TO: File – Farmland Hydro, L.P. (PSD-FL-225)

THRU: A. A. Linero

FROM: John Reynolds

DATE: November 1, 1999

SUBJ: Clarification of Molten Sulfur Storage Tank Addition

The Southwest District Office suggested that this memo be recorded in the file to explain the rationale for the handling of the additional molten sulfur storage tank requested following the filing of Farmland's original application to increase the production rates of its No. 3, 4 and 5 Sulfuric Acid Plants.

Discussions in May, 1995 with Farmland's consultant, Koogler & Associates, indicated that the sulfur tank installation was for operational flexibility and would not increase the net feed rates for the sulfuric acid plants themselves. Since a separate construction permit is typically not issued for a storage tank that is an integral part of a process that has its end product (or feed stream) limited by the permit, this modification was intended to be covered by PSD-FL-225 as indicated in K&A's letter dated August 21, 1995. However, the operation of the new sulfur tank as a "loadout" facility, i.e., a terminal for other production units in the complex (or other facilities located elsewhere), would require a separate permit as a "storage/loadout" facility. My recollection is that this type of operation would have been the source of any significant emissions increases and that K&A was advised to obtain a separate permit if the system was to be operated in that manner.

C: Kissel, SWD

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

October 16, 1997

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Charles Jenkins, Manager
of Environmental & Safety Services
Farmland Hydro, L.P.
Post Office Box 960
Bartow, Florida 33831

RE: Polk County-AP, Green Bay Complex
Sulfuric Acid Production Reallocation
Permit I.D. No. 1050053-018-AC, PSD-FL-225

Dear Mr. Jenkins:

The Bureau of Air Regulation received your request for a minor modification of the above-referenced permit and has determined that a PSD permit application is required. An additional processing fee of $7250 pursuant to Rule 62-4.050(4)(r)5, F.A.C., must be submitted along with the PSD application.

If you have any questions, please call John Reynolds at (904)488-1344.

Sincerely,

A. A. Linero 10/16

A. A. Linero, P.E.
Administrator
New Source Review Section
Bureau of Air Regulation

AAL/kt

cc: John Reynolds, BAR
John Bunyak, NPS
Brian Beals, EPA
Bill Thomas, SWD
Roy Harwood, Polk Co.

P 265 659 472

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to Charles Jenkins	
Street & Number Farmland Hydro	
Post Office, State, & ZIP Code Bartow, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 10-16-97	

1050053-018-AC
P30-Fl-225

PS Form **3800**, April 1995

Fold at line over top of envelope to the right of the return address

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Charles Jenkins, Mgr
Farmland Hydro, LP
P O Box 960
Bartow, Fl 33831

4a. Article Number P 265 659 472

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

7. Date of Delivery 10/21/97

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*
X 960

6. Signature: *(Addressee or Agent)*
X Joan Jenkins

PS Form **3811**, December 1994 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

RECEIVED
OCT 03 1997
BUREAU OF
AIR REGULATION

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:	October 3, 1997
2. Permit Number:	1050053-018-AC
3. PSD Number (if applicable):	PSD-FL-225
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.*

   C M Farris — Signature
   Sept. 15, 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
004	SULFURIC ACID PLANT #4	ACM1
005	SULFURIC ACID PLANT #5	ACM1
No Corresponding I.D.	SULFURIC ACID PLANT #6	ACM1

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: NA

[ ] 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: $ 250.00 [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

The proposed project consists of replacing Sulfuric Acid Plant No. 3 with a new more efficient sulfuric acid pant (No. 6) and redistributing facility-wide sulfuric acid production as shown below.

SAP PLANT	Permitted Production Rate (TPY)	Proposed Production Rate (TPY)
SAD3	2100	0
SAD4	2100	1850
SAD5	2800	2400
New SAD6	0	2750
TOTAL:	7000	7000

2. Projected or Actual Date of Commencement of Construction:
February 1, 1998

3. Projected Date of Completion of Construction:
February 1, 2000

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

9/12/97
Date

(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 suggested by FDEP regarding permit amendments. Additional information will be submitted , as necessary, during the permitting process.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **410.3** North (km): **3079.7**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): Longitude (DD/MM/SS):			
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 Services**
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, ext. 334** 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**
VOC	**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: **NA**		
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): [X] Attached, Document ID: Report [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Fugitive Emissions Identification: [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ ] Attached, Document ID:_____ [X] 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:

[**X**] 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).

[ ] 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): **Sulfuric Acid Plant No. 4**		
2. Emissions Unit Identification Number: **004** [ ] 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): **Double Absorption**
2. Control Device or Method Code: **044**

B.

1. Description (limit to 200 characters): **Mist Eliminators**
2. Control Device or Method Code: **014**

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: **NA**		
4. Maximum Production Rate: **1850 TPD 100% H_2SO_4**		
5. Operating Capacity Comment (limit to 200 characters): **Requested production limit.**		

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.)

DEP Core List, 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: **Sulfuric Acid Plant No. 4**	
2. Emission Point Type Code: [**X**] 1 [ ] 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: **NA**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [**X**] V [ ] W	
6. Stack Height:	**100** feet
7. Exit Diameter:	**7.5** feet
8. Exit Temperature:	**180** °F

9. Actual Volumetric Flow Rate:	**92,000** 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__1__

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Sulfuric acid production**	
2. Source Classification Code (SCC): **3-01-023-04**	
3. SCC Units: **Tons 100% H2SO4**	
4. Maximum Hourly Rate: **77.08**	5. Maximum Annual Rate: **675,250**
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): **Hourly rate is based on 1,850 TPD of 100% H2SO4.**	

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
SO2	**044**	**044**	**EL**
NOx	**000**	**000**	**NS**
SAM	**044**	**014**	**EL**

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

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**

2. Total Percent Efficiency of Control: **99.7 %**

3. Potential Emissions: **308.3** lb/hour **1350.5** tons/year

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

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

6. Emission Factor: **4 LB/TON ACID**
   Reference: **Permit**

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

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

   SO2 = 4 LB/TON X 1850 TPD / 24 HRS/DAY = 308.3 LB/HR
   X 8760 HRS/YR X TON/2000 LBS = 1350.5 TPY

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

Emissions Unit Information Section (__1__of__3__)

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: **4.0 lb /Ton Acid**		
4. Equivalent Allowable Emissions:	**308.3** lb/hour	**1350.5** Tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 8**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **40 CFR 60, SUBPART H**		

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: **SAM - Sulfuric Acid Mist**		
2. Total Percent Efficiency of Control:		**99** %
3. Potential Emissions:	**11.6** lb/hour	**50.6** tons/year
4. Synthetically Limited? [ ] Yes [X] No		
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3	_____ to _____	tons/year
6. Emission Factor: **0.15 LB/TON ACID** Reference: **Permit**		
7. Emissions Method Code: [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5		
8. Calculation of Emissions (limit to 600 characters): **SAM = 0.15 LB/TON X 1850 TPD / 24 HRS/DAY = 11.6 LB/HR** **X 8760 HRS/YR X TON/2000 LBS = 50.6 TPY**		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

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: **0.15 lb /Ton Acid**		
4. Equivalent Allowable Emissions:	**11.6** lb/hour	**50.6** tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 8**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **40 CFR 60, SUBPART H.**		

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: **VE10**
2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **10%** 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): **40 CFR 60, SUBPART H**

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 __1__of__1____

1. Parameter Code: **EM**	2. Pollutant(s): **SO2**
3. CMS Requirement:	[**X**] Rule [ ] Other
4. Monitor Information: Manufacturer: **DUPONT** Model Number: **400**	Serial Number: **3996**
5. Installation Date: **3/75**	
6. Performance Specification Test Date: **11/82**	
7. Continuous Monitor Comment (limit to 200 characters): **40 CFR 60, SUBPART H**	

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.

[**X**] 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.

[ ] 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: **See Report**			
PM	[ ] C	[ ] E	[ ] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown
4. Baseline Emissions: **See Report**			
PM		lb/hour	tons/year
SO2		lb/hour	tons/year
NO2			tons/year
5. PSD Comment (limit to 200 characters):			
Reallocation of allowable emissions from previous PSD evaluation.			

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

Supplemental Requirements for All Applications

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

[**X**] 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).

[ ] 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): **Sulfuric Acid Plant No. 5**		
2. Emissions Unit Identification Number: **005** [ ] 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): **Double Absorption**
2. Control Device or Method Code: **044**

B.

1. Description (limit to 200 characters): **Mist Eliminators**
2. Control Device or Method Code: **014**

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:	**38**	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: **NA**		
4. Maximum Production Rate: **2400 TPD 100% H2SO4**		
5. Operating Capacity Comment (limit to 200 characters): **Requested permit limit.**		

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.)

DEP Core List, 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: **Sulfuric Acid Plant No. 5**	
2. Emission Point Type Code: [**X**] 1 [ ] 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: **NA**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [**X**] V [ ] W	
6. Stack Height:	**150** feet
7. Exit Diameter:	**8** feet
8. Exit Temperature:	**180** °F

9. Actual Volumetric Flow Rate:	**114,000** 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_1_

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Sulfuric Acid Production**	
2. Source Classification Code (SCC): **3-01-023-04**	
3. SCC Units: **Tons 100% H2SO4**	
4. Maximum Hourly Rate: **100**	5. Maximum Annual Rate: **876,000**
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): **Hourly rate is based on 2,400 TPD of 100% H2SO4.**	

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
SO2	**044**	**044**	**EL**
SAM	**044**	**014**	**EL**
NOx	**000**	**000**	**NS**

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

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**	
2. Total Percent Efficiency of Control: **99.7 %**	
3. Potential Emissions: **400.0** lb/hour	**1752.0** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No	
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **4.0 LB/TON ACID** Reference: **Permit**	
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5	
8. Calculation of Emissions (limit to 600 characters): **SO2 = 4.0 LB/TON X 2400 TPD / 24 HRS/DAY = 400.0 LB/HR** **X 8760 HRS/YR X TON/2000 LBS = 1752.0 TPY**	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	

Emissions Unit Information Section (_2_of_3_)

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: **4.0 lb / Ton Produced**		
4. Equivalent Allowable Emissions:	**400.0** lb/hour	**1752.0** Tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 8**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **40 CFR 60, SUBPART H**		

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: **SAM**

2. Total Percent Efficiency of Control: **99 %**

3. Potential Emissions: **15.0** lb/hour **65.7** tons/year

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

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

6. Emission Factor: **0.15 LB/TON ACID**
   Reference: **Permit**

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

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

SAM = 0.15 LB/TON X 2400 TPD / 24 HRS/DAY = 15.0 LB/HR
X 8760 HRS/YR X TON/2000 LBS = 65.7 TPY

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

Emissions Unit Information Section (_2_ of _3_)

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: **0.15 lb /Ton Produced**		
4. Equivalent Allowable Emissions:	**15.0** lb/hour	**65.7** Tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 8**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **40 CFR 60, SUBPART H**		

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: **VE10**
2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **10%** 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):

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 _1_of_1_____

1. Parameter Code: **EM**	2. Pollutant(s): **SO2**
3. CMS Requirement:	[**X**] Rule [ ] Other
4. Monitor Information: Manufacturer: **DUPONT** Model Number: **460**	Serial Number: **7345**
5. Installation Date: **12/90**	
6. Performance Specification Test Date: **6/91**	
7. Continuous Monitor Comment (limit to 200 characters): **40 CFR 60, SUBPART H**	

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.

Emissions Unit Information Section (_2_ of _3_)

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.

[**X**] 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.

[ ] 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: **See Report**			
PM	[ ] C	[ ] E	[ ] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown

4. Baseline Emissions: **See Report**		
PM	lb/hour	tons/year
SO2	lb/hour	tons/year
NO2		tons/year

5. PSD Comment (limit to 200 characters):
Reallocation of allowable emissions from previous PSD evaluation.

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

Supplemental Requirements for All Applications

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

[**X**] 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).

[ ] 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): **Sulfuric Acid Plant No. 6**		
2. Emissions Unit Identification Number: [**X**] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **28**
6. Emissions Unit Comment (limit to 500 characters): **Proposed new plant to replace existing No. 3 sulfuric acid plant.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **Double Absorption**
2. Control Device or Method Code: **044**

B.

1. Description (limit to 200 characters): **Mist Eliminators**
2. Control Device or Method Code: **014**

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:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°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: **NA**		
4. Maximum Production Rate: **2750 TPD 100% H2SO4**		
5. Operating Capacity Comment (limit to 200 characters):		
Requested permit limit.		

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.)

DEP Core List, 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: **Sulfuric Acid Plant No. 6**	
2. Emission Point Type Code: [X] 1 [ ] 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: **NA**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**150** feet
7. Exit Diameter:	**9** feet
8. Exit Temperature:	**180** °F

9. Actual Volumetric Flow Rate:	**133,000** 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 _1_

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Sulfuric Acid Production**	
2. Source Classification Code (SCC): **3-01-023-04**	
3. SCC Units: **Tons 100% H2SO4**	
4. Maximum Hourly Rate: **114.6**	5. Maximum Annual Rate: **1,003,750**
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): **Hourly rate is based on 2,750 TPD of 100%H2SO4.**	

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

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**

2. Total Percent Efficiency of Control: **99.7 %**

3. Potential Emissions: **458.3** lb/hour **2007.5** tons/year

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

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

6. Emission Factor: **4.0 LB/TON ACID**
   Reference: **Permit**

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

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

   SO2 = 4.0 LB/TON X 2750 TPD / 24 HRS/DAY = 458.3 LB/HR
   X 8760 HRS/YR X TON/2000 LBS = 2007.5 TPY

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

Emissions Unit Information Section (_3_ of _3_)

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: **4.0 lb / Ton Produced**		
4. Equivalent Allowable Emissions:	**458.3** lb/hour	**2007.5** Tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 8**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **40 CFR 60, SUBPART H**		

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: **SAM**

2. Total Percent Efficiency of Control: **99 %**

3. Potential Emissions: **17.2** lb/hour **75.3** tons/year

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

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

6. Emission Factor: **0.15 LB/TON ACID**
   Reference: **Permit**

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

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

SAM = 0.15 LB/TON X 2750 TPD / 24 HRS/DAY = 17.2 LB/HR
X 8760 HRS/YR X TON/2000 LBS = 75.3 TPY

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

Emissions Unit Information Section (_3_ of _3_)

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: **0.15 lb /Ton Produced**		
4. Equivalent Allowable Emissions:	**17.2** lb/hour	**75.3** Tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 8**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **40 CFR 60, SUBPART H**		

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: **VE10**
2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **10%** 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): **40 CFR 60, SUBPART H**

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 _1_ of_1____

1. Parameter Code: **EM**	2. Pollutant(s): **SO2**
3. CMS Requirement:	[**X**] Rule [ ] Other
4. Monitor Information: **To Be Decided** Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): **40 CFR 60, SUBPART H**	

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.

[**X**] 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.

[ ] 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: **See Report**			
PM	[ ] C	[ ] E	[ ] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown

4. Baseline Emissions: **See Report**		
PM	lb/hour	tons/year
SO2	lb/hour	tons/year
NO2		tons/year

5. PSD Comment (limit to 200 characters):
Reallocation of allowable emissions from previous PSD evaluation.

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

Supplemental Requirements for All Applications

1. Process Flow Diagram [X] Attached, Document ID: **Report** [ ] 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:_____ [ ] Not Applicable [X] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: **Report** [ ] Not Applicable
9. Other Information Required by Rule or Statute [X] Attached, Document ID: **Report** [ ] Not Applicable

Emissions Unit Information Section (_3_ of _3_)

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

SUPPLEMENTAL INFORMATION - REPORT

1.0 PROJECT DESCRIPTION

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 Farmland's sulfuric acid manufacturing complex are Zone 17, 410.3 km east and 3079.7 km north.

Farmland proposes to redistribute the allowable sulfuric acid production rate and maintain the current facility-wide sulfuric acid production cap of 7000 tpd 100% H_2SO_4. Farmland proposes to replace Sulfuric Acid Plant No. 3 with a new, more efficient sulfuric acid plant No. 6 with a production rate of 2,750 tons per day (tpd) 100% sulfuric acid. Please refer to Table 1-1 for proposed production and emissions rates. The proposed plant will be similar in design to the existing No. 5 double absorption plant. The site location map, plant layout map and process flow diagram are presented in Figures 1-1, 1-2 and 1-3, respectively.

There will be no change in the molten sulfur handling rates as it is permitted to handle the production of 7000 tons per day of 100% sulfuric acid. No other plant at the facility is affected by the redistribution of the sulfuric acid production rates.

The sulfuric acid production capacity is currently permitted under an existing permit PSD-FL-225 and AC 53-265755, with federally enforceable production and emissions caps. The proposed project will not be subject to New Source Review requirements pursuant to Rule 62-212, Florida Administrative Code (FAC). Also attached, for clarification, is FDEP's memorandum dated August 21, 1997, referring to the use of the "potential to emit" for new or modified units. Consequently, a permit amendment is requested to allow the redistribution of the currently allowed sulfuric acid production rates and emissions rates.

Sulfuric Acid Plant No. 6 will be subject to NSPS pursuant to 40CFR60, Subpart H, and the corresponding state rule.

As FDEP is concerned about sulfur dioxide impacts in this area and the Class I area, air dispersion modeling for sulfur dioxide was conducted to provide reasonable assurance that the proposed project will not cause or contribute to any exceedances of the ambient air quality standards.

TABLE 1-1

PRODUCTION AND EMISSIONS RATES
FOR SULFURIC ACID PLANTS

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

Emission Unit	PRODUCTION RATE TPD	ALLOWABLE EMISSIONS RATES SO2 TPY	SAM TPY
Existing			
SAP3	2100	1533	57.5
SAP4	2100	1533	57.5
SAP5	2800	2044	76.7
SAP6	NA	0	0
TOTAL	7000	5110	191.7
Proposed			
SAP3	NA	0	0
SAP4	1850	1350.5	50.7
SAP5	2400	1752.0	65.7
SAP6	2750	2007.5	75.3
TOTAL	7000	5110.0	191.7

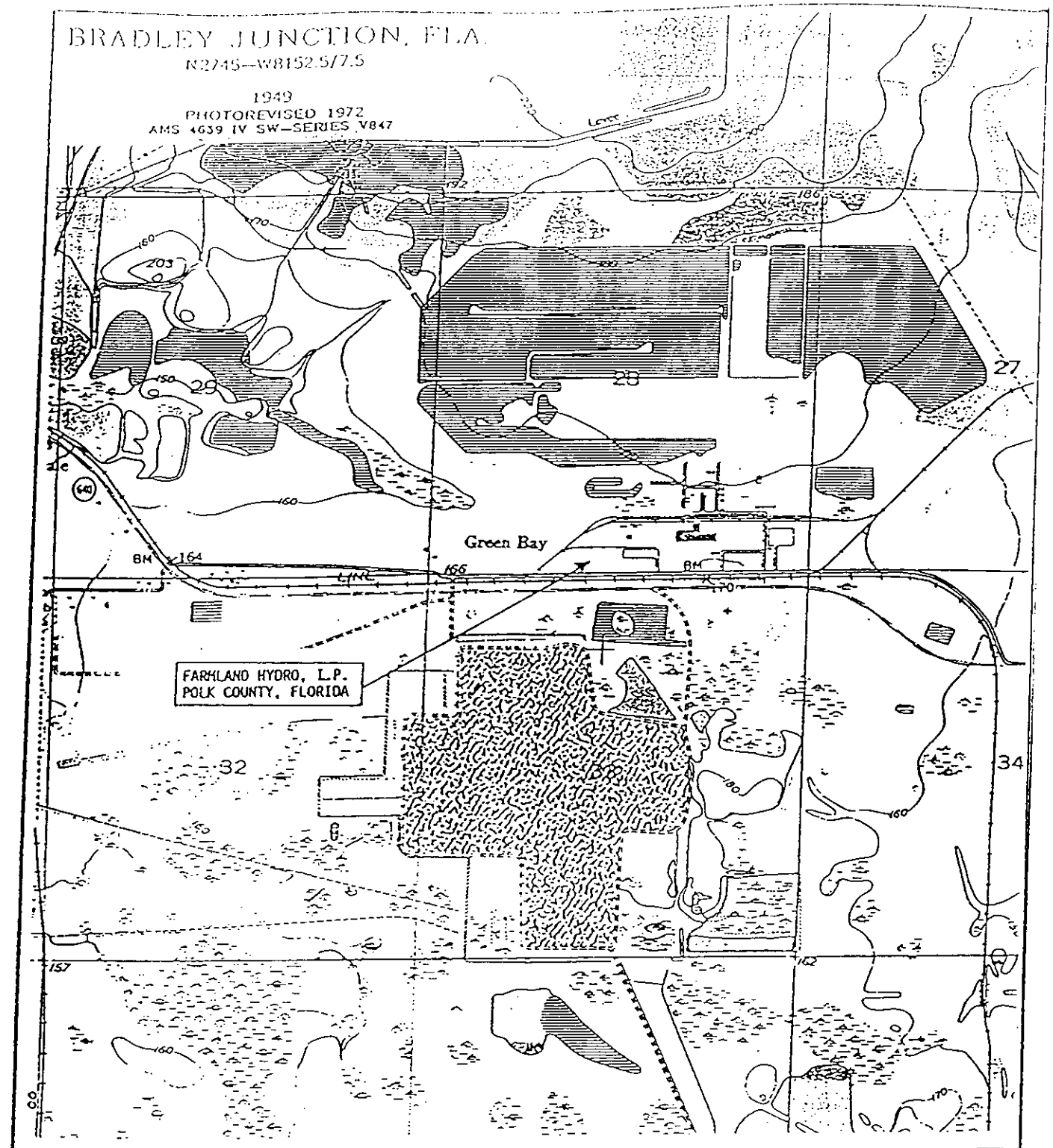
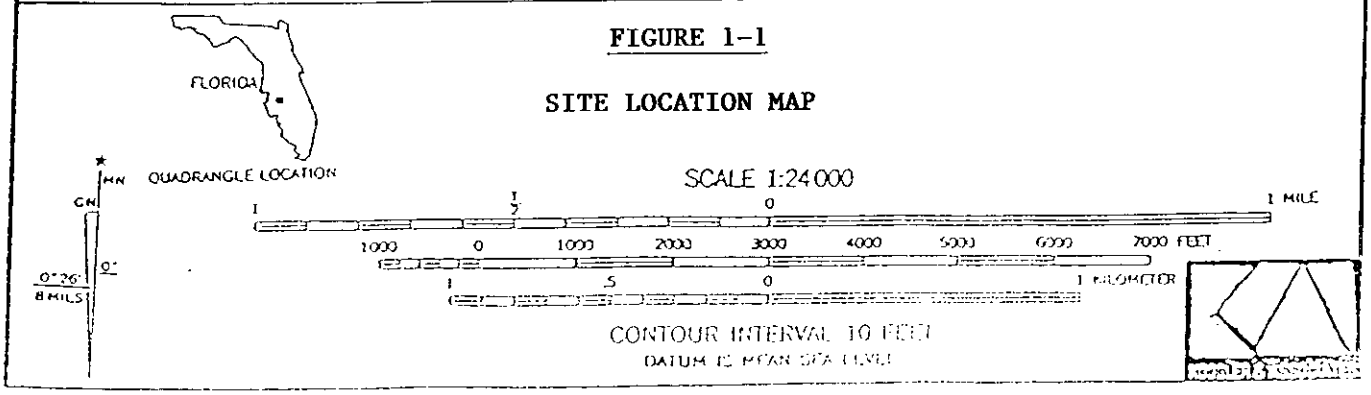


FIGURE 1-1

SITE LOCATION MAP



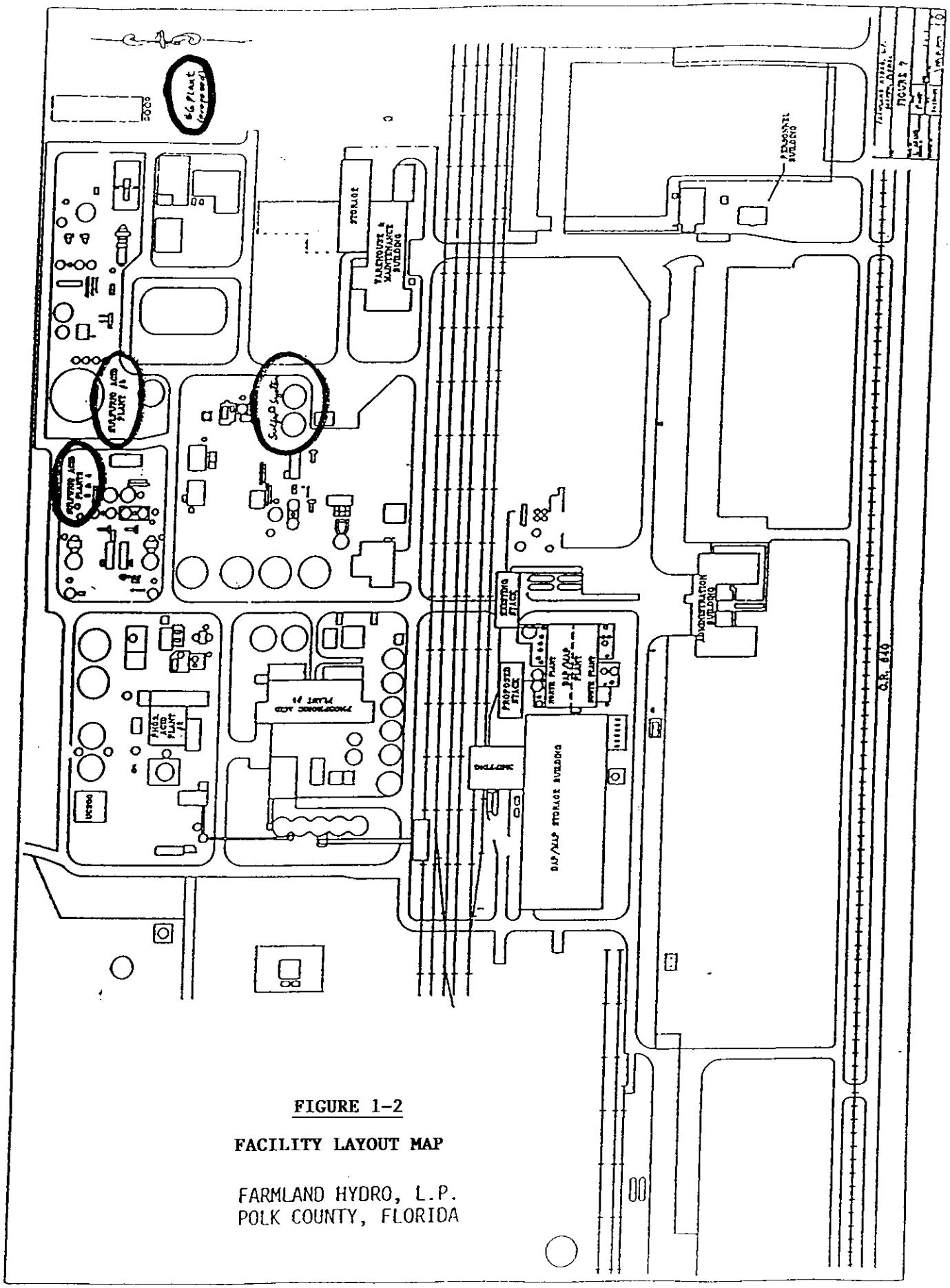


FIGURE 1-2

FACILITY LAYOUT MAP

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

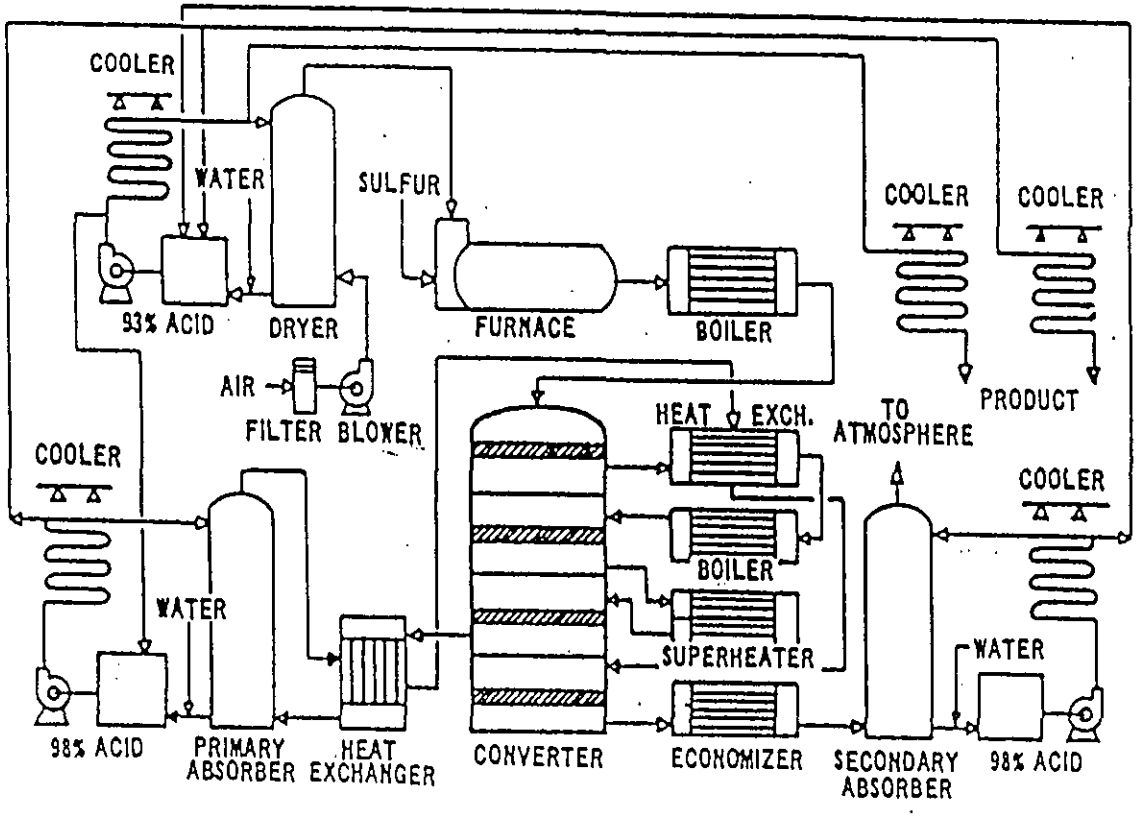


FIGURE 1-3

TYPICAL SULFURIC ACID
DOUBLE ABSORPTION PLANT
PROCESS FLOW DIAGRAM

$S + O_2 \rightarrow SO_2$ (BURNER)

$SO_2 + \frac{1}{2} O_2 \rightleftharpoons SO_3$ (CONVERTER)

$SO_3 + H_2O \rightarrow H_2SO_4$ (ABSORBER)

2.0 Ambient Air Quality Impact Analysis

The sulfur dioxide emissions from the proposed project were modeled using the ISC-ST3 model, in accordance with EPA modeling guidelines.

A significant impact analysis was conducted using five consecutive years of Tampa meteorological data (1987-1991). The existing sulfuric acid plants' emissions were compared with the proposed sulfuric acid plants' emissions. The modeling inputs are presented in Table 2-1.

Results of the significant impact analysis (SIA) modeling are presented in Table 2-2. The modeling results indicated that the maximum predicted impacts resulting from the proposed project will be significant in the vicinity of the plant; and, less than significant at the nearest Class I area (Chassahowitzka National wildlife Refuge). Therefore, additional refined modeling was necessary for the Class II area.

The refined modeling was conducted including significant sources in the vicinity of the plant. A list of the significant facilities near the proposed project is presented in Table 2-3. The corresponding sources at the significant facilities which contribute to the ambient air concentration and the PSD increment consumption/expansion in the Class II area are presented in Tables 2-4 and 2-5, respectively.

The results of the ambient air quality standard and Class II area PSD increment analysis indicate that the maximum predicted impacts from the proposed project are well within the standards, as shown in Table 2-6.

Receptor locations associated with the above modeling are presented in Figures 2-1.1 - 2-1.5.

It can be concluded from the information in this report that the proposed project, as described herein, will not cause or significantly contribute to an exceedance of the allowable sulfur dioxide ambient air quality standard, allowable PSD increment, or any other provision of Chapter 62, FAC.

TABLE 2-1

AIR QUALITY MODELING PARAMETERS
FOR SULFUR DIOXIDE

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

Emission Unit	Stack Ht (m)	Stack Dia (m)	Stack Gas Vel (mps)	Stack Gas Temp (°K)	SO2 Emission Rates (g/s)
Existing					
SAP3	30.48	2.29	12.02	355	44.1
SAP4	30.48	2.29	12.02	355	44.1
SAP5	45.72	2.44	13.42	355	58.8
SAP6	NA				0
Proposed					
SAP3	NA				0
SAP4	30.48	2.29	12.02	355	38.85
SAP5	45.72	2.44	13.42	355	50.40
SAP6	45.72	2.44	13.42	355	57.75

NOTES:

1. Building downwash effects, from the EPA approved BPIP program, were included in the modeling.

2. The proposed No. 6 plant will replace the existing No. 3 plant.

TABLE 2-2

SUMMARY OF SULFUR DIOXIDE SIGNIFICANT IMPACT ANALYSIS

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	SULFUR DIOXIDE IMPACT ($\mu g/m^3$)					
	CLASS I AREA			CLASS II AREA		
	ANNUAL(1)	3-HR(2)	24-HR(2)	ANNUAL(1)	3-HR(2)	24-HR(2)
1987	0	0.003	0.001	2.08	227.6	47.9
1988	0	0.006	0.001	3.62	171.0	65.3
1989	0	0.007	0.001	3.65	169.6	70.2
1990	0	0.003	0.001	1.40	169.6	45.8
1991	0	0.063	0.001	2.36	157.6	45.3
Significant Impact (Proposed for Class I)	0.03	1.0	0.2	1.0	25.0	5.0

NOTE:

(1) The impact represents the highest-high impact.

(2) The impact represents the highest second-high impact.

(3) The impacts are based on the difference between the existing and proposed SO2 emissions from the sulfuric acid plants.

Table 2-3
Significant Sulfur Dioxide Emitting Facilities (20 D Table)
Farmland Hydro, L.P.
Green Bay, Florida

SO2 "20 D" SOURCE INVENTORY FOR FARMLAND HYDRO PLANT			Source Location	410.330	3079.655
	UTM Coordinates (km)		SO2	Distance	20-D Emission
SOURCE DESCRIPTION	EAST	NORTH	TPY	(Km)	(TPY)
AUBURNDALE	420.800	3103.300	221	26	517
BORDEN DRYER	414.500	3109.000	-184	30	593
BORDEN DRYER	394.800	3069.600	-225	19	370
BREWSTER/IMPERIAL	404.800	3069.500	-670	12	231
CARGILL/GARDINIER	363.400	3082.400	5870	47	940
CARGILL/GARDINIER MINE	415.300	3063.300	612	17	342
CARGILL/SEMINOLE/W.R. GRACE	409.770	3086.990	5007	7	147
CF BARTOW	408.500	3082.500	5145	3	68
CF PLANT CITY	388.000	3116.000	9048	43	853
CITRUS WORLD	441.000	3087.300	1604	32	632
CLM CHLORIDE METALS	361.800	3088.300	731	49	986
CONSOLIDATED MINERALS	393.800	3096.300	943	23	469
COUCH CONST-ZEPHYRHILLS	390.300	3129.400	123	54	1073
DOLIME	404.813	3069.548	-355	12	230
ESTECH/SWIFT	411.500	3074.200	-4856	6	112
FARMLAND	410.330	3079.655	5208	0	0
FPC INTERSESSION CITY	446.300	3126.000	8168	59	1173
FPC OSCEOLA	446.300	3126.000	4380	59	1173
FPC POLK	414.400	3073.910	1720	7	141
FPL MANATEE	367.200	3054.100	83410	50	1003
GEN. PORT. CEMENT	358.000	3090.600	-4602	53	1069
GULF COAST RECYCLING	364.000	3093.500	1711	48	967
HARDEE	404.800	3057.400	9657	23	459
HILLS. CO. RESOURCE RECOVERY	368.200	3092.700	744	44	882
IMC - AGRICO /NICHOLS/CONSERVE	398.400	3084.200	1978	13	255
IMC-AGRICO/NEW WALES	396.600	3078.900	11416	14	275
IMC-AGRICO/NORALYN	414.700	3080.300	504	4	88
IMC-AGRICO/PIERCE	404.100	3078.950	-1646	6	125
IMC-AGRICO/SO. PIERCE	407.500	3071.300	4676	9	176
LAKELAND LARSEN	409.300	3102.800	4944	23	463
LAKELAND MCINTOSH	409.200	3106.200	30563	27	531
MOBIL BIG-4	394.850	3069.770	87	18	367
MOBIL NICHOLS	398.300	3084.300	971	13	258
MOBILE ELECTROPHOS	405.600	3079.400	-3337	5	95
MULBERRY COGENERATION	413.600	3080.600	466	3	68
MULBERRY PROSPHATES/ROYSTER	406.700	3085.200	1280	7	133
NITRAM	363.100	3089.000	108	48	963
PANDA KATHLEEN	398.700	3101.400	25	25	493
RIDGE COGENERATION	416.700	3100.400	480	22	434
SECI HARDEE	404.900	3057.400	223	23	458
SULFUR TERMINALS	358.000	3090.000	104	53	1067
TAMPA GENERAL HOSP	356.400	3091.000	59	55	1102
TAMPA MCKAY BAY RRF	360.000	3091.000	744	52	1032
TECO BIG BEND	361.900	3075.000	372294	49	973
TECO GANNON	360.000	3087.500	127495	51	1019
TECO HOOKERS POINT	358.000	3091.000	13535	54	1071
TECO POLK POWER	402.488	3066.914	4031	15	299
THATCHER GLASS	361.800	3088.300	177	49	986
USS AGRI-CHEM BARTOW	413.200	3086.300	-1580	7	145
USSAC FT MEADE	416.120	3068.620	3217	12	249

NOTE; Facilities with negative emissions represent shutdown facilities.

Table 2-4

AAQS SO2 Source Inventory
Farmland Hydro, L.P. - Green Bay, Florida

SOURCE DESCRIPTION	Inventory Designation	NAAQS Designation	UTM Coordinates (km) EAST	UTM Coordinates (km) NORTH	Stack Centered Coordinat EAST	Stack Centered Coordinat NORTH	Emissions (g/s)	Height (m)	Temperature (°K)	Velocity (m/s)	Dimeter (m)
CARGILL/GARDINIER NaSiF MFG (U41)	NAAQS	CARG1	363.4	3082.4	-46930	2745	0.16	12.2	333.1	13.37	2.8
CARGILL/GARDINIER DAP (U55)	NAAQS	CARG2	363.4	3082.4	-46930	2745	0.96	40.5	320	16.09	2.13
CARGILL/GARDINIER GTSP (UAA)	NAAQS	CARG3	363.4	3082.4	-46930	2745	1.9	38.4	328	11.56	2.44
CARGILL/GARDINIER MINE ROCK DRYER	NAAQS	CARG4	415.3	3063.3	4970	-16355	17.6	19.2	290	7	2.9
CARGILL/GARDINIER SAP #7 (U04)	NAAQS	CARG5	363.4	3082.4	-46930	2745	46.2	45.6	340	12.64	2.29
CARGILL/GARDINIER SAP #8 (U05)	NAAQS	CARG6	363.4	3082.4	-46930	2745	52.5	45.6	339	13.93	2.44
CARGILL/GARDINIER SAP #9 (INCR9 OF8/9	BOTH	CARG7	363.4	3082.4	-46930	2745	67.2	45.6	350	12.66	2.74
CARGILL/SEMINOLE/W.R. GRACE DAP 4 - Ba	NAAQS	CARG8	409.8	3087.0	-560	7335	0.3	40.2	316	26.2	2.1
CARGILL/SEMINOLE/W.R. GRACE SAP 4, 5	BOTH	CARG9	409.8	3087.0	-560	7335	143.64	60.96	347	34	1.52
CF BARTOW DAP 1-3	NAAQS	CFB1	408.5	3082.5	-1830	2845	7.93	36.4	339	16.11	2.13
CF BARTOW DAP 1-3	BOTH	CFB2	408.5	3082.5	-1830	2845	3.97	36.4	339	16.11	2.13
CF BARTOW H2SO4 5 (2400 TPD)	BOTH	CFB3	408.5	3082.5	-1830	2845	50.4	63.41	361	10.88	2.13
CF BARTOW H2SO4 6 (2400 TPD)	BOTH	CFB4	408.5	3082.5	-1830	2845	50.4	63.41	370	7.28	2.13
CF BARTOW H2SO4 7 (2000 TPD)	BOTH	CFB5	408.5	3082.5	-1830	2845	42	67.1	351	9.8	2.4
CF PLANT CITY (U22)	NAAQS	CFP1	388.0	3116.0	-22330	36345	0.12	2.44	373	0.33	0.61
CF PLANT CITY (U22)	NAAQS	CFP2	388.0	3116.0	-22330	36345	0.11	2.4	373.1	1.63	0.27
CF PLANT CITY (U23-24)	NAAQS	CFP3	388.0	3116.0	-22330	36345	0.17	3.7	373.1	1.65	0.09
CF PLANT CITY DAP A (U10)	NAAQS	CFP4	388.0	3116.0	-22330	36345	3	28.7	326	7.9	3
CF PLANT CITY DAP X (U16)	NAAQS	CFP5	388.0	3116.0	-22330	36345	13.2	54.9	325	9.8	2.8
CF PLANT CITY DAP Z (U11)	NAAQS	CFP6	388.0	3116.0	-22330	36345	13.2	54.9	331	13.1	2.8
CF PLANT CITY GTSP X (U12)	NAAQS	CFP7	388.0	3116.0	-22330	36345	13.2	54.9	314	7.9	2.8
CF PLANT CITY H2SO4 A&B (U02&03)	BOTH	CFP8	388.0	3116.0	-22330	36345	88.2	33.5	316	19.5	1.52
CF PLANT CITY PROPOSED C & D (U07-08)	BOTH	CFP9	388.0	3116.0	-22330	36345	109.2	60.35	353	17.77	2.44
CF PLANT CITY Y-GTSP (U17)	NAAQS	CFP10	388.0	3116.0	-22330	36345	11.33	54.9	333.1	13.37	2.8
CF PLANT CITY Zephyrhills (U01)	NAAQS	CFP11	388.0	3116.0	-22330	36345	19.98	7.62	560.8	17.74	1.07
CITRUS WORLD DRYER 1	NAAQS	CITRUS1	441.0	3087.3	30670	7645	11.8	22.9	323	10.7	1
CITRUS WORLD DRYER 2	NAAQS	CITRUS2	441.0	3087.3	30670	7645	23.74	22.9	325	12.2	0.8
CITRUS WORLD DRYER 3	NAAQS	CITRUS3	441.0	3087.3	30670	7645	23.74	24.4	313	21.9	0.8
CONSOLIDATED MINERALS	NAAQS	CONSOL1	393.8	3096.3	-16530	16645	0.12	6.1	605.2	20.21	0.37
CONSOLIDATED MINERALS FLUID BED REACTOR	NAAQS	CONSOL2	393.8	3096.3	-16530	16645	11.57	46.33	299.7	12.14	1.77
CONSOLIDATED MINERALS KILNS 3, 4 & 5	NAAQS	CONSOL3	393.8	3096.3	-16530	16645	15.43	46.33	298	13.17	1.77
FARMLAND	NAAQS	FARM1	410.3	3079.7	0	0	2.33	28.96	605.2	3.58	1.68
FARMLAND SULFUR SYSTEM (EXISTING)	NAAQS	FARM2	410.3	3079.7	0	0	0.39	12.19	366.3	2.67	0.61
FARMLAND SULFUR SYSTEM (PROPOSED)	NAAQS	FARM3	410.3	3079.7	0	0	0.16	12.19	366.3	2.67	0.61
FPC BARTOW PEAKING 1-4	NAAQS	FPC1	342.4	3082.6	-67930	2945	192.89	13.7	772	22.3	5.3
FPC BARTOW PIPELINE HEATER (U04)	NAAQS	FPC2	342.4	3082.6	-67930	2945	1.8	9.1	541	5.2	0.9
FPC BARTOW UNIT 1 & 2 (U01&02)	NAAQS	FPC3	342.4	3082.6	-67930	2945	896.8	91.4	429	36.3	2.7
FPC BARTOW UNIT 3 (U03)	NAAQS	FPC4	342.4	3082.6	-67930	2945	710.54	91.4	408	34.4	3.4

Continued

AAQS SO2 Source Inventory

Farmland Hydro, L.P. - Green Bay, Florida

SOURCE DESCRIPTION	Inventory Designation	NAAQS Designation	UTM Coordinates (km) EAST	UTM Coordinates (km) NORTH	Stack Centered Coordinat EAST	Stack Centered Coordinat NORTH	Emissions (g/s)	Height (m)	Temperature (°K)	Velocity (m/s)	Dimeter (m)
FPC BAYBORO PEAKING 1-4	NAAQS	FPC5	338.8	3071.3	-71530	-8355	197.8	12.2	755	6.4	7
FPC INT. CITY PROP TURBINES/7EA @ 20°F	BOTH	FPC6	446.3	3126.0	35970	46345	124.4	15.24	819.8	56.21	4.21
FPC INT. CITY PROP TURBINES/7FA @20°F	BOTH	FPC7	446.3	3126.0	35970	46345	110.4	15.24	880.8	32.07	7.04
FPC OSCEOLA PEAKING 1-6	NAAQS	FPC8	446.3	3126.0	35970	46345	273.06	7.9	703.7	18.06	4.24
FPC OSCEOLA PEAKING 11-12	BOTH	FPC9	446.3	3126.0	35970	46345	102.56	15.2	895.9	0.03	7.04
FPC OSCEOLA PEAKING 7-10	BOTH	FPC10	446.3	3126.0	35970	46345	111.88	15.2	834.8	0.05	4.21
FPC POLK	BOTH	FPC11	414.4	3073.9	4070	-5745	24.7	34.4	400	40.5	4.1
FPL MANATEE UNIT 1 & 2 (U01&02)	NAAQS	FPL1	367.2	3054.1	-43130	-25555	2397.8	152.1	426	17.1	8
GULF COAST LEAD	NAAQS	GULF1	364.0	3093.5	-46330	13845	0.75	8.84	309.1	20.85	0.34
GULF COAST LEAD (U01)	NAAQS	GULF2	364.0	3093.5	-46330	13845	48.45	29.57	344.1	37.59	0.61
HARDEE	BOTH	HARDEE1	404.8	3057.4	-5530	-22255	277.6	22.9	389	23.9	4.88
IMC-AGRICO /NICHOLS/CONSERVE (2500 TP	BOTH	IMC1	398.4	3084.2	-11930	4545	52.5	45.7	352	12	2.3
IMC-AGRICO /NICHOLS/CONSERVE DAP DRYE	NAAQS	IMC2	398.4	3084.2	-11930	4545	1.01	24.4	333	23.1	1.07
IMC-AGRICO /NICHOLS/CONSERVE DRYER	NAAQS	IMC3	398.4	3084.2	-11930	4545	3.34	24.69	327.4	3.77	2.29
IMC-AGRICO/NEW WALES AFI PLANT	BOTH	IMC4	396.6	3078.9	-13730	-755	0.2	52.4	322	13.1	2.4
IMC-AGRICO/NEW WALES DAP	BOTH	IMC5	396.6	3078.9	-13730	-755	5.54	36.6	319.1	20.15	1.83
IMC-AGRICO/NEW WALES DAP 1	NAAQS	IMC6	396.7	3079.4	-13630	-255	3.7	40.5	314	14.9	2.1
IMC-AGRICO/NEW WALES GTSP	NAAQS	IMC7	396.7	3079.4	-13630	-255	9.2	40.5	316	20.4	1.8
IMC-AGRICO/NEW WALES MULTIPHOS	BOTH	IMC8	396.6	3078.9	-13730	-755	4.8	52.4	314	15.8	1.4
IMC-AGRICO/NEW WALES SAP #1, 2, 3 (3	BOTH	IMC9	396.6	3078.9	-13730	-755	182.85	61	350	15.31	2.6
IMC-AGRICO/NEW WALES SAP #4, 5 (2 AT	BOTH	IMC10	396.6	3078.9	-13730	-755	121.9	60.7	350	15.31	2.6
IMC-AGRICO/NORALYN	NAAQS	IMC11	414.7	3080.3	4370	645	1.2	23.2	394	17.1	2
IMC-AGRICO/NORALYN	NAAQS	IMC12	414.7	3080.3	4370	645	13.3	18.3	341	8.5	2.8
IMC-AGRICO/SO. PIERCE DAP PLANT	BOTH	IMC13	407.5	3071.3	-2830	-8325	4.41	38.1	328	14.6	3.1
IMC-AGRICO/SO. PIERCE GTSP PLANT	NAAQS	IMC14	407.5	3071.3	-2830	-8355	16.6	42.7	305	10.4	2.7
IMC-AGRICO/SO. PIERCE H2SO4 (2 @ 2700	BOTH	IMC15	407.5	3071.3	-2830	-8355	113.4	44.18	350	13.29	2.74
LAKELAND LARSEN	NAAQS	LAKE1	409.3	3102.8	-1030	23145	0.2	9.75	699.7	171.38	1.52
LAKELAND LARSEN 4	NAAQS	LAKE2	409.3	3102.8	-1030	23145	93.37	50.29	433	5.64	3.05
LAKELAND LARSEN 5	NAAQS	LAKE3	409.3	3102.8	-1030	23145	0.4	50.29	444.1	6.47	3.05
LAKELAND LARSEN 6	NAAQS	LAKE4	409.3	3102.8	-1030	23145	0.35	50.29	444.1	6.47	3.05
LAKELAND LARSEN 7	NAAQS	LAKE5	409.3	3102.8	-1030	23145	18.71	50.29	444.1	6.86	3.05
LAKELAND LARSEN CT	BOTH	LAKE6	409.3	3102.8	-1030	23145	29.11	30.48	783.2	28.22	5.79
LAKELAND MCINTOSH	NAAQS	LAKE7	409.2	3106.2	-1130	26545	8.32	10.97	791.3	0.39	2.8
LAKELAND MCINTOSH	NAAQS	LAKE8	409.2	3106.2	-1130	26545	2.94	6.1	652.4	23.54	0.79
LAKELAND MCINTOSH 1	NAAQS	LAKE9	409.3	3106.2	-1030	26545	341.56	45.72	419.1	23.96	2.74
LAKELAND MCINTOSH 2	NAAQS	LAKE10	409.2	3106.2	-1130	26545	25.68	47.55	402.4	21.29	3.17
LAKELAND MCINTOSH 3	BOTH	LAKE11	409.2	3106.2	-1130	26545	500.1	76.2	350	19.7	4.88
MOBIL NICHOLS DRYER 1	NAAQS	MOBIL1	398.3	3084.3	-12030	4645	12.73	25.9	342	14.1	2.29

Table 2-4
Concluded
AAQS SO2 Source Inventory
Farmland Hydro, L.P. - Green Bay, Florida

SOURCE DESCRIPTION	Inventory Designation	NAAQS Designation	UTM Coordinates (km) EAST	UTM Coordinates (km) NORTH	Stack Centered Coordinate EAST	Stack Centered Coordinate NORTH	Emissions (g/s)	Height (m)	Temperature (°K)	Velocity (m/s)	Dimeter (m)
MOBIL NICHOLS DRYER 2	NAAQS	MOBIL2	398.3	3084.3	-12030	-4645	12.73	25.9	342	14.1	2.29
MOBIL NICHOLS DRYER 4	BOTH	MOBIL3	398.3	3084.3	-12030	4645	2.44	25.9	339	16.05	2.29
MULBERRY COGENERATION CT	BOTH	MULB1	413.6	3080.6	3270	945	13.4	38.1	377	9.31	1.98
MULBERRY PROSPHATES/ROYSTER (1700 TPD	BOTH	MULB2	406.7	3085.2	-3630	5545	35.7	61	360	12.2	2.13
MULBERRY PROSPHATES/ROYSTER DAP	NAAQS	MULB3	406.7	3085.2	-3630	5545	9.3	31.1	316	7.9	2.7
RIDGE COGENERATION	BOTH	RIDGE1	416.7	3100.4	6370	20745	13.8	99.1	350	14.54	3.05
TECO BIG BEND TURBINE 1 (U07)	NAAQS	TECO1	361.9	3075.0	-48430	-4655	11.3	10.7	816	136.2	1.5
TECO BIG BEND TURBINE 2&3 (U05&06)	NAAQS	TECO2	361.9	3075.0	-48430	-4655	79.12	22.86	770.8	18.74	4.27
TECO BIG BEND UNIT 1 (U01)	NAAQS	TECO3	361.9	3075.0	-48430	-4655	3309	149.35	404.7	13.74	7.32
TECO BIG BEND UNIT 2 (U02)	NAAQS	TECO4	361.9	3075.0	-48430	-4655	3275.32	149.35	404.7	13.02	7.32
TECO BIG BEND UNIT 3 (U03)	NAAQS	TECO5	361.9	3075.0	-48430	-4655	3372.92	149.35	410.2	14.47	7.32
TECO BIG BEND UNIT 4 (U04)	BOTH	TECO6	361.9	3075.0	-48430	-4655	654.7	149.4	342.2	19.81	7.32
TECO GANNON 1 & 2 (U01&02)	NAAQS	TECO7	360.0	3087.5	-50330	7845	760.86	93.27	420.8	30.85	3.05
TECO GANNON 3 (U03)	NAAQS	TECO8	360.0	3087.5	-50330	7845	483.96	93.27	419.7	38.64	3.23
TECO GANNON 4 (U04)	NAAQS	TECO9	360.0	3087.5	-50330	7845	567.71	93.27	426.9	22.97	3.05
TECO GANNON 5 (U05)	NAAQS	TECO10	360.0	3087.5	-50330	7845	691.28	93.27	423.6	23.18	4.45
TECO GANNON 6 (U06)	NAAQS	TECO11	360.0	3087.5	-50330	7845	1149.41	93.27	433	24.74	5.36
TECO GANNON TURBINE (U07)	NAAQS	TECO12	360.0	3087.5	-50330	7845	11.9	10.67	816.3	136.61	1.52
TECO HOOKERS POINT 1 & 2 (U01&02)	NAAQS	TECO13	358.0	3091.0	-52330	11345	82.6	85.3	419	6.1	3.4
TECO HOOKERS POINT 3 & 4 (U03&04)	NAAQS	TECO14	358.0	3091.0	-52330	11345	114	85.3	434	7.9	3.7
TECO HOOKERS POINT 5 (U05)	NAAQS	TECO15	358.0	3091.0	-52330	11345	84.6	85.3	448	11	3.4
TECO HOOKERS POINT 6 (U06)	NAAQS	TECO16	358.0	3091.0	-52330	11345	107.9	85.3	434	22.3	2.9
TECO POLK POWER	BOTH	TECO17	402.5	3067.0	-7842	-12701	5.42	22.86	812	27.43	5.49
TECO POLK POWER	BOTH	TECO18	402.5	3067.4	-7880	-12305	49.68	45.72	400	16.76	5.79
TECO POLK POWER	BOTH	TECO19	402.3	3067.5	-8002	-12183	8.2	60.7	1033	10.7	1.4
TECO POLK POWER	BOTH	TECO20	402.4	3067.3	-7910	-12335	0.3	6.1	533	13.1	0.91
TECO POLK POWER	BOTH	TECO21	402.0	3067.6	-8314	-12015	0.016	22.9	1000	20	1.2
TECO POLK POWER	BOTH	TECO22	402.3	3067.3	-8032	-12358	1.27	60.7	1033	9.1	1.1
TECO POLK POWER 4 CC	BOTH	TECO23	402.5	3067.2	-7880	-12439	17.6	45.72	389	16.15	4.42
TECO POLK POWER 5 CT	BOTH	TECO24	402.5	3066.9	-7842	-12741	33.4	22.86	785	31.39	5.49
USSAC FT MEADE H2SO4 1 & 2 (2200 TPD)	BOTH	USSAC1	416.1	3068.6	5790	-11035	92.48	53.4	355	10	2.59

Table 2-5

PSD Class 2 SO2 Source Inventory
Farmland Hydro, L.P. - Green Bay, Florida

SOURCE DESCRIPTION	INVENTORY Designation	Modeling Designation	UTM Coordinates (km) EAST	UTM Coordinates (km) NORTH	Stack Centered Coordinate EAST	Stack Centered Coordinate NORTH	Emissions (g/s)	Height (m)	Temperature (°K)	Velocity (m/s)	Dimeter (m)
BREWSTER/IMPERIAL DRYER	PSD	BREW1	404.8	3069.5	-5530	-10155	-19.26	27.44	339	15.25	2.29
CARGILL/GARDINIER DRYER	PSD	CARG1	363.4	3082.4	-46930	2745	-28.89	20.73	310	13.12	1.07
CARGILL/GARDINIER SAP #4, 5, 6	PSD	CARG2	363.4	3082.4	-46930	2745	-187.7	22.6	363	7	1.52
CARGILL/GARDINIER SAP #7	PSD	CARG3	363.4	3082.4	-46930	2745	-26.25	45.6	340	12.64	2.29
CARGILL/GARDINIER SAP #8	PSD	CARG4	363.4	3082.4	-46930	2745	-41.16	45.6	339	13.93	2.44
CARGILL/GARDINIER SAP #9	PSD	CARG5	363.4	3082.4	-46930	2745	-54.6	45.6	350	10.3	2.74
CARGILL/GARDINIER SAP #9 (INCR IN9 OF8/9 U06)	BOTH	CARG6	363.4	3082.4	-46930	2745	67.2	45.6	350	12.66	2.74
CARGILL/SEMINOLE/W.R. GRACE DRYER	PSD	CARG7	409.77	3086.99	-560	7335	-39.66	15.24	327	17.32	2.04
CARGILL/SEMINOLE/W.R. GRACE SAP #1 & #2	PSD	CARG8	409.77	3086.99	-560	7335	-216	45.72	352	16.5	1.37
CARGILL/SEMINOLE/W.R. GRACE SAP #3	PSD	CARG9	409.77	3086.99	-560	7335	-52.5	45.72	311	16.7	1.52
CARGILL/SEMINOLE/W.R. GRACE SAP 4, 5 & 6	PSD	CARG10	409.77	3086.99	-560	7335	-121.07	60.96	347	25.1	1.52
CARGILL/SEMINOLE/W.R. GRACE SAP 4, 5 & 6	BOTH	CARG11	409.77	3086.99	-560	7335	143.64	60.96	347	34	1.52
CF BARTOW DAP 1-3	BOTH	CFB1	408.5	3082.5	-1830	2845	3.97	36.4	339	16.11	2.13
CF BARTOW H2SO4 1 (400 TPD)	PSD	CFB2	408.5	3082.5	-1830	2845	-60.9	30.49	350	12.2	1.37
CF BARTOW H2SO4 2 (500 TPD)	PSD	CFB3	408.5	3082.5	-1830	2845	-110.25	30.49	350	10.37	1.68
CF BARTOW H2SO4 3 (600 TPD)	PSD	CFB4	408.5	3082.5	-1830	2845	-107.1	30.49	364	4.27	2.74
CF BARTOW H2SO4 4 (900 TPD)	PSD	CFB5	408.5	3082.5	-1830	2845	-174.83	30.49	358	7.93	2.13
CF BARTOW H2SO4 5 (2400 TPD)	BOTH	CFB6	408.5	3082.5	-1830	2845	50.4	63.41	361	10.88	2.13
CF BARTOW H2SO4 5 (900 TPD)	PSD	CFB7	408.5	3082.5	-1830	2845	-226.8	63.41	358	10.67	2.13
CF BARTOW H2SO4 6 (2400 TPD)	BOTH	CFB8	408.5	3082.5	-1830	2845	50.4	63.41	370	7.28	2.13
CF BARTOW H2SO4 6 (900 TPD)	PSD	CFB9	408.5	3082.5	-1830	2845	-170.1	63.41	359	10.37	2.13
CF BARTOW H2SO4 7 (2000 TPD)	BOTH	CFB10	408.5	3082.5	-1830	2845	42	67.1	351	9.8	2.4
CF PLANT CITY BASELINE A & B	PSD	CFP1	388	3116	-22330	36345	-105	23.8	316	18.8	1.52
CF PLANT CITY BASELINE C & D	PSD	CFP2	388	3116	-22330	36345	-100.8	60.35	353	16.4	2.44
CF PLANT CITY H2SO4 A&B (U02&03)	BOTH	CFP3	388	3116	-22330	36345	88.2	33.5	316	19.5	1.52
CF PLANT CITY PROPOSED C & D (U07-08)	BOTH	CFP4	388	3116	-22330	36345	109.2	60.35	353	17.77	2.44
DOLIME BOILER	PSD	DOLIME1	404.813	3069.548	-5517	-10107	-4.52	27.43	494.1	7.25	0.61
DOLIME DRYER	PSD	DOLIME2	404.813	3069.548	-5517	-10107	-5.68	27.43	333	20.67	1.52
ESTECH/SWIFT DRYER	PSD	ESTE1	411.5	3074.2	1170	-5455	-23.94	18.29	339	8.47	2.95
ESTECH/SWIFT DRYER	PSD	ESTE2	411.5	3074.2	1170	-5455	-22.8	18.75	340	5.06	2.95
ESTECH/SWIFT SAP (610 TPD & 29 LB/Ton)	PSD	ESTE3	411.5	3074.2	1170	-5455	-92.87	30.79	358	3.9	2.13
FARMLAND 1, 2 H2SO4	PSD	FARM1	410.33	3079.655	0	0	-83.98	30.48	311	20.18	1.37
FPC INT. CITY PROP TURBINES/7EA AT 20 DEG F	BOTH	FPC1	446.3	3126	35970	46345	124.4	15.24	819.8	56.21	4.21
FPC INT. CITY PROP TURBINES/7FA AT 20 DEG F	BOTH	FPC2	446.3	3126	35970	46345	110.4	15.24	880.8	32.07	7.04
FPC OSCEOLA PEAKING 11-12	BOTH	FPC3	446.3	3126	35970	46345	102.56	15.2	895.9	0.03	7.04
FPC OSCEOLA PEAKING 7-10	BOTH	FPC4	446.3	3126	35970	46345	111.88	15.2	834.8	0.05	4.21
FPC POLK	BOTH	FPC5	414.4	3073.91	4070	-5745	24.7	34.4	400	40.5	4.1
GEN. PORT. CEMENT KILN 4	PSD	GENPORT1	358	3090.6	-52330	10945	-62.99	35.97	505.2	17.61	2.74

Table 2-5
Continued
PSD Class 2 SO2 Source Inventory
Farmland Hydro, L.P. - Green Bay, Florida

SOURCE DESCRIPTION	INVENTORY Designation	Modeling Designation	UTM Coordinates (km) EAST	NORTH	Stack Centered Coordinate EAST	NORTH	Emissions (g/s)	Height (m)	Temperature (°K)	Velocity (m/s)	Dimeter (m)
GEN. PORT. CEMENT KILN 5	PSD	GENPORT2	358	3090.6	-52330	10945	-69.3	45.42	494.1	5.8	3.81
HARDEE	BOTH	HARDEE1	404.8	3057.4	-5530	-22255	277.6	22.9	389	23.9	4.88
IMC-Agrico/Nichols/Conserve (2@ 1300TPD & 4lb/To	PSD	IMC1	398.4	3084.2	-11930	4545	-54.6	30.5	308	18.9	1.8
IMC-Agrico/Nichols/Conserve (2000TPD @ 4LB/Ton)	PSD	IMC2	398.4	3084.2	-11930	4545	-42	45.7	352	10.3	2.3
IMC-Agrico/Nichols/Conserve (2500TPD @ 4LB/Ton)	BOTH	IMC3	398.4	3084.2	-11930	4545	52.5	45.7	352	12	2.3
IMC-Agrico/Nichols/Conserve ROCK DRYER	PSD	IMC4	398.4	3084.2	-11930	4545	-3.88	24.4	339	12.9	1.52
IMC-Agrico/NEW WALES AFI PLANT	BOTH	IMC5	396.6	3078.9	-13730	-755	0.2	52.4	322	13.1	2.4
IMC-Agrico/NEW WALES DAP	BOTH	IMC6	396.6	3078.9	-13730	-755	5.54	38.6	319.1	20.15	1.83
IMC-Agrico/NEW WALES MULTIPHOS	BOTH	IMC7	396.6	3078.9	-13730	-755	4.8	52.4	314	15.8	1.4
IMC-Agrico/NEW WALES ROCK DRYER	PSD	IMC8	396.6	3078.9	-13730	-755	-34.27	21	347	18.6	2.13
IMC-Agrico/NEW WALES SAP #1, 2, 3 (3 AT 2900 TP	BOTH	IMC9	396.6	3078.9	-13730	-755	182.85	61	350	15.31	2.6
IMC-Agrico/NEW WALES SAP #1, 2, 3 BASELINE	PSD	IMC10	396.6	3078.9	-13730	-755	-146	61	350	14.28	2.6
IMC-Agrico/NEW WALES SAP #4, 5 (2 AT 2900 TPD)	BOTH	IMC11	396.6	3078.9	-13730	-755	121.9	60.7	350	15.31	2.6
IMC-Agrico/PIERCE DRYERS 1, 2	PSD	IMC12	404.1	3078.95	-6230	-705	-24.32	24.38	339	12.94	1.52
IMC-Agrico/PIERCE DRYERS 3, 4	PSD	IMC13	404.1	3078.95	-6230	-705	-23	24.38	339	18.82	2.43
IMC-Agrico/SO. PIERCE DAP PLANT	BOTH	IMC14	407.5	3071.33	-2830	-8325	4.41	38.1	328	14.6	3.1
IMC-Agrico/SO. PIERCE H2SO4 (2 @ 2700 TPD)	BOTH	IMC15	407.5	3071.3	-2830	-8355	113.4	44.18	350	13.29	2.74
IMC-Agrico/SO. PIERCE H2SO4 (2 @1800 TPD)	PSD	IMC16	407.5	3071.3	-2830	-8355	-75.6	45.73	350	26.4	1.6
LAKELAND LARSEN CT	BOTH	LAKE1	409.3	3102.8	-1030	23145	29.11	30.48	783.2	28.22	5.79
LAKELAND MCINTOSH 3	BOTH	LAKE2	409.2	3106.2	-1130	26545	500.1	76.2	350	19.7	4.88
MOBIL Nichols 75 HP BOILER	PSD	MOBIL1	398.3	3084.3	-12030	4645	-0.07	4	522	1.8	0.8
MOBIL Nichols CALCINER	PSD	MOBIL2	398.3	3084.3	-12030	4645	-13.89	28.4	340	19.24	1.09
MOBIL Nichols DRYER 4	BOTH	MOBIL3	398.3	3084.3	-12030	4645	2.44	25.9	339	16.05	2.29
MOBILE Electrophos 400HP BOILER	PSD	MOBILE1	405.6	3079.4	-4730	-255	-6.53	7.32	464	3.23	0.91
MOBILE Electrophos 600HP BOILER	PSD	MOBILE2	405.6	3079.4	-4730	-255	-10.05	6.1	464	7.71	0.91
MOBILE Electrophos CALCINER	PSD	MOBILE3	405.6	3079.4	-4730	-255	-7.11	25.61	306	6.97	2.13
MOBILE Electrophos COKE DRYER	PSD	MOBILE4	405.6	3079.4	-4730	-255	-3.17	18.29	322	22.87	0.7
MOBILE Electrophos Furnace (31.25TPH Rock@ 0.3%S)	PSD	MOBILE5	405.6	3079.4	-4730	-255	-47.25	29.27	314	8.52	2.13
MOBILE Electrophos ROCK DRYER	PSD	MOBILE6	405.6	3079.4	-4730	-255	-21.81	18.29	350	6.79	1.83
MULBERRY COGENERATION CT	BOTH	MULB1	413.6	3080.6	3270	945	13.4	38.1	377	9.31	1.98
Mulbeerry Phosphates/Royster (1003TPD @29 LB/Ton)	PSD	MULB2	406.7	3085.2	-3630	5545	-152.71	51	356	9.9	2.13
Mulberry Phosphates/Royster (1700TPD @4 LB/Ton)	BOTH	MULB3	406.7	3085.2	-3630	5545	35.7	61	360	12.2	2.13
RIDGE COGENERATION	BOTH	RIDGE1	416.7	3100.4	6370	20745	13.8	99.1	350	14.54	3.05
TECO BIG BEND UNIT 3 (24-HR)	PSD	TECO1	361.9	3075	-48430	-4655	-1218	149.4	418	14.33	7.32
TECO BIG BEND UNIT 4 (U04)	BOTH	TECO2	361.9	3075	-48430	-4655	654.7	149.4	342.2	19.81	7.32
TECO BIG BEND UNITS 1&2 (24-HR)	PSD	TECO3	361.9	3075	-48430	-4655	-2436	149.4	422	28.65	7.32
TECO POLK POWER	BOTH	TECO4	402.42	3067.32	-7910	-12335	0.3	6.1	533	13.1	0.91
TECO POLK POWER	BOTH	TECO5	402.298	3067.297	-8032	-12358	1.27	60.7	1033	9.1	1.1

Table Z-5
Concluded
PSD Class 2 SO2 Source Inventory
Farmland Hydro, L.P. - Green Bay, Florida

SOURCE DESCRIPTION	INVENTORY Designation	Modeling Designation	UTM Coordinates (km) EAST	UTM Coordinates (km) NORTH	Stack Centered Coordinates EAST	Stack Centered Coordinates NORTH	Emissions (g/s)	Height (m)	Temperature (°K)	Velocity (m/s)	Dimeter (m)
TECO POLK POWER	BOTH	TECO6	402.328	3067.472	-8002	-12183	8.2	60.7	1033	10.7	1.4
TECO POLK POWER	BOTH	TECO7	402.45	3067.35	-7880	-12305	49.68	45.72	400	16.76	5.79
TECO POLK POWER	BOTH	TECO8	402.488	3066.954	-7842	-12701	5.42	22.86	812	27.43	5.49
TECO POLK POWER	BOTH	TECO9	402.016	3067.64	-8314	-12015	0.016	22.9	1000	20	1.2
TECO POLK POWER 4 CC	BOTH	TECO10	402.45	3067.216	-7880	-12439	17.6	45.72	389	16.15	4.42
TECO POLK POWER 5 CT	BOTH	TECO11	402.488	3066.914	-7842	-12741	33.4	22.86	785	31.39	5.49
USS AGRI-CHEM BARTOW DRYER	PSD	USSAG1	413.2	3086.3	2870	6645	-3.41	15.8	332	10.01	1.83
USS AGRI-CHEM BARTOW SAP (800 TPD & 10 LB/Ton)	PSD	USSAG2	413.2	3086.3	2870	6645	-42	28.96	305	7.5	2.12
USSAC FT MEADE GTSP	PSD	USSAC1	416	3069	5670	-10655	-18.27	28.35	330	17.6	1.52
USSAC FT MEADE H2SO4 (1500 TPD @ 10 LB/Ton)	PSD	USSAC2	416.21	3068.74	5880	-10915	-78.8	29	314	6.77	3.02
USSAC FT MEADE H2SO4 1 & 2 (2200 TPD)	BOTH	USSAC3	416.12	3068.62	5790	-11035	92.48	53.4	355	10	2.59

TABLE 2-6
SUMMARY OF CLASS II AREA SULFUR DIOXIDE IMPACTS ANALYSIS

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

MET. DATA	SULFUR DIOXIDE IMPACT ($\mu g/m^3$)					
	PSD			AAQS		
	ANNUAL(1)	3-HOUR(2)	24-HOUR(2)	ANNUAL(1)	3-HOUR(2)	24-HOUR(2)
1987	0	150.9	36.0	44.9	537.1	183.1
1988	0	167.5	56.9	42.5	554.2	177.9
1989	0	208.9	51.4	43.4	565.3	207.8
1990	0	184.7	28.7	46.0	559.2	182.5
1991	0	197.3	33.8	45.4	495.8	185.7
MAX. INCL. BACKGROUND (3)	0	208.9	56.9	57.0	576.3	218.8
INCREMENT & STD.	20	512	91	60	1300	260
STD. EXCEEDED	NO	NO	NO	NO	NO	NO

NOTE:

(1) The impact represents the highest-high impact.

(2) The impact represents the highest second-high impact.

(3) A background concentration of 11 ug/m3 was included.

Figure 2.1-1
Modeling Receptor Network For Class 2 and FAAQS
Significant Impact Analysis

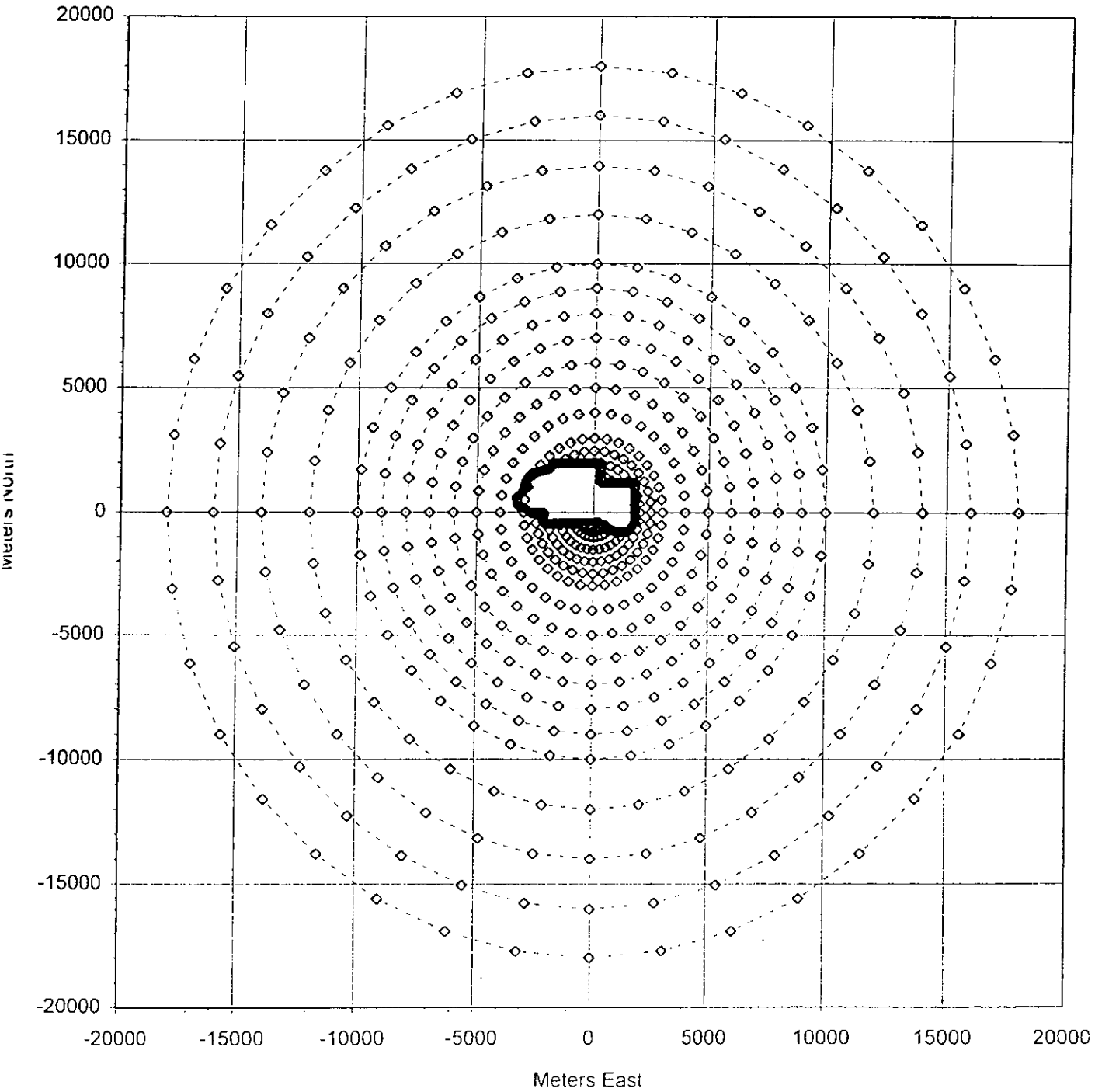


Figure 2.1-2
Modeling Receptor Network For Class 1 Chasshowitzka N.W.R.
Significant Impact Analysis

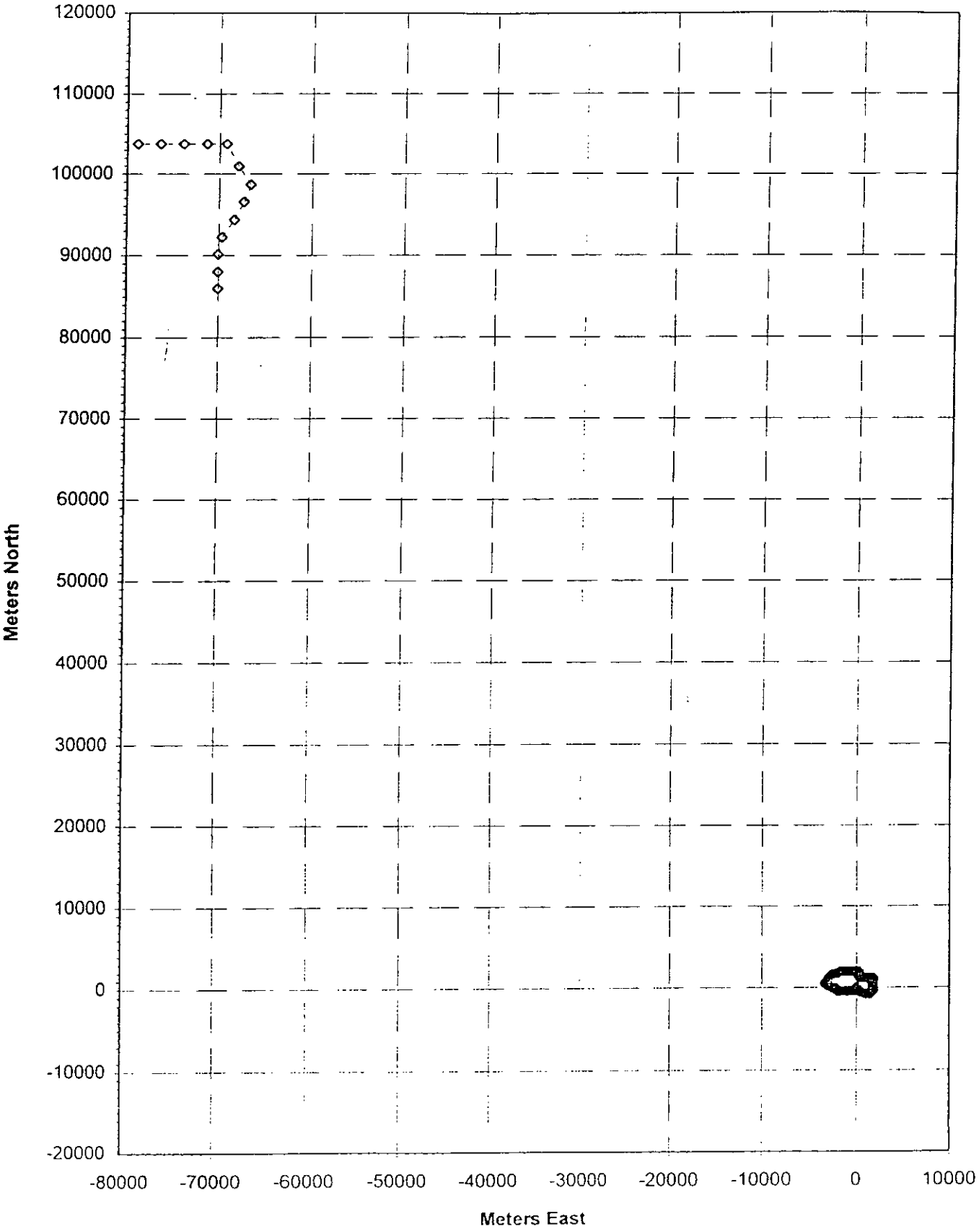


Figure 2.1-3
Modeling Receptor Network for For Class 2 and FAAQS Increment Analysis
3-Hour Averaging Periods

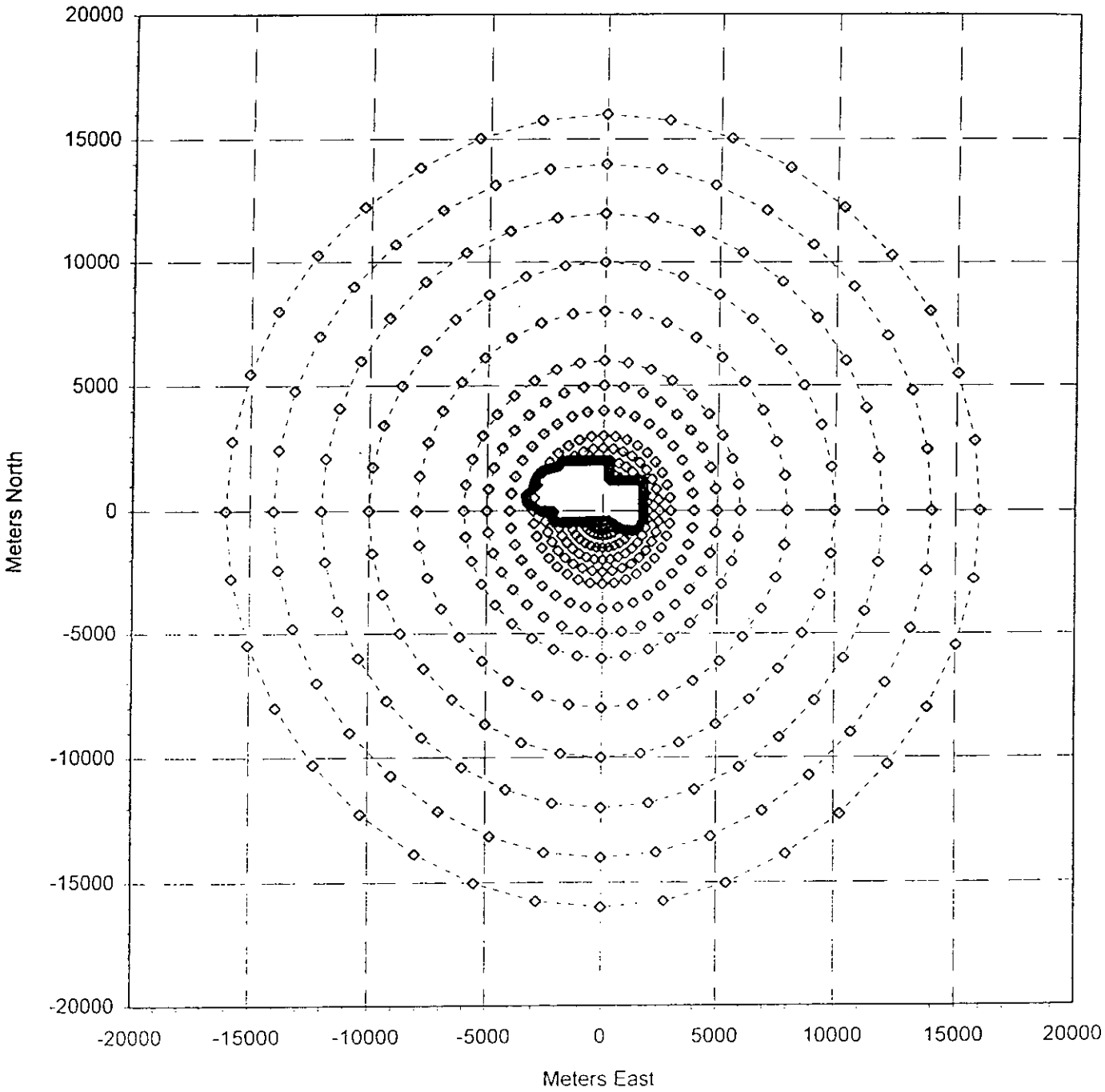


Figure 2.1-4
Modeling Receptor Network for For Class 2 and FAAQS Increment Analysis
24-Hour Averaging Periods

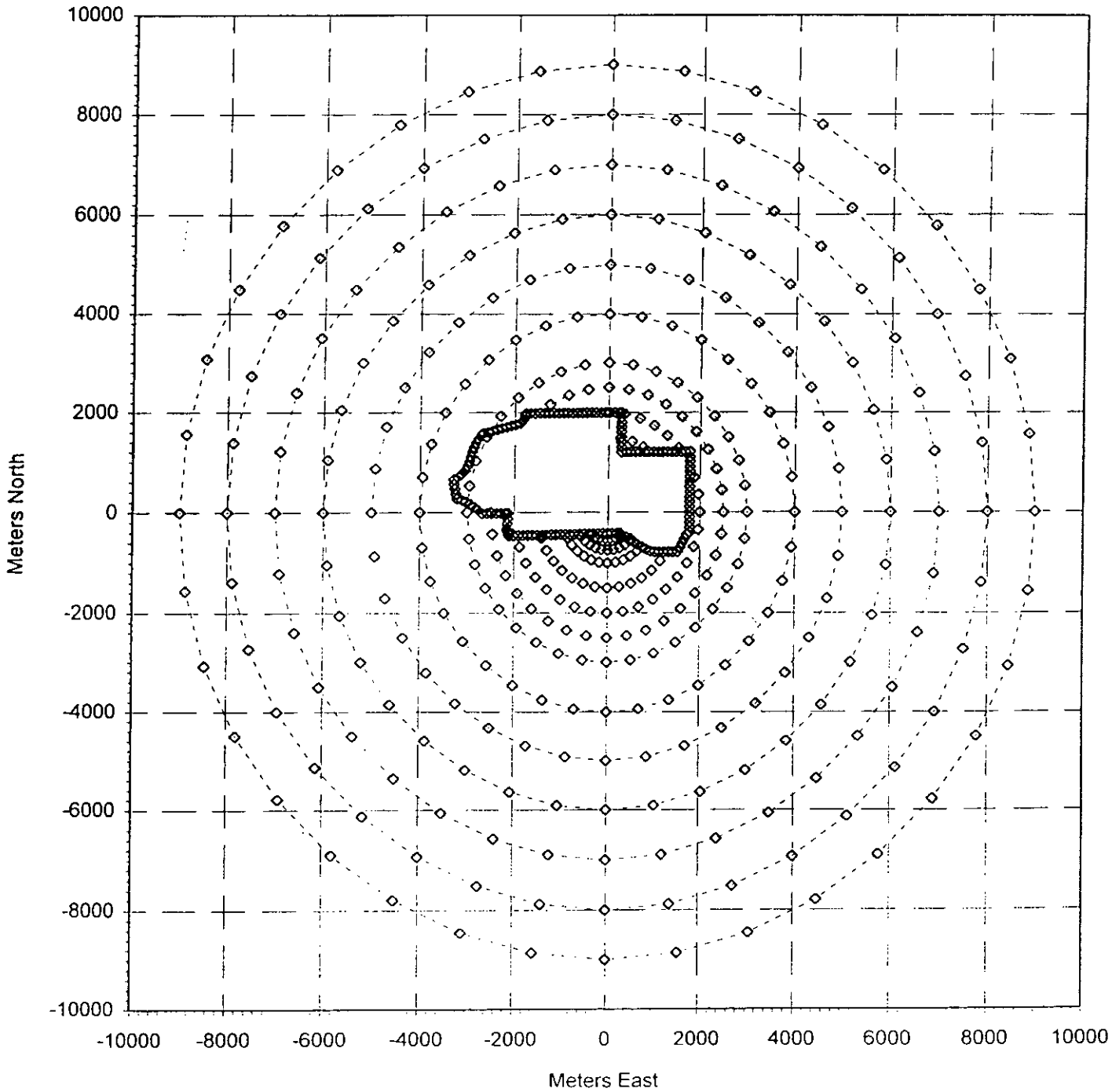
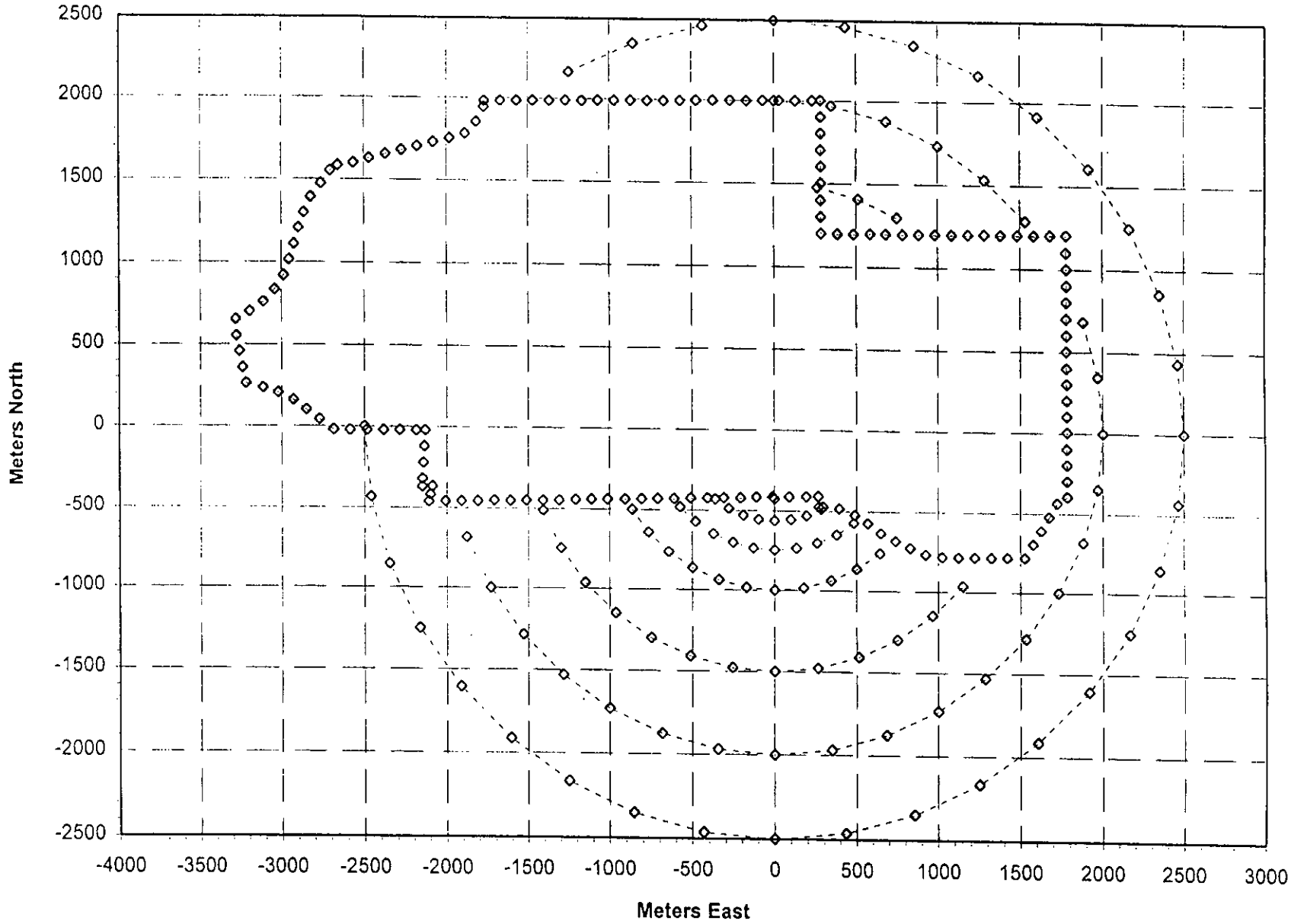


Figure 2.1-6
Modeling Receptor Network for For Class 2 and FAAQS Increment Analysis
Annual Averaging Periods



APPENDIX
EMISSION RATE CALCULATIONS

1.0 PERMITTED EMISSION RATES

1.1 No. 3 SULFURIC ACID PLANT

SO_2 = 350 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 1533 TPY

ACID MIST (SAM) = 13.1 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 57.5 TPY

1.2 No. 4 SULFURIC ACID PLANT

SO_2 = 350 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 1533 TPY

SAM = 13.1 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 47.5 TPY

1.3 No. 5 SULFURIC ACID PLANT

SO_2 = 467 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 2044 TPY

SAM = 17.5 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 76.7 TPY

1.4 No. 6 SULFURIC ACID PLANT

Not currently permitted.

2.0 PROPOSED EMISSION RATE CALCULATIONS:

2.1 No. 3 SULFURIC ACID PLANT

To be permanently shut down and dismantled.

2.2 No. 4 SULFURIC ACID PLANT

SO_2 = 1850 tons/day x day/24 hrs x 4.0 lbs/ton
= 308.3 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 1350.5 TPY

SAM = 1850 tons/day x day/24 hrs x 0.15 lb/ton
= 11.6 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 50.6 TPY

2.3 No. 5 SULFURIC ACID PLANT

SO_2 = 2400 tons/day x day/24 hrs x 4.0 lbs/ton
= 400 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 1752 TPY

SAM = 2400 tons/day x day/24 hrs x 0.15 lb/ton
= 15.0 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 65.7 TPY

2.4 No. 6 SULFURIC ACID PLANT

SO_2 = 2750 tons/day x day/24 hrs x 4.0 lbs/ton
= 458.3 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 2007.5 TPY

SAM = 2750 tons/day x day/24 hrs x 0.15 lb/ton
= 17.2 lbs/hr
x 8760 hrs/yr x ton/2000 lbs
= 75.3 TPY

Please note that the proposed project does not result in any emissions increase, as the current allowable emissions are simply redistributed.

MODELING OUTPUT ON DISK

CURRENT AIR PERMIT

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:
Farmland Hydro, L.P.
County Road 640 West
Bartow, Florida 33830

Permit Number: AC 53-265755
PSD-FL-225
Expiration Date: Dec. 31, 1996
County: Polk
UTM Coordinates: 17-410.3 km E
17-3079.7 km N
Project: Sulfuric Acid Plant Production Increase

This permit is issued under the provisions of Chapter 403, Florida Statutes; Chapters 62-210, 212, 272, 296 and 297, Florida Administrative Code (F.A.C.); and, Chapter 62-4, F.A.C. The above named permittee is hereby authorized to perform the work or operate the emission unit/source shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department of Environmental Protection (Department) and specifically described as follows:

For the increase in production rate of the Nos. 3, 4 and 5 sulfuric acid plants from a total of 5,640 tons of sulfuric acid product/day to 7,000 tons/day. No major physical changes are required for this modification. The sources are located at the permittee's facility in Bartow, Polk County, Florida.

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

Attachments are listed below:

1. Application received February 21, 1995
2. Department's letter dated March 22, 1995
3. USDOI's letter dated March 29, 1995
4. Koogler & Assoc. letter dated May 10, 1995
5. Memorandum of Understanding Regarding Best Operational Start-up Practices for Sulfuric Acid Plants, 1989

GENERAL CONDITIONS:

arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

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

13. This permit also constitutes:

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

14. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application

GENERAL CONDITIONS:

for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

1. Unless otherwise indicated, the subject modification shall be in accordance with the capacities and specifications stated in the application.

2. The maximum production rates for the Nos. 3 and 4 sulfuric acid plants shall be 2,100 tons/day each while that for the No. 5 sulfuric acid plant shall be 2,800 tons/day, based on 100% sulfuric acid (H_2SO_4). [Rule 62-212.200(56), F.A.C.]

3. The Nos. 3, 4 and 5 sulfuric acid plants may operate on a full-time basis (8,760 hours per year). [Rule 62-212.200(56), F.A.C.]

4. Emissions of sulfur dioxide (SO_2), sulfuric acid mist (SAM) and visible emissions (VE) from the Nos. 3, 4 and 5 sulfuric acid plants shall not exceed the following limits [Rule 62-212.410, F.A.C.]:

	SO_2		SAM		VE
Plant	lb/hr	TPY	lb/hr	TPY	%
3	350	1,533	13.1	57.5	10
4	350	1,533	13.1	57.5	10
5	467	2,044	17.5	76.7	10

SPECIFIC CONDITIONS:

5. Before this permit expires, performance testing of emissions from each unit shall be conducted with the emission unit operating at permitted capacity. Permitted capacity is defined as 90-100% of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then emission units may be tested at less than 90% of the maximum operating rate allowed by the permit. In this case, subsequent emission unit operation is limited to 110% of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities (with prior notification provided to the Department) is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the permitted capacity in the permit. [Rule 62-297.340(1)(a), F.A.C.]

6. Performance testing shall be conducted and compliance determined using the test methods and procedures set forth in 40 CFR 60.85(a) through (c). Pursuant to Rule 62-297.340(1)(i), the Department's Southwest District office shall be notified in writing at least 15 days prior to performance testing. Pursuant to Rule 62-297.570(1) and (2), written reports of the test results shall be submitted to that office within 45 days of test completion.

7. A continuous monitoring system for the measurement of sulfur dioxide emissions shall be installed, calibrated, operated and maintained as described in 40 CFR 60.84(a) through (e). [Rule 62-296.800, F.A.C.; 40 CFR 60.84]

8. Objectionable odors associated with air emissions shall be prohibited. [Rule 62-296.320(2), F.A.C.]

9. Pursuant to Rule 62-210.700(1), F.A.C., excess emissions from the sulfuric acid plants resulting from startup, shutdown, malfunction, or load change shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed three hours in any 24-hour period unless specifically authorized by the Department for a longer duration. Best operational start-up practices shall be followed as described in the attached Memorandum of Understanding signed in 1989.

10. Stack sampling facilities shall be provided by the permittee in accordance with Rule 62-297.345, F.A.C.

SPECIFIC CONDITIONS:

11. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rule 62-4.090, F.A.C.].

12. An application for an operation permit must be submitted to the Department's Southwest District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. The operation permit application shall include a set of conditions acceptable to the Department for startup/shutdown of the permittee's sulfuric acid plant. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit. [Rules 62-4.055 and 62-4.220, F.A.C.].

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes, P.E.
Director
Division of Air Resources Management

Best Available Control Technology (BACT) Determination
Farmland Hydro, L.P.
Polk County
Permit Number AC 53-265755
PSD-FL-225

The applicant proposes to increase the total production of the No. 3, 4 and 5 Sulfuric Acid Plants (SAP) from 5,640 tons per day (TPD) to 7,000 TPD at the applicant's phosphate fertilizer manufacturing facility on County Road 640 West in Polk County, Florida. The proposed project will result in a significant increase in emissions of sulfur dioxide (SO_2) and sulfuric acid mist. The project is therefore subject to Prevention of Significant Deterioration (PSD) review in accordance with Rule 62-212.400, Florida Administrative Code (F.A.C.). The BACT determination is part of the PSD review requirements in accordance with Rule 62-212.410, F.A.C.

Date Application Received: February 21, 1995

Date Application Complete: May 11, 1995

BACT Determination Proposed by Applicant:

Control Technology: Double Absorption/Fiber Mist Eliminators

Emission Limits: SO_2: 4 lbs/ton of 100% H_2SO_4 produced
Acid Mist: 0.15 lb/ton of 100% H_2SO_4 produced
Visible Emissions: 10% opacity

BACT Determination Procedure:

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

(a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

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

BACT Determined by the Department: Same as proposed by applicant

BACT Determination Rationale

The Department's BACT determination is the same as that proposed by the applicant. This is consistent with determinations completed by other states and the Standards of Performance for Sulfuric Acid Plants, 40 CFR 60 Subpart H, (double absorption process). The process itself is the control technology for SO_2. For this reason, more stringent limits have not been required. The emission limits reflect a conversion efficiency of around 99.4% of SO_2 to H_2SO_4. High efficiency mist eliminators are considered BACT for sulfuric acid mist. BACT/LAER Clearinghouse information indicates that double absorption technology and the use of high efficiency mist eliminators are representative of BACT using the top-down approach.

Conclusion

The emission limits are equivalent to those in other BACT determinations and are in compliance with all air pollution regulations. It is concluded that the emission limits established herein represent BACT.

BACT Analysis Details Available From:

John Reynolds, Permit Engineer
New Source Review Section
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

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

9/20, 1995
Date

Approved by:

Howard L. Rhodes, P.E., Director
Division of Air Resources Management

9/22/95, 1995
Date

Policy Book

Florida Department of Environmental Protection

Memorandum

TO: Jerry Kissel

FROM: Al Linero 8/21

DATE: August 21, 1997

SUBJECT: PSD Applicability Question Raised in August 14, 1997 Letter (attached)

This is in response to your question on whether actual emissions should be presumed to be equal to allowables in a case where only six months of data are available. We agree that the rule provision (Rule 62-210.200(12)(b)) is intended for situations where normal operation has not begun such that actual emission data are either not available or not sufficient to predict annual emissions. In your example, we assume that normal operation has begun and that we have data sufficient to predict annual emissions. Assuming that there is a corresponding 3.3% production increase or physical change behind the request for an increase in allowable emissions from 300 to 310 TPY, actual emissions (assume PM) could be presumed to increase by up to 3.3% of 280 or 9.3 TPY. This actual increase would not be a PSD-significant change in real terms, but it would trigger PSD applicability for PM if the allowables are increased to 25 TPY over actual emissions or 305 TPY.

Our analysis appears to be consistent with the attached excerpt from the EPA's New Source Review Manual (October 1990 Draft) since the source is not operating "at or near its allowable emissions level". In fact, the figures suggest that the actual increase could be absorbed with no increase in allowables, although the safety margin would be tighter. We believe that the company could escape PSD by proposing a new allowable of 304.9 TPY which would give them a margin for compliance of about 15.6 TPY.

This case is only hypothetical. We prefer to evaluate specific cases where we know actual and projected production and emission rates, as well as the nature of the previous and planned physical and control equipment alterations. Regarding another specific inquiry from Mr. Raval that may be connected with this, please note that an emissions decrease cannot be credited from a permit that has not been constructed or operated. We interpret that to also apply to modifications that have not yet been fully implemented.

If there are further questions, please call me or John Reynolds at SC 278-1344.

AAL/jr
Attachment

creditable emissions increase or decrease involves determining old and new actual annual emissions levels for each affected emission unit.

The following basic criteria should be used when quantifying the increase or decrease:

- For proposed new or modified units which have not begun normal operations, the potential to emit must be used to determine the increase from the units.
- For an existing unit, actual emissions just prior to either a physical or operational change are based on the lower of the actual or allowable emissions levels. This "old" emissions level equals the average rate (in tons per year) at which the unit actually emitted the pollutant during the 2-year period just prior to the change which resulted in the emissions increase. These emissions are calculated using the actual hours of operation, capacity, fuel combusted and other parameters which affected the unit's emissions over the 2-year averaging period. In certain limited circumstances, where sufficient representative operating data do not exist to determine historic actual emissions and the reviewing agency has reason to believe that the source is operating at or near its allowable emissions level, the reviewing agency may presume that source-specific allowable emissions [or a fraction thereof] are equivalent to (and therefore are used in place of) actual emissions at the unit. For determining the difference in emissions from the change at the unit, emissions after the change are the potential to emit from the units.
- A source cannot receive emission reduction credit for reducing any portion of actual emissions which resulted because the source was operating out of compliance.
- An emissions decrease cannot be credited from a unit that has not been constructed or operated.

Examples of how to apply these creditability criteria for prospective emissions reductions is shown in Figure A-1. As shown in Case I of Figure A-1, the potential to emit for an existing emissions unit (which is based on the existing allowable emission rate) is greater than the actual emissions, which are based on actual operating data (e.g., type and amount of fuel combusted at the unit) for the past 2 years. The source proposes to switch to a lower sulfur fuel. The amount of the reduction in this case is the difference between the actual emissions and the revised allowable emissions. (Recall that

1050053-018-AC

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

KA 123-97-02

September 12, 1997

RECEIVED
OCT 03 1997
BUREAU OF
AIR REGULATION

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

Subject: Polk County-AP
Farmland Hydro, L.P.
Green Bay Complex
Minor Permit Modification Request
Sulfuric Acid Production Reallocation -1050053-018-AC
PSD-FL-225

Dear Mr. Linero:

Farmland Hydro, L.P. is submitting this minor permit amendment request in order to amend the facility-wide allocation of sulfuric acid production, and the associated emissions, at the existing facility in Polk County, Florida.

As you are aware, the facility-wide allocation was established under PSD-FL-225, AC53-265755, which included the existing Nos. 3, 4 and 5 Sulfuric Acid Plants. Farmland proposes to construct a new (No. 6) plant to replace the existing No. 3 plant. The proposed project will not affect the federally enforceable production cap and emissions cap associated with the facility, only the re-allocation of the production among the three plants.

Enclosed are four (4) copies of the permit amendment application, along with a check in the amount of $250 (amendment processing 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.

cc: SWD
EPA
NPS
Polk Co.
> application

JBK:par
Enc.

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

1050053-018-AC

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

KA 123-97-02

September 12, 1997

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

Subject: Polk County-AP
Farmland Hydro, L.P.
Green Bay Complex
Minor Permit Modification Request
Sulfuric Acid Production Reallocation -1050053-018-AC
PSD-FL-225

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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

0000002944

FHL
NBCDA
FHAP

CODE	CHECK NO.
IO	0000002944
DATE	PAGE
09/26/1997	1 of 1

FARMLAND HYDRO, L.P. ACCOUNTS PAYABLE CHECK DETAIL

B.A.	DATE	INVOICE NO.	DOCUMENT NO.	GROSS	DISCOUNT	NET
FHL	09/15/1997	91597	100003883	250.00		250.00
Return to Joan						
		Total		$250.00		$250.00

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. 0000002944

DATE	CHECK NO.
09/26/1997	0000002944
AMOUNT	
*******$250.00	

AMOUNT VOID AFTER 180 DAYS

PAY EXACTLY **********250 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

⑈0000002944⑈ ⑆061112788⑆ 3299910424⑈

Farmland

THIS DISK CONTAINS SULFUR DIOXIDE (SO2) MODELING FILES FOR THE FARMLAND HYDRO, L.P. FACILITY IN GREEN BAY, FLORIDA. THE FOLLOWING ARE OUTPUT FILES ARE IN SELF EXTRACTING ARCHIVE FORMAT.

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

SO2 ASI ANALYSIS OF CHASSAHOWITZKA NWR PSD CLASS I AREA:

ASI-C1	EXE	50,152 09-12-97	

ASI ANALYSIS OF FAAQS, AND PSD CLASS 2 AREA:

ASI-C2	EXE	162,699 09-12-97	

INCREMENT ANALYSIS OF PSD CLASS 2 AND FAAQS AREA:

C2-INV	EXE	365,603 09-12-97	PSD CLASS 2 AREA
FQS-INV	EXE	382,843 09-12-97	FAAQS AREA

AND:

BPIP-DW	EXE	20,828 09-12-97	BUILDING DOWNWASH CALCULATIONS

TO UNARCHIVE THESE FILES COPY THEM TO A HARD DISK DRIVE AND TYPE THE FILE NAME. FOR EXAMPLE TO UNARCHIVE THE SO2 ASI CLASS 2 ISCST3 OUTPUT FILES, TYPE "ASI-C2" AND PRESS ENTER. THE FILES WILL AUTOMATICALLY UNARCHIVE TO THE HARD DISK DRIVE. THESE ARCHIVED FILES CONTAIN THE MODELING AND ANALYSIS FILES IN ASCII FORMAT DESCRIBED AS FOLLOWS;

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

C1ASI87	OUT	60,893 09-07-97
C1ASI88	OUT	60,893 09-07-97
C1ASI89	OUT	60,893 09-07-97
C1ASI90	OUT	60,893 09-07-97
C1ASI91	OUT	60,893 09-07-97

NO SO2 SIGNIFICANCE WAS FOUND AT THE PSD CLASS 1 AREA

THE FOLLOWING FILES CONTAIN SIGNIFICANT IMPACT ANALYSIS (SIA) FOR FAAQS AND PSD CLASS 2 AREAS FOR SO2. THERE ARE DISCRETE RECEPTORS AT 100 METER INTERVALS ALONG THE PROPERTY LINE, AND ADDITIONAL DISCRETE POLAR RECEPTORS FROM 427 METERS TO 2500 METERS AND POLAR RECEPTOR RINGS @ 3000 4000 5000 6000 7000 8000 9000 10000 12000 14000 16000 18000 METERS. POLAR RECEPTORS ARE CENTERED AT UTMS X=410,330E Y=3074,655N ON SULFURIC ACID PLANT NUMBER 5 OR NORTH WEST OF THE INTERSECTION OF 1ST AND B STREETS.

THE FOLLOWING SIA FILES ARE PROVIDED:

C2ASI87	OUT	212,787 09-07-97	SO2 CLASS 2 AND FAAQS SIA FOR 1987
C2ASI88	OUT	212,787 09-07-97	SO2 CLASS 2 AND FAAQS SIA FOR 1988
C2ASI89	OUT	212,787 09-07-97	SO2 CLASS 2 AND FAAQS SIA FOR 1989
C2ASI90	OUT	212,787 09-07-97	SO2 CLASS 2 AND FAAQS SIA FOR 1990
C2ASI91	OUT	212,787 09-07-97	SO2 CLASS 2 AND FAAQS SIA FOR 1991

THE SIA MODELING FOR PSD CLASS 2 AND FAAQS INDICATES THAT PSD CLASS 2 INCREMENT AND FAAQS STANDARD ANALYSIS ARE REQUIRED.

PSD CLASS 2 AND FAAQS INVENTORIES WERE COMPILED AND APPLIED TO THE RECEPTOR GROUPS THAT DEMONSTRATED SIGNIFICANCE. FOR THE FIVE YEARS MODELED, EACH AVERAGING PERIOD DEMONSTRATED MAXIMUM SIGNIFICANCE AT DIFFERENT RECEPTOR DISTANCES:

3-HOUR	14 KILOMETERS
24-HOUR	8 KILOMETERS
ANNUAL	DISCRETE RECEPTORS

IN THE INCREMENT ANALYSIS FOR THE 3-HOUR AVERAGING PERIOD, ALL DISCRETE RECEPTORS MENTIONED ABOVE WERE USED WITH POLAR RECEPTOR RINGS @ 3000 4000 5000 6000 7000 8000 10000 12000 14000 AND 16000 METERS.

FP2-387	OUT	197.698	09-11-97	PSD CLASS 2 FOR 1987
FP2-388	OUT	197.698	09-11-97	PSD CLASS 2 FOR 1988
FP2-389	OUT	197.698	09-12-97	PSD CLASS 2 FOR 1989
FP2-390	OUT	197.698	09-12-97	PSD CLASS 2 FOR 1990
FP2-391	OUT	197.698	09-12-97	PSD CLASS 2 FOR 1991

FNQ-387	OUT	206.603	09-11-97	FAAQS FOR 1987
FNQ-388	OUT	206.603	09-11-97	FAAQS FOR 1988
FNQ-389	OUT	206.603	09-11-97	FAAQS FOR 1989
FNQ-390	OUT	206.603	09-11-97	FAAQS FOR 1990
FNQ-391	OUT	206.603	09-11-97	FAAQS FOR 1991

IN THE INCREMENT ANALYSIS FOR THE 24-HOUR AVERAGING PERIOD, ALL DISCRETE RECEPTORS MENTIONED ABOVE WERE USED WITH POLAR RECEPTOR RINGS @ 3000 4000 5000 6000 7000 8000 AND 9000 METERS.

FP2-2487	OUT	196.045	09-06-97	PSD CLASS 2 FOR 1987
FP2-2488	OUT	195.911	09-06-97	PSD CLASS 2 FOR 1988
FP2-2489	OUT	195.911	09-06-97	PSD CLASS 2 FOR 1989
FP2-2490	OUT	195.911	09-07-97	PSD CLASS 2 FOR 1990
FP2-2491	OUT	195.911	09-07-97	PSD CLASS 2 FOR 1991

FNQ-2487	OUT	203.029	09-06-97	FAAQS FOR 1987
FNQ-2488	OUT	203.029	09-06-97	FAAQS FOR 1988
FNQ-2489	OUT	203.029	09-06-97	FAAQS FOR 1989
FNQ-2490	OUT	203.029	09-06-97	FAAQS FOR 1990
FNQ-2491	OUT	203.029	09-07-97	FAAQS FOR 1991

IN THE INCREMENT ANALYSIS FOR THE ANNUAL AVERAGING PERIOD, ONLY THE DISCRETE RECEPTORS MENTIONED ABOVE WERE REQUIRED.

FP2-AN87	OUT	145,953	09-07-97 PSD CLASS 2 FOR 1987
FP2-AN88	OUT	145,953	09-07-97 PSD CLASS 2 FOR 1988
FP2-AN89	OUT	145,953	09-07-97 PSD CLASS 2 FOR 1989
FP2-AN90	OUT	145,953	09-07-97 PSD CLASS 2 FOR 1990
FP2-AN91	OUT	145,953	09-07-97 PSD CLASS 2 FOR 1991
FNQ-AN87	OUT	153,027	09-07-97 FAAQS FOR 1987
FNQ-AN88	OUT	153,027	09-07-97 FAAQS FOR 1988
FNQ-AN89	OUT	153,027	09-07-97 FAAQS FOR 1989
FNQ-AN90	OUT	153,027	09-07-97 FAAQS FOR 1990
FNQ-AN91	OUT	153,027	09-07-97 FAAQS 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;

FRM	INP	2,812	09-06-97	INPUT FOR SO2 SOURCES
FRM	OUT	5,836	09-06-97	OUTPUT FOR SO2 SOURCES
FRM	SUM	93,651	09-06-97	SUMMARY FOR SO2 SOURCES

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

SEPTEMBER 12, 1997
MARK KOLETZKE
KOOGLER AND ASSOCIATES
(352) 377-5822
KOLET@WORLDNET.ATT.NET

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

KA 123-97-01

August 15, 1997

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

Subject: Farmland Hydro, L.P.
Extension of Permit Expiration Date
Sulfuric Acid Plants 3, 4 and 5
AC53-265755, PSD-FL-225

Dear Mr. Linero:

This request is to extend the construction permit expiration date for FDEP permit No. AC53-265755, PSD-FL-225, for the above referenced units.

It is our understanding that FDEP is considering some rule changes which would allow construction permits to expire. As it is likely that the Title V permit for Farmland may be issued after the proposed rulemaking changes take effect, it is requested that the above permit be extended to 60 days after the Title V permit is issued.

Enclosed is a check in the amount of $50 (permit extension fee).

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

Very truly yours,

KOOGLER & ASSOCIATES

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

JBK:par
encl.

c: C. Jenkins, Farmland
B. Thomas, FDEP Tampa

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:
Farmland Hydro, L.P.
County Road 640 West
Bartow, Florida 33830

Permit Number: AC 53-265755
PSD-FL-225
Expiration Date: Dec. 31, 1996
County: Polk
UTM Coordinates: 17-410.3 km E
17-3079.7 km N
Project: Sulfuric Acid Plant
Production Increase

This permit is issued under the provisions of Chapter 403, Florida Statutes; Chapters 62-210, 212, 272, 296 and 297, Florida Administrative Code (F.A.C.); and, Chapter 62-4, F.A.C. The above named permittee is hereby authorized to perform the work or operate the emission unit/source shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department of Environmental Protection (Department) and specifically described as follows:

For the increase in production rate of the Nos. 3, 4 and 5 sulfuric acid plants from a total of 5,640 tons of sulfuric acid product/day to 7,000 tons/day. No major physical changes are required for this modification. The sources are located at the permittee's facility in Bartow, Polk County, Florida.

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

Attachments are listed below:

1. Application received February 21, 1995
2. Department's letter dated March 22, 1995
3. USDOI's letter dated March 29, 1995
4. Koogler & Assoc. letter dated May 10, 1995
5. Memorandum of Understanding Regarding Best Operational Start-up Practices for Sulfuric Acid Plants, 1989

Farmland Hydro, L.P.

Charles W. Jenkins
Manager of Environmental and Safety Services

Green Bay Plant
County Road 640
Post Office Box 960
Bartow, Florida 33831
Tele: 941 533-1141
Fax: 941 533-8793

December 20, 1996

Mr. W. C. Thomas
Florida Department of Environmental Protection
Southwest District Office
Division of Air Resources Management
3804 Coconut Palm Drive
Tampa, FL 33619-8318

RE: Application for Operating Permit for Permit No. AC53-265755

Dear Mr. Thomas:

Enclosed are two signed copies of the Application for Operating of air sources in completion of the above referenced Construction Permit No. AC53-265755. I realize that I am a little behind the time schedule for submission of this application according to Specific Permit Condition No. 12, and as a result I would like to request an extension of the deadline on this permit. Please extend the expiration of this permit from December 31, 1996, to 60 days forward.

If you have any questions, please give me a call at (941) 533-1141, extension 334.

Sincerely,

Charles W. Jenkins
Manager of Environmental and Safety Services

CWJ:jp\210-96
enclosures - 2 binders

RULE 62-213.420(1)(a)2. ALLOWS THIS APP'N TO BE TREATED AS A SUPPLEMENT TO TITLE V APP'N. AC53-265755 DOES NOT NEED TO BE EXTENDED.

J. Russell 12/31/96

A.I. C. JENKINS
TITLE V APP'N
S.A.P. PLANT 3 FILE

435

JOHN B. KOOGLER, P.A.
DBA KOOGLER & ASSOCIATES
4014 N.W. 13TH ST., 352-377-5822
GAINESVILLE, FL 32609

63-2/630
00320

8/15 1997

PAY TO THE ORDER OF Florida Dept of Environmental Protection $ 50 00

Fifty and 00/100 DOLLARS

FIRST UNION
First Union National Bank of Florida
Gainesville, Florida
24 Hour Information Service
1-800-735-1012

FOR Farmland Hydro - air permit extension

David Lee Johnson MP

⑈000435⑈ ⑆063000021⑆ 213200045690 2⑈

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DEP File No. AC 53-265755
PSD-FL-225
Polk Co.

Mr. C. M. Farris
Vice President - Operations
Farmland Hydro, L.P.
County Road 640 West
Bartow, Florida 33830

_____/

Enclosed is Permit Number AC 53-265755 (PSD-FL-225) for an increase in the combined total production rate of the Nos. 3, 4 and 5 sulfuric acid plants from 5,640 to 7,000 tons per day at Farmland's facility located near Bartow in Polk County, Florida, issued pursuant to Section (s) 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 9-25-95 to the listed persons.

Clerk Stamp

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

Kuri Jobes (Clerk) 9/25/95 (Date)

Copies furnished to:
W. Thomas, SWD
R. Harwood, Polk County
J. Harper, EPA
J. Bunyak, NPS
J. Koogler, P.E.

Final Determination

Farmland Hydro, L.P.
Bartow, Polk County, Florida

SULFURIC ACID PRODUCTION INCREASE
PLANTS 3, 4 AND 5

Permit Number
PSD-FL-225
AC 53-265755

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

September 19, 1995

Final Determination
Farmland Hydro, L.P.
PSD-FL-225
AC 53-265755

The Technical Evaluation and Preliminary Determination for a construction permit to increase the combined total production of the Nos. 3, 4 and 5 sulfuric acid plants from 5,640 to 7,000 tons per day (100% acid basis) at the applicant's facility in Bartow, Polk County, Florida, was distributed on August 3, 1995. The Notice of Intent to Issue was published in the Ledger on August 12, 1995. Copies of the evaluation were available for public inspection at the Department's offices in Tallahassee and Tampa.

Since no adverse comments were received following distribution of the proposed permit, the final action of the Department will be to issue the construction permit as proposed.

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:
Farmland Hydro, L.P.
County Road 640 West
Bartow, Florida 33830

Permit Number: AC 53-265755
PSD-FL-225
Expiration Date: Dec. 31, 1996
County: Polk
UTM Coordinates: 17-410.3 km E
17-3079.7 km N
Project: Sulfuric Acid Plant Production Increase

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

Attachments are listed below:

1. Application received February 21, 1995
2. Department's letter dated March 22, 1995
3. USDOI's letter dated March 29, 1995
4. Koogler & Assoc. letter dated May 10, 1995
5. Memorandum of Understanding Regarding Best Operational Start-up Practices for Sulfuric Acid Plants, 1989

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or

GENERAL CONDITIONS:

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

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and,

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source

GENERAL CONDITIONS:

arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

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

13. This permit also constitutes:

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

14. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application

GENERAL CONDITIONS:

for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

1. Unless otherwise indicated, the subject modification shall be in accordance with the capacities and specifications stated in the application.

2. The maximum production rates for the Nos. 3 and 4 sulfuric acid plants shall be 2,100 tons/day each while that for the No. 5 sulfuric acid plant shall be 2,800 tons/day, based on 100% sulfuric acid (H_2SO_4). [Rule 62-212.200(56), F.A.C.]

3. The Nos. 3, 4 and 5 sulfuric acid plants may operate on a full-time basis (8,760 hours per year). [Rule 62-212.200(56), F.A.C.]

4. Emissions of sulfur dioxide (SO_2), sulfuric acid mist (SAM) and visible emissions (VE) from the Nos. 3, 4 and 5 sulfuric acid plants shall not exceed the following limits [Rule 62-212.410, F.A.C.]:

	SO_2		SAM		VE
Plant	lb/hr	TPY	lb/hr	TPY	%
3	350	1,533	13.1	57.5	10
4	350	1,533	13.1	57.5	10
5	467	2,044	17.5	76.7	10

SPECIFIC CONDITIONS:

5. Before this permit expires, performance testing of emissions from each unit shall be conducted with the emission unit operating at permitted capacity. Permitted capacity is defined as 90-100% of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then emission units may be tested at less than 90% of the maximum operating rate allowed by the permit. In this case, subsequent emission unit operation is limited to 110% of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities (with prior notification provided to the Department) is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the permitted capacity in the permit. [Rule 62-297.340(1)(a), F.A.C.]

6. Performance testing shall be conducted and compliance determined using the test methods and procedures set forth in 40 CFR 60.85(a) through (c). Pursuant to Rule 62-297.340(1)(i), the Department's Southwest District office shall be notified in writing at least 15 days prior to performance testing. Pursuant to Rule 62-297.570(1) and (2), written reports of the test results shall be submitted to that office within 45 days of test completion.

7. A continuous monitoring system for the measurement of sulfur dioxide emissions shall be installed, calibrated, operated and maintained as described in 40 CFR 60.84(a) through (e). [Rule 62-296.800, F.A.C.; 40 CFR 60.84]

8. Objectionable odors associated with air emissions shall be prohibited. [Rule 62-296.320(2), F.A.C.]

9. Pursuant to Rule 62-210.700(1), F.A.C., excess emissions from the sulfuric acid plants resulting from startup, shutdown, malfunction, or load change shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed three hours in any 24-hour period unless specifically authorized by the Department for a longer duration. Best operational start-up practices shall be followed as described in the attached Memorandum of Understanding signed in 1989.

10. Stack sampling facilities shall be provided by the permittee in accordance with Rule 62-297.345, F.A.C.

SPECIFIC CONDITIONS:

11. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rule 62-4.090, F.A.C.].

12. An application for an operation permit must be submitted to the Department's Southwest District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. The operation permit application shall include a set of conditions acceptable to the Department for startup/shutdown of the permittee's sulfuric acid plant. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit. [Rules 62-4.055 and 62-4.220, F.A.C.].

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes, P.E.
Director
Division of Air Resources Management

Best Available Control Technology (BACT) Determination
Farmland Hydro, L.P.
Polk County
Permit Number AC 53-265755
PSD-FL-225

The applicant proposes to increase the total production of the No. 3, 4 and 5 Sulfuric Acid Plants (SAP) from 5,640 tons per day (TPD) to 7,000 TPD at the applicant's phosphate fertilizer manufacturing facility on County Road 640 West in Polk County, Florida. The proposed project will result in a significant increase in emissions of sulfur dioxide (SO_2) and sulfuric acid mist. The project is therefore subject to Prevention of Significant Deterioration (PSD) review in accordance with Rule 62-212.400, Florida Administrative Code (F.A.C.). The BACT determination is part of the PSD review requirements in accordance with Rule 62-212.410, F.A.C.

Date Application Received: February 21, 1995

Date Application Complete: May 11, 1995

BACT Determination Proposed by Applicant:

Control Technology: Double Absorption/Fiber Mist Eliminators

Emission Limits: SO_2: 4 lbs/ton of 100% H_2SO_4 produced
Acid Mist: 0.15 lb/ton of 100% H_2SO_4 produced
Visible Emissions: 10% opacity

BACT Determination Procedure:

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

(a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

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

BACT Determined by the Department: Same as proposed by applicant

BACT Determination Rationale

The Department's BACT determination is the same as that proposed by the applicant. This is consistent with determinations completed by other states and the Standards of Performance for Sulfuric Acid Plants, 40 CFR 60 Subpart H, (double absorption process). The process itself is the control technology for SO_2. For this reason, more stringent limits have not been required. The emission limits reflect a conversion efficiency of around 99.4% of SO_2 to H_2SO_4. High efficiency mist eliminators are considered BACT for sulfuric acid mist. BACT/LAER Clearinghouse information indicates that double absorption technology and the use of high efficiency mist eliminators are representative of BACT using the top-down approach.

Conclusion

The emission limits are equivalent to those in other BACT determinations and are in compliance with all air pollution regulations. It is concluded that the emission limits established herein represent BACT.

BACT Analysis Details Available From:

John Reynolds, Permit Engineer
New Source Review Section
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

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

9/20, 1995
Date

Approved by:

Howard L. Rhodes, P.E., Director
Division of Air Resources Management

9/22/95, 1995
Date

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
C.M. Farris, V.P. Operations
Farmland Hydro, LP
County Rd 640 West
Bartow, Fl 33830

4a. Article Number
Z 127 632 522

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

7. Date of Delivery
9-28-95

5. Signature (Addressee)
Linda K. Thompson

6. Signature (Agent)

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

PS Form 3811, December 1991 *U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 127 632 522

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

UNITED STATES POSTAL SERVICE

Sent to C. M. Farris	
Street and No. Farmland Hydro	
P.O., State and ZIP Code Bartow, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 9-25-95	

AC 53-265755
PSD-FI-225

PS Form 3800, March 1993

Florida Department of
Environmental Protection

Memorandum

Patty A

TO: Howard L. Rhodes

THRU: C. H. Fancy

FROM: A. A. Linero

DATE: September 19, 1995

SUBJ: Approval of Permit PSD-FL-225
Farmland Hydro, L.P. - Polk County

Attached for your approval and signature is a PSD permit and a Best Available Control Technology Determination for an increase in production of three existing sulfuric acid plants at the subject facility in Bartow, Polk County.

The total production will be increased from 5,640 to 7,000 tons/day at plants Nos. 3, 4 and 5. There will be no physical modifications except for replacement of one heat exchanger and the installation of additional catalyst. The sulfur dioxide and acid mist emissions are minimized by a control technology consisting of double absorption and high efficiency mist elimination.

AAL/jrt

Attachments