ATTACHMENT 1.0

UPDATED INFORMATION

PSD PERMIT APPLICATION
SULFURIC ACID PRODUCTION INCREASE

ATTACHMENT 1.1

UPDATED PAGES OF THE APPLICATION FORM

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Phong T. Vo, General Manager of Engineering and Technical Services
2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: **Same as Above**
   Street Address:
   City: State: Zip Code:
3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: **(863) 285-8121** Fax: **(863) 285-7088**
4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [X], if so) 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.*

Phong T. Vo — Signature

6/20/00 — Date

* Attach letter of authorization if not currently on file.

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 and Associates**
   Street Address: **4014 NW 13th Street**
   City: **Gainesville** State: **FL** Zip Code: **32609**
3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 377-5822** Fax: **(352) 377-7158**

4. Professional Engineer Statement:

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

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

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

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

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

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

Signature _____ Date 6/12/02

(seal)

* Attach any exception to certification statement.

Construction/Modification Information

1. Description of Proposed Project or Alterations:
USAC received a construction permit (PSD FL-107) to de-bottleneck the existing sulfuric acid plants in August 1985 to increase production up to 3000 TPD each plant. To date, the planned production has not been achieved. Due to recent technological advances, USAC proposes to make additional modification to the plants to increase production rate up to 3000 TPD each plant. The extent of modification primarily involves catalyst type and quantity in the converter. Minor modification to the plant's feed rate, heat transfer system, acid distribution system, etc. may be made as necessary to accommodate the increased production.

2. Projected or Actual Date of Commencement of Construction: 9/30/00

3. Projected Date of Completion of Construction: 12/31/02

Application Comment

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: SAM	2. Total Percent Efficiency of Control: 91.2	
3. Potential Emissions: 15 lb/hour 65.7 tons/year		4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [X] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: 0.12 lb/ton acid Reference: Proposed BACT		7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): SAM = 125 tph x 0.12 lb/ton acid = 15 lbs/hr x 8760 hours x ton/2000 lbs = 65.7 tpy		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):		

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units: 0.12 lb/ton acid	4. Equivalent Allowable Emissions: 15 lb/hour 65.7 tons/year
5. Method of Compliance (limit to 60 characters): EPA METHOD 8	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: SAM	2. Total Percent Efficiency of Control: 91.2	
3. Potential Emissions: 15 lb/hour 65.7 tons/year		4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [X] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: 0.12 lb/ton acid Reference: Proposed BACT		7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): SAM = 125 tph x 0.12 lb/ton acid = 15 lbs/hr x 8760 hours x ton/2000 lbs = 65.7 tpy		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):		

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units: 0.12 lb/ton acid	4. Equivalent Allowable Emissions: 15 lb/hour 65.7 tons/year
5. Method of Compliance (limit to 60 characters): EPA METHOD 8	

ATTACHMENT 1.2

UPDATED CALCULATIONS OF NET EMISSIONS INCREASES

ATTACHMENT 1.2

NET EMISSIONS CHANGES

SULFURIC ACID PRODUCTION INCREASE

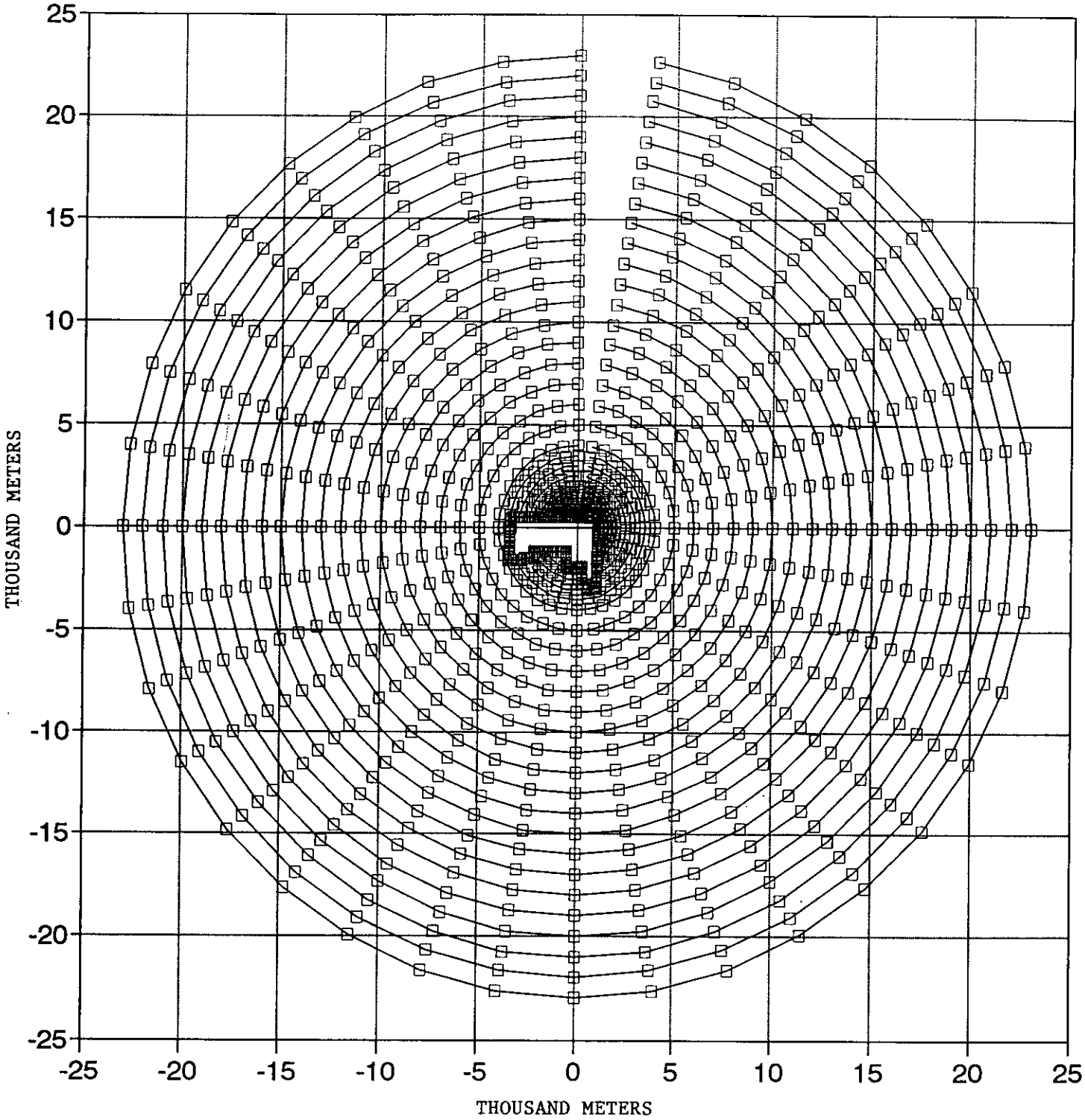
The actual emissions presented below are based on a two-year average for the years 1998 and 1999. The emissions of sulfur dioxide and sulfuric acid mist are based on measurements during compliance testing. The emissions of nitrogen oxides are estimated based on an emission factor of 0.12 lb/ton. Annual emissions are calculated by multiplying the emissions rate in lb/ton acid by the annual acid production.

Year	Plant	Production	SO2		SAM		NOx	
			Lb/ton	tpy	lb/ton	tpy	lb/ton	tpy
ACTUAL EMISSIONS								
1998	Plant 1	792,803	2.42	959.3	0.049	19.4	0.12	47.6
	Plant 2	789,623	2.47	975.2	0.046	18.2	0.12	47.4
TOTAL				1934.5		37.6		95.0
1999	Plant 1	787,393	2.95	1161.4	0.043	16.9	0.12	47.2
	Plant 2	793,569	3.76	1491.9	0.038	15.1	0.12	47.6
TOTAL				2653.3		32.0		94.8
1998-99 Average				2293.9		34.8		94.9
PROPOSED EMISSIONS								
	Plant 1	1,095,000	3.5	1916.3	0.12	65.7	0.12	65.7
	Plant 2	1,095,000	3.5	1916.3	0.12	65.7	0.12	65.7
TOTAL				3832.6		131.4		131.4
CONTEMPORANEOUS EMISSIONS								
	MAP Plant			0		0		12.6
NET CHANGE								
TOTAL				1538.7		96.6		49.1
PSD Significant Level				40		7		40
PSD Review ?				YES		YES		YES

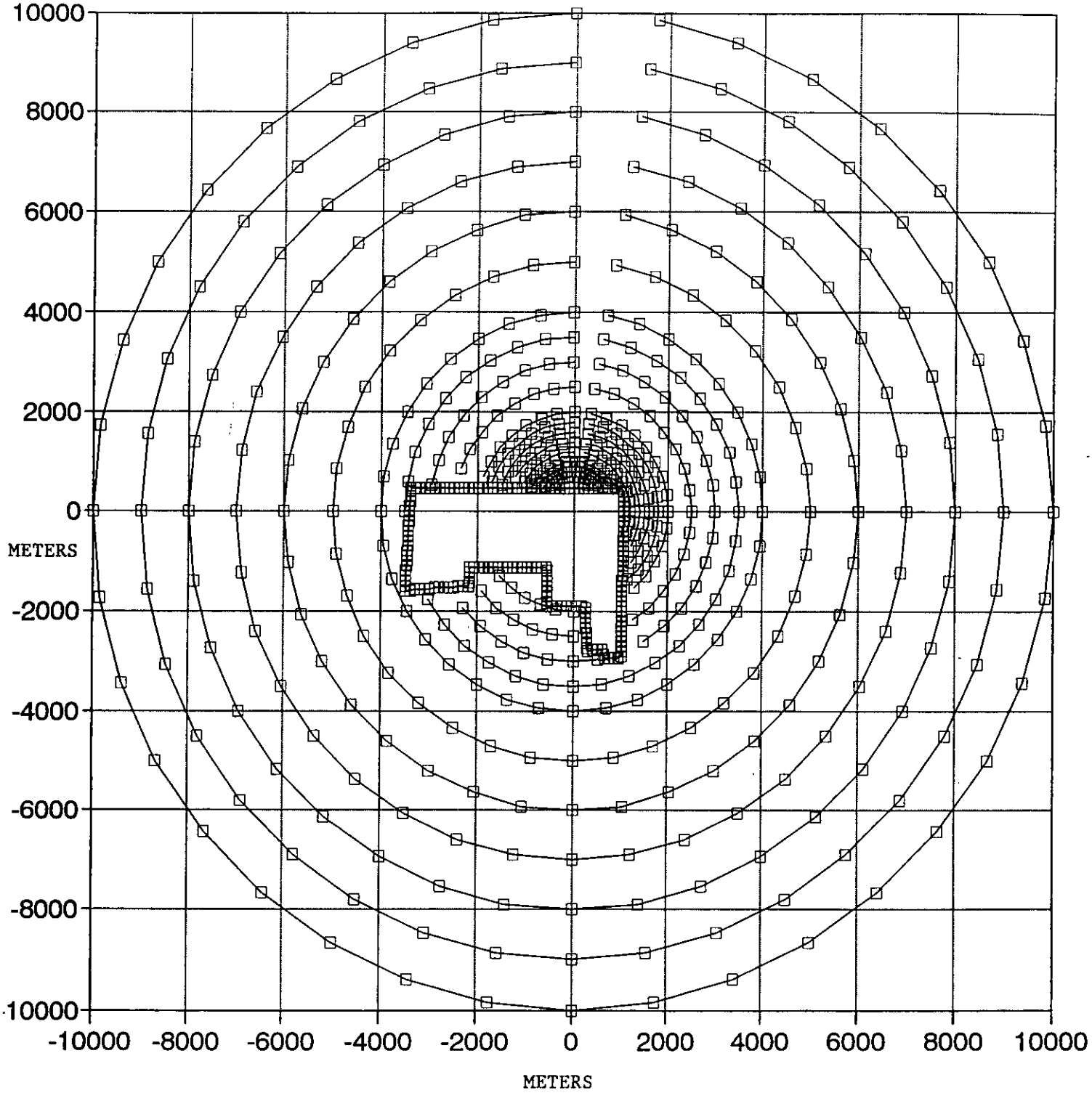
ATTACHMENT 1.3

MODELING RECEPTOR LOCATION MAPS

Modeling Receptors
Locations for SO2 SIA
US AGRICHEMICALS CORPORATION



Modeling Receptor
Locations for NOx SIA
US AGRICHEMICALS CORPORATION



ATTACHMENT 1.4

UPDATED SULFUR DIOXIDE EMISSION INVENTORY

Table 2-3
Sulfur Dioxide Emitting Facilities

SO2 "20 D" SOURCE INVENTORY US-AGRI CHEMICALS CORP.				Source Location	415.940	3068.930	
SOURCE DESCRIPTION	DESIGNATION	UTM Coordinates (km) EAST	NORTH	SO2 TPY	Distance (Km)	20-D Emission (TPY)	Significant?
AUBURNDALE	BOTH	420.800	3103.300	221	35	694	NO
BORDEN	PSD	394.800	3069.600	225	21	423	NO
BREWSTER/IMPERIAL	PSD	404.800	3069.500	670	11	223	YES
CARGILL/GARDINIER MINE	NAAQS	415.300	3063.300	670	6	113	YES
CARGILL/GARDINIER	BOTH	363.400	3082.400	11779	54	1085	YES
CARGILL/SEMINOLE/W.R. GRACE	BOTH	409.770	3086.990	14931	19	382	YES
CF BARTOW	BOTH	408.500	3082.500	29567	15	310	YES
CF PLANT CITY	BOTH	388.000	3116.000	9452	55	1095	YES
CITRUS WORLD	NAAQS	441.000	3087.300	2062	31	621	YES
CLM CHLORIDE METALS	BOTH	361.800	3088.300	731	58	1150	NO
COCA COLA - AUBURNDALE	NAAQS	421.600	3103.700	1393	35	705	YES
CONSOLIDATED MINERALS	NAAQS	393.800	3096.300	943	35	704	YES
COUCH CONST-ZEPHYRHILLS (ASP	BOTH	390.300	3129.400	123	66	1314	NO
DOLIME	PSD	404.813	3069.548	355	11	223	YES
ESTECH/SWIFT	PSD	411.500	3074.200	4856	7	138	YES
FARMLAND	BOTH	410.516	3079.624	8545	12	240	YES
FPC INT. CITY	BOTH	446.300	3126.000	8168	65	1293	YES
FPC OSCEOLA	BOTH	446.300	3126.000	16958	65	1293	YES
FPC POLK	BOTH	414.400	3073.910	859	5	104	YES
FPL MANATEE	NAAQS	367.200	3054.100	83410	51	1019	YES
GEN. PORT. CEMENT	PSD	358.000	3090.600	4602	62	1237	YES
GOLD BOND	NAAQS	347.300	3082.700	320	70	1400	NO
GULF COAST LEAD	NAAQS	364.000	3093.500	1711	57	1149	YES
HARDEE	BOTH	404.800	3057.400	9657	16	321	YES
HILLS. CO. RESOURCE RECOVERY	BOTH	368.200	3092.700	744	53	1067	NO
IMC - AGRICO /NICHOLS/CONSERVE	BOTH	398.400	3084.200	3495	23	465	YES
IMC-AGRICO/NEW WALES	BOTH	396.600	3078.900	11416	22	435	YES
IMC-AGRICO/NORALYN	NAAQS	414.700	3080.300	504	11	229	YES
IMC-AGRICO/PIERCE	PSD	404.100	3078.950	1646	16	310	YES
IMC-AGRICO/SO. PIERCE	BOTH	407.500	3071.300	5114	9	175	YES
KISSIMMEE KANE IS.	BOTH	447.680	3127.920	1023	67	1340	NO
LAFARGE CORP.	NAAQS	357.7	3090.6	20293	62	1243	YES
LAKELAND LARSEN	BOTH	409.300	3102.800	4944	35	690	YES
LAKELAND MCINTOSH	BOTH	409.200	3106.200	30563	38	757	YES
MOBIL BIG-4	BOTH	394.850	3069.770	591	21	422	YES
MOBIL NICHOLS	BOTH	398.300	3084.300	971	23	468	YES
MOBILE ELECTROPHOS	PSD	405.600	3079.400	3337	15	294	YES
MULBERRY COGENERATION	BOTH	413.600	3080.600	466	12	238	YES
MULBERRY PROSPHATES/ROYSTER	BOTH	406.753	3085.151	5312	19	373	YES
NITRAM	NAAQS	363.100	3089.000	108	57	1130	NO
PANDA KATHLEEN	BOTH	398.700	3101.400	25	37	735	NO
PINEY POINT/ROYSTER	NAAQS	348.700	3057.300	1719	68	1365	YES
RIDGE COGENERATION	BOTH	416.700	3100.400	480	31	630	NO
SEBRING UTIL	BOTH	464.300	3035.400	3868	59	1177	YES
SECI HARDEE	BOTH	404.900	3057.400	452	16	319	YES
SULFUR TERMINALS	NAAQS	358.000	3090.000	104	62	1233	NO
TAMPA GENERAL HOSP	NAAQS	356.400	3091.000	59	63	1270	NO
TAMPA MCKAY BAY RRF	BOTH	360.000	3091.000	744	60	1203	NO
TECO BIG BEND	BOTH	361.900	3075.000	415986	54	1088	YES
TECO GANNON	NAAQS	360.000	3087.500	127495	59	1179	YES
TECO HOOKERS POINT	NAAQS	358.000	3091.000	13535	62	1240	YES
TECO POLK POWER	BOTH	402.488	3066.914	4031	14	272	YES
THATCHER GLASS	NAAQS	361.800	3088.300	177	58	1150	NO
USS AGRI-CHEM BARTOW	PSD	413.200	3086.300	1580	18	352	YES
USSAC FT MEADE	BOTH	415.940	3068.930	3377	0	0	YES

ATTACHMENT 1.5

UPDATED SUMMARY OF MODELING RESULTS

Class 2 Area FAAQS Standard Analysis

Year	3-Hour High AT (X & Y)		3-Hour HSH AT (X & Y)		24-Hour High AT (X & Y)		24-Hour HSH AT (X & Y)		Annual High AT (X & Y)	
1987	537.11		486.52		182.39		176.12		35.64	
	-5638.16	2052.12	-6500.00	11,258.33	-6000.00	10,392.30	-3767.22	10,336.62	-1041.89	-5908.85
1988	523.85		454.49		183.91		168.82		31.21	
	-6000.00	10,392.30	-3762.22	10,336.62	-5500.00	9526.28	-5500.00	9526.28	-1041.89	-5908.85
1989	597.57		596.87		237.94		200.61		30.08	
	-19,052.56	11,000.00	-19,052.56	11,000.00	-5142.30	6128.36	-5500.00	9526.28	-5196.15	3000.00
1990	484.58		458.94		199.52		189.91		31.52	
	-1910.13	10,832.88	-1910.13	10,832.88	-3762.22	10,336.62	-3762.22	10,336.62	-1041.89	-5908.85
1991	583.75		554.66		191.76		171.92		34.66	
	-6500.00	11,258.33	-6500.00	11,258.33	-1041.89	-5908.85	0.00	6000.00	-1041.89	-5908.85
Maximum	597.57		596.87		237.94		200.61		35.64	
	-19,052.56	11,000.00	-19,052.56	11,000.00	-5142.30	6128.36	-5500.00	9526.28	-1041.89	-5908.85
Max.+ Bkgd*			668				219		41	
Standard			1300				260		60	

PSD Incremant Analysis Class 2 Area

Year	3-Hour High AT (X & Y)		3-Hour HSH AT (X & Y)		24-Hour High AT (X & Y)		24-Hour HSH AT (X & Y)		Annual High AT (X & Y)
1987	160.14		105.70		29.47		25.63		0.00
	-2778.37	15,756.92	8000.00	13,856.41	-7000.00	-12,124.36	-7000.00	-12,124.36	
1988	227.10		171.56		49.60		41.03		0.00
	-12,256.71	10,284.60	8000.00	13,856.41	8000.00	13,856.41	8000.00	13,856.41	
1989	259.32		222.00		62.72		40.66		0.00
	12,000.00	20,784.61	12,000.00	20,784.61	-19,052.56	11,000.00	12,000.00	20,784.61	
1990	140.30		104.28		30.19		23.62		0.00
	-3762.22	10,336.62	1910.13	10,832.89	-7794.23	4,500.00	-7660.44	6,427.88	
1991	205.33		139.89		32.56		26.45		0.00
	-4788.28	13,155.70	-4788.28	13,155.70	-7794.23	4500.00	-8999.03	-10,724.62	
Maximum	259.32		222.00		62.72		41.03		0.00
	12,000.00	20,784.61	12,000.00	20,784.61	-19,052.56	11,000.00	8000.00	13,856.41	
Increment			512				91		20

*NOTE: Background concentration levels of 71, 18 and 5 ug/m3 for the 3-hr, 24-hr and annual averaging periods, respectively, are included in the total impact.

THIS DISK CONTAIN SULFUR DIOXIDE (SO2) MODELING FILES FOR THE
U. S. AGRICHEMICALS FACILITY IN FT. MEADE, FLORIDA. THESE FILES

THE FOLLOWING FILES ARE IN SELF EXTRACTING ARCHIVE FORMAT AND CONTAIN
ISCST3 MODELING OF:

ASI2SO2.EXE	SIGNIFICANT IMPACT ANALYSIS (SIA) FOR CLASS 2 AREAS
GRID100M.EXE	INCREMENT ANALYSIS FOR CLASS II

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:

ASI2SO2
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;

THE FILE ASI2SO2.EXE CONTAINS:

C2SO2-87 OUT	282,909	04-28-00	SO2 CLASS 2 AND FAAQS SIA FOR 1987
C2SO2-88 OUT	282,909	04-28-00	SO2 CLASS 2 AND FAAQS SIA FOR 1988
C2SO2-89 OUT	296,995	04-28-00	SO2 CLASS 2 AND FAAQS SIA FOR 1989
C2SO2-90 OUT	282,909	04-28-00	SO2 CLASS 2 AND FAAQS SIA FOR 1990
C2SO2-91 OUT	282,909	04-28-00	SO2 CLASS 2 AND FAAQS SIA FOR 1991

PSD CLASS 2 AND FAAQS INVENTORIES WERE COMPILED AND FOR THE FIVE YEARS
METEOROLOGY. RECEPTOR GRIDS OF 2KM IN WIDTH AND WITH 100 METER SPACING WERE
PLACED CENTERED AT THE POLAR MOST EXPOSED INDIVIDUAL (MEI) RECEPTORS. THE
FOLLOWING INCREMENT AND STANDARD ANALYSIS MODELING ARE PROVIDED:

THE FILE GRID100M.EXE CONTAINS:

AQS89-3G OUT	103,286	05-01-00	3 HOUR AVERAGE PSD CLASS 2 FOR 1989
AQS87S24 OUT	103,554	05-01-00	24 HOUR AVERAGE AQS CLASS 2 FOR 1987
AQS89G24 OUT	103,286	05-01-00	24 HOUR AVERAGE AQS CLASS 2 FOR 1989
AQS89S24 OUT	103,554	05-01-00	24 HOUR AVERAGE AQS CLASS 2 FOR 1989
AQS90G24 OUT	103,420	05-01-00	24 HOUR AVERAGE AQS CLASS 2 FOR 1990
AQS91G24 OUT	103,286	05-01-00	24 HOUR AVERAGE AQS CLASS 2 FOR 1991
AQS87GAN OUT	96,242	04-30-00	ANNUAL AVERAGE AQS CLASS 2 FOR 1987
PSD89G3H OUT	91,279	04-30-00	3 HOUR AVERAGE PSD CLASS 2 FOR 1989
PSD88G24 OUT	91,413	05-01-00	24 HOUR AVERAGE PSD CLASS 2 FOR 1988
PSD89G24 OUT	91,279	05-01-00	24 HOUR AVERAGE PSD CLASS 2 FOR 1989
PSD89S24 OUT	91,279	04-30-00	24 HOUR AVERAGE PSD CLASS 2 FOR 1989
PSD91G24 OUT	91,279	04-30-00	24 HOUR AVERAGE PSD CLASS 2 FOR 1991
PSD91S24 OUT	91,279	05-01-00	24 HOUR AVERAGE PSD CLASS 2 FOR 1991

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

MARK KOLETZKE, P.E.
KOOGLER AND ASSOCIATES
(352) 377-5822
KOOGLER@WORLDNET.ATT.NET

ATTACHMENT 1.6

PROPERTY BOUNDARY MAP

U.S. Agri-Chemicals
Air Modeling Boundary

Dike/berm

Fence

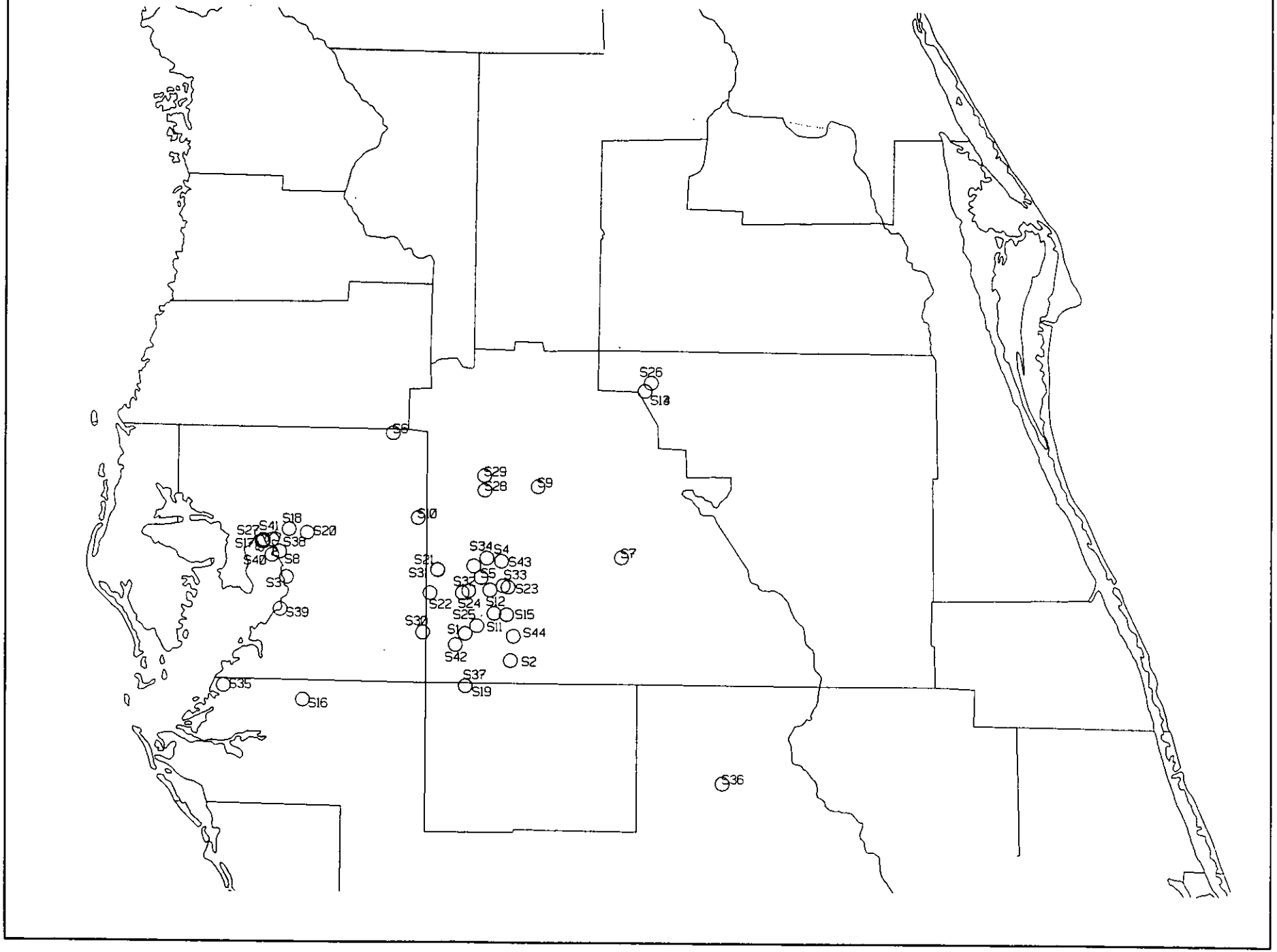
ATTACHMENT 1.7

LOCATION MAPS OF SO2 SOURCES AND AMBIENT MONITORS

Identification of Significant SO2 Sources

		UTM Coordinates (km)	
	SOURCE DESCRIPTION	EAST	NORTH
S1	BREWSTER/IMPERIAL	404.800	3069.500
S2	CARGILL/GARDINIER MINE	415.300	3063.300
S3	CARGILL/GARDINIER	363.400	3082.400
S4	CARGILL/SEMINOLE/W.R. GRACE	409.770	3086.990
S5	CF BARTOW	408.500	3082.500
S6	CF PLANT CITY	388.000	3116.000
S7	CITRUS WORLD	441.000	3087.300
S8	CLM CHLORIDE METALS	361.800	3088.300
S9	COCA COLA - AUBURNDALE	421.600	3103.700
S10	CONSOLIDATED MINERALS	393.800	3096.300
S11	ESTECH/SWIFT	411.500	3074.200
S12	FARMLAND	410.516	3079.624
S13	FPC INT. CITY	446.300	3126.000
S14	FPC OSCEOLA	446.300	3126.000
S15	FPC POLK	414.400	3073.910
S16	FPL MANATEE	367.200	3054.100
S17	GEN. PORT. CEMENT	358.000	3090.600
S18	GULF COAST LEAD	364.000	3093.500
S19	HARDEE	404.800	3057.400
S20	HILLS. CO. RESOURCE RECOVERY	368.200	3092.700
S21	IMC - AGRICO /NICHOLS/CONSER	398.400	3084.200
S22	IMC-AGRICO/NEW WALES	396.600	3078.900
S23	IMC-AGRICO/NORALYN	414.700	3080.300
S24	IMC-AGRICO/PIERCE	404.100	3078.950
S25	IMC-AGRICO/SO. PIERCE	407.500	3071.300
S26	KISSIMMEE KANE IS.	447.680	3127.920
S27	LAFARGE CORP.	357.700	3090.600
S28	LAKELAND LARSEN	409.300	3102.800
S29	LAKELAND MCINTOSH	409.200	3106.200
S30	MOBIL BIG-4	394.850	3069.770
S31	MOBIL NICHOLS	398.300	3084.300
S32	MOBILE ELECTROPHOS	405.600	3079.400
S33	MULBERRY COGENERATION	413.600	3080.600
S34	MULBERRY PROSPHATES/ROYSTE	406.753	3085.151
S35	PINEY POINT/ROYSTER	348.700	3057.300
S36	SEBRING UTIL	464.300	3035.400
S37	SECI HARDEE	404.900	3057.400
S38	TAMPA MCKAY BAY RRF	360.000	3091.000
S39	TECO BIG BEND	361.900	3075.000
S40	TECO GANNON	360.000	3087.500
S41	TECO HOOKERS POINT	358.000	3091.000
S42	TECO POLK POWER	402.488	3066.914
S43	USS AGRI-CHEM BARTOW	413.200	3086.300
S44	USSAC FT MEADE	415.940	3068.930

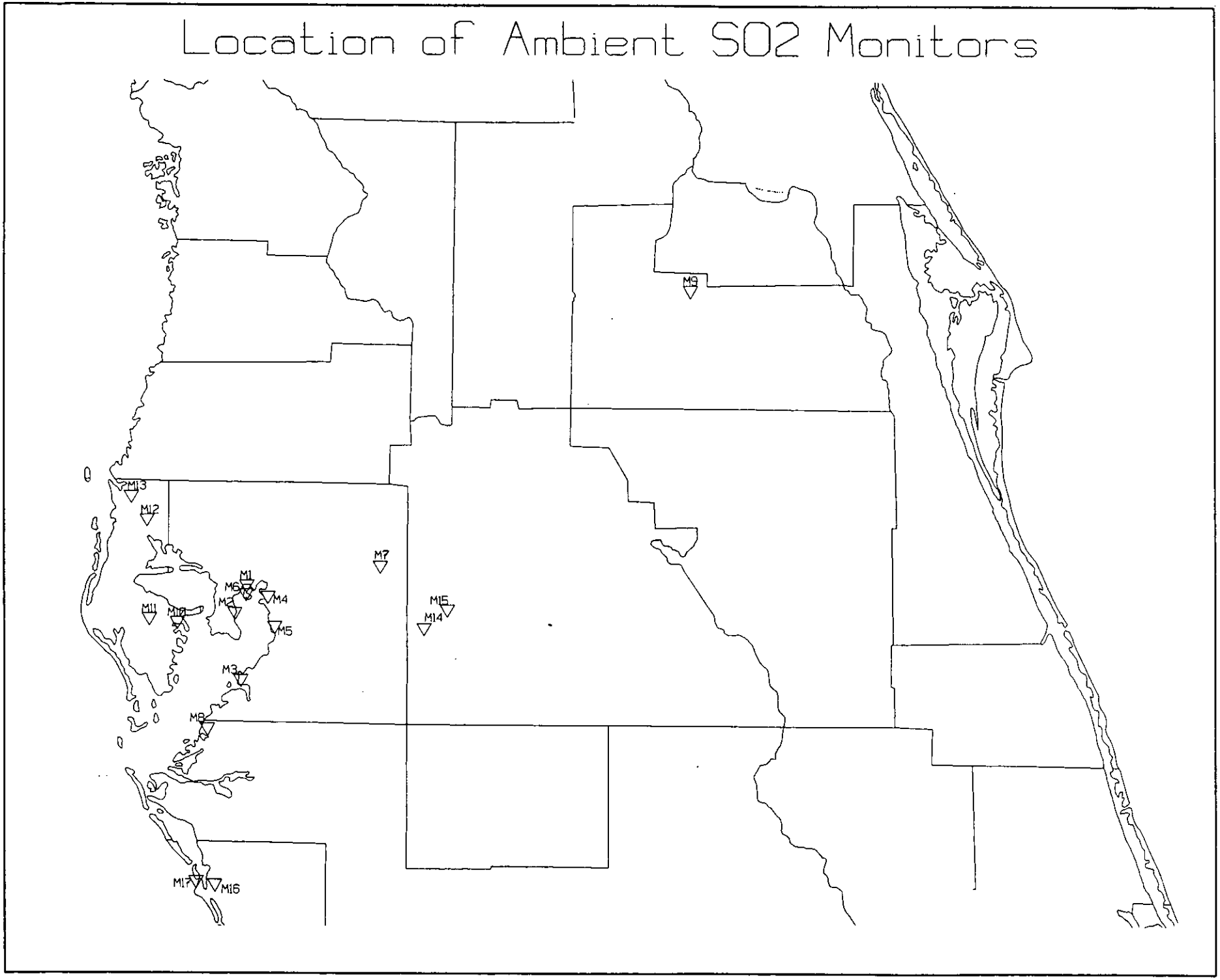
Location of Significant SO2 Sources



Identification of Ambient SO2 Monitors

Identfication Number	Monitor Location	UTM Coordinates (km) EAST	NORTH	County Designation/Number
M1	RUSKIN	357.024	3092.065	HILLSBOROUGH 21
M2	TAMPA	354.182	3085.359	HILLSBOROUGH 53
M3	TAMPA	355.561	3069.035	HILLSBOROUGH 81
M4	TAMPA	362.100	3089.240	HILLSBOROUGH 95
M5	TAMPA	363.770	3081.892	HILLSBOROUGH 109
M6	TAMPA	356.862	3089.913	HILLSBOROUGH 1035
M7	PLANT CITY	389.300	3096.710	HILLSBOROUGH 4004
M8	PALMETTO	347.461	3057.318	MANATEE 3002
M9	WINTER PARK	464.515	3163.490	ORANGE 2002
M10	ST PETERSBURG	340.173	3082.975	PINELLAS 23
M11	PINELLAS	333.450	3083.930	PINELLAS 3002
M12	TARPON	332.880	3108.174	PINELLAS 5002
M13	TARPON	329.140	3113.970	PINELLAS 5003
M14	MULBERRY	399.801	3081.501	POLK CO 10
M15	MULBERRY	405.500	3086.000	POLK CO 2006
M16	SARASOTA	349.150	3020.375	SARASOTA 1002
M17	SARASOTA	344.600	3021.250	SARASOTA 1005

Location of Ambient SO2 Monitors



ATTACHMENT 2.0

SUPPLEMENTAL INFORMATION

PSD PERMIT APPLICATION FOR
PHOSPHORIC ACID PRODUCTION INCREASE

Department of
Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **US Agri-Chemicals Corporation**	
2. Site Name: **Ft. Meade Chemical Plant**	
3. Facility Identification Number: **1050051**	[ ] Unknown
4. Facility Location: Street Address or Other Locator: **3225 State Road 630 West** City: **Ft. Meade** County: **Polk** Zip Code: **33841-9799**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **Ronald L. Brunk, Manager, Env. Eng.**		
2. Application Contact Mailing Address: Organization/Firm: **Same as Above.** Street Address: City:	State:	Zip Code:
3. Application Contact Telephone Numbers: Telephone: **(863)285-8121**	Fax: **(863)285-7088**	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

[ ] Initial Title V air operation permit 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:_____

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

Current construction permit number:_____

Operation permit number to be revised:_____

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected:_____

[ ] Title V air operation permit revision 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 number to be revised:_____

Reason for revision:_____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[**X**] Air construction permit to construct or modify one or more emissions units.

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

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Phong T. Vo, General Manager of Engineering and Technical Services
2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: **Same as Above**
   Street Address:
   City: State: Zip Code:
3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: **(863) 285-8121** Fax: **(863) 285-7088**
4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [X], if so) 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.*

Phong T. Vo — Signature

6/20/00 — Date

* Attach letter of authorization if not currently on file.

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 and Associates**
   Street Address: **4014 NW 13th Street**
   City: **Gainesville** State: **FL** Zip Code: **32609**
3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 377-5822** Fax: **(352) 377-7158**

4. Professional Engineer Statement:

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

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

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

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

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

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

Signature _____ Date 6/12/02

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
016	Sulfuric Acid Plant 1	ACIA	$7500 -PSD
017	Sulfuric Acid Plant 2	ACIA	PSD
005	Phosphoric Acid Plant A-Train	ACIA	PSD
020	Phosphoric Acid Plant B-Train	ACIA	PSD
021	Phosphoric Acid Plant Tank Farm	ACIA	PSD

Application Processing Fee

Check one: [ ] Attached - Amount: **$ 7500 (Prev. Submitted).** [ ] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

The proposed project includes an increase in the production rates of the sulfuric acid plants Nos. 1 and 2 to 3000 tpd , each; and, an increase in the production rates of the phosphoric acid trains Nos. A and B to 50 tph, each. This will result in an increase in the acid throughput at the phosphoric acid tank farm. The proposed project is subject to a PSD review as the expected increases, in the air emissions of sulfur dioxide, sulfuric acid mist, nitrogen oxides and fluorides, will be greater than the significant pursuant to Rule 62-212 of the Florida Administrative Code.

2. Projected or Actual Date of Commencement of Construction: **9/30/00**

3. Projected Date of Completion of Construction: **12/31/03**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **416.2** North (km): **3068.7**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): **27/44/40** Longitude (DD/MM/SS): **81/51/08**			
3. Governmental Facility Code: **O**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **28**	6. Facility SIC(s): **2874**
7. Facility Comment (limit to 500 characters):			

Facility Contact

1. Name and Title of Facility Contact: **Ronald L. Brunk, Manager, Env. Eng.**
2. Facility Contact Mailing Address: Organization/Firm: **U.S. Agri-Chemicals Corporation** Street Address: **3225 State Road 630 West** City: **Ft. Meade** State: **FL** Zip Code: **33841-9799**
3. Facility Contact Telephone Numbers: Telephone: **(863) 285-8121** Fax: **(863) 285-7088**

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source? [ ] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?
4. [ ] Major Source of Hazardous Air Pollutants (HAPs)?
5. [ ] Synthetic Minor Source of HAPs?
6. [X] One or More Emissions Units Subject to NSPS?
7. [X] One or More Emission Units Subject to NESHAP?
8. [ ] Title V Source by EPA Designation?
9. Facility Regulatory Classifications Comment (limit to 200 characters):

List of Applicable Regulations

DEP TITLE V CORE LIST	
40 CFR 52, 55, 60, 61, 63, 68, 82	
FAC RULES 62-4, 204, 210, 212, 213, 214, 252, 256, 257, 281, 296, 297	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
SO2	**A**				
FL	**B**				
PM/PM10	**B**				
NO_X	**A**				
SAM	**A**				

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

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

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
   [ ] Attached, Document ID:_____ [**X**] Not Applicable

9. 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

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. Risk Management Plan Verification:
    [**X**] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:_100000145871_) or previously submitted to DEP (Date and DEP Office: _____)
    [ ] Plan to be submitted to CEPPO (Date required:_____)
    [ ] 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 J 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.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (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.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Phosphoric Acid Plant A-Train

4. Emissions Unit Identification Number:
ID: **005** [ ] No ID

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**28**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

   VENTURI SCRUBBER

2. Control Device or Method Code(s): **053**

Emissions Unit Details

1. Package Unit: **N/A**
   Manufacturer:
   Model Number:
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**NA**	mmBtu/hr		
2. Maximum Incineration Rate:	**N/A**		lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**				
4. Maximum Production Rate: **50 TPH P2O5 INPUT**				
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	52	weeks/year	**8760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):				

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Page 8.	

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **PAD A Train**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **V**	6. Stack Height: **85** feet	7. Exit Diameter: **2.5** feet
8. Exit Temperature: **100** F	9. Actual Volumetric Flow Rate: **12000** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **DIHYDRATE WET PROCESS**		
2. Source Classification Code (SCC): **3-01-016-01**	3. SCC Units: **TONS**	
4. Maximum Hourly Rate: **50**	5. Maximum Annual Rate: **438,000**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **Maximum Hourly Rate = 50 tons P2O5 input** **Maximum Annual Rate = 50tph x 8760 hours = 438,000 tons P2O5 input**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
Fluoride	**053**		**EL**

Emissions Unit Information Section ____3 _ **of** __5____

Pollutant Detail Information Page ___1___ **of** ___1___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **FL**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.675** lb/hour **2.96** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [**X**] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.0135 lb/ton of Input P2O5** Reference: **Proposed BACT**	7. Emissions Method Code: **O**
8. Calculation of Emissions (limit to 600 characters): **FL = 0.0135 lbs/ton of P205 Input x 50 Tons/hr P2O5 = 0.675 lb/hr X 8760 hours x ton/2000 lbs = 2.96 tpy**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **There is a potential for fugitive emissions from the plant.**	

Allowable Emissions Allowable Emissions _1___ of _1___

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **0.0135 lb/ton P2O5 input**	4. Equivalent Allowable Emissions: **0.675** lb/hour **2.96** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 13B**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **BACT**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

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): **As particulate matter is not emitted by this emissions unit, a VE limitation is not applicable.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __1___ of __2___

1. Parameter Code: **Flow**	2. Pollutant(s): **N/A**
3. CMS Requirement:	[**X**] Rule [ ] Other
4. Monitor Information: Manufacturer: **Micro Motion** Model Number: **D600S-SS** Serial Number: **126188**	
5. Installation Date: **12/90**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **NSPS requirement.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __2___ of __2___

1. Parameter Code: **PRS**	2. Pollutant(s): **N/A**
3. CMS Requirement:	[**X**] Rule [ ] Other
4. Monitor Information: Manufacturer: **Rosemount** Model Number: **1151DP3E22B1** Serial Number: **1582994**	
5. Installation Date: **10/01/82**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **NSPS requirement.**	

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

Supplemental Requirements

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

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

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

15. Acid Rain Part 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:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[**X**] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J 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.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (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.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Phosphoric Acid Plant B-Train

4. Emissions Unit Identification Number:
[ ] No ID ID: **020** [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**28**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

   VENTURI SCRUBBER

2. Control Device or Method Code(s): **053**

Emissions Unit Details

1. Package Unit: **N/A**
   Manufacturer:
   Model Number:
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**N/A**			mmBtu/hr
2. Maximum Incineration Rate:	**N/A**		lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**				
4. Maximum Production Rate: **50 TPH P2O5 INPUT**				
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	52	weeks/year	**8760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):				

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Page 8	

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **PAD B Train**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **V**	6. Stack Height: **85** feet	7. Exit Diameter: **2.5** feet
8. Exit Temperature: **100** F	9. Actual Volumetric Flow Rate: **12000** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment ___1__ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
DIHYDRATE WET PROCESS		
2. Source Classification Code (SCC): **3-01-016-01**	3. SCC Units: **TONS**	
4. Maximum Hourly Rate: **50**	5. Maximum Annual Rate: **438,000**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **Maximum Hourly Rate = 50 tons P2O5 input** **Maximum Annual Rate = 50 tph x 8760 hours = 438,000 tons P2O5 input**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
Fluoride	**053**		**EL**

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **FL**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.675** lb/hour **2.96** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [X] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.0135 lbs/ton P2O5 input** Reference: **Proposed BACT**	7. Emissions Method Code: **O**
8. Calculation of Emissions (limit to 600 characters): **FL = 0.0135 lb/ton P205 input x 50 tons/hr P2O5 input = 0.675 lb/hr X 8760 hours x ton/2000 lbs = 2.96 tpy**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **There is a potential for fugitive emissions from this plant.**	

Allowable Emissions Allowable Emissions _1___ of _1___

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **0.0135 lb/ton P2O5 input**	4. Equivalent Allowable Emissions: **0.675** lb/hour **2.96** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 13B**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **BACT**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

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): **As particulate matter is not emitted by this emissions unit, a VE limitation is not applicable.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __1___ of __2___

1. Parameter Code: **Flow**	2. Pollutant(s): **N/A**
3. CMS Requirement:	[**X**] Rule [ ] Other
4. Monitor Information: Manufacturer: **Micro Motion** Model Number: **D600S-SS** Serial Number: **123557**	
5. Installation Date: **9/90**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **NSPS requirement.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __2__ of __2__

1. Parameter Code: **PRS**	2. Pollutant(s): **N/A**
3. CMS Requirement:	[**X**] Rule [ ] Other
4. Monitor Information: Manufacturer: **Rosemount** Model Number: **1151DP3E22B1** Serial Number: **371059**	
5. Installation Date: **10/01/82**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **NSPS requirement.**	

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

Supplemental Requirements

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

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

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

15. Acid Rain Part 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:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J 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.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (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.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Phosphoric Acid Tank Farm

4. Emissions Unit Identification Number:
[ ] No ID ID: **021** [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**28**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

   VENTURI SCRUBBER

2. Control Device or Method Code(s): **053**

Emissions Unit Details

1. Package Unit: **N/A**
   Manufacturer:
   Model Number:
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**N/A**		mmBtu/hr
2. Maximum Incineration Rate:	**N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**			
4. Maximum Production Rate: **100 TPH P2O5 INPUT**			
5. Requested Maximum Operating Schedule:			
	24 hours/day	**7**	days/week
	52 weeks/year	**8760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):			

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Page 8	

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **PAD Tank Farm**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **V**	6. Stack Height: **60** feet	7. Exit Diameter: **2** feet
8. Exit Temperature: **90** F	9. Actual Volumetric Flow Rate: **8,400** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters): **2 54% ACID STORAGE TANKS** **1 29% ACID STORAGE TANK** **1 29% OR 49% ACID STORAGE TANK** **1 40% ACID STORAGE TANK** **2 29% ACID CLARIFIER TANKS** **3 40% ACID CLARIFIER TANKS** **2 PHOSPHORIC ACID MIX TANKS** **2 FLUOSILICIC ACID TANKS** **1 54% ACID CLARIFIER TANK**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment ___1__ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
DIHYDRATE WET PROCESS ACID TANKS		
2. Source Classification Code (SCC): **3-01-016-99**	3. SCC Units: **TONS**	
4. Maximum Hourly Rate: **100**	5. Maximum Annual Rate: **876,000**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **Maximum Hourly Rate = 100 tons P2O5 input** **Maximum Annual Rate = 100 tph P2O5 input x 8760 hours = 876,000 tons P2O5 input**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
Fluoride	**053**		**EL**

Emissions Unit Information Section ___5_ of __5____

Pollutant Detail Information Page ___1___ of ___1___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **FL**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **1.0** lb/hour	**4.4** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [X] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **1 lb/hr** Reference: **BACT**		7. Emissions Method Code: **O**
8. Calculation of Emissions (limit to 600 characters): **FL = 1.0 lb/hr X 8760 hours x ton/2000 lbs = 4.4 tpy**		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **There is a potential for fugitive emissions from this emissions unit.**		

Allowable Emissions Allowable Emissions _1___ of _1___

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **1 lb/hr**	4. Equivalent Allowable Emissions: **1.0** lb/hour **4.4** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 13B**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

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): **As particulate matter is not emitted by this emissions unit, a VE limitation is not applicable.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	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):	

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

Supplemental Requirements

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
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Attached, Document ID:_____

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

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[**X**] Not Applicable

SUPPLEMENTAL REPORT IN SUPPORT OF PSD APPLICATION FOR

INCREASE IN SULFURIC ACID PRODUCTION AND PHOSPHORIC ACID PRODUCTION

U.S. AGRI-CHEMICALS CORPORATION
FT. MEADE FACILITY

REPORT PREPARED BY

KOOGLER & ASSOCIATES
4014 NW 13TH STREET
GAINESVILLE, FLORIDA
(352) 377-5822

JUNE, 2000

TABLE OF CONTENTS

1.0 INTRODUCTION

As part of the PSD project currently under FDEP review for the sulfuric acid production increase at the Ft. Meade facility, US Agri-Chemicals Corporation (USAC) proposes to increase the phosphoric acid production rate from 44 tons per hour (tph) to 50 tph P2O5 input for each of the A and B trains. The plant description, detailed in the Title V permit, is included in Appendix B. Pumps and piping will be upgraded, as necessary, to accomplish the production increase. No major equipment changes are proposed. The increase in phosphoric acid production rate will result in an increase in throughput at the phosphoric acid tank farm. No other emission units will be affected by the proposed project.

The proposed phosphoric acid production increase is expected to result in a significant increase, as defined in Rule 62-212, Florida Administrative Code (FAC), in the emissions of fluorides. As a technical evaluation has already been submitted on this project with regards to the sulfuric acid plants, this supplemental report is intended to supplement the information previously submitted and specifically addresses the BACT and air impact analyses pursuant to Rule 62-212, FAC. Air dispersion modeling for fluorides has not been conducted as it is not required.

USAC proposes the continued use of the existing venturi scrubbers as BACT and will limit fluoride emissions from the phosphoric acid plant to 0.0135 lb/ton P2O5 input; and, limit fluoride emissions from the tank farm to 1.0 lb/hr.

2.0 BEST AVAILABLE CONTROL TECHNOLOGY

As indicated in the rule applicability in the permit application, the proposed project is subject to PSD review requirements pursuant to Rule 62-212, FAC. A Best Available Control Technology (BACT) evaluation is presented below for fluoride emissions from the proposed project.

USAC proposes about a 25 percent increase in the annual production rate of the two existing phosphoric acid trains, A and B. The proposed maximum production rate for each train, of 50 tph P2O5 input, will result in a total of 100 tph P2O5 input. The existing evaporator system will concentrate the acid from both trains. Acid of varying strengths will be stored in the existing tank farm. Several venturi scrubbers, as shown on the process flow diagrams presently control the fluoride emissions. No major equipment changes are expected to be necessary to accomplish the production increase.

2.1 EMISSION STANDARDS FOR PHOSPHORIC ACID PLANTS

Federal New Source Performance Standards (NSPS) for wet process phosphoric acid plants, codified in 40 CFR 60, Subpart T, limit fluoride emissions to no more than 0.02 pounds per ton P2O5 input. For the purposes of the standard, the affected facility includes any combination of reactors, filters, evaporators and hot wells. It should be noted that phosphoric acid product storage tanks are not included under the standard as they are not an affected facility.

More recently, additional federal standards were promulgated under 40 CFR 63 Subpart AA, National Emission Standards for Hazardous Air Pollutants From Phosphoric Acid Manufacturing Plants. The fluoride emission standard under these NESHAPs for existing phosphoric acid plants is

identical to that under NSPS, at 0.02 lb/ton P2O5 feed. The fluoride emission standard for new plants is limited to 0.0135 lb/ton P2O5 feed. However, these standards apply only to major sources of HAPs. As USAC is not a major source of HAPs, these standards do not apply to the proposed project.

There are no fluoride emission standards for tank farms.

2.2 CONTROL TECHNOLOGIES

The most common pollution control equipment used to control fluorides from a wet process phosphoric acid plant is a wet scrubber. There is some variation in the wet scrubbing system configurations from plant to plant, often depending on the preference of the plant designers and suppliers.

The use of fresh water as scrubbing medium, in place of pond water, would result in increased capture of gaseous fluorides. However, this option is not possible given the current severe water restrictions implemented in the area by the Water Management District.

The existing USAC scrubbing system consists of venturi scrubbers. They are popular with the industry as they operate with low maintenance/repair costs, and increased on-line operation.

Packed scrubbers offer superior gaseous fluoride removal, however the industry experience indicates that the packing tends to plug frequently causing maintenance problems. The resulting plant down time cuts into the overall plant efficiency and productivity. Consequently, the use of packed scrubbers, in place of the existing venturi scrubbers, is not considered for this application. However, the use of packed scrubbers, in series with the existing venturi scrubbers can be evaluated.

The cost associated with the use of a cross-flow packed scrubber, based on a recent cost proposal for a similar application, is estimated below for each train separately.

Total Capital Cost:	With Equipment Cost of $190,000		
	Purchased Equip. Cost (1.18, EPA factor)	= $	224,200
	Installation Cost (0.85 PEC, EPA factor)	= $	190,570
	Indirect Cost (0.35 PEC, EPA factor)	= $	78,470
	Total Capital Cost	= $	493,240
Direct Annual Cost	Labor (O.5 hr/shift, EPA factor)	=$	10,000
	Maintenance (1.0 hr/shift, EPA factor)	=$	20,000
	Electricity (pump)	=$	30,000
	Total DC	=$	60,000
Indirect Annual Cost	(0.1715 TCI, EPA combined factor) (includes capital recovery at 15 year life, 10% int.)	=$	84,600
Total Annual Cost	(DC + IC)	= $	144,600

Based on the above annual cost, the cost of fluoride control can be estimated with a conservative assumption that all fluorides from the venturi scrubber, of 2.96 tpy, are captured.

Annual Cost of fluoride control	($144,600 / 2.96 tpy)	= $	48,850/ton

The use of packed scrubbers is rejected as BACT based on the above cost evaluation.

Treated water recirculation is rejected as BACT based on costs evaluated for a similar project for a lined pond and lime treatment that exceed even the costs associated with a packed scrubber. Further, the treated water containment integrity and storm contingencies can add considerable unnecessary environmental liability.

It should be noted that the historical fluoride emissions measurements indicate that the current scrubber configuration results in emissions of fluorides well below the NSPS. A summary of recent emissions measurements at USAC is included along with the emissions calculations in Appendix A. Furthermore, the proposed fluoride emission rate is as stringent as the limit imposed by FDEP, of 0.0135 lb/ton P2O5 input on Cargill Fertilizer's phosphoric acid plant (based on the Title V permit).

The tank farm is also subject to BACT, as it is included in the proposed project. However, BACT-based emissions limits are usually not considered for this relatively minor source. Indeed, many facilities do not even control fluoride emissions from the phosphoric acid tank farms. A packed scrubber is rejected as BACT, given the above cost evaluation. The use of fresh water is rejected due to the severe restrictions on water consumption in the area. The proposed BACT is continued use of the existing venturi scrubber using pond water to control fluorides from the tank farm and a fluoride emission rate of 1.0 lb/hr.

2.3 BACT CONCLUSION

Based on the above discussion, USAC proposes the continued use of the existing venturi scrubbers as BACT and will limit fluoride emissions from the phosphoric acid plant to 0.0135 lb/ton P2O5 input; and, limit fluoride emissions from the tank farm to 1.0 lb/hr.

3.0 GOOD ENGINEERING PRACTICE STACK HEIGHT

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

The stacks associated with the proposed project are less than 213 feet in height above-grade. This satisfies the good engineering practice (GEP) stack height criteria.

4.0 AIR IMPACTS ANALYSIS

No ambient air standards analysis is required for fluorides as there are no applicable standards.

5.0 IMPACTS ON SOILS, VEGETATION AND VISIBILITY

No adverse effects are expected on the soils, vegetation or visibility from the fluorides emissions associated with the proposed phosphoric acid production increase based on past FDEP assessment of fluoride levels in the vicinity of the proposed project. In fact, FDEP has discontinued monitoring of ambient fluorides in Polk County for many years.

The proposed modification will require no increase in personnel to operate the plant. Therefore, no additional growth impacts are expected as a result of the proposed phosphoric acid production increase.

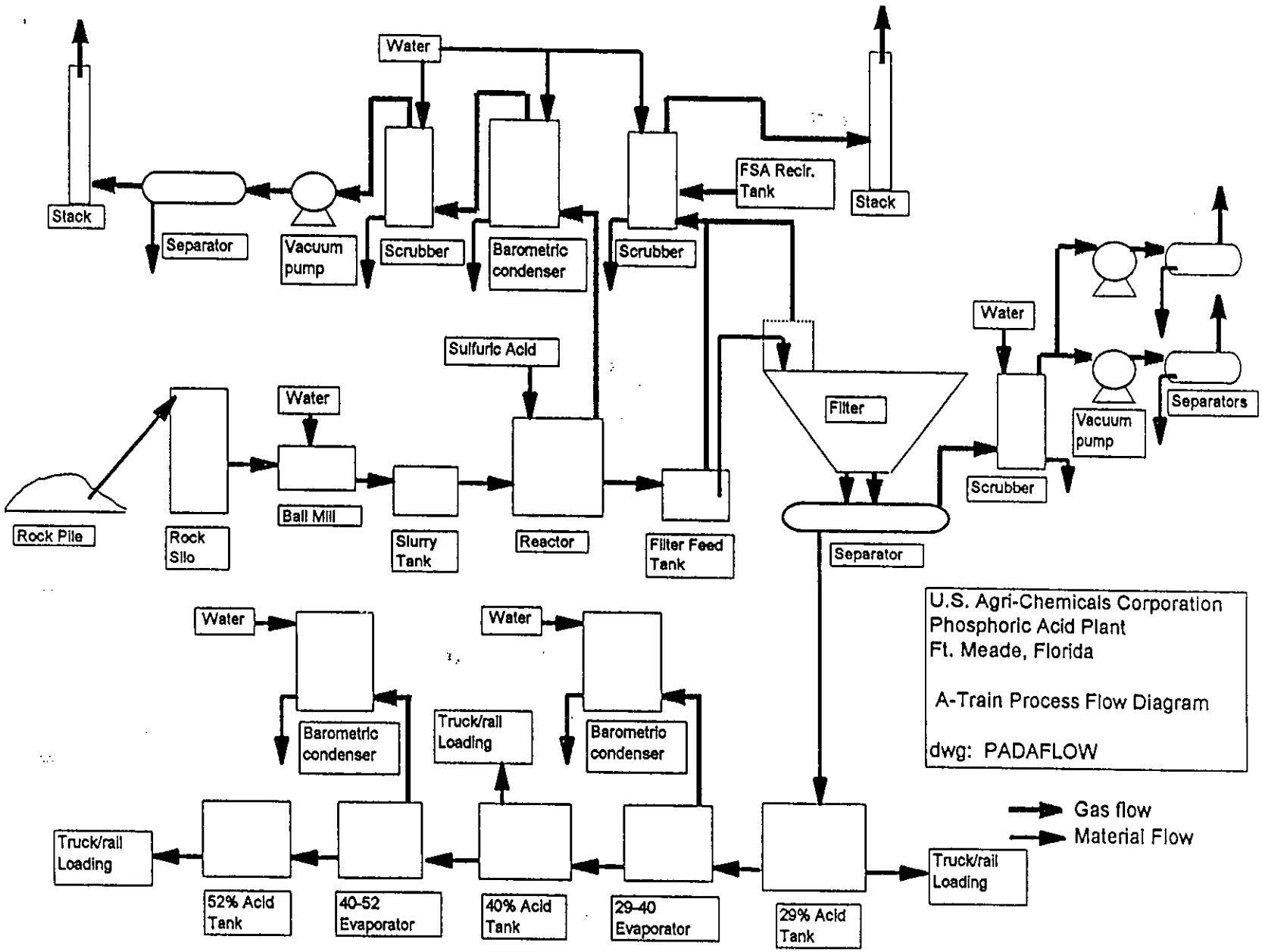
6.0 IMPACTS ON AIR QUALITY RELATED VALUES

By prorating the predicted NOx impacts, the Class I area fluoride impact for the annual period is conservatively estimated to be less than 0.0001 ug/m3, calculated as ((9 tpy F/65.7 tpy NOx) x 0.0007 ug NOx /m3). A maximum 24-hour averaging period exposure can be similarly estimated at 0.074 ug/m3. The lowest observed effect levels for sensitive plants were reported in the range of 1.6 ug/m3 for the 24-hour period (study by Applied Sciences Associates, Inc. 1978).

Based on the low fluorides levels, no adverse impacts are expected on the air quality related values of the soils, vegetation and wildlife in the nearest Class I area, Chassahowitzka National Wildlife Refuge, located more than 100 km from the proposed project. As fluorides are not visible, no adverse visibility impacts are expected from the proposed project.

7.0 CONCLUSION

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


Water
Stack
Separator
Vacuum pump
Scrubber
Barometric condenser
Scrubber
FSA Recir. Tank
Stack
Water
Separators
Vacuum pump
Sulfuric Acid
Filter
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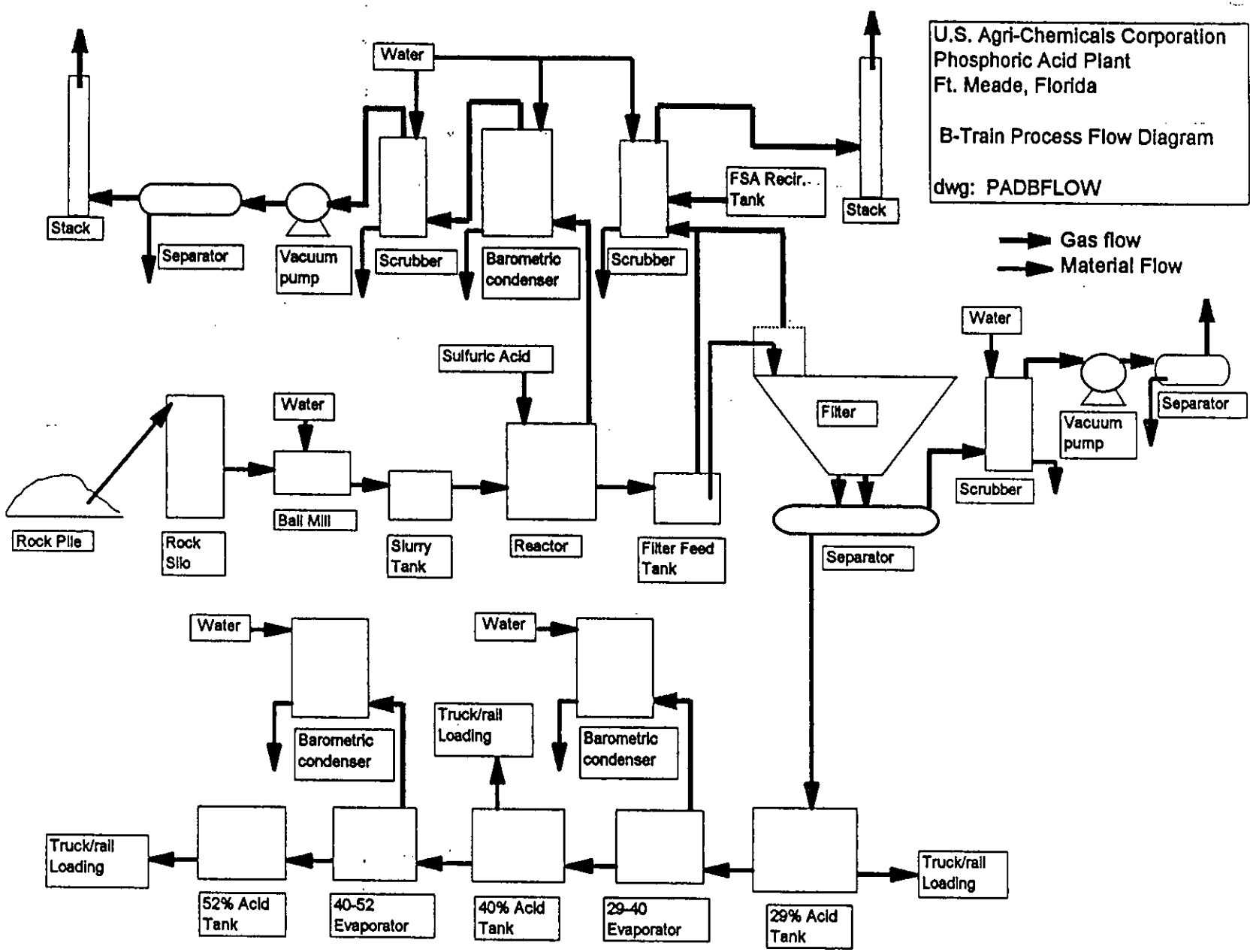
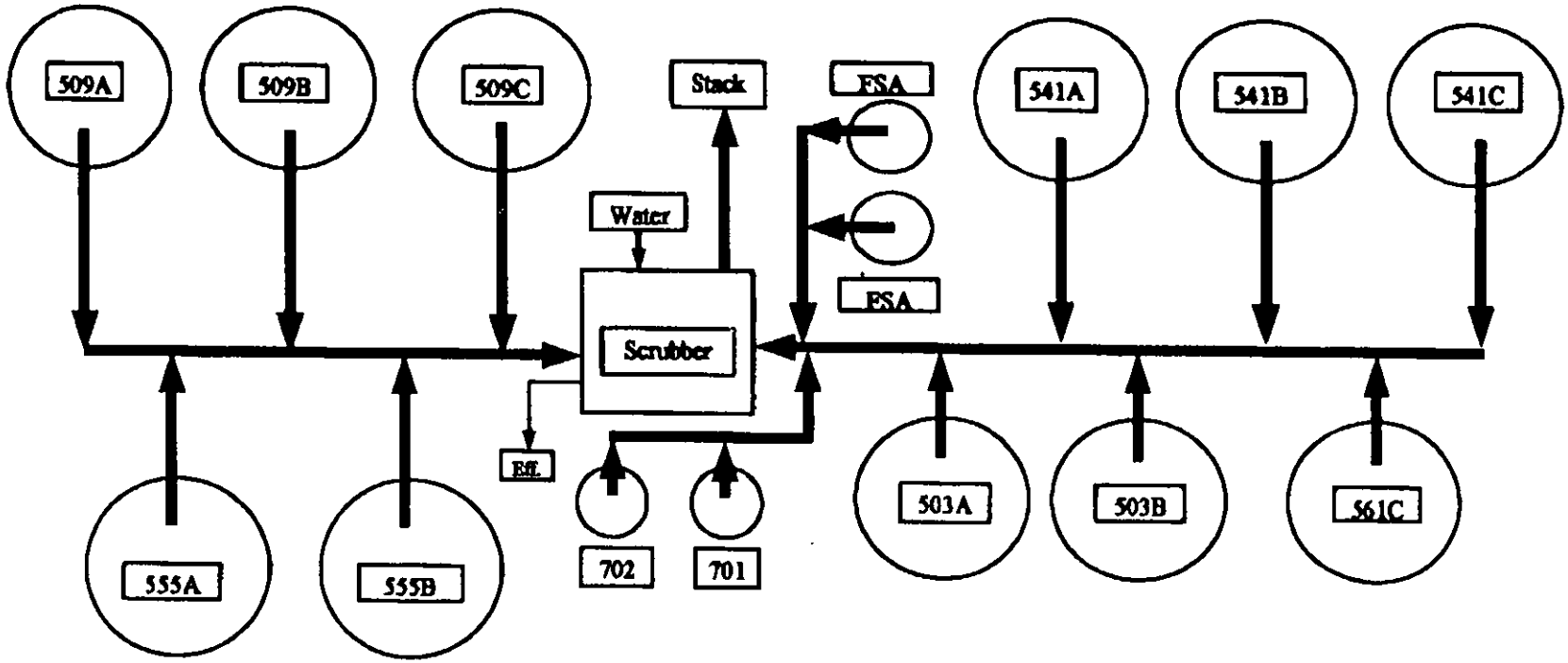
A-Train Process Flow Diagram
dwg: PADAFLOW
Water
Water
Barometric condenser
Truck/rail Loading
Barometric condenser
Gas flow
Material Flow
Truck/rail Loading
Truck/rail Loading
52% Acid Tank
40-52 Evaporator
40% Acid Tank
29-40 Evaporator
29% Acid Tank


U.S. Agri-Chemicals Corporation
Phosphoric Acid Plant
Ft. Meade, Florida
B-Train Process Flow Diagram
dwg: PADBFLOW
Gas flow
Material Flow
Water
Stack
Separator
Vacuum pump
Scrubber
Barometric condenser
Scrubber
FSA Recir. Tank
Stack
Water
Sulfuric Acid
Filter
Water
Separator
Vacuum pump
Scrubber
Water
Ball Mill
Rock Pile
Rock Silo
Slurry Tank
Reactor
Filter Feed Tank
Separator
Water
Water
Barometric condenser
Truck/rail Loading
Barometric condenser
Truck/rail Loading
52% Acid Tank
40-52 Evaporator
40% Acid Tank
29-40 Evaporator
29% Acid Tank
Truck/rail Loading



509A 29% Storage
509B 29% or 40% Stor-
509C 40% Storage
555A 54% Storage
555B 54% Storage
701 Acid Mix Tanks
702 Acid Mix Tanks
503A 29% Clarifier
503B 29% Clarifier
541A 40% Clarifier
541B 40% Clarifier
541C 40% Clarifier
561C 54% Clarifier

Gas Flow

US Agri-Chemicals Corporation
Phosphoric Acid Plant
Ft. Meade, Florida

Tank Farm Process Flow Diagram

dwg: Tank Farm.pub

APPENDIX A

PHOSPHORIC ACID PLANT EMISSIONS CALCULATIONS

CURRENT ACTUAL EMISSION RATES

Based on 1998 and 1999 compliance tests, the actual emissions can be summarized as follows:

Unit	Year	Hours Operated	F. Emission Rate (lb/hr)	F. Emissions (tpy)
A train	1998	7558	0.061	0.231
B train	1998	7497	0.029	0.109
Tank Farm	1998	8760	0.54	2.360
1998 Total F =				2.70
A train	1999	7636	0.039	0.149
B train	1999	7697	0.046	0.180
Tank Farm	1999	8760	0.10	0.440
1999 Total F =				0.77

Two year average = (2.7 + 0.77) / 2 = 1.74

Note: Tpy emissions are calculated as: lb/hr x hrs/yr / 2000 lbs/ton

PROPOSED ALLOWABLE EMISSION RATES

A Train, F = 50 tph P2O5 x 0.0135 lb F/ton P2O5
= 0.675 lb/hr
x 8760 hrs/yr x ton/2000 lbs
= 2.96 tpy

B Train, F = 50 tph P2O5 x 0.0135 lb F/ton P2O5
= 0.675 lb/hr
x 8760 hrs/yr x ton/2000 lbs
= 2.96 tpy

Tank Farm, F = 1.0 lb/hr
x 8760 hrs/yr x ton/2000 lbs
= 4.38 tpy

NET EMISSIONS INCREASES

F = (2.96 + 2.96 + 4.38 – 1.74) tpy
= 8.6 tpy (exceeds PSD significant level of 3 tpy)

APPENDIX B - CURRENT AIR PERMIT CONDITIONS

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

Permittee:
U.S. Agri-Chemicals Corporation

FINAL Permit No.: 1050051-003-AV
Facility ID No.: 1050051
SIC Nos.: 28, 2874
Project: Revised Title V Air Operation Permit

Note: The previous Title V Operation Permit is replaced by this version (effective date 5/15/00, DEP Project No.: 006).

This permit is for the operation of the Ft. Meade Chemical Plant facility. This facility is located at 3225 State Road 630 West, Ft. Meade, Polk County; UTM Coordinates: Zone 17, 416.2 km East and 3068.7 km North; Latitude: 27° 44' 40" North and Longitude: 81° 51' 08" West.

STATEMENT OF BASIS: This Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.) and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-213. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:
Appendix U-1, List of Unregulated Emissions Units and/or Activities
APPENDIX TV-3, TITLE V CONDITIONS (version dated 4/30/99)
APPENDIX SS-1, STACK SAMPLING FACILITIES(version dated 10/7/96)
TABLE 297.310-1, CALIBRATION SCHEDULE(version dated 10/7/96)
FIGURE 1 - SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE REPORT(version dated 7/96)

Effective Date of Original Issuance: 09/11/98
Effective Date of Revision: 5/15/00
Renewal Application Due Date: 03/13/03
Expiration Date: 09/09/03

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

W.C. Thomas, P.E.
District Air Program Administrator
Southwest District

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of two phosphoric acid plants -- A and B Trains, one phosphoric acid plant tank farm, one MAP Plant, one MAP Loadout System, two sulfuric acid plants, one auxiliary boiler, one molten sulfur storage and handling system, and one lime silo.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the initial Title V permit application received June 13, 1996, this facility is not a major source of hazardous air pollutants (HAPs). Based on the proposed rule "National Emission Standards for Hazardous Air Pollutants Phosphoric Acid Manufacturing and Phosphate Fertilizers Production" (reference Federal Register 12/27/96), this facility may be considered a major source of HAPS, and permitting considerations will be deferred until the promulgation of this MACT rule.

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

E.U. ID No.	Brief Description
-005	Phosphoric Acid Plant A-Train
-006	Auxiliary Boiler
-016	Sulfuric Acid Plant #1
-017	Sulfuric Acid Plant #2
-020	Phosphoric Acid Plant B-Train
-021	Phosphoric Acid Plant Tank Farm
-028	Molten Sulfur System -- Sulfur Tank
-029	Molten Sulfur System -- Sulfur Pit
-030	Molten Sulfur System -- Sulfur Rail Unloading
-031	Molten Sulfur System -- Sulfur Truck Unloading
-032	Prilled MAP Plant (includes MAP Storage & Loadout)
-033	Lime Silo
-035	Phosphogypsum Stack

Unregulated Emissions Units and/or Activities

-036	Facility-Wide Fugitive Emissions

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions unit(s).

E.U. ID No.	Brief Description
-005	Phosphoric Acid Plant A-Train
-020	Phosphoric Acid Plant B-Train
-021	Phosphoric Acid Plant Tank Farm

The maximum permitted process input rate for Phosphoric Acid Plants A and B is 44 tons per hour (1,056 tons per day as P_2O_5) for each plant. Fluoride emissions from phosphoric acid production are controlled by a 12,000 ACFM venturi scrubber at each plant.

The phosphoric acid tank farm at the Fort Meade Plant is used for the storage of phosphoric acid and fluorosilicic acid. Two phosphoric acid production trains designated as "A" and "B", produce the acid stored in the tank farm. The tank farm consists of: 2 - 54% product tanks, 1 - 29% storage tank, 1 - 29% or 40% storage tank, 1 - 40% storage tank, 2 - 40% clarifier tanks, 2 - 29% clarifier tanks, 2 - phosphoric acid mix tanks, and 2 - fluorosilicic acid tanks.

Fluoride emissions from the tank farm are controlled by a venturi scrubber which exhausts at approximately 6,000 ACFM. The scrubber uses pondwater as the scrubbing liquid. Liquid flow rate to the scrubber is approximately 475 gpm at 35 psig and the pressure drop across the scrubber is approximately 2 inches water gauge (w.g.).

The phosphoric acid evaporator system (Nos. 1 through 5) concentrates acid from both A-Train and B-Train Phosphoric Acid Plants. It can be used to concentrate 29% acid to 40% acid or 40% acid to 52% acid or 29% acid to 52% acid. The phosphoric acid evaporator system consists of evaporators, hydrofluorosilicic acid (FSA) towers, FSA recirculation tanks, barometric condensers, inter-condensers, steam ejectors, ejector seal tanks, and hot well sumps. Fluoride emissions from the FSA recirculation tank are vented to the A-Train scrubber. There is an insignificant amount of fugitive fluoride emissions from the hot well sumps and the ejector seal tanks.

{Permitting note(s): These emissions units are regulated under NSPS - 40 CFR 60, Subpart T, Standards of Performance for the Phosphate Fertilizer Industry: Wet-Process Phosphoric Acid Plants, adopted and incorporated by reference in Rule 62-204.800(7)(b)25., F.A.C.; Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD); and Rule 62-296.403, F.A.C., Phosphate Processing.}

The following conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

A.1. Capacity. The maximum process input rate of phosphorus bearing feed material to either Plant A or Plant B shall not exceed 44 tons per hour as P_2O_5 on a 24-hour basis (1,056 tons per day).
[Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions - (PTE), AC53-103830 and AC53-103831]
{**Permitting Note:** The maximum throughput rate for the tank farm is limited by the process rate from the "A" and "B" phosphoric acid production trains.}

A.2. Hours of Operation. The hours of operation for this emissions unit shall not exceed the following:

a. Phosphoric acid production equipment - 7,968 hours/year.
b Evaporation and tank farm - 8,760 hours/year.

[Rule 62-210.200, F.A.C., Definitions - (PTE), Air Construction Permits AC53-103830 and AC53-103831]

Emission Limitations and Standards

A.3. Total fluoride emissions[1] from each phosphoric acid plant (Plant A or Plant B) shall not exceed any of the following:

a. 0.02 pound per ton of "equivalent P_2O_5 feed"[2];
b. 0.88 pound per hour;
c. 21.1 pounds per day;
d. 3.5 tons per year.

Fluoride emissions from each plant (Plant A or B) shall be defined as the sum of the fluoride emissions from the (Plant A and Plant B) phosphoric acid production facilities and one half of the fluoride emissions from the clarification and storage areas.
[AC53-103830, AC53-103831, Rule 204.800(7)(b)25, F.A.C., and 40 CFR 60.202(a)].

A.4. Visible emissions from the Phosphoric Acid Plant A and Plant B scrubber exhausts, phosphoric acid plant tank farm, and associated processing equipment shall not be equal to or greater than 20% opacity.
[Rule 62-296.320(4)(b), F.A.C.]

Test Methods and Procedures

A.5. The permittee shall test all 3 stacks' emissions simultaneously or within 5 days for fluoride emissions and visible emissions annually, on or during the 60 day period prior to November 29. The 3 stacks to be tested are: the clarification and storage tank farm venturi scrubber stack and the "A" and "B" production trains' venturi scrubber stacks. [Construction Permit AC53-103831, and Rules 62-297.310(7)(a)4, F.A.C. and 62-4.070(3), F.A.C.]

A.6. Compliance with the fluoride and visible emissions limitations of Conditions A.3 and A.4 shall be determined using EPA Methods 1, 2, 4, 9 and 13A or 13B as contained in 40 CFR 60, Appendix A and adopted by reference in Chapter 62-297, F.A.C. The test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. The minimum requirements for stack sampling facilities, sampling and reporting, shall be in accordance with Chapter 62-297, F.A.C. and 40 CFR 60, Appendix A.

Monitoring of Operations

A.7. In order to provide reasonable assurance, when the phosphoric acid plants (Trains A and B) and the clarification and storage tank farm are operating, that the pollution control system is operating properly, the permittee shall comply with Facility-wide Condition No. 9.
[Rule 62-4.070(3), F.A.C.].

A.8. In order to provide reasonable assurance that the pollution control system is operating properly, the permittee shall create and keep a record log of the scrubber operating parameters for each scrubber. The record log shall contain, at a minimum:

a. the volumetric liquid flow rate (gallons per minute),
b. the scrubber pressure drop (inches of water),
c. the date and time of the measurements, and
d. the name of the person responsible for performing the measurements.

A log entry shall be made at least once for every 8 hour shift that either Phosphoric Acid Plant Train A or B operates.

NOTE: The permittee may substitute continuous monitoring and strip chart recordings for the manual recordkeeping required by this Condition.
[Rules 62-4.070(3), 62-4.160(14)(b), 62-4.160(14)(c), and 62-213.440(b)2.b., F.A.C.]

Continuous Monitoring Requirements

A.9. The permittee shall install, calibrate, maintain, and operate a monitoring device which can be used to determine the mass flow of phosphorus-bearing feed material to the process. The monitoring device shall have an accuracy of ±5% over its operating range.
[Rule 62-204.800(7)(b)25, F.A.C. and 40CFR60.203(a)]

A.10. The permittee shall install, calibrate, maintain, and operate a monitoring device which continuously measures and permanently records the total pressure drop across each venturi scrubbing system. The monitoring device shall have an accuracy of ±5% over its operating range.
[Rule 62-204.800(7)(b)25, F.A.C. and 40CFR60.203(c)]

Recordkeeping and Reporting Requirements

A.11. The permittee shall maintain a daily record of the "equivalent P_2O_5 feed"[(2)] rate for Phosphoric Acid Plant Trains A and B according to the procedure specified in 40CFR60.203(b)- Monitoring of Operations. This daily log shall be maintained at the facility and shall be made available to the Department upon request.
[40CFR60.203 and Rules 62-4.070(3), F.A.C. and 62-204.800(7)(b)25, F.A.C.]

A.12. The monitoring devices required by Conditions A.9 and A.10 for the equivalent P_2O_5 feed rate and the total pressure drop measurement across the scrubber are considered inoperative when they are out-of-service or fail to produce valid data. Upon the occurrence of 48 consecutive hours of continuous monitoring system downtime, the permittee shall notify the Air Compliance Section, Southwest District Office of the Department of Environmental Protection by 5:00 p.m. on the Department's next business day, of the incident and specify the corrective action being pursued.
[Rules 62-4.130, and 62-4.160(8), F.A.C.]

Notify: Air Compliance Supervisor
Southwest District Office
Department of Environmental Protection
Telephone: (813) 744-6100
FAX: (813) 744-6458

A.13. All test reports submitted to the Department shall include, at a minimum, the following information for the test period:

a. the production rate ("equivalent P_2O_5 feed"[2] rate),
b. the input rate to the tank farm,
c. the tank farm unloading rate, and
d. for each scrubber
    1. type of scrubber liquid,
    2. volumetric liquid flow rate (gpm) and/or water pressure (psig), and
    3. gas pressure drop ("w.g.).

[Construction Permit Nos. AC53-103830 and AC53-103831, Rules 62-4.070(3), 62-4.160(14)(b), and 62-4.160(14)(c), F.A.C.]

Failure to submit the above information, or operating at conditions which do not reflect normal operating conditions may invalidate the test and fail to provide reasonable assurance of compliance.
[Rule 62-4.070(3), F.A.C.]

<u>Reasonable Assurances</u>

A.14. The wetted area in the gypsum disposal area and the process cooling pond shall not be increased without prior approval from the Department.
[Rule 62-4.070(3), F.A.C. and Construction Permit Nos. AC53-103830 and AC53-103831]

A.15. All reasonable precautions shall be taken to minimize and control the generation of fugitive fluoride emissions.
[Rule 62-4.070(3), F.A.C.]

[1] **"Total Fluoride Emissions"** - elemental fluorine and all fluoride compounds as measured by reference methods specified in 40 CFR 60.204, or equivalent or alternative methods.

[2] **"Equivalent P_2O_5 Feed Rate"** - the quantity of phosphorus, expressed as phosphorous pentoxide, feed to the process.