

U.S. Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, FL 33841-9799
813 285 8121

US
Agri-Chemicals

A Sinochem Company

RECEIVED
JUL 18 1995
Bureau of
Air Regulation

July 13, 1995

Virginia B. Wetherell, Secretary
c/o Office of General Counsel
Department of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399-9799

Dear Ms. Secretary:

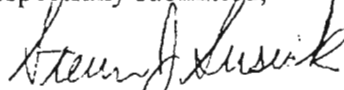
RE: Request for an Extension of Time
DEP File No. PSD-FL-222; AC53-260190

U.S. Agri-Chemicals Corporation (USAC), pursuant to Rule 62-103.070, hereby request an extension of time within which it must file a petition for an administrative proceeding in connection of this matter and, in support thereof, states:

1. USAC filed an application for an air pollution permit to construct a monoammonium phosphate plant on 10/28/94. On 7/3/95, USAC received DEP's Technical Evaluation and Preliminary Determination (TEPD), Intent to Issue the permit with Conditions, and Best Available Control Technology Determination (BACTD).
2. USAC has reviewed the TEPD, permit conditions, and BACTD and has found several items that need to be revised or clarified.
3. USAC representatives have informed the Department permitting staff of USAC's desire to initiate informal discussions to resolve this matter.
4. USAC representative has conferred with counsel for the Department, Douglas Beason, Esquire, who stated that he has no objection to this request for extension of time.

WHEREFORE, USAC requests that the Secretary grant an extension of time through 9/17/95, within which to file a petition for an administrative proceeding.

Respectfully submitted,



Stephen J. Susick, P.E.

General Manager of Eng. and Tech. Svcs.

cc: J. Reynolds, DEP
J. Koogler
Douglas Beason, Esq., DEP



KA 173-94-04

March 31, 1995

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

Subject: BACT Determination for Fluorides
U.S. Agri-Chemicals Corporation
P205 Fl 200 (AGRI-CHEMICALS) P. 111-11 MAP Plant

Dear Mr. Linero;

This is a follow up to Pradeep Raval's telephone conversation today with Mr. John Reynolds of your staff regarding the proposed fluoride emissions limit for the above referenced MAP plant.

We concur with FDEP's position that adequate emission data are not available to assess the validity of the fluoride emission limit proposed as BACT for the MAP plant. As a result, USAC agrees with FDEP's proposal for a delayed BACT determination which would be based on the performance tests upon completion or construction of the MAP plant. It should be noted that USAC intends to require a manufacturer, upon selection, to design the MAP plant scrubber to meet the fluoride emission limit of 0.0417 pound per ton P205 input, as proposed in the application.

It is anticipated that the information herein concludes the technical review of the proposed project. We appreciate your efforts, as well as the efforts of Mr. Reynolds and Ms. Zhang for the prompt issuance of the Department's Technical Evaluation and draft permit.

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

Very truly yours,

KOGLER & ASSOCIATES



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

JBK:par

c: Steve Susick, USAC



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
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904/377-5822 ■ FAX 377-7158

KA 173-94-04

March 20, 1995

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MAR 31 1995

**Bureau of
Air Regulation**

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

Subject: Submittal of Additional Information
U.S. Agri-Chemicals Corporation
PSD-FL-222 (AC53-260190) Prilled MAP Plant

Dear Mr. Linero:

This is a follow up to our letter to you dated March 2, 1995, to provide additional information regarding ambient air quality modeling for particulate matter (PM10) emissions from the above referenced project.

The results of the ASI modeling, submitted to FDEP on March 2, 1995, and summarized herein (see Tables 1, 2 and 3) demonstrate that the predicted ambient air quality impact of particulate matter emissions from the proposed project are greater than significant for the 24-hour and annual periods in the Class II area; and, less than significant in the Class I area. Consequently, the proposed project is not expected to cause or significantly contribute to any exceedance of the allowable Class I area PSD increments, should such exceedances occur.

As the predicted particulate matter impacts from the proposed project were significant within the Class II area, additional modeling was required to determine compliance with the ambient air quality standards and allowable Class II area PSD increments.

Class II Area AAQS and PSD Increment Analysis

The Ambient Air Quality Standards (AAQS) Analysis and the Class II Area PSD Increment (PSD) Analysis was conducted to determine the combined ambient air impact of the proposed project and other nearby PM10 emitting sources.

The ASI modeling indicated that the predicted impacts from the proposed project would not be significant beyond a distance of 4000 meters from the plant. Accordingly, the receptor grid for this analysis included all the

Mr. A. A. Linero
Florida Department of
Environmental Protection

March 20, 1995
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receptors used in the ASI modeling, except for receptors beyond 4000 meters. Receptors rings at distances of 2500 and 3500 meters from the proposed project were added to the previous grid.

An inventory of particulate matter sources in the region was obtained from FDEP, and then updated based on current information in FDEP files (see letter presented in Attachment 1). For the purposes of this analysis, it was conservatively assumed that PM10 emissions are equal to TSP emissions listed in the inventory. The significant facilities to be included in the analysis were determined based on the standard "20 D Rule" approach.

A list of the significant facilities near the proposed project is presented in Table 4. The corresponding particulate matter 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 5 and 6, respectively. Although the ISC model is not recommended for modeling sources beyond 50 kilometers, some of the borderline sources were included to be conservative.

The results of the AAQS and PSD analysis indicate that the maximum predicted 24-hour and annual period impacts for the Class II area are well below the standards, as shown in Tables 7 and 8, respectively. The modeling output is provided on disk (enclosed).

It should be noted that the predicted ambient air quality impacts, including a conservative background PM10 concentration level of 30 micrograms per cubic meter (for the Gibsonton area) representing the contribution of any non-modeled sources, is also well below the 24-hr and annual PM10 ambient air quality standard.

As you are aware, USAC is under considerable pressure to maintain the project schedule. Consequently, we are available to you at all times should any questions arise. We appreciate your kind assistance.

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

Very truly yours,

KOUGLER & ASSOCIATES


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

JBK:par
Enc.

c: Steve Susick, USAC

J. Reynolds
R. Zhang
A. Kessel, SWDist

J. Harper, EPA
J. Duranah, NPS
J. Novak, Polk Co.



TABLE 1
AIR QUALITY MODELING PARAMETERS

U. S. AGRI-CHEMICALS
POLK COUNTY, FLORIDA

Source	PM10 Emission (g/s)	Height (m)	Temp. (°K)	Velocity (m/s)	Diameter (m)
Tower/Cooler	24 3.02	43.10 21.95	332	14.37	2.74
Loadout	0.54	15.24	300	14.40	0.43

NOTE: Building wake effects were included in the modeling.



TABLE 2
 SUMMARY OF PM10 SIGNIFICANT IMPACT ANALYSIS
 CLASS II AREA

U. S. AGRI-CHEMICALS
 POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	PARTICULATE MATTER IMPACT ($\mu\text{g}/\text{m}^3$)	
	24-HOUR	ANNUAL
1987	16.08	1.25
1988	15.95	1.56
1989	20.43	2.02
1990	16.42	1.30
1991	16.38	1.53
Significant Impact (Rule 62-272, FAC)	5	1
Class II Increment (Rule 62-272, FAC)	30	17
Ambient Air Standard (Rule 62-272, FAC)	150	50

NOTE:

(1) The predicted impacts represent the highest-high impact.



TABLE 3
 SUMMARY OF PM10 SIGNIFICANT IMPACT ANALYSIS
 CLASS I AREA

U. S. AGRI-CHEMICALS
 POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	PARTICULATE MATTER IMPACT ($\mu\text{g}/\text{m}^3$)	
	24-HOUR	ANNUAL
1987	0.065	0.0022
1988	0.051	0.0033
1989	0.068	0.0043
1990	0.075	0.0022
1991	0.039	0.0019
Significant Impact (NPS guidelines)	0.27	0.08

NOTE:

- (1) The predicted impacts represent the highest-high impact.



TABLE 4
CLASS II AREA
SIGNIFICANT PM-10
EMITTING FACILITIES (20 D)

SO2 *20 D* SOURCE INVENTORY FOR U S AGRI-CHEMICALS Facility	UTM		PM (tpy)	DIST FROM SITE TO USAC (KM)	20 x D	INCLUDE MODELING
	East	North				
APAC-Florida, Inc.	347.1	3027.3	163	80.5	1,610.7	NO
APAC-Florida, Inc.	347.1	3027.3	163	80.5	1,610.7	NO
Adams Packing Association	421.7	3104.2	144.0	35.7	713.2	NO
Agrico Chemical	400.0	3061.0	84.0	17.9	357.8	NO
Agrico Chemical Co	362.1	3076.1	195.0	54.4	1,087.3	NO
Agrico Chemical Co Pierce*	403.7	3079.0	840.0	15.9	317.0	YES
Agrico Chemical Co South Pierce*	407.5	3071.5	1,096.0	8.9	177.2	YES
Alcoa	416.8	3116.0	446	47.0	940.1	NO
Alcoa	416.8	3116.0	446	47.0	940.1	NO
Alcoma Packing - Lake Wales	451.6	3085.5	263	39.2	784.8	NO
Alcoma Packing - Lake Wales	451.6	3085.5	263	39.2	784.8	NO
Allsun Products	413.5	3093.8	318.0	24.9	498.5	NO
Alumax Extrusions	385.6	3097.0	172.0	41.3	826.6	NO
Amcon Concrete	364.0	3075.0	39.0	52.3	1,046.9	NO
Amcon Concrete	358.4	3090.2	3.0	61.4	1,227.6	NO
Amcon Products	364.6	3092.8	32.0	56.6	1,132.9	NO
American Orange Corp	429.8	3047.3	181.0	25.7	514.3	NO
Amoco Oil	357.8	3092.0	9.0	62.6	1,251.6	NO
Aristrech Chemical Corp	411.7	3085.9	7.0	17.4	348.8	NO
Asgrow Florida Company	388.6	3104.6	5.0	44.9	898.5	NO
Auburndale Cogeneration*	420.8	3103.3	161.0	34.6	826.0	NO
Bay Concrete	365.0	3084.0	3.0	53.2	1,063.2	NO
Bay Concrete	365.1	3093.8	37.0	56.6	1,132.4	NO
Bio-Medical Service Corp of GA	413.9	3081.3	46.0	12.5	249.6	NO
Bordo Citrus Product Inc	427.8	3097.5	13.0	30.8	616.9	NO
Brannen Prestress Co.	353.7	3016.5	100	81.5	1,629.4	NO
Brannen Prestress Co.	353.7	3016.5	100	81.5	1,629.4	NO
C & M Products Co	405.5	3079.1	162.0	14.6	291.4	NO
C F Industries Bonnie Mine Rd*	408.4	3082.4	1,319.0	15.4	308.1	YES
C&M Products	405.5	3079.1	37	14.6	291.4	NO
C&M Products	405.5	3079.1	37	14.6	291.4	NO
C-Cure of Florida	386.0	3098.7	21.0	42.2	844.3	NO
CF Industries	388.0	3116.0	84	54.7	1,094.2	NO
CF Industries	388.0	3116.0	84	54.7	1,094.2	NO
CF Industries - Bartow	408.4	3082.4	790	15.4	308.1	YES
CF Industries - Bartow	408.4	3082.4	790	15.4	308.1	YES
CSX Transportation Inc.	361.0	3089.0	404.0	58.5	1,170.5	NO
Cargill	358.1	3091.7	22.0	62.2	1,243.8	NO
Cargill Fertilizer Inc. (Gardiner)	362.9	3082.2	932.0	54.7	1,094.3	NO
Cargill/Nutrena Feed Division	360.8	3095.8	21.0	61.4	1,227.2	NO
Cast Metals Corp	368.8	3094.6	8.0	53.7	1,073.9	NO
Cast-Crete Corp of Florida	371.9	3099.2	11.0	53.4	1,069.0	NO
Central Florida Hot-Mix	412.5	3097.7	19.0	28.9	578.3	NO
Central Phosphates Inc.	359.1	3089.8	26.0	60.6	1,211.7	NO
Chapman Contracting	356.8	3068.4	4.0	59.2	1,184.1	NO
Chevron Asphalt Inc.	358.2	3092.0	4.0	62.2	1,244.2	NO
Citrus Hill Mfg	447.9	3068.3	66.0	31.9	638.2	NO
Citrus World	441.0	3087.3	601.0	31.0	619.6	NO
City Of Tampa Dept.	364.0	3089.5	48.0	55.9	1,117.9	NO
Coca Cola	421.6	3103.7	387.0	35.1	703.0	NO
Comco of America	361.4	3086.9	9.0	57.5	1,149.2	NO
Commercial Metals Inc	358.5	3086.3	108.0	60.7	1,213.1	NO
Conserv Inc.*	398.7	3084.2	1,598.0	23.0	460.6	YES
Consolidated Minerals Inc	393.8	3096.3	1.0	35.2	703.7	NO
Consolidated Minerals Inc. Plant City	393.8	3096.3	756.0	35.2	703.7	YES
Couch Construction Co	364.3	3098.1	45.0	59.3	1,186.5	NO
Couch Construction Company	362.1	3096.7	26.0	60.6	1,212.0	NO
Crown Door Company	362.1	3092.5	13.0	58.8	1,176.0	NO
David J. Joseph Co.	364.0	3092.9	123.0	57.2	1,144.6	NO
David J. Joseph Co.	364.0	3092.9	123	57.2	1,144.6	NO
David J. Joseph Co.	364.0	3092.9	123	57.2	1,144.6	NO
Delta Asphalt	372.1	3105.4	72.0	57.0	1,140.6	NO
Driggers Concrete	360.0	3065.9	21.0	56.1	1,121.7	NO
ER Carpenter	397.0	3131.5	55	65.3	1,306.5	NO
ER Carpenter	397.0	3131.5	55	65.3	1,306.5	NO
Earl Massey	440.4	3103.4	39	42.2	843.5	NO
Earl Massey	440.4	3103.4	39	42.2	843.5	NO
Eastern Association Terminal	360.2	3088.9	534.0	59.2	1,184.8	NO
Eastern Electric Apparatus Repair Co	366.6	3092.0	21.0	54.5	1,089.8	NO
Eger Concrete Eastside Dr N	410.5	3102.5	11.0	33.9	679.0	NO
Eger Concrete Lake Ida & 5th St	428.1	3102.0	49.0	35.1	703.0	NO
Ennis Drum Service Inc	422.5	3102.5	4.0	34.1	682.5	NO
Ery Juice Inc	399.0	3101.8	117.0	36.9	738.9	NO

TABLE 4
CLASS II AREA
SIGNIFICANT PM-10 EMITTING FACILITIES (20 D)
(CONTINUED)

SO2 *20 D* SOURCE INVENTORY FOR U S AGRI-CHEMICALS Facility	UTM		PM (tpy)	DIST FROM SITE TO USAC (KM)	20 x D	INCLUDE MODELING
	East	North				
Ero Industries	427.5	3095.6	33.0	29.0	579.6	NO
Estech	411.5	3074.2	311.0	6.9	137.5	YES
Estech-Duette Phosphate Mine	388.9	3047.2	750.0	34.8	695.6	YES
Ewell Ind Bonnie Mine Rd	407.7	3080.9	96.0	14.5	290.2	NO
Ewell Ind S Florida Ave	406.3	3092.9	348.0	25.8	515.9	NO
Ewell Industries	367.1	3092.7	19.0	54.3	1,086.8	NO
Ewell Industries	367.0	3092.8	13.0	54.5	1,089.5	NO
FMC Corp/Citrus Machinery Division	409.8	3102.6	9.0	34.2	734.0	NO
FPC Bayboro	338.8	3071.3	2526	77.2	1,544.7	YES
FPC Bayboro	338.8	3071.3	2526	77.2	1,544.7	YES
FPC Intercession City 7EA Turbine (#180)	446.3	3126.0	108	64.6	1,291.1	NO
FPC Intercession City 7EA Turbine (#180)	446.3	3126.0	108	64.6	1,291.1	NO
FPC-Bartow	342.4	3082.6	9244	74.8	1,496.9	YES
FPC-Bartow	342.4	3082.6	9244	74.8	1,496.9	YES
Farmland Industries Green Bay Plant*	409.5	3080.1	1,486.0	12.9	257.3	YES
Florida Brick & Clay Co	384.9	3097.1	26.0	41.9	838.3	NO
Florida Crushed Stone	358.9	3088.4	20.0	60.3	1,206.1	NO
Florida Distillers Company	421.4	3102.9	2.0	34.3	686.5	NO
Florida Fence Post	409.2	3039.9	6.0	29.9	597.7	NO
Florida Institute of Phosphate Research	415.0	3085.8	4.0	16.8	336.6	NO
Florida M & M	362.2	3066.2	21.0	53.9	1,077.5	NO
Florida Mega-Mix	364.5	3093.4	22.0	57.0	1,139.8	NO
Florida Mining & Materials Alabama Lane	420.8	3103.4	40.0	34.7	694.7	NO
Florida Petroleum	360.9	3094.0	16.0	60.5	1,210.1	NO
Florida Power & Light*	367.2	3054.1	40,179.0	51.0	1,020.5	YES
Florida Precast Concrete	360.4	3094.2	132.0	61.0	1,220.9	NO
Florida Privatization Inc	418.3	3048.0	281.0	21.1	422.5	NO
Florida Rock Industries	416.8	3085.8	57.0	16.8	336.4	NO
Florida Rock Industries	363.9	3093.5	8.0	57.6	1,151.5	NO
Florida Rock Industries	428.0	3105.2	55.0	38.1	762.7	NO
Florida Rock Industry	365.8	3085.0	21.0	52.7	1,053.8	NO
Florida Rock Industry	362.3	3097.5	20.0	60.8	1,215.9	NO
Florida Steel Corp	364.6	3092.8	144.0	56.6	1,132.9	NO
Florida Tile	405.4	3102.4	309.0	35.0	700.8	NO
GAF Building Materials Corp	362.2	3087.2	57.0	56.8	1,135.9	NO
GNB Inc. (PAC CHL)	361.8	3088.3	25.0	57.5	1,150.7	NO
Gardner Asphalt Corp	360.8	3093.3	5.0	60.3	1,206.2	NO
Gardinier	415.3	3063.3	175.0	5.7	114.9	YES
Garrison Stevedoring	357.8	3091.7	182.0	62.5	1,249.4	NO
Gaylord Container Corp	366.3	3092.3	108.0	54.9	1,097.8	NO
General Chemical Corp	359.9	3092.3	30.0	60.7	1,214.9	NO
Glen-Mar Concrete Products	363.2	3093.3	22.0	58.1	1,162.5	NO
Gold Bond Building Products	347.3	3082.7	117	70.1	1,401.1	NO
Gold Bond Building Products	347.3	3082.7	117	70.1	1,401.1	NO
Golden Triangle Asphalt	333.8	3086.1	1274	84.0	1,679.2	NO
Golden Triangle Asphalt	333.8	3086.1	1274	84.0	1,679.2	NO
Graves Enterprises Riverview	363.1	3085.3	350.0	55.4	1,107.1	NO
Griffin Industries	364.1	3096.4	4.0	58.7	1,173.8	NO
Gulf Coast Lead Company	364.0	3093.5	17.0	57.5	1,149.7	NO
Gulf Coast Metals	364.7	3093.6	13.0	56.9	1,137.9	NO
H & S Properties	360.3	3093.2	9.0	60.7	1,214.6	NO
Hardee Memorial Hospital	419.2	3046.7	1.0	22.5	450.6	NO
Hardee Power Station Ft. Green Springs*	404.8	3057.4	1,251.0	16.1	322.5	YES
Haynes Funeral Home Plant City	388.1	3100.3	6.0	41.9	838.6	NO
High Performance Finishers	428.0	3096.0	12.0	29.5	590.9	NO
Hillsborough Animal Control Center	368.5	3092.7	11.0	53.1	1,061.7	NO
Hillsborough Co Resource Recovery	368.2	3092.7	172.0	53.4	1,067.1	NO
Hillsborough Co. Animal Control Center	364.9	3093.5	16.0	56.7	1,133.4	NO
Holly Hill	441.0	3115.4	145.3	52.7	1,054.1	NO
Holly Hill	441.0	3115.4	145.3	52.7	1,054.1	NO
Holman Inc.	359.3	3087.1	54.0	59.5	1,190.4	NO
Holnam Inc.	359.5	3087.3	55.0	59.4	1,187.8	NO
Hull Materials, Inc.	399.4	3070.6	13.0	16.7	333.5	NO
Humana Hospital	429.9	3076.7	1.0	15.9	317.8	NO
Humana Hospital	373.3	3093.4	4.0	49.2	983.6	NO
Hydro Conduit Corp	363.6	3093.5	2.0	57.7	1,153.3	NO
IMC Ft. Lonesome*	389.6	3067.9	678.0	26.4	528.5	YES
IMC Kingsford	398.2	3075.7	422.0	19.0	380.4	YES
IMC Noralyn Mine*	414.7	3080.3	1,689.0	11.4	227.5	YES
IMC Port Sutton Terminal	360.1	3087.5	442.0	58.9	1,177.6	NO
IMC Fertilizer New Wales	396.7	3079.4	1,430.0	21.9	438.5	YES
IMC Fertilizer Prairie	402.9	3087.0	288.0	22.3	445.2	NO
IMC Fertilizer Rainbow Division	402.3	3085.8	88.0	21.7	433.6	NO

TABLE 4
CLASS II AREA
SIGNIFICANT PM-10 EMITTING FACILITIES (20 D)
(CONTINUED)

SO2 *20 D* SOURCE INVENTORY FOR U S AGRI-CHEMICALS Facility	UTM		PM (tpy)	DIST FROM SITE TO USAC (KM)	20 x D	INCLUDE MODELING
	East	North				
IMC/Uranium Recovery C F Industries*	408.4	3082.8	1,071.0	15.8	315.1	YES
Imperial Phosphate Ltd.	404.8	3069.5	162.0	11.2	224.2	NO
International Paper Company	421.7	3104.3	8.0	35.8	715.1	NO
International Salt Company	358.2	3090.2	21.0	61.6	1,231.3	NO
John Carlos Florida	426.2	3104.1	29.0	36.6	731.0	NO
Johnson Controls Battery Group, Inc.	359.9	3102.5	156	65.3	1,306.8	NO
Johnson Controls Battery Group, Inc.	359.9	3102.5	156	65.3	1,306.8	NO
Kaiser Aluminum	408.3	3085.5	106.0	18.2	364.2	NO
Kaplan Industries	418.3	3079.3	53.0	10.6	211.1	NO
Kearney Development Company	368.7	3094.8	21.0	53.9	1,077.6	NO
Kimmins Recycling Corporation	360.4	3093.1	66.0	60.6	1,212.0	NO
LaFarge Corp	357.7	3090.6	1,221.0	62.2	1,243.5	NO
LaFarge Corp.	358.3	3092.8	51.0	62.4	1,248.3	NO
Laidlaw Environmental Services Inc	424.7	3091.9	9.0	24.5	489.9	NO
Lakeland City Electric & Utilities	404.0	3105.3	8.0	38.2	764.6	NO
Lakeland City Power Larsen Power Station*	409.3	3102.8	107.0	34.5	734.0	NO
Lakeland City Power McIntosh Power Statio	409.2	3106.1	15,138.0	37.7	754.4	YES
Lehigh Portland Cement Co	361.3	3086.9	7.0	57.6	1,151.1	NO
Lehigh Portland Cement Co Port Sutton	360.7	3086.8	18.0	58.1	1,161.9	NO
Lehigh Portland Cement Comp Pt Sutton	360.7	3086.8	15.0	58.1	1,161.9	NO
Leisey Shell Corp	352.7	3064.8	20.0	63.4	1,268.8	NO
Lykes Pasco Packing	412.4	3096.5	48.0	27.7	554.7	NO
MacDill AFB	355.0	3080.6	2.0	62.1	1,241.9	NO
Macasphalt	423.1	3101.5	70.0	33.3	665.3	NO
Manatee Scrap Processing	366.9	3053.8	108.0	51.4	1,028.0	NO
Manna Pro Corporation	364.7	3092.6	16.0	56.5	1,129.4	NO
Marathon Petroleum Company	362.2	3087.2	13.0	56.8	1,135.9	NO
Metals & Materials Recycling	386.5	3097.4	1.0	40.9	819.0	NO
Mobil Mining & Minerals Big Four Mine	394.7	3069.6	68.0	21.3	426.2	NO
Mobil Mining & Minerals SR 676	398.5	3085.1	990.0	23.8	475.6	YES
Mobil-Electrophos Division*	405.6	3079.4	544.0	14.7	294.2	YES
Monier Roof Tile	414.0	3102.5	44.0	33.6	671.2	NO
National Portland Cement Co. of FL	346.4	3058.4	186	70.4	1,408.1	NO
National Portland Cement Co. of FL	346.4	3058.4	186	70.4	1,408.1	NO
Nitram	362.5	3089.0	218.0	57.1	1,142.3	NO
North American Salt Co	362.4	3085.7	5.0	56.1	1,122.8	NO
Orange Co of Florida	418.7	3083.6	119.0	14.8	297.0	NO
Orlando Utilities Station #1	483.5	3116.0	84	82.3	1,645.0	NO
Orlando Utilities Station #1	483.5	3116.0	84	82.3	1,645.0	NO
Orlando Utilities Station #2	483.5	3150.6	375	105.9	2,118.0	NO
Orlando Utilities Station #2	483.5	3150.6	375	105.9	2,118.0	NO
Ott-Laughlin	427.8	3099.7	1.0	32.9	657.8	NO
Owens-Brockway Glass Container	423.4	3102.3	189.0	34.1	682.2	NO
Packaging Corp of America	423.4	3102.8	38.0	34.6	692.0	NO
Pakhoed Dry Bulk Terminals	360.8	3087.3	483	58.2	1,163.1	NO
Pakhoed Dry Bulk Terminals	360.8	3087.3	483	58.2	1,163.1	NO
Paktank Florida	360.8	3087.3	178.0	58.2	1,163.1	NO
Palm Harbor Homes	391.8	3101.5	22.0	40.5	810.4	NO
Pavers Incorporated	414.0	3098.2	479.0	29.3	585.4	NO
Pavex Corp	413.0	3086.2	44.0	17.5	349.2	NO
Pembroke Materials Inc	420.4	3075.2	12.0	7.6	152.1	NO
Pinellas Co. Resource Recovery Facility	335.2	3084.1	329	82.2	1,644.0	NO
Pinellas Co. Resource Recovery Facility	335.2	3084.1	329	82.2	1,644.0	NO
Purina Mills	402.0	3087.0	88.0	22.8	456.1	NO
Quikrete of Florida	412.8	3099.0	253.0	30.2	603.4	NO
R & L Metals	363.6	3093.0	5.0	57.6	1,152.7	NO
R C Martin Concrete Products	368.6	3092.1	28.0	52.7	1,054.6	NO
R V Shulenburg	362.5	3097.3	6.0	60.5	1,210.5	NO
Reed Minerals Division	362.2	3085.5	70.0	56.3	1,125.5	NO
Resource Recovery of America Inc	401.8	3085.8	10.0	22.0	439.9	NO
Reynolds Aluminum Recycling	362.7	3097.5	14.0	60.4	1,208.8	NO
Ridge Cogeneration*	416.7	3100.4	414.0	31.4	738.0	NO
Ridge Pallets Inc	419.1	3078.1	96.0	9.6	192.3	NO
Ridge Pallets Inc.	418.6	3084.1	165.0	15.3	306.4	NO
Rinker Cencon Corp	412.4	3099.0	159.0	30.2	604.3	NO
Rinker Materials Corp	364.9	3084.4	8.0	53.4	1,067.4	NO
Rinker Materials Corp.	392.2	3100.0	14.0	39.1	781.6	NO
Rinker Materials Corporation	363.2	3098.1	22.0	60.3	1,205.8	NO
Royster Co	362.8	3098.4	18.0	60.8	1,215.7	NO
Royster Company	406.8	3085.1	1,393.0	18.5	370.9	YES
S I Lime Co Division of Longview Lime	362.9	3084.7	48.0	55.4	1,107.4	NO
Sani-Med Inc.	359.6	3079.9	16.0	57.4	1,148.9	NO
Schering Berlin Polymers	410.7	3098.9	30.0	30.4	607.3	NO

TABLE 4
CLASS II AREA
SIGNIFICANT PM-10 EMITTING FACILITIES (20 D)
(CONCLUDED)

SO2 *20 D* SOURCE INVENTORY FOR U S AGRI-CHEMICALS Facility	UTM		PM (tpy)	DIST FROM SITE TO USAC (KM)	20 x D	INCLUDE MODELING
	East	North				
Scrapall Inc.	359.4	3093.1	31.0	61.5	1,230.3	NO
Seminole Fertilizer (W R Grace)*	409.8	3086.7	2,760.0	18.8	375.1	YES
South Bay Hospital	365.3	3065.1	18.0	50.8	1,017.0	NO
Southeastern Galvanizing Division	368.5	3094.5	21.0	53.9	1,078.2	NO
Southeastern Wire	368.3	3094.5	21.0	54.1	1,081.8	NO
Southern Culvert	391.5	3095.0	17.0	35.7	714.5	NO
Southern Mill Creek Products Inc.	362.8	3097.7	6.0	60.4	1,209.0	NO
Southern Prestressed	363.2	3098.4	2.0	60.4	1,208.7	NO
Southport Stevedore	358.5	3091.8	30.0	61.9	1,237.1	NO
Speedling, Inc.	354.1	3062.2	19.0	62.3	1,245.4	NO
Standard Sand & Silica	441.5	3118.2	286	55.4	1,108.3	NO
Standard Sand & Silica	441.5	3118.2	286	55.4	1,108.3	NO
Stauffer Chemical Company	365.3	3093.6	9.0	56.4	1,127.1	NO
Stilwell Foods of Florida	389.8	3098.9	2.0	39.8	795.1	NO
Sulfur Terminals Co	358.0	3090.0	9.0	61.7	1,233.7	NO
Sulfuric Acid Trading Company	349.0	3081.5	1204	68.2	1,363.1	NO
Sulfuric Acid Trading Company	349.0	3081.5	1204	68.2	1,363.1	NO
Sun Pac Foods	422.7	3092.6	62.0	24.5	490.7	NO
Surfacing Products of America	347.5	3037.6	153	75.4	1,507.1	NO
Surfacing Products of America	347.5	3037.6	153	75.4	1,507.1	NO
TECO Big Bend*	361.9	3075.0	7,897.0	54.4	1,088.6	YES
TECO Gannon	360.0	3087.5	5,857.0	59.0	1,179.5	YES
TECO Hooker's Point	358.0	3091.0	1,231.0	62.0	1,240.6	NO
TECO Polk	402.5	3067.4	438	13.6	271.9	YES
TECO Polk	402.5	3067.4	438	13.6	271.9	YES
Tampa Armature Works	365.6	3091.7	13.0	55.3	1,105.5	NO
Tampa Bay Crematory	372.9	3090.7	10.0	48.3	965.1	NO
Tampa Bay Stevedores Inc	358.3	3088.6	24.0	60.9	1,218.8	NO
Tampa City McKay Bay Refuse-to-Energy	360.0	3091.9	344.0	60.5	1,210.0	NO
Tampa Sand & Material	360.1	3092.2	17.0	60.5	1,210.5	NO
Tarmac Florida	362.8	3098.4	23.0	60.8	1,215.7	NO
Tarmac Florida Hialeah	362.8	3097.0	36.0	60.1	1,202.4	NO
The Florida Brewery	422.8	3104.7	121.0	36.3	726.8	NO
The Gibson-Homans	365.5	3094.8	21.0	56.7	1,134.2	NO
The Mancini Packing Company	421.4	3040.8	1.0	28.7	574.2	NO
Treasure Isle Inc.	378.0	3096.9	11.0	47.1	942.8	NO
Triangle Pacific Corp	413.3	3098.8	6.0	29.9	598.4	NO
Tropicana Products, Inc.	346.8	3040.9	969	74.7	1,493.8	NO
Tropicana Products, Inc.	346.8	3040.9	969	74.7	1,493.8	NO
US Agri-Chemicals Hwy 60	413.2	3086.3	443.0	17.5	350.5	YES
US Agri-Chemicals Hwy 630*	416.0	3069.0	1,071.0	0.0	0.0	YES
Union Camp Corp	402.0	3102.0	47.0	35.8	716.9	NO
Union Oil Company of California	358.0	3089.1	14.0	61.4	1,227.7	NO
Universal Waste & Transit	364.9	3093.7	7.0	56.8	1,135.1	NO
Unocal Chemical Division	358.4	3088.4	15.0	60.8	1,215.6	NO
Verlite Co	363.0	3098.1	64.0	60.5	1,209.3	NO
Vigoro Industries Inc.	427.9	3097.4	136.0	30.8	615.8	NO
W R Bonasal Co	363.6	3098.1	19.0	59.9	1,198.8	NO
W R Grace & Co	360.2	3093.0	11.0	60.7	1,214.8	NO
Wachula City Power	418.4	3047.0	21.0	22.1	442.6	NO
Westcon	375.3	3092.8	21.0	47.1	943.0	NO
Weyerhaeuser Co	362.8	3098.3	25.0	60.7	1,214.7	NO
Zipperer S. Agape Mortuary Services	363.0	3064.7	21.0	53.2	1,063.5	NO

**TABLE 5
PM-10 FAAQS INVENTORY**

F A A Q S INVENTORY FOR U S AGRICHEMICALS Facility	UTM		PM (g/s)	Height (m)	Temper- ature (K)	Velocity (m/s)	Diameter (m)
	East	North					
Agrico Chemical Co Pierce	403.7	3079.0	1.90	10.36	298.0	5.92	0.70
Agrico Chemical Co Pierce	403.7	3079.0	1.90	27.43	298.0	3.60	0.98
Agrico Chemical Co Pierce	403.7	3079.0	1.90	27.43	298.0	4.79	0.70
Agrico Chemical Co Pierce	403.7	3079.0	1.90	24.69	298.0	4.15	2.13
Agrico Chemical Co Pierce	403.7	3079.0	3.17	24.69	298.0	3.69	2.13
Agrico Chemical Co Pierce	403.7	3079.0	3.92	28.96	683.0	14.75	1.77
Agrico Chemical Co Pierce	403.7	3079.0	4.46	24.38	316.3	5.76	3.05
Agrico Chemical Co Pierce	403.7	3079.0	5.04	24.38	320.8	21.25	2.44
Agrico Chemical Co South Pierce	407.5	3071.5	0.03	16.15	298.0	1.72	0.46
Agrico Chemical Co South Pierce	407.5	3071.5	0.03	20.73	298.0	2.87	0.46
Agrico Chemical Co South Pierce	407.5	3071.5	0.03	29.26	298.0	1.15	0.40
Agrico Chemical Co South Pierce	407.5	3071.5	0.23	19.81	300.2	88.45	0.49
Agrico Chemical Co South Pierce	407.5	3071.5	0.26	19.81	310.2	5.48	0.49
Agrico Chemical Co South Pierce	407.5	3071.5	0.43	38.10	319.1	15.84	1.07
Agrico Chemical Co South Pierce	407.5	3071.5	0.55	26.82	307.4	9.24	0.91
Agrico Chemical Co South Pierce	407.5	3071.5	3.02	38.10	327.4	14.55	3.05
Agrico Chemical Co South Pierce	407.5	3071.5	4.00	3.05	344.1	20.69	0.55
Agrico Chemical Co South Pierce	407.5	3071.5	4.12	30.48	306.3	6.87	1.22
Agrico Chemical Co South Pierce	407.5	3071.5	4.32	18.29	323.0	9.70	0.30
Agrico Chemical Co South Pierce	407.5	3071.5	4.40	42.67	304.7	10.66	2.74
Agrico Chemical Co South Pierce	407.5	3071.5	5.07	24.38	296.9	7.80	3.35
Agrico Chemical Co South Pierce	407.5	3071.5	5.07	24.38	295.2	7.23	3.35
C F Industries Bonnie Mine Rd	408.4	3082.4	0.12	30.48	299.7	5.95	0.76
C F Industries Bonnie Mine Rd	408.4	3082.4	0.83	62.79	338.6	6.51	2.13
C F Industries Bonnie Mine Rd	408.4	3082.4	1.27	16.76	298.0	9.01	1.37
C F Industries Bonnie Mine Rd	408.4	3082.4	1.38	10.97	588.6	13.45	0.76
C F Industries Bonnie Mine Rd	408.4	3082.3	1.50	62.79	333.0	6.69	2.13
C F Industries Bonnie Mine Rd	408.4	3082.4	1.76	19.81	298.0	15.36	1.22
C F Industries Bonnie Mine Rd	408.4	3082.4	2.45	36.58	333.0	17.17	2.29
C F Industries Bonnie Mine Rd	408.4	3082.4	4.95	41.45	333.0	18.05	2.83
C F Industries Bonnie Mine Rd	408.4	3082.4	5.10	42.67	298.0	21.73	0.76
C F Industries Bonnie Mine Rd	408.4	3082.4	5.10	36.88	338.6	18.76	1.83
C F Industries Bonnie Mine Rd	408.4	3082.4	5.12	41.15	298.0	7.92	1.52
C F Industries Bonnie Mine Rd	408.4	3082.4	5.44	35.66	338.6	11.31	2.44
C F Industries Bonnie Mine Rd	408.4	3082.4	15.27	42.70	298.0	21.60	0.80
Conserv Inc.	398.7	3084.2	0.20	55.47	310.8	2.97	0.43
Conserv Inc.	398.7	3084.2	0.29	8.23	533.0	13.74	0.61
Conserv Inc.	398.7	3084.2	0.43	11.89	533.0	8.91	0.98
Conserv Inc.	398.7	3084.2	0.63	63.09	330.2	21.12	0.43
Conserv Inc.	398.7	3084.2	0.63	63.09	330.2	21.12	0.43
Conserv Inc.	398.7	3084.2	0.63	54.56	338.6	14.37	0.18
Conserv Inc.	398.7	3084.2	1.18	15.85	321.9	20.18	0.76
Conserv Inc.	398.7	3084.2	1.18	24.38	327.4	23.81	1.07
Conserv Inc.	398.7	3084.2	1.18	21.95	360.8	31.08	0.98
Conserv Inc.	398.7	3084.2	1.38	63.09	333.0	51.22	0.27
Conserv Inc.	398.7	3084.2	4.43	24.69	327.4	3.77	2.29
Conserv Inc.	398.7	3084.2	4.92	12.80	310.8	10.60	1.22
Conserv Inc.	398.7	3084.2	28.91	45.72	349.7	10.31	2.29
Consolidated Minerals Plant City	393.8	3096.3	0.03	15.24	294.1	20.70	0.15
Consolidated Minerals Plant City	393.8	3096.3	0.03	21.34	298.0	12.58	0.18
Consolidated Minerals Plant City	393.8	3096.3	0.06	29.57	298.0	13.58	0.30
Consolidated Minerals Plant City	393.8	3096.3	0.06	3.05	338.6	18.19	0.24
Consolidated Minerals Plant City	393.8	3096.3	0.09	14.02	298.0	17.97	0.18
Consolidated Minerals Plant City	393.8	3096.3	0.09	21.34	298.0	31.89	0.37
Consolidated Minerals Plant City	393.8	3096.3	0.12	6.10	605.2	20.21	0.37
Consolidated Minerals Plant City	393.8	3096.3	0.12	15.85	298.0	19.14	0.43
Consolidated Minerals Plant City	393.8	3096.3	0.12	16.46	298.0	19.14	0.43
Consolidated Minerals Plant City	393.8	3096.3	0.14	20.42	298.0	11.50	0.46
Consolidated Minerals Plant City	393.8	3096.3	0.17	32.61	298.0	33.69	0.37
Consolidated Minerals Plant City	393.8	3096.3	0.20	16.46	298.0	19.96	0.55
Consolidated Minerals Plant City	393.8	3096.3	0.20	13.72	349.7	14.17	0.55
Consolidated Minerals Plant City	393.8	3096.3	0.20	17.37	298.0	28.75	0.46
Consolidated Minerals Plant City	393.8	3096.3	0.26	24.69	315.2	9.05	0.82
Consolidated Minerals Plant City	393.8	3096.3	0.26	18.90	298.0	24.95	0.55
Consolidated Minerals Plant City	393.8	3096.3	0.66	9.75	295.8	10.76	0.46
Consolidated Minerals Plant City	393.8	3096.3	0.86	30.48	319.1	0.01	0.91
Consolidated Minerals Plant City	393.8	3096.3	0.89	10.36	327.4	19.16	0.82
Consolidated Minerals Plant City	393.8	3096.3	1.64	46.33	300.2	9.61	1.77
Consolidated Minerals Plant City	393.8	3096.3	1.67	30.48	338.0	11.98	1.37
Consolidated Minerals Plant City	393.8	3096.3	1.76	24.38	319.1	6.20	1.68
Consolidated Minerals Plant City	393.8	3096.3	1.76	46.33	295.2	11.16	1.77
Consolidated Minerals Plant City	393.8	3096.3	1.76	46.33	299.7	12.14	1.77
Consolidated Minerals Plant City	393.8	3096.3	1.90	45.72	313.0	18.34	1.77

TABLE 5
PM-10 FAAQS INVENTORY
(CONTINUED)

F A A Q S INVENTORY FOR U S AGRICHEMICALS		UTM		PM	Height	Temper- ature	Velocity	Diameter
Facility		East	North	(g/s)	(m)	(K)	(m/s)	(m)
Consolidated Minerals	Plant City	393.8	3096.3	2.10	46.33	298.0	13.17	1.77
Consolidated Minerals	Plant City	393.8	3096.3	4.40	24.38	308.0	79.21	1.37
Estech		411.5	3074.2	0.95	10.97	315.8	11.11	0.34
Estech		411.5	3074.2	1.27	14.63	311.9	11.43	0.34
Estech		411.5	3074.2	1.27	10.97	311.9	7.83	0.34
Estech		411.5	3074.2	1.58	18.90	338.6	11.58	2.04
Estech		411.5	3074.2	3.89	18.29	334.1	6.24	3.05
Estech-Duette Phosphate Mine		388.9	3047.2	7.20	18.29	318.0	30.31	0.85
Estech-Duette Phosphate Mine		388.9	3047.2	7.20	18.29	342.4	14.86	2.87
Estech-Duette Phosphate Mine		388.9	3047.2	7.20	38.10	321.3	30.24	1.07
Farmland Industries	Green Bay Plant	409.5	3080.1	0.06	12.19	366.3	0.03	0.61
Farmland Industries	Green Bay Plant	409.5	3080.1	0.09	12.19	366.3	0.03	0.61
Farmland Industries	Green Bay Plant	409.5	3080.1	0.09	12.19	366.3	0.03	0.61
Farmland Industries	Green Bay Plant	409.5	3080.1	0.09	12.19	366.3	2.67	0.61
Farmland Industries	Green Bay Plant	409.5	3080.1	0.66	30.48	349.7	8.70	2.29
Farmland Industries	Green Bay Plant	409.5	3080.1	0.66	30.48	351.9	9.74	2.29
Farmland Industries	Green Bay Plant	409.5	3080.1	2.94	39.32	326.9	12.41	2.29
Farmland Industries	Green Bay Plant	409.5	3080.1	2.94	56.39	338.0	5.17	1.52
Farmland Industries	Green Bay Plant	409.5	3080.1	3.22	39.32	327.4	7.47	2.29
Farmland Industries	Green Bay Plant	409.5	3080.1	3.22	39.62	311.9	5.66	1.22
Farmland Industries	Green Bay Plant	409.5	3080.1	3.31	50.29	298.0	8.86	0.70
Farmland Industries	Green Bay Plant	409.5	3080.1	3.40	39.32	327.4	6.84	2.29
Farmland Industries	Green Bay Plant	409.5	3080.1	3.43	26.82	349.7	19.09	0.73
Farmland Industries	Green Bay Plant	409.5	3080.1	3.80	39.32	319.1	10.66	2.13
Farmland Industries	Green Bay Plant	409.5	3080.1	3.80	39.93	298.0	9.92	2.44
Farmland Industries	Green Bay Plant	409.5	3080.1	4.46	27.43	305.2	5.48	0.91
Farmland Industries	Green Bay Plant	409.5	3080.1	6.62	35.05	349.7	22.72	0.67
Florida Power & Light		367.2	3054.1	108.93	152.10	425.8	23.61	7.99
Florida Power & Light		367.2	3054.1	108.93	152.10	425.8	23.98	7.92
Hardee Power Station	Ft. Green Springs	404.8	3057.3	14.38	22.86	389.0	23.90	4.88
IMC Ft. Lonesome		389.6	3067.9	3.14	38.10	339.1	16.80	2.44
IMC Ft. Lonesome		389.6	3067.9	3.17	38.10	339.1	15.16	2.44
IMC Ft. Lonesome		389.6	3067.9	6.45	45.72	316.3	8.43	0.82
IMC Ft. Lonesome		389.6	3067.9	6.77	22.86	314.7	17.33	0.85
IMC Fertilizer	Kingsford	398.2	3075.7	0.14	17.68	310.8	15.23	0.58
IMC Fertilizer	Kingsford	398.2	3075.7	0.78	10.67	296.9	10.35	0.76
IMC Fertilizer	Kingsford	398.2	3075.7	3.25	21.34	346.9	14.52	2.13
IMC Fertilizer	Kingsford	398.2	3075.7	3.51	18.29	316.3	19.66	0.76
IMC Fertilizer	Kingsford	398.2	3075.7	4.46	32.31	308.0	20.70	0.76
IMC Fertilizer	New Wales	396.7	3079.4	0.06	30.48	311.9	12.58	0.55
IMC Fertilizer	New Wales	396.7	3079.4	0.12	30.48	299.7	54.62	0.46
IMC Fertilizer	New Wales	396.7	3079.4	0.17	33.53	316.3	13.86	0.43
IMC Fertilizer	New Wales	396.7	3079.4	0.20	5.49	313.6	9.70	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.20	26.21	299.7	16.50	0.21
IMC Fertilizer	New Wales	396.7	3079.4	0.35	32.61	338.6	15.84	1.07
IMC Fertilizer	New Wales	396.7	3079.4	0.43	18.29	313.6	9.70	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.43	13.72	313.6	9.70	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.43	26.52	438.6	86.24	0.46
IMC Fertilizer	New Wales	396.7	3079.4	0.43	32.00	313.6	42.69	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.43	26.52	438.6	86.24	0.46
IMC Fertilizer	New Wales	396.7	3079.4	0.43	34.14	313.6	10.35	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.43	17.37	352.4	22.96	0.40
IMC Fertilizer	New Wales	396.7	3079.4	0.43	5.18	380.2	38.27	0.40
IMC Fertilizer	New Wales	396.7	3079.4	0.43	32.61	313.6	20.96	0.55
IMC Fertilizer	New Wales	396.7	3079.4	0.43	19.81	352.4	14.37	0.46
IMC Fertilizer	New Wales	396.7	3079.4	0.43	34.14	313.6	10.35	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.43	35.97	313.6	10.35	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.43	31.70	313.6	21.48	0.49
IMC Fertilizer	New Wales	396.7	3079.4	0.43	35.66	313.6	38.81	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.43	18.29	313.6	16.17	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.46	19.81	313.6	51.75	0.30
IMC Fertilizer	New Wales	396.7	3079.4	0.58	28.65	352.4	10.78	1.83
IMC Fertilizer	New Wales	396.7	3079.4	0.60	12.19	315.2	20.12	0.91
IMC Fertilizer	New Wales	396.7	3079.4	0.66	7.62	333.0	10.49	1.31
IMC Fertilizer	New Wales	396.7	3079.4	0.78	51.82	316.3	1.97	1.52
IMC Fertilizer	New Wales	396.7	3079.4	0.81	12.19	299.7	9.39	0.27
IMC Fertilizer	New Wales	396.7	3079.4	1.78	52.12	316.3	17.97	1.83
IMC Fertilizer	New Wales	396.7	3079.4	1.78	52.12	316.3	17.97	1.83
IMC Fertilizer	New Wales	396.5	3079.0	1.93	40.54	333.0	21.43	1.22
IMC Fertilizer	New Wales	396.7	3079.4	2.13	21.64	299.7	10.35	0.30
IMC Fertilizer	New Wales	396.5	3079.3	2.53	40.54	313.6	1.01	0.91
IMC Fertilizer	New Wales	396.7	3079.4	3.34	52.43	313.6	15.97	1.37
IMC Fertilizer	New Wales	396.5	3079.0	3.60	40.54	313.6	15.18	2.13

**TABLE 5
PM-10 FAAQS INVENTORY
(CONTINUED)**

F A A Q S INVENTORY FOR U S A G R I - C H E M I C A L S Facility	UTM		PM (g/s)	Height (m)	Temper- ature (K)	Velocity (m/s)	Diameter (m)
	East	North					
IMC Fertilizer New Wales	396.5	3079.2	3.63	40.54	315.2	18.87	1.83
IMC Fertilizer New Wales	396.5	3079.1	4.26	40.54	316.3	20.66	1.83
IMC Fertilizer New Wales	396.8	3079.4	4.64	52.43	321.9	13.14	2.44
IMC Fertilizer Noralyn Mine	414.7	3080.3	0.35	8.23	296.9	4.85	0.61
IMC Fertilizer Noralyn Mine	414.7	3080.3	1.27	16.46	319.1	19.40	0.30
IMC Fertilizer Noralyn Mine	414.7	3080.3	1.90	13.11	303.0	18.11	0.61
IMC Fertilizer Noralyn Mine	414.7	3080.3	1.90	8.23	302.4	16.17	0.61
IMC Fertilizer Noralyn Mine	414.7	3080.3	1.90	8.23	302.4	16.17	0.61
IMC Fertilizer Noralyn Mine	414.7	3080.3	2.39	7.32	316.3	8.09	0.61
IMC Fertilizer Noralyn Mine	414.7	3080.3	3.22	7.62	296.9	11.50	0.46
IMC Fertilizer Noralyn Mine	414.7	3080.3	3.83	11.58	333.0	7.17	0.58
IMC Fertilizer Noralyn Mine	414.7	3080.3	3.83	11.58	333.0	7.17	0.58
IMC Fertilizer Noralyn Mine	414.7	3080.3	4.35	41.15	288.6	16.75	0.85
IMC Fertilizer Noralyn Mine	414.7	3080.3	4.38	23.17	394.1	17.30	1.98
IMC Fertilizer Noralyn Mine	414.7	3080.3	4.40	45.72	310.8	15.84	1.07
IMC Fertilizer Noralyn Mine	414.7	3080.3	4.72	16.76	341.3	8.82	2.83
IMC Fertilizer Noralyn Mine	414.7	3080.3	4.98	7.32	316.3	8.09	0.61
IMC Fertilizer Noralyn Mine	414.7	3080.3	5.21	11.58	333.0	7.17	0.58
IMC/Uranium Recovery C F Industries	408.4	3082.8	0.12	15.24	313.6	8.09	0.61
IMC/Uranium Recovery C F Industries	408.4	3082.8	0.12	30.48	299.7	5.95	0.76
IMC/Uranium Recovery C F Industries	408.4	3082.8	0.40	27.43	299.7	16.50	0.21
IMC/Uranium Recovery C F Industries	408.4	3082.8	0.63	25.91	296.9	11.64	0.15
IMC/Uranium Recovery C F Industries	408.4	3082.8	1.47	30.48	321.9	12.98	0.55
IMC/Uranium Recovery C F Industries	408.4	3082.8	2.42	27.43	299.7	16.50	0.21
IMC/Uranium Recovery C F Industries	408.4	3082.8	5.82	18.29	302.4	9.50	1.07
IMC/Uranium Recovery C F Industries	408.4	3082.8	23.90	25.91	296.9	11.64	0.15
Lakeland City Power McIntosh Power Station	409.2	3106.1	0.12	6.10	652.4	23.54	0.79
Lakeland City Power McIntosh Power Station	409.2	3106.1	0.12	6.10	652.4	23.54	0.79
Lakeland City Power McIntosh Power Station	409.2	3106.1	0.58	10.97	791.3	0.39	2.80
Lakeland City Power McIntosh Power Station	409.2	3106.1	12.41	45.72	419.1	23.96	2.74
Lakeland City Power McIntosh Power Station	409.2	3106.1	14.05	47.55	402.4	21.29	3.17
Lakeland City Power McIntosh Power Station	409.2	3106.1	40.82	76.20	349.7	32.85	4.88
Mobil Mining & Minerals SR 676	398.4	3085.3	0.06	24.08	349.7	14.64	0.24
Mobil Mining & Minerals SR 676	398.4	3085.1	0.14	4.57	312.4	16.50	0.43
Mobil Mining & Minerals SR 676	398.4	3085.3	0.72	3.96	521.9	2.12	0.76
Mobil Mining & Minerals SR 676	398.4	3085.2	1.12	30.48	338.6	19.02	1.10
Mobil Mining & Minerals SR 676	398.4	3085.3	1.38	12.19	344.1	11.83	1.07
Mobil Mining & Minerals SR 676	398.4	3085.2	1.41	24.38	326.9	11.68	0.49
Mobil Mining & Minerals SR 676	398.4	3085.2	1.55	24.38	326.9	11.68	0.49
Mobil Mining & Minerals SR 676	398.4	3085.3	1.96	25.91	299.7	14.54	1.68
Mobil Mining & Minerals SR 676	398.2	3085.0	3.11	25.91	338.6	16.10	2.29
Mobil Mining & Minerals SR 676	398.5	3085.1	4.55	24.38	344.1	12.65	2.29
Mobil Mining & Minerals SR 676	398.5	3085.1	5.50	24.38	344.1	12.65	2.29
Mobil Mining & Minerals SR 676	398.3	3085.1	7.00	25.91	296.9	19.40	1.52
Mobil-Electrophos Division	405.6	3079.4	1.93	18.29	321.9	14.34	0.76
Mobil-Electrophos Division	405.6	3079.4	2.42	25.60	321.9	25.77	1.07
Mobil-Electrophos Division	405.6	3079.4	3.63	29.26	306.9	7.70	2.13
Mobil-Electrophos Division	405.6	3079.4	3.71	15.24	308.0	18.73	0.91
Mobil-Electrophos Division	405.6	3079.4	15.95	30.48	319.1	12.34	1.31
Royster Company	406.8	3085.1	1.93	22.56	308.0	3.80	1.07
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.03	24.38	327.4	0.00	3.51
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.06	7.92	366.3	0.12	0.30
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.06	10.36	366.3	0.12	0.30
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.06	6.10	366.3	17.46	0.30
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.06	7.92	366.3	0.12	0.30
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.06	9.45	366.3	0.03	0.61
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.09	17.98	317.4	9.70	0.61
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.09	30.48	260.8	15.52	1.52
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.12	10.67	305.2	9.98	0.55
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.12	10.67	305.2	9.98	0.55
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.12	10.67	305.2	9.98	0.55
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.26	12.80	307.4	9.41	1.16
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.43	30.48	300.2	9.70	0.61
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.43	16.15	301.9	4.19	0.67
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.46	30.48	324.7	9.70	0.61
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.52	14.02	296.9	8.09	0.61
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.58	20.73	294.1	2.46	0.52
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.58	16.15	294.1	20.21	0.12
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.58	14.02	298.0	15.16	0.24
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.63	27.43	296.9	11.37	0.98
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.63	30.48	294.1	13.20	2.13
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.75	21.34	299.7	21.27	1.28
Seminole Fertilizer (W R Grace)	409.8	3086.7	0.81	16.15	299.7	7.68	0.67

**TABLE 5
PM-10 FAAQS INVENTORY
(CONCLUDED)**

F A A Q S INVENTORY FOR U S AGRICHEMICALS Facility		UTM		PM (g/s)	Height (m)	Temper- ature (K)	Velocity (m/s)	Diameter (m)
		East	North					
Seminole Fertilizer (W R Grace)		409.8	3086.7	1.27	15.24	294.1	8.02	0.34
Seminole Fertilizer (W R Grace)		409.9	3087.0	1.30	60.96	346.9	28.46	1.52
Seminole Fertilizer (W R Grace)		409.9	3087.0	1.35	60.96	341.3	24.58	1.52
Seminole Fertilizer (W R Grace)		409.8	3086.7	1.38	22.56	305.2	9.98	0.55
Seminole Fertilizer (W R Grace)		409.8	3086.7	1.38	24.38	299.7	17.90	0.52
Seminole Fertilizer (W R Grace)		409.9	3087.0	1.73	45.72	304.1	9.32	2.04
Seminole Fertilizer (W R Grace)		409.8	3086.7	1.93	16.76	298.0	17.42	1.07
Seminole Fertilizer (W R Grace)		409.8	3086.7	1.93	16.76	294.1	17.42	1.07
Seminole Fertilizer (W R Grace)		409.8	3086.7	1.93	16.76	294.1	17.42	1.07
Seminole Fertilizer (W R Grace)		409.9	3087.0	2.82	40.23	316.3	26.40	2.13
Seminole Fertilizer (W R Grace)		409.8	3086.7	3.17	24.38	313.6	16.63	2.01
Seminole Fertilizer (W R Grace)		409.8	3086.7	3.22	24.38	294.1	8.38	0.76
Seminole Fertilizer (W R Grace)		409.9	3087.0	3.34	60.96	346.9	28.46	1.52
Seminole Fertilizer (W R Grace)		409.8	3086.0	3.77	15.24	333.0	17.29	2.04
Seminole Fertilizer (W R Grace)		409.8	3086.0	3.77	15.24	333.0	17.29	2.04
Seminole Fertilizer (W R Grace)		409.8	3086.0	3.77	30.18	330.2	16.21	2.29
Seminole Fertilizer (W R Grace)		409.8	3086.7	33.60	30.48	324.7	13.40	2.04
TECO Big Bend		361.9	3075.0	0.03	42.37	333.0	18.19	0.49
TECO Big Bend		361.9	3075.0	0.06	54.56	298.6	21.04	0.52
TECO Big Bend		361.9	3075.0	0.06	54.56	298.6	21.04	0.52
TECO Big Bend		361.9	3075.0	0.06	54.56	298.6	21.04	0.52
TECO Big Bend		361.9	3075.0	0.66	31.09	394.1	16.04	0.76
TECO Big Bend		361.9	3075.0	2.10	34.44	394.1	123.77	0.27
TECO Big Bend		361.9	3075.0	4.17	10.67	816.3	15.17	4.57
TECO Big Bend		361.7	3075.2	4.17	22.86	770.8	18.74	4.27
TECO Big Bend		361.7	3075.5	4.17	22.86	770.8	18.74	4.27
TECO Big Bend		361.9	3075.0	50.44	149.35	404.7	13.02	7.32
TECO Big Bend		361.9	3075.0	50.96	149.35	404.7	13.74	7.32
TECO Big Bend		362.0	3075.0	51.97	149.35	410.2	14.47	7.32
TECO Big Bend		361.9	3075.0	54.61	149.35	341.9	18.21	7.32
TECO Gannon		360.0	3087.5	0.03	53.95	298.6	15.52	0.61
TECO Gannon		360.0	3087.5	0.03	53.34	298.6	21.49	0.52
TECO Gannon		360.0	3087.5	0.03	21.95	449.7	10.96	0.21
TECO Gannon		360.0	3087.5	0.03	53.34	298.6	21.49	0.52
TECO Gannon		360.0	3087.5	0.03	53.04	298.6	24.26	0.37
TECO Gannon		360.0	3087.5	0.03	53.34	298.6	21.49	0.52
TECO Gannon		360.0	3087.5	0.03	53.34	298.6	21.49	0.52
TECO Gannon		360.0	3087.5	0.14	32.61	449.7	30.37	0.30
TECO Gannon		360.0	3087.5	0.37	31.70	449.7	18.27	0.61
TECO Gannon		360.0	3087.5	15.40	10.67	816.3	136.61	1.52
TECO Gannon		360.0	3087.5	15.89	93.27	420.8	30.85	3.05
TECO Gannon		360.0	3087.5	15.89	93.27	415.8	28.90	3.05
TECO Gannon		360.0	3087.5	20.18	93.27	419.7	38.64	3.23
TECO Gannon		360.0	3087.5	23.69	93.27	426.9	22.97	3.05
TECO Gannon		360.0	3087.5	28.76	93.27	423.6	23.18	4.45
TECO Gannon		360.0	3087.5	47.91	93.27	433.0	24.74	5.36
US Agri-Chemicals Hwy 60		413.2	3086.3	2.85	22.56	299.7	48.51	0.61
US Agri-Chemicals Hwy 60		413.2	3086.3	4.87	39.93	327.4	11.09	2.13
US Agri-Chemicals Hwy 60		413.2	3086.3	5.04	19.20	308.6	9.31	1.52
US Agri-Chemicals Hwy 630		416.0	3069.0	0.23	28.35	326.9	10.66	1.52
US Agri-Chemicals Hwy 630		416.0	3069.0	0.49	1.83	405.2	104.86	0.09
US Agri-Chemicals Hwy 630		416.0	3069.0	2.48	21.03	315.2	22.16	0.52
US Agri-Chemicals Hwy 630		416.0	3069.0	3.78	42.60	315.2	23.20	0.82
US Agri-Chemicals Hwy 630		416.0	3069.0	5.07	15.85	334.7	10.96	1.83
TECO Polk KBA		402.5	3067.4	2.02	6.1	533	13.1	0.9
TECO Polk KBB		402.5	3067.4	7.43	45.7	400	16.79	5.8
TECO Polk KBC		402.5	3067.4	3.15	60.7	1033	9.14	1.07
FPC Bayboro C4		338.8	3071.3	8.14	12.2	755.4	6.54	6.98
FPC-Bartow TC2		342.4	3082.6	31.96	91.4	424.8	31.09	2.74
FPC-Bartow TD4		342.4	3082.6	12.8	13.7	772	22.25	5.27
FPC-Bartow TO3		342.4	3082.6	27.9	91.4	408.2	34.44	3.35
FPC-Bartow TO4		342.4	3082.6	0.04	9.1	541.5	5.18	0.91
FPC-Bartow TO9		342.4	3082.6	0.01	7.6	298.1	0.04	0.27

**TABLE 6
PM-10 CLASS II AREA
PSD INCREMENT INVENTORY**

Facility	UTM		PM* (g/s)	Height+ (m)	Temper- ature (K)	Velocity** (m/s)	Diameter (m)
	East	North					
Agrico Chemical Pierce	403.7	3,079.0	5.04	24.38	320.8	21.25	2.44
Agrico Chemical Pierce	403.7	3,079.0	3.92	28.96	683.0	14.75	1.77
Agrico South Pierce	407.5	3,071.3	49.10	45.70	350.0	39.06	1.60
CF Industries Bonnie Mine Road	408.4	3,082.4	15.27	42.70	298.0	21.60	0.80
CF Industries Bonnie Mine Road	408.4	3,082.4	2.45	36.58	333.0	17.17	2.29
CF Industries Bonnie Mine Road	408.4	3,082.4	4.95	41.45	333.0	18.05	2.83
Conserv Inc.	398.7	3,084.2	28.91	45.72	349.7	10.31	2.29
Conserv Inc.	398.7	3,084.2	4.92	12.80	310.8	10.60	1.22
FPC Bayboro C4	338.8	3071.3	8.14	12.2	755.4	6.54	6.98
FPC-Bartow TC2	342.4	3082.6	31.96	91.4	424.8	31.09	2.74
FPC-Bartow TD4	342.4	3082.6	12.8	13.7	772	22.25	5.27
FPC-Bartow TO3	342.4	3082.6	27.9	91.4	408.2	34.44	3.35
FPC-Bartow TO4	342.4	3082.6	0.04	9.1	541.5	5.18	0.91
FPC-Bartow TO9	342.4	3082.6	0.01	7.6	298.1	0.04	0.27
Farmland Industries Green Bay Plant	409.5	3,080.1	28.09	30.50	308.0	18.30	1.40
Florida Power & Light	367.2	3054.1	218	152.1	425.8	23.61	7.99
Hardee Power Station	404.8	3,057.4	1.89	22.90	389.0	23.90	4.88
IMC Ft. Lonesome	389.6	3,067.9	3.17	38.10	339.1	15.16	2.44
IMC Ft. Lonesome	389.6	3,067.9	3.14	38.10	339.1	16.80	2.44
IMC Ft. Lonesome	359.6	3,067.9	6.45	45.72	316.3	8.43	0.82
IMC Fertilizer Noralyn Mine	414.7	3,080.3	28.00	11.58	333.0	7.17	0.58
IMC/Uranium Recovery CF Industries	408.4	3,082.8	23.90	25.90	297.0	11.60	0.20
Lakeland City Power CT (Larsen)	409.2	3,102.8	1.89	30.48	783.0	28.22	5.79
Lakeland McIntosh	409.5	3,105.8	40.82	76.20	350.0	32.60	4.90
Lakeland McIntosh	409.5	3,105.8	14.00	45.70	419.0	23.77	2.74
Mobil-Electrophos Division	405.6	3,079.4	15.95	30.48	319.1	12.34	1.31
TECO Big Bend	361.9	3,079.4	167.30	149.40	342.0	20.00	7.32
TECO Big Bend	361.9	3,057.0	54.61	149.35	341.9	18.21	7.32
TECO Polk KBA	402.5	3067.4	2.02	6.1	533	13.1	0.9
TECO Polk KBB	402.5	3067.4	7.43	45.7	400	16.79	5.8
TECO Polk KBC	402.5	3067.4	3.15	60.7	1033	9.14	1.07
WR Grace/Seminole	409.8	3,087.0	13.61	15.24	333.0	17.10	2.00
WR Grace/Seminole	409.8	3,087.0	4.68	60.96	347.0	25.10	1.52

TABLE 7
 SUMMARY OF AMBIENT AIR QUALITY STANDARD ANALYSIS FOR PM10
 U. S. AGRI-CHEMICALS
 POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	PARTICULATE MATTER IMPACT ($\mu\text{g}/\text{m}^3$) (1)	
	24-HOUR	ANNUAL
1987	74.85	12.35
1988	71.86	13.59
1989	88.21	17.45
1990	79.94	12.17
1991	68.03	12.96
Maximum Impact	88.21	17.45
Maximum Impact Plus Background (2)	118	47
Ambient Air Standard (Rule 62-272, FAC)	150	50

NOTE:

- (1) The predicted impacts represent the highest-high impact for the annual period and the highest second-high for the 24-hour period.
- (2) The maximum predicted impacts for the 24-hour and annual periods, including a conservative background PM10 concentration level (for Gibsonton) of $30 \mu\text{g}/\text{m}^3$, would still be below the ambient air quality standards.



TABLE 8
SUMMARY OF CLASS II AREA PM10 INCREMENT ANALYSIS

U. S. AGRI-CHEMICALS
POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	PARTICULATE MATTER IMPACT ($\mu\text{g}/\text{m}^3$)	
	24-HOUR	ANNUAL
1987	20.49	3.53
1988	20.64	3.60
1989	28.43	4.43
1990	21.76	3.51
1991	19.48	3.41
Class II Increment (Rule 62-272, FAC)	30	17

NOTE:

- (1) The predicted impacts represent the highest-high impact for the annual period, and the highest second-high for the 24-hour period.

ATTACHMENT 1
DOCUMENTATION OF PM10 EMISSION INVENTORY UPDATES



U.S. Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, FL 33841-9799
813 285 8121



A Sinochem Company

March 20, 1995

Pradeep Raval
Koogler & Associates
4014 NW 13th St
Gainesville, FL 32609

Dear Pradeep:

RE: PSD-FL-222 (AC53-260190) Prill MAP

A review of the emission inventories showed that the following revisions are necessary:

NAAQS INVENTORY

1. U.S. Agri-Chemicals, Highway 60: There is not a source that emits 5.04 g/s.
2. U.S. Agri-Chemicals, Highway 630: We have permits for Rock Dryer, Sulfur Pit, Boiler, Sulfur Tank, and Rock Screening. The remaining sources should be removed.
3. FPC-Bartow TO3: This source is allowed 221.1 lbs/hr. The corresponding rate in terms of g/s is 27.9
4. Florida Power & Light: There are 2 identical sources, each emits 108.93 g/s. There is not a source that emits 15.95 g/s.
5. Lakeland City Power McIntosh: The rate of 408.56 g/s is incorrect. The correct value is 40.86 g/s.
6. Royster: There is not a source that emits 29.48 g/s.

CLASS II INVENTORY

1. Hardee Power Station: There are 3 identical sources each emits 5 lbs/hr. The corresponding rate in terms of g/s is 0.63
2. Lakeland McIntosh: The rate of 408.56 g/s is incorrect. The correct value is 40.86 g/s.

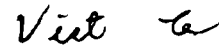
March 20, 1995

3. FPC-Bartow TO3: This source is allowed 221.1 lbs/hr. The corresponding rate in terms of g/s is 27.9

4. U.S. Agri-Chemicals Highway 630: There is not a source that emits 12.61 g/s.

Attached please find revisions to the emissions inventories as well as some APIS printouts to support the revisions. Due to the available time, we only checked sources with significant emission rates. Please contact me at (813)285-7123, ext. 115, if you have any questions.

Sincerely,



Viet Ta
Environmental Supervisor

cc: R. Brunk

THIS DISK CONTAINS PM-10 PSD ANALYSIS FILES IN ASCII FORMAT.
THE FOLLOWING ARE ISCST2 OUTPUT FILES FOR US AGRI-CHEMICALS
FT. MEADE FACILITY.

FOR PSD AND NAAQS PM-10 MODELING, THE SELF EXTRACTING
ARCHIVE FILE;
US-INVRV EXE 325,461 03-20-95

TO UNARCHIVE THIS FILE COPY IT TO A HARD DISK DRIVE AND TYPE THE FILE NAME.
TO UNARCHIVE THE ISCST2 OUTPUT FILES, TYPE "US-INVRV" AND
PRESS ENTER. THE FILES WILL AUTOMATICALLY UNARCHIVE TO THE HARD DISK DRIVE.
THESE ARCHIVED FILES CONTAIN THE MODELING DATA DESCRIBED AS FOLLOWS;

CLASS 2 INVENTORY

USAC2R87 OUT	202,957	03-17-95	CLASS 2 IMPACT FOR 1987
USAC2R88 OUT	202,957	03-17-95	CLASS 2 IMPACT FOR 1988
USAC2R89 OUT	202,957	03-17-95	CLASS 2 IMPACT FOR 1989
USAC2R90 OUT	202,957	03-18-95	CLASS 2 IMPACT FOR 1990
USAC2R91 OUT	202,957	03-18-95	CLASS 2 IMPACT FOR 1991

FAAQS INVENTORY

USCFAQR7 OUT	284,483	03-20-95	FAAQS IMPACT FOR 1987
USCFAQR8 OUT	284,483	03-17-95	FAAQS IMPACT FOR 1988
USCFAQR9 OUT	284,483	03-18-95	FAAQS IMPACT FOR 1989
USCFAQR0 OUT	284,483	03-18-95	FAAQS IMPACT FOR 1990
USCFAQR1 OUT	284,483	03-18-95	FAAQS IMPACT FOR 1991

IF THERE ARE ANY QUESTIONS OR IF ADDITIONAL FILES
ARE REQUIRED PLEASE CALL ME.

MARK KOLETZKE
KOOGLER AND ASSOCIATES
(904) 377-5822



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

RECEIVED

MAR 3 1995

Bureau of
Air Regulation

KA 173-94-04

March 2, 1995

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

Subject: Submittal of Additional Information
U.S. Agri-Chemicals Corporation
PSD-FL-222 (AC53-260190) Prilled MAP Plant
PSD-FL-223 (AC53-260192) Granular MAP/DAP Plant

Dear Mr. Linero:

This is in response to your letter dated November 23, 1994, and the U.S. Department of Interior letter dated December 15, 1994, for additional information on the above referenced projects.

The information provided in this response pertains to the application for the Prilled MAP plant. The information requested by FDEP on the proposed granular plant will be provided under separate cover.

In recognition of the ultimate capacity of an MAP plant "rated" at 40 tons per hour production capacity, it is requested that the proposed project be permitted for a maximum production rate of 60 tons per hour of prilled MAP, and for continuous operation. The information provided below is consistent with this request. Updated information for the proposed project is included in this response. It should be noted that this request does not significantly affect FDEP's project review.

The responses below are provided in the same order as the questions.

1. Since the MAP product is about 51% P2O5, the proposed Best Available Control Technology (BACT) fluoride emission limit of 0.046 pound of fluorides (F) per ton of Prilled MAP product is less stringent than the most recent (July 1992) Pipe Reactor/Granular MAP BACT limit of 0.060 pound F per ton of P2O5 input (Farmland's AC53-210886). Farmland's MAP BACT limit is equivalent to the DAP federal NSPS and pre-1994 DAP BACT limit. However, the typical BACT limit for DAP plants has been reduced from 0.060 to 0.0417 pound F per ton of P2O5 input with the issuance of IMC-Agrico's AC53-232681 in April of this year.

Therefore, assuming equivalency of fluoride emissions from the MAP and DAP processes, and from the Prilled vs. Granular processes, the fluoride emissions from the new Prilled MAP plant would be limited to 0.85 pound F per hour instead of the 1.84 figure proposed. Likewise, the fluoride emissions from the new Granular MAP/DAP plant would be limited to 2.88 pounds per hour instead of the 4.14 figure proposed. The Cargill (AC53-194504 & -08) limit of 0.046 pound F per ton of P2O5 that the Prilled MAP proposal is based on was not derived from a BACT determination for a new facility. It was a production increase with no increase in allowable emissions based on Cargill's fluoride allocation of 1.0 pound F per hour under the "0.4 existing plant emissions" rule (Rule 62-296.403(2), Florida Administrative Code (F.A.C.)). Please address these issues and revise the application accordingly.

RESPONSE:

USAC proposes to meet the FDEP's fluoride BACT determination of 0.0417 lb per ton of P2O5 input. The fluoride emission calculations are presented below.

The production rate based on P2O5 is:

$$\begin{aligned} \text{Product rate} &= 60 \text{ tph MAP} \times 0.51 \text{ ton P2O5/ton MAP} \\ &= 30.6 \text{ tph P2O5} \end{aligned}$$

The P2O5 input based on a 96% process efficiency (typical efficiency used by other fertilizer plants in Florida) is:

$$\begin{aligned} \text{P}_2\text{O}_5 \text{ Input} &= 30.6 \text{ tph P2O5}/0.96 \\ &= 31.9 \text{ tph P2O5} \end{aligned}$$

Therefore, the emission rate of fluorides is:

$$\begin{aligned} \text{Fluorides} &= 31.9 \text{ tph P2O5 input} \times 0.0417 \text{ lb F/ton P2O5 input} \\ &= 1.33 \text{ lbs/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 5.8 \text{ tpy} \end{aligned}$$

2. The Prilled MAP application should describe the type of pond water makeup to be employed (i.e., fresh water or gypsum pond water).

RESPONSE:

The scrubbing system makeup water will be either fresh water or pond water. A side stream will recycle some scrubber water to the reactor feed tank. A scrubber pond is not planned. The scrubber system will be designed to meet the fluoride emission limit.



3. The use of allowable particulate matter emissions instead of the representative two-year average actual emissions cannot be used for netting out of PSD review (see 40 CFR 52.21 and Rule 62-212.400(2)(e)3, FAC). The only exception would be a situation in which no actual emission data exist and the limits for the emission units shut down were federally enforceable. The net emission increase will have to be recalculated using the most recent or representative two-year average actual emissions from the rock drying operation and the results are to be compared to the proposed potential/allowables. If the increase is significant, then the requirements (i.e., modeling analysis, BACT determination, etc.) of Rule 62-212.400(5), FAC, must be satisfied and provided to the Department.

RESPONSE:

Given the approach used by FDEP for emission netting purposes, USAC hereby withdraws the rock drying operation from this project. Therefore, the rock dryer operation will retain its current permit. As the particulate matter emissions from the proposed project, presented below, exceed the significant net emissions increase threshold of 25 tons, both a BACT determination and an ambient air quality analysis are required for particulate matter.

In reviewing the information in FDEP files, and based on our meeting with Mr. John Reynolds, the particulate matter BACT determination for IMC-Agrico's prilled MAP plant seems to be the most representative for the proposed prilled MAP project. The IMC-Agrico MAP BACT is representative for this project given the common prilled product. Other BACT determinations pertain to granular MAP production and are not representative of the prilled product manufacture and handling. The BACT determination for IMC-Agrico's plant indicates a particulate matter emission limit from the prill tower scrubber stack of 0.3 pound per ton MAP; 0.02 gr/dscf from the cooler baghouse stack; and, 3.6 lbs/hr from the MAP loadout system (based on voluntary restriction associated with ambient air quality modeling). In order to compare the emission limitations, the IMC-Agrico emission limits can be converted to limitations with a common denominator as follows:

Prill Tower PM = 0.3 lb/ton MAP

Cooler PM = 0.02 gr/dscf x 30,000 dscfm x 1b/7000 gr x 60 min/hr
= 5.14 lb/hr
x hr/50 tph MAP produced
= 0.1 lb/ton MAP

Loadout PM = 3.6 lb/hr x hr/50 tph MAP produced
= 0.072 lb/ton MAP



As the proposed project will have a common scrubber and stack for the tower and cooler, and a separate stack for the product loadout, the particulate matter emissions from the proposed MAP system are as follows:

$$\begin{aligned} \text{Tower/Cooler PM} &= (0.3 + 0.1) \text{ lb/ton MAP} \times 60 \text{ tph MAP} \\ &= 24 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 105.1 \text{ tpy} \\ \\ \text{Loadout PM} &= 0.072 \text{ lb/ton MAP} \times 60 \text{ tph MAP produced} \\ &= 4.32 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 18.9 \text{ tpy} \end{aligned}$$

In order to assure product moisture consistency prior to storage, the designer has added a 12 MMBtu/hr (0.012 MMCFH) natural gas fired air heater package to the cooler, to be utilized as and when needed. Assuming continuous operation at maximum heat input rate, the maximum potential annual emissions (tpy) from the heater, based on AP-42 factors, are as follows:

$$\begin{aligned} \text{PM} &= (6.2 + 7.5) \text{ lb/MMCF} \times 0.012 \text{ MMCF/hr} \\ &= 0.16 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 0.7 \text{ tpy} \\ \\ \text{SO}_2 &= 0.6 \text{ lb/MMCF} \times 0.012 \text{ MMCF/hr} \\ &= 0.007 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 0.03 \text{ tpy} \\ \\ \text{NO}_x &= 140 \text{ lb/MMCF} \times 0.012 \text{ MMCF/hr} \\ &= 1.68 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 7.4 \text{ tpy} \\ \\ \text{CO} &= 35 \text{ lb/MMCF} \times 0.012 \text{ MMCF/hr} \\ &= 0.42 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 1.8 \text{ tpy} \\ \\ \text{TOC} &= 5.8 \text{ lb/MMCF} \times 0.012 \text{ MMCF/hr} \\ &= 0.07 \text{ lb/hr} \\ &\quad \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 0.3 \text{ tpy} \end{aligned}$$

It should be noted that the above uncontrolled products of natural gas combustion do not alter the pollutants subject to PSD review. The net



contemporaneous emission changes for the proposed project are the emissions associated with the proposed project. The particulate matter emissions from the natural gas fired unit would be subject to BACT and ambient air quality analysis. Natural gas is proposed as BACT for particulate matter from the heating unit. The ambient air quality analysis addresses the particulate matter emissions from the tower/cooler, including the heating unit.

The following design information is provided for the proposed project:

Tower/Cooler Stack:	Height - 72 ft. Diameter - 9 ft. Temperature - 138°F Flow - 180,000 acfm
Loadout Baghouse Vent:	Height - 50 ft. Diameter - 16.75 inches Temperature - 80°F Flow - 4300 acfm
Venturi Scrubber:	Efficiency - 99% Pressure Drop - 8" to 40" Water Maximum Total Liquid Flow - 1760 gpm
Baghouse:	Efficiency - 99.98% Filter Area - 358 sq. ft. Static Pressure - 2" to 8"

4. The National Park Service may have additional questions about the impacts of fluoride emissions on the Chassahowitzka PSD Class I area. They may need more time to review the proposal since the applications were delayed getting to the Bureau because they were filed with the district office.

RESPONSE:

The NPS questions, dated December 15, 1994, are addressed below.

PSD Applicability

The application provides net emission increase calculations to determine which pollutants are subject to PSD review. The calculations use allowable permitted emissions to offset the proposed emission increases. As you know, net emission increase calculations must be based on actual, not allowable emissions. It is not clear if, in this case, allowable emissions are equal to actual. If actual emissions are less, the applicant should



reevaluate PSD applicability based on actual emissions and perform or revise impact and control analyses accordingly.

RESPONSE:

Please refer to RESPONSE No. 3 above.

Best Available Control Technology (BACT)

The applicant proposes to meet a fluoride emission rate of 0.06 pounds per ton of P2O5 input at their DAP plant. A recent BACT determination for an IMC Agrico Diammonium Phosphate plant requires a BACT limit of 0.0417 pounds per ton of P2O5 input. BACT should be set at the lower level unless the applicant provides information demonstrating that 0.0417 is not an appropriate level for this particular plant.

RESPONSE:

Please refer to RESPONSE No. 1 above.

Air Quality Modeling Analysis

The applicant incorrectly concludes that because the proposed facilities are more than 100 km from a Class I area, analyses of impacts at the Class I area are not necessary. The determination of whether a Class I area impact analysis is required is made on a case-by-case basis. The Environmental Protection Agency has stated that "large sources located at distances greater than 100 kilometers need to be considered when such impacts reasonably could affect the outcome of the Class I analysis." The need for a Class I impact analysis cannot be decided until the amounts of the proposed emissions increases are clarified.

No increment analysis or viability impact analysis was performed for the Class I area. If the proposed project is PSD significant for particulate matter, these analyses must be done. In addition, fluoride concentrations at the Class I area should be modeled.

RESPONSE:

The Class I area analyses are presented in Attachment 1. The inputs and the results of the ambient air impact analysis are summarized in Attachment 2. The modeling output is provided on disk.



Air Quality Related Values (AQRV) Analysis

As noted above, USAC did not analyze impacts, including AQRV impacts, on the Class I area. We are particularly concerned with cumulative fluoride impacts to vegetation and wildlife at Chassahowitzka WA. We would like the applicant to discuss these impacts in an AQRV analysis.

RESPONSE:

The AQRV analysis is presented in Attachment 1.

In accordance with the discussions with FDEP staff, the Class II area ambient air quality analysis, based on an extensive inventory currently being updated, will be submitted under separate cover.

As you are aware, USAC is under considerable pressure to maintain the project schedule. Consequently, we are available to you at all times should any questions arise. We appreciate your guidance and continued support of our application and the project's timely conclusion.

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

Very truly yours,

KOGLER & ASSOCIATES

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

JBK:PAR:wa
Enc.

c: Steve Susick, USAC

J. Reynolds
R. Zhang
J. Kessell, SW District
S. Turchi, Polk Co.
J. Naples, EPA
J. Bennett, NPS



ATTACHMENT 1

1.0 IMPACTS ON SOILS, VEGETATION AND VISIBILITY

1.1 IMPACT ON SOILS AND VEGETATION

The U. S. Environmental Protection Agency was directed by Congress to develop primary and secondary ambient air quality standards. The primary standards were to protect human health and the secondary standards were to "... protect the public welfare from any known or anticipated adverse effects of a pollutant." The public welfare was to include soils, vegetation and visibility.

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

The air quality modeling that has been conducted as a requirement for the PSD application demonstrates that the levels of particulate matter expected in the vicinity of the proposed project are well below the ambient air quality standards. As a result, it is reasonable to conclude that there will be no adverse effect to the soils, vegetation or visibility of the area.

The air quality modeling demonstrates that the levels of fluoride expected from the proposed project will be in line with levels from similar fertilizer plants evaluated by FDEP in the recent past. The fluoride monitoring conducted by several fertilizer companies in the area in accordance with past FDEP requirements had shown little or no effect on vegetation from airborne fluorides at even higher concentrations than those evaluated for this project.

The USAC plant property and the surrounding areas are comprised of mining lands (phosphate), flatwoods, marshes, and sloughs. The soils of the area are primarily sandy and are typically low in both clay and silt content. These characteristics and the semi-tropic climatic factors of high temperature and rainfall are the natural factors which determine the terrestrial communities of the region.

The land in the vicinity of the USAC plant supports various plant communities. Much of the natural vegetation on the site and the surrounding areas has been altered due to mining and industrial use; primarily the phosphate fertilizer industry. As a result of mining and industrial activity, there is very little undisturbed land in existence in the vicinity of the plant. As a result, no adverse impacts from the

proposed project are expected on the soils and vegetation in the vicinity of the facility.

1.2 GROWTH RELATED IMPACTS

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

1.3 VISIBILITY IMPACTS

The proposed project will result in emissions of particulate matter and therefore has the potential for adverse impacts on visibility.

A screening approach suggested by EPA (Workbook for Plume Visual Impact Screening and Analysis, 1988) was conducted using the VISCREEN model. The emissions of particulate matter were input to the model. The VISCREEN - Level 1 modeling results (attached) indicate that there will be no adverse visibility impacts from the proposed project.

1.4 IMPACTS ON AIR QUALITY RELATED VALUES FOR CLASS I AREA

In the previous section, the impact of the air emission increases on air quality related values in the vicinity of the proposed project was addressed. The analysis addressed in this section extends the review of the impact of increased emissions on air quality related values to the Chassahowitzka Class I PSD area; an area in excess of 120 kilometers northwest of the USAC plant.

1.4.1 Impact on Vegetation

The response of vegetation to air pollutants is influenced by the concentration of the pollutant, the duration of the exposure and the frequency of the exposure. The pattern of exposure expected from a single facility is that of a few episodes of relatively high concentrations interdispersed with long periods of no exposure or extremely low concentrations. This is the pattern of exposure that would be expected from fluorides and particulate matter emissions from the proposed project at Chassahowitzka.

The vegetation in the Chassahowitzka area is characterized by flatwoods, brackish-water, marine and halothyctic terrestrial species. Predominant tree species are slash pine, laurel oak, sweet gum and palm. Other plants in the area include needlegrass rush, seashore saltgrass, marsh hay and red mangrove.

Vegetation responds to a dose of an air pollutant with a dose being defined as the product of the concentration of the pollutant and the duration of the exposure. The maximum expected concentrations of fluorides and particulate matter in the Chassahowitzka area resulting from the increased emissions from USAC will be less than significant. In perspective, it should be noted that particulate matter concentration in the form of salt deposition in coastal areas are in the range of 25-300 pounds per acre per year and may be as high as 4000 pounds per acre per year on exposed shorelines.

1.4.2 Impact on Soils

The major soil classification in the Chassahowitzka area is Weeki Wachee-Durbin muck. This is an euic, hyderthermic typic sulfhemist that is characterized by high levels of sulfur and organic matter. This soil is flooded daily with the advent of high tide and the pH ranges between 6.1 and 7.8. The upper level of this soil may contain as much as four percent sulfur (USDA, 1991).

Based upon the insignificant fluoride and particulate matter concentrations in the Chassahowitzka area resulting from the increased emissions from the USAC plant, it is not expected that there will be any adverse impact on the native soils.

1.4.3 Impacts on Wildlife

As the predicted fluoride and particulate matter levels are insignificant, the proposed project is not expected to have any impact on the wildlife in the Chassahowitzka area.

1.4.4 Visibility Impairment Analysis

Visibility impairment analysis was performed to determine potential visibility effects of the proposed project in the Chassahowitzka area. The VISCREEN - Level 1 modeling results (attached) indicate that no adverse visibility impacts are expected within the Class I area as a result of the proposed project.

REFERENCES

- Curtis, C.R., L.R. Krusbert, T.L. Lauver, and B.A. Francis. 1975. Chalk Point Cooling Tower Project: Field Research on Native Vegetation. Maryland Water Resources Research Center. Maryland Department of Natural Resources - Power Plant Siting Program. p.107.
- McLaughlin, S.B. and N.T. Lee. 1974 Botanical Studies in the Vicinity of the Widows Creek Steam Plant. Review of Air Pollution Effects Studies, 1952-1972, and Results of 1973 Surveys. Internal Report I-EB-74-1. TVA.
- United States Environmental Protection Agency, 1988. Workbook for Plume Visual Impact Screen and Analysis. EPA-450/4-88-015, September 1988.
- United States Department of Agriculture, 1991. Surveys of Hernando and Citrus Counties, Florida. USDA Soil Conservation Service in cooperation with University of Florida, Institute of Food and Agricultural Sciences, Agricultural Experiment Stations and Soil Science Department.
- Woltz, S.S. and T.K. Howe, 1981. Effects of Coal Burning Emissions on Florida Agriculture. In: The Impact of Increased Coal Use in Florida. Interdisciplinary Center for Aeronomy and (other) Atmospheric Sciences. University of Florida, Gainesville.



VISCREEN ANALYSIS

Visual Effects Screening Analysis for
Source: USAC MAP
Class I Area: CHASS

*** Level-1 Screening ***
Input Emissions for

Particulates	3.56	G	/S
NOx (as NO2)	.21	G	/S
Primary NO2	.00	G	/S
Soot	.00	G	/S
Primary SO4	.00	G	/S

**** Default Particle Characteristics Assumed

Transport Scenario Specifications:

Background Ozone:	.04 ppm
Background Visual Range:	25.00 km
Source-Observer Distance:	123.00 km
Min. Source-Class I Distance:	123.00 km
Max. Source-Class I Distance:	130.00 km
Plume-Source-Observer Angle:	11.25 degrees
Stability:	6
Wind Speed:	1.00 m/s

R E S U L T S

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

Backgrnd	Theta	Azi	Distance	Alpha	Delta E		Contrast	
					Crit	Plume	Crit	Plume
SKY	10.	84.	123.0	84.	2.00	.010	.05	.000
SKY	140.	84.	123.0	84.	2.00	.001	.05	.000
TERRAIN	10.	84.	123.0	84.	2.00	.000	.05	.000
TERRAIN	140.	84.	123.0	84.	2.00	.000	.05	.000

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

Backgrnd	Theta	Azi	Distance	Alpha	Delta E		Contrast	
					Crit	Plume	Crit	Plume
SKY	10.	75.	119.1	94.	2.00	.011	.05	.000
SKY	140.	75.	119.1	94.	2.00	.001	.05	.000
TERRAIN	10.	65.	114.8	104.	2.00	.001	.05	.000
TERRAIN	140.	65.	114.8	104.	2.00	.000	.05	.000



ATTACHMENT 2

2.0 AMBIENT AIR QUALITY ANALYSIS

An air quality review is required for the pollutants subject to PSD review. Air quality modeling is required to provide assurance that the increases in air pollutant emissions associated with the project, combined with all other applicable air pollutant emission rate increases and decreases associated with new sources affecting the project area, will not cause or contribute to an exceedance of the applicable ambient air quality standards.

The air quality review for the proposed project included emission increases of particulate matter and fluorides associated with the prilled MAP plant.

2.1 AIR QUALITY MODELING FOR PARTICULATE MATTER

2.1.1 Area of Significant Impact

The impact analysis of the particulate emissions was conducted using the Industrial Source Complex-Short Term 2 (ISC-ST2) air quality model, Version 93109, in accordance with guidelines established by EPA and published in the document, Guideline for Air Quality Modeling. The meteorological data used with the model were for Tampa, Florida and represented the period 1987-1991.

The emission rates of particulate matter used for air quality modeling purposes to determine the area of significant impact (ASI) represent the emission rates associated with the MAP prill tower/cooler and the MAP loadout. Table 2-1 contains modeling input parameters used in the ambient air quality impacts analysis.

The ASI modeling included discrete receptors at the facility property boundary and additional receptors established by the polar grid system extending to 10 kilometers from the plant (see Figure 2-1 and 2-2). The discrete receptors were placed along the property boundary. The polar grid receptor rings were placed up to a distance of 10,000 meters from the plant with receptors placed at 10 degree intervals from 10° to 360° on each receptor ring beyond the plant boundary. The downwind receptor distances were selected in order to provide a higher concentration of receptors closer to the source where the maximum impacts were expected.

Building wake effects were also addressed in the modeling. The EPA recommended BPIP program was used to determine the downwash criteria for the modeling. The buildings used in the BPIP analysis are presented in Figure 2-3.

A second set of modeling runs were conducted with the same modeling inputs with receptors placed at the Class I area (Chassahowitzka National Wildlife Refuge) boundary. The receptor locations used for the Class I area impact analysis are identical to those used in modeling analyses for recent sources evaluated in this area.

The results of the ASI modeling, summarized in Table 2-2 (Class II area) and Table 2-3 (Class I area), demonstrate that the predicted ambient air quality impact of particulate matter emissions from the proposed project are greater than significant for the 24-hour and annual periods in the Class II area; and, less than significant in the Class I area.

Thus the results of the modeling analyses indicate that the proposed project is not expected to cause or significantly contribute to any violation of the allowable Class I area PSD increment.

As the predicted particulate matter impacts from the proposed project are significant within the Class II area, additional modeling is required to determine compliance with the ambient air quality standards and allowable Class II area PSD increments. However, an extensive particulate matter emission inventory for the sources in the vicinity of the proposed project will be required. With FDEP's assistance, an updated source inventory should be available soon. Results of that analysis will be submitted for agency review under separate cover, so as not to delay the other aspects of review regarding the proposed project.

2.2 AIR QUALITY REVIEW FOR FLUORIDES AND AMMONIA

No ambient air quality standards, PSD increments or significant impact levels have been established for fluorides or ammonia. FDEP's current permitting guideline for air toxics requires temporary facilities to evaluate short-term impacts for comparison with Air Reference Concentrations (ARC) listed in Version 3 of the Air Toxics List. However, permanent facilities have to evaluate annual impacts to compare with the ARCs.

To address the concerns of the U.S. Department of Interior, the fluoride emissions from not only the proposed project but also from other significant emission sources at the USAC facility were included in the air modeling. Both the A and B phosphoric acid plants were included in the modeling (see Table 2-1). The receptor grid discussed in the previous section was used for the modeling of fluoride emissions.

The air modeling conducted for ammonia represented the expected emissions from the proposed project and followed the same format as the fluoride modeling described above (see Table 2-1), except that only one year of meteorological data, representing the most recent Tampa data, was used. This approach is consistent with the FDEP policy for pollutants with no established ambient air standards.



The modeling results indicated fluoride and ammonia impacts far below the annual ARCs in the vicinity of the plant, and at insignificant levels at the Class I area (see Table 2-4). Consequently, neither the fluoride nor the ammonia emissions from the proposed project are not expected to be of concern.

TABLE 2-1
AIR QUALITY MODELING PARAMETERS

U. S. AGRI-CHEMICALS
POLK COUNTY, FLORIDA

Source	Emission (g/s)	Height (m)	Temp. (°K)	Velocity (m/s)	Diameter (m)
Particulate Matter					
Tower/Cooler	3.02	21.95	332	14.37	2.74
Loadout	0.54	15.24	300	14.40	0.43
Fluorides					
Tower/Cooler	0.168	21.95	332	14.37	2.74
Loadout	NA				
Phos Acid A	0.111	25.90	316	12.22	0.76
Phos Acid B	0.111	25.90	316	12.22	0.76
Ammonia					
Tower/Cooler	4.8	21.95	332	14.37	2.74
Loadout	NA				

NOTE: No emissions of fluorides or ammonia are associated with MAP loadout.



TABLE 2-2
 SUMMARY OF PARTICULATE MATTER SIGNIFICANT IMPACT ANALYSIS
 CLASS II AREA

U. S. AGRI-CHEMICALS
 POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	PARTICULATE MATTER IMPACT ($\mu\text{g}/\text{m}^3$)	
	24-HOUR	ANNUAL
1987	16.08	1.25
1988	15.95	1.56
1989	20.43	2.02
1990	16.42	1.30
1991	16.38	1.53
Significant Impact (Rule 62-272, FAC)	5	1
Class II Increment (Rule 62-272, FAC)	30	17
Ambient Air Standard (Rule 62-272, FAC)	150	50

NOTE:

(1) The predicted impacts represent the highest-high impact.



TABLE 2-3
 SUMMARY OF PARTICULATE MATTER SIGNIFICANT IMPACT ANALYSIS
 CLASS I AREA

U. S. AGRI-CHEMICALS
 POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	PARTICULATE MATTER IMPACT ($\mu\text{g}/\text{m}^3$)	
	24-HOUR	ANNUAL
1987	0.065	0.0022
1988	0.051	0.0033
1989	0.068	0.0043
1990	0.075	0.0022
1991	0.039	0.0019
Significant Impact (NPS guidelines)	0.27	0.08

NOTE:

- (1) The predicted impacts represent the highest-high impact.

TABLE 2-4
SUMMARY OF FLUORIDES AND AMMONIA IMPACTS ANALYSIS

U. S. AGRI-CHEMICALS
POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	FLUORIDES ($\mu\text{g}/\text{m}^3$) ANNUAL	AMMONIA ($\mu\text{g}/\text{m}^3$) ANNUAL
CLASS I AREA		
1991	0.0002	0.0026
CLASS II AREA		
1991	0.1367	1.1299
(FDEP ARC guideline)	50	100

NOTE:

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



FIGURE 2-1

FENCE LINE AND POLAR RECEPTORS
US AGRI-CHEMICALS, FT. MEADE, FLORIDA

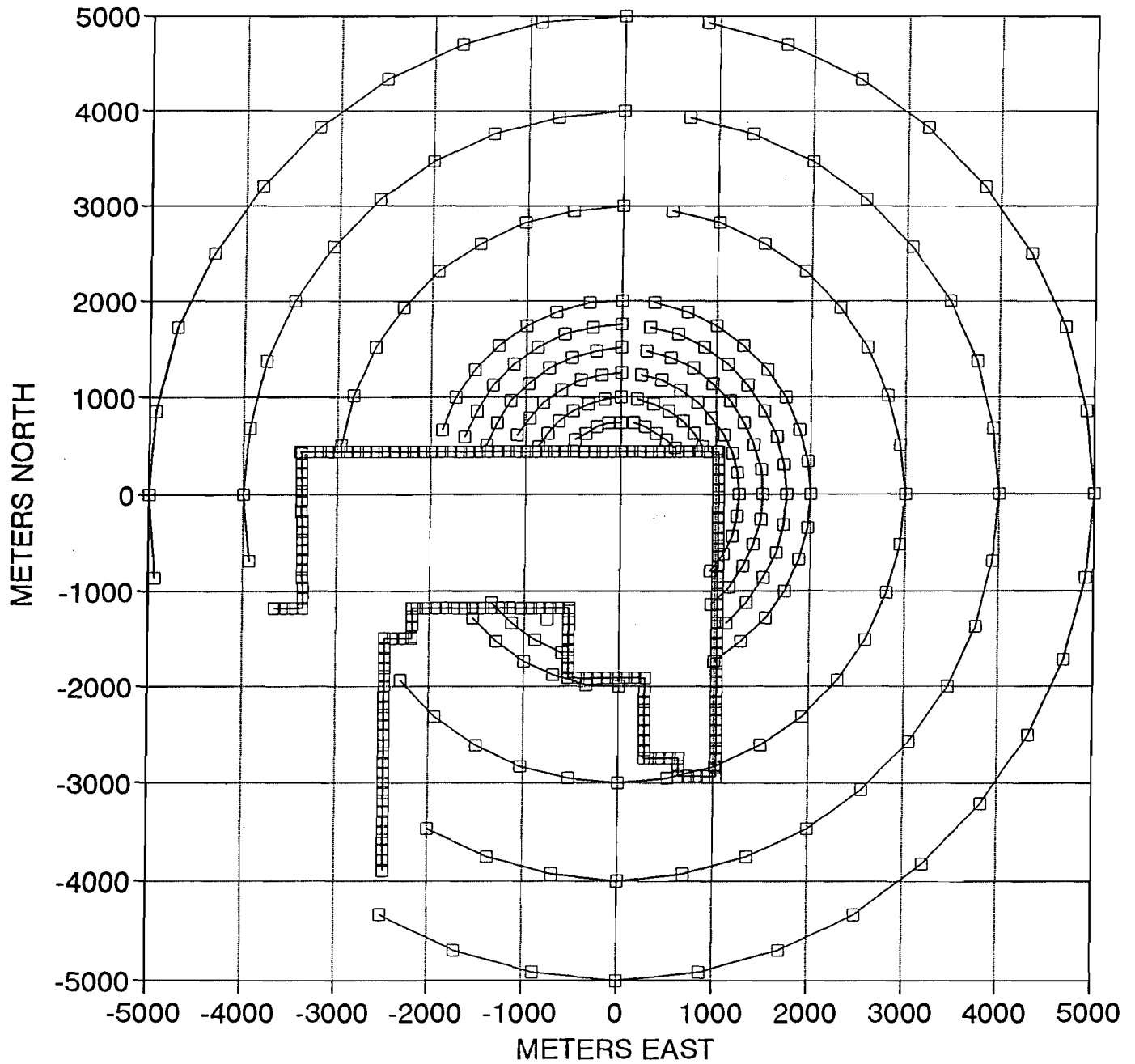
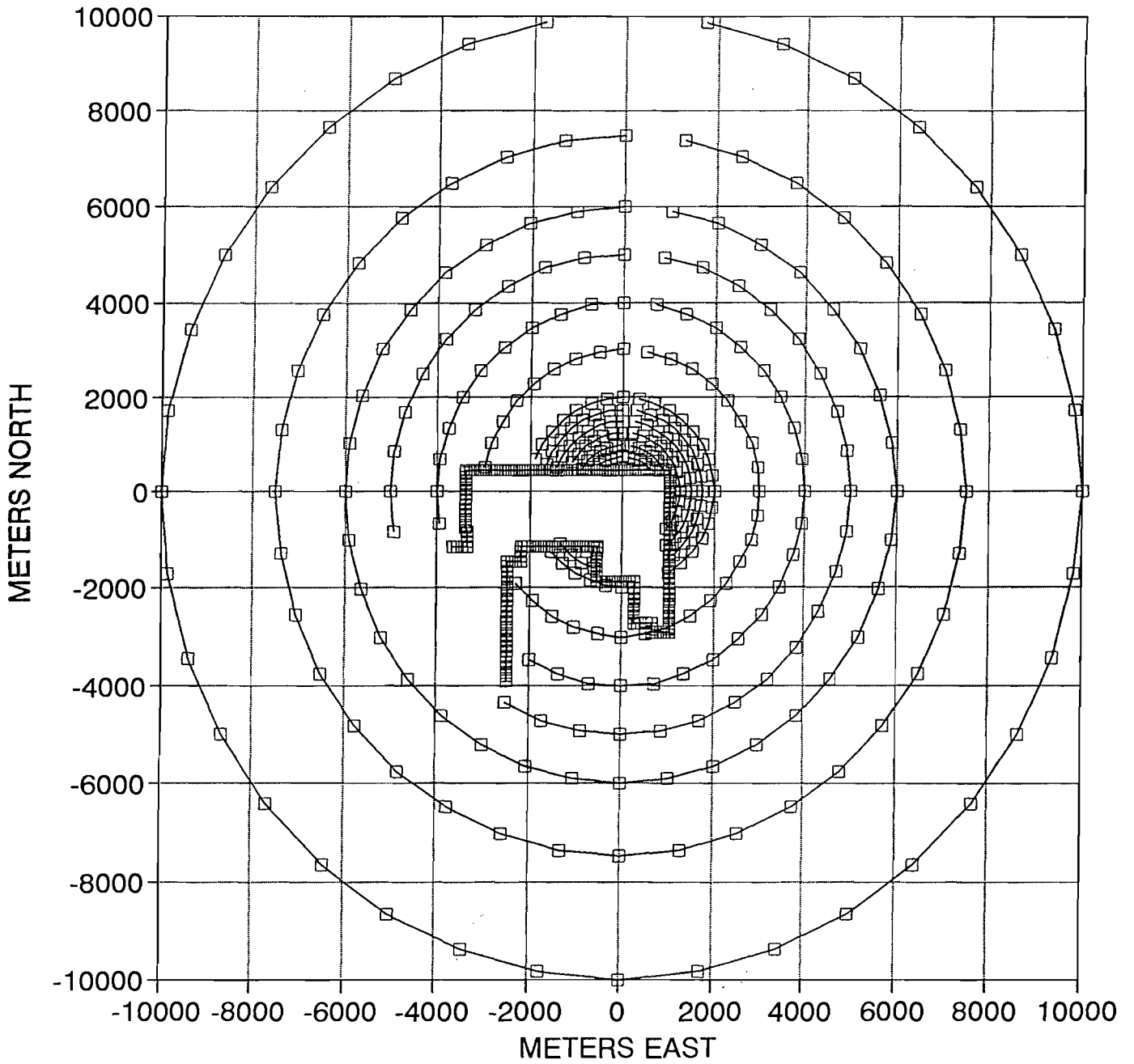


FIGURE 2-2

FENCE LINE AND POLAR RECEPTORS
US AGRI-CHEMICALS, FT. MEADE, FLORIDA



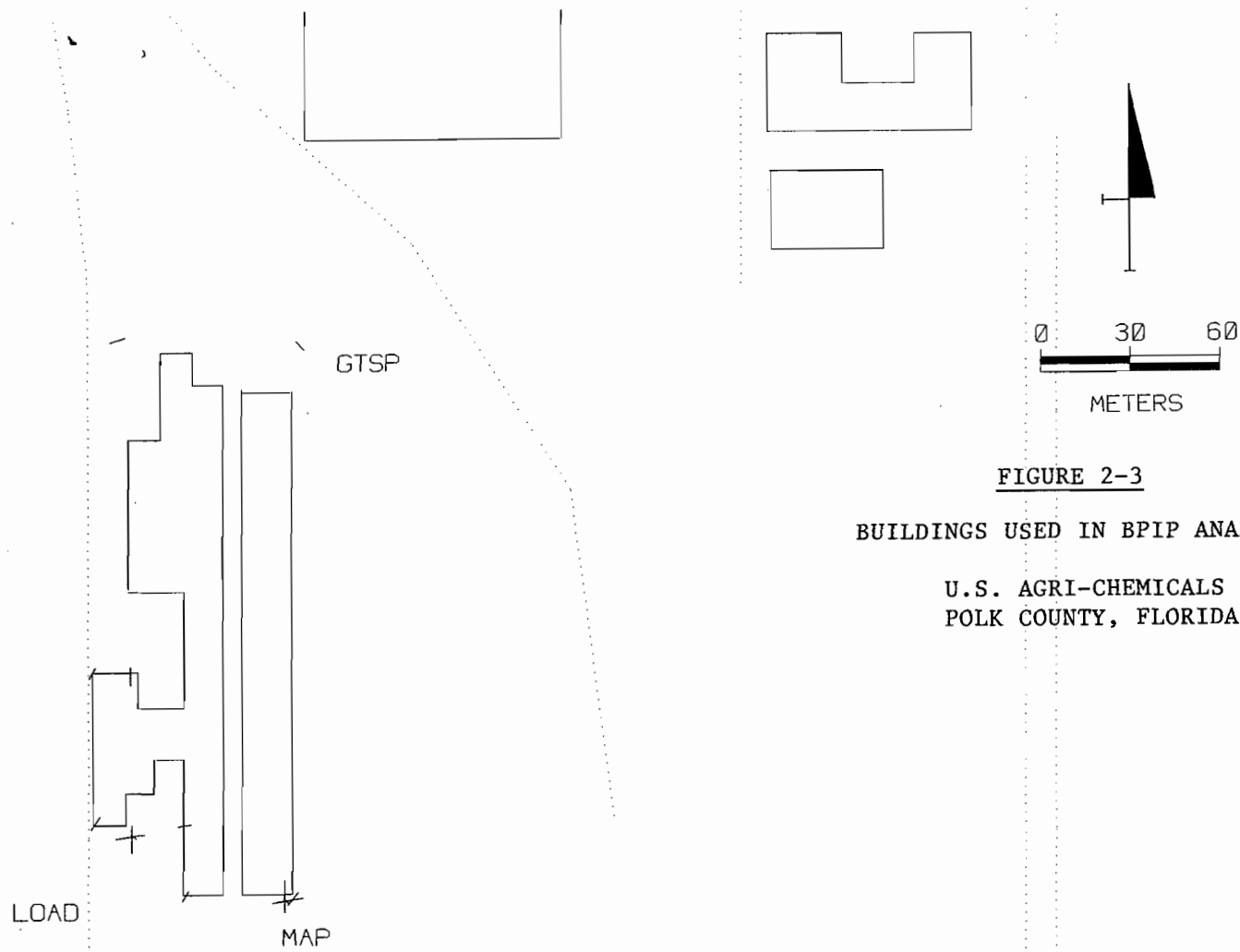


FIGURE 2-3

BUILDINGS USED IN BPIP ANALYSIS

**U.S. AGRI-CHEMICALS
POLK COUNTY, FLORIDA**



U.S. Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, FL 33841-9799
813 285 8121

US
Agri-Chemicals

A Sinochem Company

CLARK
al
To: U.S. AgriChem
Ft Meade Facility File.
al

Jewell Harper, Chief
Air Enforcement Branch
345 Courtland Street, N.E.
Atlanta, GA 30365

September 16, 1996

Dear Ms. Harper:

RE: Phosphogypsum Stack Expansion at Ft. Meade Facility

In accordance with section 40 CFR 61.09(a)(2), this is to notify the Agency that the actual date of initial startup of the referenced source is September 16, 1996.

Please contact Mr. Ronald L. Brunk at (941)285-7123, ext. 279 if you have any questions.

Sincerely,

Steven J. Susick
Steven J. Susick, General Manager
Engineering & Technical Services

- cc: 1. Mr. Howard L. Rhodes, Director
Division of Air Resource Management
Florida Department of Environmental Protection
2. Dr. Lyle Jerrett, Director
Office of Radiation Control
Florida Department of Health & Rehabilitative Services

RECEIVED

SEP 19 1996

DIVISION OF AIR
RESOURCES MANAGEMENT

U.S. Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, FL 33841-9799
813 285 8121

US
Agri-Chemicals

A Sinochem Company

Jewell Harper, Chief
Air Enforcement Branch
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Ms. Harper:

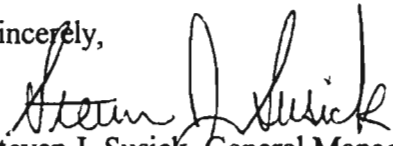
RE: Phosphogypsum Stack Expansion at Ft. Meade Facility

This is to update the Agency on the anticipated date of initial startup provided in our letter dated May 5, 1996.

Due to adverse weather conditions that caused construction delays, the revised anticipated date of initial startup is August 15, 1996.

Please contact Mr. Ronald L. Brunk at (941)285-7123, ext. 279 if you have any questions.

Sincerely,


Steven J. Susick, General Manager
Engineering & Technical Services

cc: 1. Mr. Howard L. Rhodes, Director
Division of Air Resource Management
Florida Department of Environmental Protection

2. Dr. Lyle Jerrett, Director
Office of Radiation Control
Florida Department of Health & Rehabilitative Services

RECEIVED

AUG 07 1996

DIVISION OF AIR
RESOURCES MANAGEMENT

AC
Heather - Put
in a U.S. Agri. Chemicals
permanent file.
claim
dw

August 5, 1996

~~Howard~~
8/8
~~John R. FYJ.~~
AT (Trust)
Fol



KOOGLER & ASSOCIATES

ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

KA 173-94-04

September 12, 1995

RECEIVED

SEP 15 1995

Bureau of
Air Regulation

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

Subject: Comments on FDEP's Draft Permit
US Agri-Chemicals Corporation
MAP Prill Plant
DEP File No. AC53-260190, PSD-FL-222

Dear Mr. Reynolds:

This is to document your telephone conversation on September 7, 1995, with Pradeep Raval regarding the above mentioned draft permit.

1. Based on the conversation, it is our understanding that the permit expiration date will be December 30, 1997.
2. It is our understanding that the following is implied on Page 6 of 7, S.C. 11.d.:

"In case of excess emissions resulting from malfunctions, beyond those addressed in 11.a. above, each source..."

3. Based on the conversation regarding the BACT Determination, it is our understanding that the following is valid:

As no performance data are readily available for a recently constructed prilled MAP plant to facilitate setting emission limitations pursuant to BACT, USAC is not opposed to the Bureau of Air Regulation setting such emission limitations at a later date so long as the limits are realistic. Appropriate emission limits would have to be based on plant performance data over a reasonable period of time; allow for normal fluctuations associated with the process; and, allow for variation in the quality of raw materials.

The control efficiencies mentioned by FDEP in the BACT evaluation as "target" scrubber efficiencies are for design purposes only, since there are no relevant data from other prilled MAP plants. Given a critical construction schedule, it is expected that the final scrubbing system design, based on BACT criteria, will be reviewed by the FDEP permit processor, within 30 days of submittal.

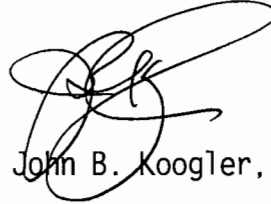
Mr. John Reynolds
Florida Department of
Environmental Protection

September 12, 1995
Page 2

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

Very truly yours,

KOGLER & ASSOCIATES



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

JBK:par

c: Steve Susick, USAC





KOUGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

KA 173-94-04

August 14, 1995

RECEIVED

AUG 15 1995

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: Comments on FDEP's Draft Permit
US Agri-Chemicals Corporation
MAP Prill Plant
DEP File No. AC53-260190, PSD-FL-222

Dear Mr. Linero:

We have reviewed FDEP's draft permit package on the above referenced project. Comments on the Department's Technical Evaluation and Preliminary Determination and draft permit are presented below.

We have no comments of significance on the Intent to Issue or the Notice of Intent to Issue.

COMMENTS ON TECHNICAL EVALUATION

1. General Comment: It is our understanding that while gaseous fluorides are mentioned in the Technical Evaluation and BACT Determination as an air pollutant, fluorides will be permitted (emission limits/test requirements) on the basis of total fluorides.
2. Page 2, Section II, Paragraph 1: The final prilled MAP process design could be based on the Swift or another process.
3. Page 2, Section II, Paragraph 2: As no performance data are readily available for a recently constructed prilled MAP plant to facilitate setting emission limitations pursuant to BACT, USAC is not opposed to FDEP setting such emission limitations at a later date so long as the limits are realistic. Appropriate emission limits would have to be based on plant performance data over a reasonable period of time; allow for normal fluctuations associated with the process; and allow for variation in the quality of raw materials. We recommend the use of the emission limits based on a 99th percentile confidence level based on several performance tests over a six month period after completion of construction.

4. Page 3, Section II, Paragraph 1: USAC will accept the preliminary BACT limit of 0.0417 lb F/ton P205. This is the most stringent fluoride emission limit established under the BACT criteria by FDEP for a MAP/DAP plant. The control efficiencies mentioned by FDEP in the BACT evaluation as "target" scrubber efficiencies, for design purposes only, are based on data from other than prilled MAP plants. If FDEP requires additional justification for the BACT limit of 0.0417 lb F/ton P205, USAC will provide FDEP with an update on the BACT cost analyses for scrubbing system alternatives when detailed design information is available.
5. Page 4, Section IV, Paragraph 5: Although not of consequence for this project, the background ambient air concentration for PM should be adjusted downward to avoid potential "double counting" of impacts from sources in the vicinity of the ambient monitor.

COMMENTS ON DRAFT PERMIT

6. Page 1 of 7, Permit Expiration Date: It is requested that the permit expiration date be revised to December 30, 1997, in order to provide adequate time for construction, process debugging, performance testing, discussions with FDEP, and the issuance of the air operation permit.
7. Page 1 of 7, Project Description: See Comment 3 above, regarding setting of emission limits after construction.
8. Page 5 of 7, S.C. 5: See Comment 3 above, regarding the time frame for performance testing relative to setting of emission limits after construction.
9. Page 5 of 7, S.C. 6: See Comment 3 above, regarding the time frame for performance testing.
10. Page 6 of 7, S.C. 11.d.: This condition should be clarified by amending the wording as follows:

" In case of excess emissions resulting from malfunctions, beyond those addressed in 11.a. above, each source..."

COMMENTS ON BACT

11. Page 2, Paragraph 3: See Comment 3 above, concerning setting of emission limits after construction.
12. Page 2, Paragraph 4: See Comment 4 above, on control efficiencies.



Mr. A. A. Linero
Florida Department of
Environmental Protection

August 14, 1995
Page 3

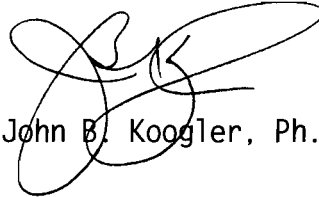
As you are probably aware, USAC has filed for an extension of time within which to file for a hearing. This petition is expected to allow adequate time to discuss the above issues of concern with FDEP. We look forward to a prompt resolution of matters concerning this project.

We appreciate the effort of FDEP staff, especially Mr. John Reynolds and Ms. Kate Zhang, in providing prompt review of the information submitted in conjunction with the above project.

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

Very truly yours,

KOUGLER & ASSOCIATES




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

JBK:par

c: Steve Susick, USAC

B. Thomas, SWD
J. Harper, EPA
J. Burzyk, NPS
C. Nelladay, BAR
R. Harwood, Polk Co.
J. Reynolds, BAR





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4APT-AEB

AUG 07 1995

RECEIVED
AUG 11 1995
Bureau of
Air Regulation

Mr. Clair H. Fancy, P.E.
Chief
Bureau of Air Regulation
Florida Department of Environmental
Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJ: United States Agri-Chemicals Corporation (USACC), Fort
Meade, Polk County, Florida (PSD-FL-222)

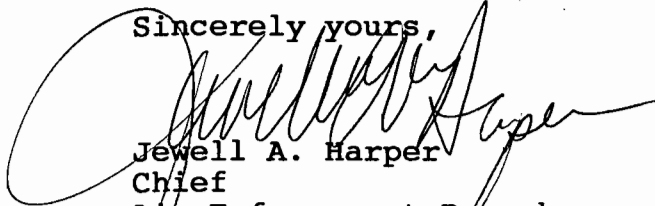
Dear Mr. Fancy:

This is to acknowledge receipt of your preliminary determination and draft Prevention of Significant Deterioration (PSD) permit for the major modification to the above referenced phosphate fertilizer manufacturing facility by your letter dated June 29, 1995. The proposed project consists of the addition of a new prilled monoammonium phosphate (MAP) plant. The production rate of the new prilled MAP plant is expected to be approximately 60 tons per hour (TPH). The Swift prill tower process will be used to produce the prilled MAP. Diluted wet process phosphoric acid is reacted with ammonia vapor in a pipe reactor above the louvered prill tower. Solid MAP particles called "prills" are collected in a hopper at the bottom of the tower.

We agree with your determination that either a combination medium energy primary venturi/packed secondary crossflow scrubber system, or a medium to high energy venturi scrubber system, could be considered representative of Best Available Control Technology (BACT) for control of tower and cooler particulate and fluoride emissions. The combination wet scrubber system would use recirculated gypsum/cooling pond water, while the medium to high energy system would utilize neutralized water from a dedicated scrubber pond with fresh water feed. Minimum removal efficiencies of 99.3 and 99.0 percent for fluoride and particulate, respectively, will be required for any prill tower wet scrubber system. Fabric filtration may also be considered representative of BACT for control of particulate emissions from product loadout operations. The proposed prilled MAP plant will utilize both the existing phosphoric acid transfer and storage system, and product storage building. Other material handling equipment will not be modified to accommodate the new MAP plant.

As discussed between Mr. John Reynolds of your staff and Mr. Stan Kukier of my staff on July 25, 1995, we have reviewed the package as submitted and have no adverse comments. Thank you for the opportunity to comment on this package. If you have any questions, please contact Mr. Stan Kukier of my staff at (404) 347-3555, voice mailbox extension 4143.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Jewell A. Harper". The signature is written in black ink and is positioned above the typed name and title.

Jewell A. Harper
Chief
Air Enforcement Branch
Air, Pesticides, and Toxics
Management Division

U.S. Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, FL 33841-9799
813 285 8121

US
Agri-Chemicals

A Sinochem Company

RECEIVED

AUG 15 1995

August 9, 1995

Bureau of
Air Regulation

Mr. John Reynolds
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399-9799

Dear Mr. Reynolds:

RE: DEP File No. PSD-FL-222; AC53-260190, Public Notice

Attached please find the Affidavit of Publication of the Department's Notice of Intent to Issue Permit.

Please feel free to contact me at (813) 285-7123, ext. 279, if you need additional information.


Sincerely,



Ronald L. Brunk, Manager
Environmental Engineering

cc: Pradeep Raval, Koogler & Assoc.

cc : B. Thomas, SWD
J. Harper, EPA
J. Bunkak, NPS
C. Holladay, BAR
R. Harwood, Peck Co.



AFFIDAVIT OF PUBLICATION

THE LEDGER
Lakeland, Polk County, Florida

Case No.

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Robert Lee, who on oath says that he is Classified Manager of The Ledger, a daily newspaper published in Polk County, Florida; that the attached copy of advertisement, being a

...Notice of Intent.....

in the matter of


Phosphate Fertilizer

in the

Court, was published in said newspaper in the issues of
August 1;

1995

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.


Signed
Classified Advertising Manager

by Robert E. Lee who is personally known to me

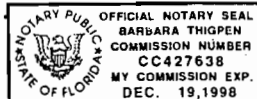
Sworn to and subscribed before me this 1st

day of August A.D. 19 95

(Seal)


Notary Public

My Commission Expires
U.S. Agri-
Chemical Corp.



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO ISSUE PERMIT
PSD-FL-222

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit to US Agri-Chemicals, Inc., 3225 Stone Road, 530 West, Fort Meade, Florida 33841. This company operates a phosphate fertilizer manufacturing facility at that address. The permit will allow the construction of a 60 tons per hour prilled monoammonium phosphate plant. A determination of "Best Available Control Technology" (BACT) was required since the proposed project is subject to Prevention of Significant Deterioration (PSD) regulations. Fluoride and particulate matter emissions from the tower and cooler will be controlled using a state-of-the-art scrubbing system while a fabric filter will control product loadout emissions. Modeling indicates that emissions from the new facility are not expected to have any adverse environmental impact. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

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

If a petition is filed, the administration hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application/request have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel of the above address of the Department. Failure to petition within the above time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to the proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-3.207, Florida Administrative Code, 28-3.207, 44-28-3.207.

The application/request is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following address:
Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Blvd., Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Southwest District
8407 Laurel Fair Circle
Tampa, Florida 33634

Any person may wish written comments on the proposed action to Administrative New Source Review of the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination. Further, a public hearing can be requested by any person(s). Such requests must be submitted within 30 days of this notice.

F 115

Florida Department of
Environmental Protection

Memorandum

al

RECEIVED

SEP 28 1995

Bureau of
Air Regulation

TO: Howard L. Rhodes
THRU: C. H. Fancy *CHF*
FROM: A. A. Linero *AA Linero* 9/26
DATE: September 26, 1995
SUBJ: Approval of Permit PSD-FL-222
U. S. Agrico, Prilled MAP Plant - Polk County

Attached for your review and approval is a PSD permit and a Best Available Control Technology Determination for a new 60 TPH prilled monoammonium phosphate (MAP) plant at the Agrico facility in Fort Meade, Polk County.

Sources of emissions are from the absorption tower and product loadout area. Controls include 99+ percent absorption by venturi scrubbing, use of natural gas for process heating, and a baghouse for product loadout.

No comments were received during the public notice period. I recommend your approval.

AAL/aal/l

Attachments

1050051-002-AC

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DEP File No. AC 53-260190
PSD-FL-222
Polk Co.

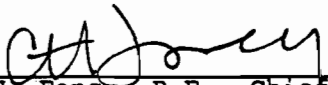
Mr. Stephen J. Susick, P.E.
General Manager
US Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, Florida 33841-9799

Enclosed is Permit Number AC 53-260190 (PSD-FL-222) for the construction of a 60 TPH prilled monoammonium phosphate plant at the existing US Agri-Chemicals facility located in Fort Meade, Polk County, Florida, issued pursuant to Chapter 403, Florida Statutes (F.S.).

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

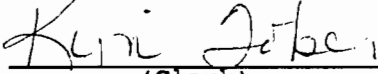

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 9-29-95 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.


(Clerk)

9/29/95
(Date)

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

Final Determination

US Agri-Chemicals Corp.
Prilled Monoammonium Phosphate Plant
Polk County
Fort Meade, Florida

Permit Number
PSD-FL-222
AC 53-260190

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

September 26, 1995

Final Determination
US Agri-Chemicals Corp.
PSD-FL-222
AC 53-260190

The Technical Evaluation and Preliminary Determination for a permit to construct a 60 tons per hour prilled monoammonium phosphate (MAP) plant at the US Agri-Chemicals facility in Fort Meade, Polk County, Florida, was distributed on June 29, 1995. The Notice of Intent to Issue was published in the Ledger on August 1, 1995. Copies of the evaluation were available for public inspection at the Department's offices in Tallahassee and Tampa.

During the 30-day period following public notice, the Department received comments from the applicant and the US Environmental Protection Agency (USEPA). The USEPA requested no changes, while the applicant requested that the fluoride emission limit be based on another Best Available Control Technology (BACT) determination for a granular MAP plant. Since there are significant differences in the granular and prilled MAP processes, the Department does not agree that a BACT fluoride emission limit for the granular process can be applied to the prilled process. The applicant also requested that the permit expiration date be extended to December 30, 1997. The final action of the Department will be to issue the permit with the extended expiration date.

Best Available Control Technology (BACT) Determination
U.S. Agri-Chemicals Corporation
Fort Meade, Polk County, Florida
PSD-FL-222
AC53-260190

The applicant proposes to construct a 60 tons per hour (TPH) prilled monoammonium phosphate (MAP) plant at their agricultural chemical facility in Fort Meade. The proposed project will result in a significant increase in emissions of particulate matter (PM-PM10) and gaseous fluorides (SiF₄ and HF). 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 review required by Rule 62-212.410, F.A.C.

Date of Receipt of Complete Application: April 4, 1995

BACT Determination Proposed by Applicant:

Emission Limits: Tower & Cooler - 0.0417 lb F/ton P₂O₅ input
- 0.40 lb PM-PM10/ton MAP
Product Loadout - 0.072 lb PM-PM10/ton MAP

Control Technology: - Medium-energy venturi scrubber using recycled pond water (for tower and cooler)
- Baghouse (for product loadout)
- Natural Gas (for process heater)

BACT Determination Procedure:

In accordance with F.A.C. Chapter 62-212, this BACT 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, Rule 62-212.410(1), F.A.C., states 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.

BACT
US Agri-Chemicals Corp.
Page Two

(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, 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 DEP:

Emission Limits: Tower and Cooler - Fluoride and PM/PM10 limits to be established after performance test
Product Loadout - No visible emissions

Control Technology:

Options for Tower & Cooler:

- Medium-energy venturi primary scrubber with packed secondary scrubber using recirculated gypsum/cooling pond water (minimum 99.3% removal of total gaseous fluorides and 99.0% removal by weight of PM/PM10 over 5 microns)
- Medium-to-high-energy venturi scrubber using neutralized water from dedicated scrubber pond with fresh water makeup (minimum 99.3% removal of total gaseous fluorides and 99.0% removal by weight of PM/PM10 over 5 microns)
- Other system with equivalent removal efficiencies approved by the Department

Product Loadout: Baghouse as proposed

Process Heater: Natural gas as proposed

BACT Determination Rationale:

The applicant based their proposed fluoride BACT emission limit of 0.0417 lb F per ton P2O5 on the Department's 1994 BACT determination for IMC-Agrico's granular Diammonium Phosphate plant in Polk County (PSD-FL-204). However, due to the substantial differences in air flow and other process variables that exist between the granulation and prill tower processes, the Department

BACT
US Agri-Chemicals Corp.
Page Two

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- Other system with equivalent removal efficiencies approved by the Department

Product Loadout: Baghouse as proposed

Process Heater: Natural gas as proposed

BACT Determination Rationale:

The applicant based its proposed fluoride BACT emission limit of 0.0417 lb F per ton P2O5 on the Department's 1994 BACT determination for IMC-Agrico's granular Diammonium Phosphate plant in Polk County (PSD-FL-204). However, due to the substantial differences in air flow and other process variables that exist between the granulation and prill tower processes, the Department

BACT
US Agri-Chemicals Corp.
Page Three

cannot rely on the granulation emissions to accurately predict emissions from the prill process.

PM/PM10 emission limits were proposed by the applicant based on a 1980 BACT determination for a prilled MAP plant operated by IMC-Agrico. Since that is the only BACT determination available (15 years old) and technological advances have no doubt been made since 1980, the Department prefers not to rely on it for this new source.

This leaves the Department without an adequate basis for arriving at BACT limits for this project prior to construction. In such cases where relevant data are not available on which to base an enforceable BACT emission limit, the Department must require that the level of control and the emission control equipment capabilities be at least equivalent to those imposed in other BACT determinations for the same industry.

Based on a review of state-of-the-art fluoride scrubber capabilities in the phosphate industry, the Department finds that for this application the control equipment should be capable of achieving at least 99.3% removal of gaseous fluorides and 99.0% (wt.) removal of PM/PM10 above 5 microns. The applicant must submit scrubber design calculations and drawings to the Department prior to construction to show that the equipment will meet these removal efficiencies. The BACT emission limits will be established upon completion of the performance tests.

Air Quality Analysis:

The proposed project will result in PSD-significant emissions of PM/PM10 and gaseous fluorides (HF and SiF₄). The maximum 24-hour and annual average PM/PM10 concentrations are 20.43 and 2.02 ug/m³, respectively. The maximum PM/PM10 impacts are above the respective Class II PM10 significant impact levels of 5.0 and 1.0 ug/m³. The maximum predicted 24-hour and annual PM/PM10 concentrations in the Class I Chassahowitzka National Wilderness Area are 0.075 and 0.0046 ug/m³, respectively. They are below the National Park Service-recommended Class I PM10 24-hour and annual significance levels of 0.27 and 0.08 ug/m³. Therefore, a full Class II impact assessment was done while a Class I modeling analysis was not required.

The modeling results indicate that the maximum PM/PM10 increment consumption will not exceed the allowable PSD increments. Also, as shown in the Technical Evaluation, the maximum impacts of toxic air pollutants (ammonia and fluorides), compared to the Department's draft Ambient Reference Concentrations (ARC), are less than their respective ARC values. Results of the Level I visibility impairment analysis demonstrate that all parameters

BACT
US Agri-Chemicals Corp.
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have values less than the threshold values indicating that emissions from the proposed project will not have a significant impact on area visibility.

Conclusion:

The controlled air pollutant emissions resulting from the proposed project are not expected to have any adverse environmental impact. It is concluded that the control equipment options proposed by the Department represent the best available control technology.

BACT Analysis Details Available From:

A. A. Linero, P.E. or John Reynolds
New Source Review Section
Bureau of Air Regulation
111 South Magnolia Drive
Tallahassee, Florida 32399-2400

Recommended by:

Approved by:

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

Virginia B. Wetherell, Secretary
Dept. of Environmental

_____, 1995
Date

_____, 1995
Date

BACT
US Agri-Chemicals Corp.
Page Three

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This leaves the Department without an adequate basis for arriving at BACT limits for this project prior to construction. In such cases where relevant data are not available on which to base an enforceable BACT emission limit, the Department must require that the level of control and the emission control equipment capabilities be at least equivalent to those imposed in other BACT determinations for the same industry.

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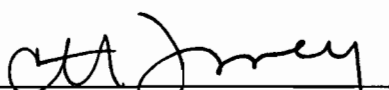
Conclusion:

The controlled air pollutant emissions resulting from the proposed project are not expected to have any adverse environmental impact. It is concluded that the control equipment options proposed by the Department represent the best available control technology.


BACT Analysis Details Available From:

John Reynolds, Permit Engineer
Bureau of Air Regulation
Department of Environmental Protection
111 South Magnolia Drive
Tallahassee, Florida 32399-2400

Recommended by:


C. H. Fancy, P.E., Chief
Bureau of Air Regulation
Date 9/27, 1995

Approved by:


Howard L. Rhodes, P.E., Director
Division of Air Resources Management
Date 9/27, 1995



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:
US Agri-Chemicals Corp.
3225 State Road 630 West
Fort Meade, FL 33841-9799

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: Dec. 30, 1997
County: Polk
Latitude/Longitude: 27°44'25"N
81°51'05"W
Project: 60 TPH Prilled MAP
Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, 212, 272, 275, 276, and 297, Florida Administrative Code (F.A.C.). The above named permittee is hereby authorized to perform the work or operate the emission unit 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 construction of a 60 TPH Prilled MAP Plant with state-of-the-art air pollution control equipment to be approved by the Department prior to construction and emission limits set after construction and testing. The facility is located at 3225 State Road 630 West, Fort Meade, Polk County, Florida. The UTM coordinates are Zone 17: 416 km East and 3,069 km North.

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

Attachments are listed below:

1. DEP's letter dated November 23, 1994
2. USDOJ's letter dated December 15, 1994
2. DEP's letter dated February 17, 1995
3. K&A's letter dated March 2, 1995
4. K&A's letter dated March 20, 1995
5. K&A's letter dated March 29, 1995
6. K&A's letter dated March 31, 1995
7. USAC's letter dated July 13, 1995
8. USEPA's letter dated August 7, 1995
9. K&A's letter dated August 14, 1995
10. K&A's letter dated September 12, 1995

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: Dec. 30, 1997

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, F.S. 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), F.S, 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 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

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: Dec. 30, 1997

GENERAL CONDITIONS:

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 arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S. 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 F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: Dec. 30, 1997

GENERAL CONDITIONS:

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)
- () Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for 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.

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
P&S-FL-222
Expiration Date: Dec. 30, 1997

GENERAL CONDITIONS:

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 construction and operation of the subject Prilled MAP production facility shall be in accordance with the capacities and specifications stated in the application.

2. Pursuant to Rule 62-212.200(56), F.A.C., the production rate of the Prilled MAP plant shall not exceed 60 tons MAP product per hour.

3. Pursuant to Rule 62-212.200(56), F.A.C., the Prilled MAP plant may operate up to 8760 hours per year.

4. Pursuant to Rule 62-212.410, F.A.C., PM/PM10 emissions from the Prilled MAP plant loadout baghouse shall not exceed 5% opacity.

5. Pursuant to Rule 62-212.410, F.A.C., emissions of fluorides and PM/PM10 from the prill tower shall meet the requirements for Best Available Control Technology. Limits for these pollutants shall be determined by the Department's Bureau of Air Regulation (BAR) in Tallahassee, Florida, within 45 days following receipt by BAR of the performance test results required in Specific Condition No. 6. As soon as the design of the air pollution control system is finalized, the permittee shall submit all efficiency calculations and drawings of the system to the BAR in Tallahassee for approval.

6. Pursuant to Rule 62-297.340(1)(a), F.A.C., and before this construction permit expires, performance testing for fluorides and PM/PM10 shall be conducted on the prill tower scrubber stack and for opacity from the product loadout baghouse with the emission unit operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than capacity (i.e., less than 90 percent of maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit.

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222

Expiration Date: Dec. 30, 1997

7. 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 the performance test. Pursuant to Rule 17-297.570(1) and (2), written reports of the test results shall be submitted to that office and the BAR office in Tallahassee within 45 days of test completion.

8. Pursuant to Rules 62-296.800 and 62-297.401, F.A.C., the test procedures for fluorides shall be in accordance with EPA Reference Methods 1, 2, 3, and 13A or 13B, as published in 40 CFR 60, Appendix A. The test procedures for PM/PM10 shall be in accordance with EPA Reference Methods 1, 2, 3, 5 and 9 as published in 40 CFR 60, Appendix A.

9. Pursuant to Rule 62-296.320(2), F.A.C., Objectionable Odor Prohibited, no person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

10. Pursuant to Rule 62-210.650, F.A.C., Circumvention, no person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.

11. Pursuant to Rule 62-210.700, Excess Emissions, the Prilled MAP plant is subject to the following:

a. Rule 62-210.700(1): Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

b. Rule 62-210.700(4): Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.

c. Rule 62-210.700(5): Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.

d. Rule 62-210.700(6): In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: Dec. 30, 1997

12. Pursuant to Rules 62-210.370(2)(a) and (b), F.A.C., Reports, the permittee shall submit an Annual Operating Report using DEP Form 62-210.900(4) to the Department's Southwest District office by March 1 of the following year for the previous year's operation.

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

14. Pursuant to Rules 62-4.055 and 62-4.220, F.A.C., an application for an operation permit must be submitted to the Southwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate 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.

**STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION**



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

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:
 Stephen G. Susick, PE
 US Agri-Chemicals Corp
 3225 State # 630, West
 Ft. Meade, Fl 33841-9799
 of Washington

4a. Article Number
 Z 127 632 528

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

7. Date of Delivery
 10-2-95

5. Signature (Addressee)

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

6. Signature (Agent)

Thank you for using Return Receipt Service.

Z 127 632 528



Receipt for Certified Mail

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

PS Form 3800, March 1993

Sent to	Stephen Susick
Street and no.	US Agri Chem
P.O., State, and ZIP Code	Ft. Meade, 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	AC53-260190 PSO-FI-222 9-29-95

Memorandum

Florida Department of Environmental Protection

6/28 al
Signed. Ready
to go.
Clair

TO: C. H. Fancy
FROM: A. A. Linero *AA Lin*
DATE: June 26, 1995
SUBJ: US Agri-Chemicals Corp. / PSD-FL-222

Attached for your review and approval is a BACT determination, technical evaluation and preliminary determination and proposed permit for the above company to construct a 60 TPH Prilled Monoammonium Phosphate plant in Fort Meade.

Since this is an uncommon process and the BACT emission criteria for the most recent similar installation (operated by IMC-Agrico) are 15 years old, we recommend doing an after-the-fact BACT determination such as we did for Steve Smallwood's permit (the wood/tire burning power plant operated by Decker Energy-Ridge near Lakeland). We are proposing to review the capabilities of their control equipment design prior to construction and then set emission limits after test results are available. This approach seems to be working well for the Decker-Ridge project.

If you have any questions, please advise.

AAL/jr

The applicant has agreed to do after the-fact BACT determination based on actual performance.
Clair - We are requiring scrubbers used in roughly similar applications to achieve
99.9% Fluoride control and 99.3% PM removal for particles larger than 5µ.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

June 29, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Stephen J. Susick, P.E.
General Manager
US Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, Florida 33841-9799

Dear Mr. Susick:

Attached is one copy of the Technical Evaluation and Preliminary Determination, Best Available Control Technology (BACT) determination, Intent to Issue, and proposed permit for US Agri-Chemicals Corp. to construct a 60 tons per hour prilled monoammonium phosphate plant at the existing facility in Fort Meade, Polk County, Florida. Also included is the Notice of Intent to Issue for you to publish as indicated.

Please submit any written comments to be considered concerning the Department's proposed action to Mr. A. A. Linero at the above address. If you have any questions regarding this matter, please call Mr. John Reynolds at 904-488-1344.

Sincerely,

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

CHF/jr/t

Attachments

CC: W. Thomas, SWD
L. Novak, Polk Co.
J. Harper, EPA
J. Bunyak, NPS
J. Koogler, K&A

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL

In the Matter of an
Application for Permit by:

DEP File No. PSD-FL-222
AC 53-260190
Polk County

Mr. Stephen J. Susick, P.E.
General Manager
US Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, Florida 33841-9799

INTENT TO ISSUE

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy attached) to the applicant's facility as detailed in the application/request specified, above, for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, US Agri-Chemicals, Corp., submitted a complete application on April 4, 1995, to the Department for a permit to construct a 60 tons per hour prilled monoammonium phosphate plant at their facility located in Polk County.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The project is not exempt from permitting procedures. The Department has determined that a permit is required for the proposed work.

Pursuant to Section 403.815, F.S., and Rule 62-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

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

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

The Petition shall contain the following information;

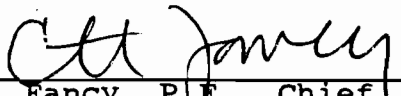
- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c)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

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE PERMIT AMENDMENT all copies were mailed by certified mail before the close of business on 6-29-95 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.


Clerk 6/29/95
Date

Copies furnished to:
B. Thomas, SWD
L. Novak, Polk Co.
J. Harper, EPA
J. Bunyak, NPS
J. Koogler, K&A

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF INTENT TO ISSUE PERMIT

PSD-FL-222

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit to US Agri-Chemicals, Inc., 3225 State Road 630 West, Fort Meade, Florida 33841. This company operates a phosphate fertilizer manufacturing facility at that address. The permit will allow the construction of a 60 tons per hour prilled monoammonium phosphate plant. A determination of Best Available Control Technology (BACT) was required since the proposed project is subject to Prevention of Significant Deterioration (PSD) regulations. Fluoride and particulate matter emissions from the tower and cooler will be controlled using a state-of-the-art scrubbing system while a fabric filter will control product loadout emissions. Modeling indicates that emissions from the new facility are not expected to have any adverse environmental impact. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

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

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application/request have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

The application/request is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Southwest District
8407 Laurel Fair Circle
Tampa, Florida 33619

Any person may send written comments on the proposed action to Administrator, New Source Review at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination.

Further, a public hearing can be requested by any person(s). Such requests must be submitted within 30 days of this notice.

Technical Evaluation
and
Preliminary Determination

US Agri-Chemicals Corp.
Prilled Monoammonium Phosphate Plant
Polk County
Fort Meade, Florida

Permit Number
PSD-FL-222
AC 53-260190

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

June 30, 1995

I. Application Information

A. Applicant

Mr. Stephen J. Susick, P.E.
General Manager
US Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, Florida 33841-9799

B. Request

The Department received a complete application on April 4, 1995 from U.S. Agri-Chemicals Corporation to construct a 60 tons per hour (TPH) prilled monoammonium phosphate (MAP) plant at its agricultural chemical facility in Fort Meade.

C. Classification

The applicant's facility (SIC 2874) is located at 3225 State Road 630 West, Fort Meade, Polk County, Florida. Latitude and longitude are 27/44/25 and 81/51/05 respectively. UTM coordinates of the site are: Zone 17, 416 km E and 3,069 km N.

II. Project Description/Emissions

The applicant proposes to construct a 60 TPH prilled MAP plant based on the Swift prill tower process. In this process, diluted wet process phosphoric acid is reacted with ammonia vapor in a pipe reactor positioned at the top of a louvered tower. Solid MAP particles called "prills" are formed immediately from the highly exothermic reaction and fall into a hopper at the bottom of the tower. Part of the reaction heat is transferred to the upflowing tower air while the remainder of the product heat is removed in a separate air cooler. Exhaust streams from both the tower and the cooler are routed to the scrubbing system. This process offers the advantage of avoiding the granulation step required for granular products while incurring the disadvantage of occasional plugging of the pipe reactor. Equipment and operating costs are substantially less than required for the conventional granulation process.

Emissions of primary concern are gaseous fluorides (SiF_4 and HF), ammonia, and particulate matter (PM/PM10) from the tower, cooler and product loadout area. With the exception of the product loadout and process heating emissions which are relatively minor, up-to-date emission factors for these pollutants are not readily available for this project. For this reason, the Department will establish emission limits after the air pollution control equipment has been installed and tested. To provide assurance that only state-of-the-art equipment representative of BACT control technology will be installed, the applicant must submit engineering calculations and design drawings to the Department sufficient to show that the equipment selected is capable of achieving removal efficiencies that are equivalent to those typically required for

other processes in the industry. These removal efficiencies have been determined by the Department to be a minimum of 99.3% for gaseous fluorides and 99% for PM/PM10 over 5 microns.

The following emission projections are rough estimates and should not be relied on except for indicating PSD applicability:

	<u>Applicant's Proposed Maximum Emissions</u> (tons per year)	<u>PSD-Significant Emission Rate</u> (tons per year)	<u>PSD Applies</u>
Fluorides	5.8	3.0	Yes
PM/PM10	124.7	25.0/15.0	Yes
NOx	7.4	40.0	No
SO2	0.03	40.0	No
CO	1.8	100.0	No
O3 (VOC)	0.3	40.0	No

III. Rule Applicability

The construction permit application is subject to review under Chapter 403, Florida Statutes (F.S.), and Chapters 62-209 through 62-297 and 62-4, F.A.C. The facility is located in an area designated as attainment for all criteria pollutants (Rule 62-275.400, F.A.C.). The proposed project is subject to the preconstruction review requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) since the proposed increases in PM/PM10 and fluoride emissions exceed the significant levels set forth in Table 212.400-2 of Chapter 62-212, F.A.C. Unreacted ammonia will also be emitted but since ammonia is not a regulated pollutant, the Department does not require emission limits for ammonia. Excess ammonia emissions will be restricted by application of the Objectionable Odor Rule (Rule 62-296.320(2), F.A.C.).

IV. Air Quality Analysis

The proposed project will emit PM/PM10 and fluorides in PSD-significant amounts. Impacts from PM are no longer included in the air quality impact analysis since the Ambient Air Quality Standards (AAQS) and increments are designated for PM10 only. Allowable values proposed by the applicant for these pollutants were used in the air quality modeling and are shown in Table 1.

The air quality impact analysis required by the PSD regulations for these pollutants includes:

- * An analysis of existing air quality;
- * A PSD increment analysis (for PM10);
- * An Ambient Air Quality Standards (AAQS) analysis (for PM10);
- * An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality modeling impacts; and
- * A "Good Engineering Practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved

methods. The PSD and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA guidelines.

Based on the required analyses, the Department has reasonable assurance that the proposed project, as described in this report and subject to the approval proposed herein, will not cause or contribute to a violation of any AAQS or PSD increment. However, the following EPA-directed stack height language is included: "In approving this permit, the Florida Department of Environmental Protection has determined that the application complies with the applicable provisions of the stack height regulations as reviewed by EPA on July 8, 1985 (50 FR 27895). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators." A discussion of the modeling procedure and required analyses follows.

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review. However, an exemption to the monitoring requirement can be obtained if the maximum air quality impact, as determined by air quality modeling, is less than a pollutant-specific "de minimus" level. Pollutants which do not have a specified de minimus level may also be exempt from preconstruction monitoring requirements. In addition, if an acceptable ambient monitoring method for the pollutant has not been established by EPA, monitoring is not required.

Table 2 shows that the maximum PM10 and fluoride impacts from the proposed project are predicted to be greater than the applicable de minimus levels. Therefore, an ambient monitoring analysis is required for PM10. The Department is not requiring preconstruction monitoring for fluoride because there are no EPA-approved monitoring methods for fluoride.

Previously existing representative monitoring data from the PM10 monitor in Gibsonton was used to fulfill the monitoring requirement for PM10 and to establish a background concentration for use in the AAQS analysis. The background concentration for PM10 was set at 30 ug/m3 for both the 24-hour and annual averaging periods.

The EPA-approved Industrial Source Complex (ISC2) dispersion model was used to evaluate pollutant emissions from the proposed project, the adjacent U.S. Agri-Chemicals facilities and other existing major facilities. The model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area and volume sources. The model incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms such as deposition. This model allows for the separation of sources, building wake downwash, and various other input and output

features. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant has used the EPA recommended regulatory options in each modeling scenario. Direction-specific downwash parameters were used because the stacks were less than the good engineering practice (GEP) stack height.

Meteorological data used in the modeling consisted of a concurrent five year period (1987-1991) of hourly surface observations and twice daily upper air soundings from the National Weather Service (NWS) station at Tampa, Florida. Since five years of data were used, the highest second-highest short-term predicted concentrations were compared with the appropriate AAQS or PSD increments. For the annual averages, the highest predicted yearly average was compared with the standards. For determining the significant impact area, both the highest short-term predicted concentrations and the highest predicted yearly averages were compared to the significant impact levels.

Receptors were placed at locations considered to be ambient air. Discrete receptors (180) were placed along the property boundary. Additional receptors were established by a polar grid system extending out 10 km from the plant. They were placed at the distances of 750, 1000, 1250, 1500, 1750, 2000, 3000, 4000, 5000, 6000, 7500, 10000 meters from the plant, along 36 radials with each radial spaced at 10 degree intervals. The Chassahowitzka National Wilderness Area (CNWA) is a PSD Class I area located approximately 125 km from the site. CNWA is represented by 13 discrete receptors located along the boundary of the Class I area.

A summary of impacts from the PM10 modeling analysis are presented in Table 2 and compared to the significant impact levels. The maximum impacts are above the respective PM10 significant impact levels. Therefore, a full impact assessment was performed for this pollutant. Maximum PM10 impacts predicted at CNWA for comparison to the National Park Service (NPS)-recommended Class I significance levels are presented in Table 3. They are below the NPS Class I PM10 24-hour and annual significance levels. Therefore, no further Class I modeling analysis was conducted.

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant. Atmospheric dispersion modeling, as previously described, was performed to quantify the amount of PSD increment consumed. The modeling results, summarized in Table 4, indicate that the maximum PM10 increment consumption will not exceed the allowable PSD increments.

For pollutants subject to an AAQS review, the total impact on ambient air is obtained by adding a background concentration to the maximum modeled concentration. The 1994 monitoring result from Gibsonton station was used to determine the background concentration. The results of the AAQS analysis are summarized in Table 5. Emissions from the proposed project are not expected to cause or contribute to a violation of an AAQS.

The maximum impacts of toxic air pollutants that will be emitted by the proposed project are presented in Table 6. Fluoride impacts are included in this analysis. Each pollutant's maximum 8-hour, 24-hour, and annual impact is compared to the Department's draft Ambient Reference Concentration (ARC). As shown in the table, all predicted impacts are less than their respective ARC.

The maximum ground-level concentrations predicated to occur for PM10, as a result of the proposed project, including a background concentration and all other nearby sources, will be below the AAQS. The AAQS are designed to protect both the public health and welfare. As such, this project is not expected to have a harmful impact on soils and vegetation in the PSD Class II area. An Air quality related values (AQRV) analysis was done by the applicant for the Class I area. No significant impacts on this area are expected.

The EPA-approved Level I visibility computer model VISCREEN was used to estimate the impact of proposed project's stack emissions upon visibility in the CNWA. Results of the Level I visibility impairment analysis demonstrate that all contract parameters have values less than the threshold values. Thus, emissions from the proposed facility will not have a significant impact on visibility in this area.

The proposed project will require a minimal increase in personnel to operate the plant. The increase in production may cause a slight increase in vehicular traffic but the impact on traffic in the area will be negligible. The project is not expected to have a significant impact on the residential, commercial, and industrial growth in Polk County.

Good Engineering Practice (GEP) stack height means the greater of: (1) 65 meters or (2) the maximum nearby building height plus 1.5 times the building height or width, whichever is less. The stacks for this project will be 21.95 meters and 15.24 meters, respectively. These stacks will not exceed the GEP stack height and will comply with GEP stack height regulations. The potential for building downwash to occur was considered in the modeling analysis for these stacks since they will be less than GEP.

V. Conclusion

Based on the information provided by US Agri-Chemicals Corp., the Department has reasonable assurance that the proposed project, as proposed herein, will not cause or contribute to a violation of an ambient air quality standard, PSD increment, or any other technical provisions of Chapters 62-209 through 62-297 of the Florida Administrative Code.

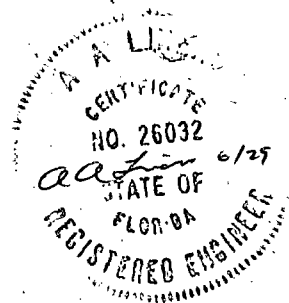


Table1. Significant and Net Emission Rates (Tons Per Year)

Pollutant	Existing Emissions (Actual)	Proposed Maximum Emissions	Net Emission Increases	Significant Emission Rate	Applicable Pollutant (Yes/No)
CO	0	1.8	1.8	100	No
NO _x	0	7.4	7.4	40	No
SO ₂	0	0.03	0.03	40	No
PM	0	124.7	124.7	25	Yes
PM10	0	124.7	124.7	15	Yes
O ₃ (VOC)	0	0.3	0.3	40	No
Fluoride	0	5.8	5.8	3.0	Yes

Table 2. Maximum Air Quality Impacts for Comparison to the Significant Impact and De Minimus Ambient Levels.

Pollutant	Avg. Time	Predicted Impact (ug/m3)	Significant Impact Level (ug/m3)	De Minimus Level (ug/m3)
PM10	24-hour	20.43	5.0	10.0
	Annual	2.02	1.0	NA
Fluoride	24-hour	1.56	NA	0.25

Table 3. Maximum Air Quality Impacts Analysis for Class I Area

Pollutant	Avg. Time	Maximum Predicted Impact (ug/m3)	National Park Service (NPS) Significant Impact Level (ug/m3)
PM10	24-hour	0.075	0.27
	Annual	0.0046	0.08

Table 4. PSD Class II Increment Analysis

Pollutant	Avg. Time	Maximum Predicted Impact (ug/m3)	Allowable Increment (ug/m3)
PM10	24-hour	28.43	30
	Annual	4.43	17

Table 5. Ambient Air Quality Impact

Pollutant	Avg. Time	Modeled Source Impact (ug/m3)	Background Concentration (ug/m3)	Maximum Predicted Impact (ug/m3)	Florida AAQS (ug/m3)
PM10	24-hour	92	30	122	150
	Annual	17.7	30	47.7	50

Table 6. Air Toxic Analysis

Pollutant	Avg. Time	Maximum Predicted Impact (ug/m3)	Ambient Reference Concentration (ug/m3)
Fluoride	8-hour	2.75	16
	24-hour	1.56	3.84
	Annual	0.14	50
NH ₃	8-hour	34.6	170
	24-hour	19.6	40.8
	Annual	1.13	100

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:
Stephen G. Susick, PE
US Agri-Chemicals, Corp
3225 State Rd 630 West
H. Meade, FL
33841-9799

4a. Article Number
Z 392 979 010

4b. Service Type

- Registered Insured
- Certified COD
- Express Mail Return Receipt for Merchandise

7. Date of Delivery

5. Signature (Addressee)
Yvonne Washington

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

6. Signature (Agent)

Thank you for using Return Receipt Service.

Z 392 979 010



Receipt for Certified Mail

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

PS Form 3800, March 1995

Sent to	<i>Stephen G. Susick</i>
Street and No.	<i>US Agri Chem</i>
P.O., State and Zip Code	<i>H. Meade, FL</i>
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	<i>6-29-95</i>
	<i>AP-53-260190</i>
	<i>PSD-F1-222</i>



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:
US Agri-Chemicals Corp.
3225 State Road 630 West
Fort Meade, FL 33841-9799

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: June 30, 1997
County: Polk
Latitude/Longitude: 27°44'25"N
81°51'05"W
Project: 60 TPH Prilled MAP
Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, 212, 272, 275, 276, and 297, Florida Administrative Code (F.A.C.). The above named permittee is hereby authorized to perform the work or operate the emission unit 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 construction of a 60 TPH Prilled MAP Plant with state-of-the-art air pollution control equipment to be approved by the Department prior to construction and emission limits set after construction and testing. The facility is located at 3225 State Road 630 West, Fort Meade, Polk County, Florida. The UTM coordinates are Zone 17: 416 km East and 3,069 km North.

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

Attachments are listed below:

1. DEP's letter dated November 23, 1994
2. USDOJ's letter dated December 15, 1994
2. DEP's letter dated February 17, 1995
3. K&A's letter dated March 2, 1995
4. K&A's letter dated March 20, 1995
5. K&A's letter dated March 29, 1995
6. K&A's letter dated March 31, 1995

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: June 30, 1997

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, F.S. 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), F.S., 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 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

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: June 30, 1997

GENERAL CONDITIONS:

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 arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S. 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 F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: June 30, 1997

GENERAL CONDITIONS:

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)
- () Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for 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.

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: June 30, 1997

GENERAL CONDITIONS:

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 construction and operation of the subject Prilled MAP production facility shall be in accordance with the capacities and specifications stated in the application.
2. Pursuant to Rule 62-212.200(56), F.A.C., the production rate of the Prilled MAP plant shall not exceed 60 tons MAP product per hour.
3. Pursuant to Rule 62-212.200(56), F.A.C., the Prilled MAP plant may operate up to 8760 hours per year.
4. Pursuant to Rule 62-212.410, F.A.C., PM/PM10 emissions from the Prilled MAP plant loadout baghouse shall not exceed 5% opacity.
5. Pursuant to Rule 62-212.410, F.A.C., emissions of fluorides and PM/PM10 from the prill tower shall meet the requirements for Best Available Control Technology. Limits for these pollutants shall be determined by the Department's Bureau of Air Regulation (BAR) in Tallahassee, Florida, within 45 days following receipt by BAR of the performance test results required in Specific Condition No. 6. As soon as the design of the air pollution control system is finalized, the permittee shall submit all efficiency calculations and drawings of the system to the BAR in Tallahassee for approval.
6. Pursuant to Rule 62-297.340(1)(a), F.A.C., and before this construction permit expires, performance testing for fluorides and PM/PM10 shall be conducted on the prill tower scrubber stack and for opacity from the product loadout baghouse with the emission unit operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than capacity (i.e., less than 90 percent of maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit.

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222

Expiration Date: June 30, 1997

7. 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 the performance test. Pursuant to Rule 17-297.570(1) and (2), written reports of the test results shall be submitted to that office and the BAR office in Tallahassee within 45 days of test completion.

8. Pursuant to Rules 62-296.800 and 62-297.401, F.A.C., the test procedures for fluorides shall be in accordance with EPA Reference Methods 1, 2, 3, and 13A or 13B, as published in 40 CFR 60, Appendix A. The test procedures for PM/PM10 shall be in accordance with EPA Reference Methods 1, 2, 3, 5 and 9 as published in 40 CFR 60, Appendix A.

9. Pursuant to Rule 62-296.320(2), F.A.C., Objectionable Odor Prohibited, no person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

10. Pursuant to Rule 62-210.650, F.A.C., Circumvention, no person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.

11. Pursuant to Rule 62-210.700, Excess Emissions, the Prilled MAP plant is subject to the following:

a. Rule 62-210.700(1): Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

b. Rule 62-210.700(4): Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.

c. Rule 62-210.700(5): Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.

d. Rule 62-210.700(6): In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

PERMITTEE:
US Agri-Chemicals Corp.

Permit Number: AC 53-260190
PSD-FL-222
Expiration Date: June 30, 1997

12. Pursuant to Rules 62-210.370(2)(a) and (b), F.A.C., Reports, the permittee shall submit an Annual Operating Report using DEP Form 62-210.900(4) to the Department's Southwest District office by March 1 of the following year for the previous year's operation.

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

14. Pursuant to Rules 62-4.055 and 62-4.220, F.A.C., an application for an operation permit must be submitted to the Southwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate 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.

Issued this _____ day
of _____, 1995

**STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION**

Virginia B. Wetherell, Secretary

Best Available Control Technology (BACT) Determination
U.S. Agri-Chemicals Corporation
Fort Meade, Polk County, Florida
PSD-FL-222
AC53-260190

The applicant proposes to construct a 60 tons per hour (TPH) prilled monoammonium phosphate (MAP) plant at its agricultural chemical facility in Fort Meade. The proposed project will result in a significant increase in emissions of particulate matter (PM-PM10) and gaseous fluorides (SiF₄ and HF). 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 review required by Rule 62-212.410, F.A.C.

Date of Receipt of Complete Application: April 4, 1995

BACT Determination Proposed by Applicant:

Emission Limits: Tower & Cooler - 0.0417 lb F/ton P₂O₅ input
- 0.40 lb PM-PM10/ton MAP
Product Loadout - 0.072 lb PM-PM10/ton MAP

Control Technology: - Medium-energy venturi scrubber using recycled pond water (for tower and cooler)
- Baghouse (for product loadout)
- Natural Gas (for process heater)

BACT Determination Procedure:

In accordance with F.A.C. Chapter 62-212, this BACT 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, Rule 62-212.410(1), F.A.C., states 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.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

February 17, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Steven J. Susick, P.E.
General Manager
US Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, Florida 33841-9799

RE: PSD-FL-222 (AC53-260190)/Prilled MAP Plant
PSD-FL-223 (AC53-260192)/Granular MAP/DAP Plant

Dear Mr. Susick:

This is a request for additional information concerning the construction applications listed above. As stated in the Department's November 23 letter, as a result of the shortened review time due to these applications being filed with the district office, additional questions may be required by the National Park Service. Accordingly, please respond to each of the issues addressed in the attached letter submitted by their Atlanta regional office.

If there are any questions about this additional requirement, please contact John Reynolds or Cleve Holladay at 904-488-1344 or write to me at the above address.

Sincerely,

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

AAL/JR/kt

cc: W. Thomas, SWD
L. Novak, Polk County
J. Harper, EPA
E. Porter, NPS

U.S. Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, FL 33841-9799
813 285 8121

RECEIVED

JAN 06 1995

US

Agri-Chemicals

A Sinochem Company

Bureau of
Air Regulation

January 4, 199~~4~~⁵

John Reynolds
Dept. Of Env. Protection
2600 Blair Stone Rd
Tallahassee, FL 32399-2400

Dear Mr. Reynolds:

RE: PSD-FL-222 (AC53-260190) Prill MAP
PSD-FL-223 (AC53-260192) Granular DAP/MAP

This is to inform you that, due to the comments by the U.S. Dept. of Interior's letter dated December 15, 1994, we are working on a reply which will satisfy their letter as well as your letter dated November 23, 1994.

Please contact me at (813)285-7123, ext. 279, if you have any questions.

Sincerely,



Ronald L. Brunk, Manager
Environmental Engineering

cc: S. Susick
J. Koogler

Z 751 860 031



Receipt for Certified Mail

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

S Form 3800, March 1993

Sent to <i>Steven J. Susick</i>	
Street and No. <i>US Agri Chem Corp.</i>	
P.O., State, and ZIP Code <i>H. Meade FL</i>	
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 <i>2-17-95</i>	
<i>PSD-F1-222-AC53-260190</i>	
<i>PSD-F1-223 AC53-260192</i>	



United States Department of the Interior

FISH AND WILDLIFE SERVICE
1875 Century Boulevard
Atlanta, Georgia 30345

IN REPLY REFER TO:

December 15, 1994

RECEIVED

DEC 21 1994

Bureau of
Air Regulation

Mr. Clair H. Fancy
Chief, Bureau of Air Regulation
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399

Dear Mr. Fancy:

We have reviewed the Prevention of Significant Deterioration (PSD) applications for the Monoammonium Phosphate plant and the Diammonium Phosphate plant proposed by U.S. Agrichemicals Corporation (USAC). The new plants would be located at USAC's Ft. Meade Chemical facility, approximately 130 km southeast of Chassahowitzka Wilderness Area (WA), a Class I air quality area, administered by the Fish and Wildlife Service. We understand that USAC plans to build only one of the new plants, but wants to start the permit process for both. Our comments are as follows:

PSD Applicability

The application provides net emission increase calculations to determine which pollutants are subject to PSD review. The calculations use allowable permitted emissions to offset the proposed emission increases. As you know, net emission increase calculations must be based on actual, not allowable emissions. It is not clear if, in this case, allowable emissions are equal to actual. If actual emissions are less, the applicant should reevaluate PSD applicability based on actual emissions, and perform or revise impact and control analyses accordingly.

Best Available Control Technology (BACT)

The applicant proposes to meet a fluoride emission rate of .06 pounds per ton of P_2O_5 input at their DAP plant. A recent BACT determination for an IMC Agrico Diammonium Phosphate plant requires a BACT limit of .0417 pounds per ton of P_2O_5 input. BACT should be set at the lower level unless the applicant provides information demonstrating that .0417 is not an appropriate level for this particular plant.

Air Quality Modeling Analysis

The applicant incorrectly concludes that because the proposed facilities are more than 100 km from a Class I area, analyses of impacts at the Class I area are not necessary. The determination of whether a Class I area impact analysis is required is made on a case-by-case basis. The Environmental Protection Agency has stated that "large sources located at distances greater than 100 kilometers need to be considered when such impacts reasonably could affect the outcome of the Class I analysis." The need for a Class I impact analysis cannot be decided until the amounts of the proposed emissions increases are clarified.

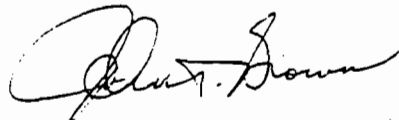
No increment analysis or visibility impact analysis was performed for the Class I area. If the proposed project is PSD significant for particulate matter, these analyses must be done. In addition, fluoride concentrations at the Class I area should be modeled.

Air Quality Related Values (AQRV) Analysis

As noted above, USAC did not analyze impacts, including AQRV impacts, on the Class I area. We are particularly concerned with cumulative fluoride impacts to vegetation and wildlife at Chassahowitzka WA. We would like the applicant to discuss these impacts in an AQRV analysis.

Thank you for giving us the opportunity to comment on this permit application. We appreciate your cooperation in notifying us of proposed projects with the potential to impact the air quality and related resources of our Class I air quality areas. If you should require further information, please contact Ms. Ellen Porter of our Air Quality Branch in Denver at 303/969-2071.

Sincerely yours,



John T. Brown
Acting Regional Director

cc: J. Reynolds
R. Zhang
J. Kissel, SW Dist
L. Novak, Public Co.
J. Harper, EPA
V. Sa, US Dept. of Energy

APPLICATION TRACKING SYSTEM

11/03/94

APPL NO:260192

APPL RECVD:10/28/94 TYPE CODE:AC SUBCODE:1A LAST UPDATE:11/03/94
 DER OFFICE RECVD:TPA DER OFFICE TRANSFER TO:___ APPLICATION COMPLETE:___/___/___
 DER PROCESSOR:AIR

APPL STATUS:AC DATE:10/28/94 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)
 RELIEF:___ (SSAC/EXEMPTIONS/VARIANCE)

(Y/N) N MANUAL TRACKING DISTRICT:40 COUNTY:53
 (Y/N) N OGC HEARING REQUESTED LAT/LONG:27.44.25/81.51.05
 (Y/N) N PUBLIC NOTICE REQD? BASIN-SEGMENT:___,___
 (Y/N) N GOV BODY LOCAL APPROVAL REQD? COE #:_____
 (Y/N) Y LETTER OF INTENT REQD? (I/ISSUE D/DENY) ALT#:_____

PROJECT SOURCE NAME:DAP PLANT

STREET:3225 SR 630 WEST CITY:FT. MEADE
 STATE:FL ZIP:_____ PHONE:_____

APPLICATION NAME:US AGRI-CHEMICALS

STREET:3225 SR 630 WEST CITY:FT. MEADE
 STATE:FL ZIP:33841 PHONE:813-285-8121

AGENT NAME:SUSICK, STEVEN J.

STREET:SAME CITY:SAME
 STATE:FL ZIP:33841 PHONE:813-285-8121

FEE #1 DATE PAID:11/02/94 AMOUNT PAID:07500 RECEIPT NUMBER:00238092

B DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE - - - ___/___/___
 C DATE DER SENT DNR APPLICATION/SENT DNR INTENT - - - - - ___/___/___
 D DATE DER REQ. COMMENTS FROM GOV. BODY FOR LOCAL APP. - , ___/___/___
 E DATE #1 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - ___/___/___
 E DATE #2 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - ___/___/___
 E DATE #3 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - ___/___/___
 E DATE #4 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - ___/___/___
 E DATE #5 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - ___/___/___
 E DATE #6 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - - ___/___/___
 F DATE LAST 45 DAY LETTER WAS SENT - - - - - ___/___/___
 G DATE FIELD REPORT WAS REQ--REC - - - - - ___/___/___
 H DATE DNR REVIEW WAS COMPLETED - - - - - ___/___/___
 I DATE APPLICATION WAS COMPLETE - - - - - ___/___/___
 J DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS - - ___/___/___
 K DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT - - - - ___/___/___
 L DATE PUBLIC NOTICE WAS SENT TO APPLICANT - - - - - ___/___/___
 M DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED - - ___/___/___
 N WAIVER DATE BEGIN--END (DAY 90) - - - - - ___/___/___

COMMENTS:

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION) 3. _____
1. P Adams 4. _____
2. _____ 5. _____

PLEASE PREPARE REPLY FOR:

- SECRETARY'S SIGNATURE
- DIV/DIST DIR SIGNATURE
- MY SIGNATURE
- YOUR SIGNATURE
- DUE DATE _____

ACTION/DISPOSITION

- DISCUSS WITH ME
- COMMENTS/ADVISE
- REVIEW AND RETURN
- SET UP MEETING
- FOR YOUR INFORMATION
- HANDLE APPROPRIATELY
- INITIAL AND FORWARD
- SHARE WITH STAFF
- FOR YOUR FILES

COMMENTS:

*Tall's PSD app's.
We're putting in
PATS & processing
ch. here.
3 copies of each enclosed;
we kept the 4th copy*

FROM: J. Huse DATE: 11/2/94 PHONE: 5C542-6100

U.S. Agri-Chemicals Corporation
3225 State Road 630 West
Fort Meade, FL 33841-9799
813 285 8121

US
Agri-Chemicals

A Sinochem Company

RECEIVED
OCT 28 1994
Department of Environmental Protection
BY SOUTHWEST DISTRICT

October 28, 1994

Florida Department of Environmental Protection
3804 Coconut Palm
Tampa, FL 33619

RE: Permit Applications for Construction of a Di-ammonium and Mono-ammonium Phosphate Plant

Dear Sir,

Enclosed please find the applications and \$15,000 fees (2 @ \$7,500) for the construction of a 40 tph MAP plant, and for a 150 tph DAP plant. While we only plan to construct one of the above facilities, we wish to begin the permitting process for both at this time. As we have not yet determined which facility to construct, we request that you process these permits separately, and we will withdraw one at a future date.

We appreciate your help in this matter. If you have any questions please feel free to call me at (813)285-8121 x279, or Viet Ta at extension 115.

Sincerely,



Ronald L. Brunk
Manager, Environmental Engineering

APPLICATION TRACKING SYSTEM

11/03/94

APPL NO:260190

APPL RECVD:10/28/94 TYPE CODE:AC SUBCODE:1A LAST UPDATE:11/03/94
DER OFFICE RECVD:TPA DER OFFICE TRANSFER TO:___ APPLICATION COMPLETE:___/___/___
DER PROCESSOR:AIR

APPL STATUS:AC DATE:10/28/94 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)
RELIEF:___ (SSAC/EXEMPTIONS/VARIANCE)

(Y/N) N MANUAL TRACKING DISTRICT:40 COUNTY:53
(Y/N) N OGC HEARING REQUESTED LAT/LONG:27.44.25/81.51.05
(Y/N) N PUBLIC NOTICE REQD? BASIN-SEGMENT:___
(Y/N) N GOV BODY LOCAL APPROVAL REQD? COE #:_____
(Y/N) Y LETTER OF INTENT REQD? (I/ISSUE D/DENY) ALT#:_____

PROJECT SOURCE NAME:MAP PLANT

STREET:3225 SR 630 WEST CITY:FT. MEADE
STATE:FL ZIP:_____ PHONE:_____

APPLICATION NAME:US AGRI-CHEMICALS

STREET:3225 SR 630 WEST CITY:FT. MEADE
STATE:FL ZIP:33841 PHONE:813-285-8121

AGENT NAME:SUSICK, STEVEN J.

STREET:SAME CITY:SAME
STATE:FL ZIP:33841 PHONE:813-285-8121

FEE #1 DATE PAID:11/02/94 AMOUNT PAID:07500 RECEIPT NUMBER:00238092

B DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE - - - ___/___/___
C DATE DER SENT DNR APPLICATION/SENT DNR INTENT - - - ___/___/___
D DATE DER REQ. COMMENTS FROM GOV. BODY FOR LOCAL APP. - - - ___/___/___
E DATE #1 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - ___/___/___
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E DATE #4 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - ___/___/___
E DATE #5 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - ___/___/___
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I DATE APPLICATION WAS COMPLETE - - - ___/___/___
J DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS - - - ___/___/___
K DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT - - - ___/___/___
L DATE PUBLIC NOTICE WAS SENT TO APPLICANT - - - ___/___/___
M DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED - - - ___/___/___
N WAIVER DATE BEGIN--END (DAY 90) - - - ___/___/___

COMMENTS:

PSD-FL-222

PERMIT APPLICATION FEE/ASSIGNMENT SHEET

APPLICATION TYPE: AC1A FILE PROCESSING NO: AC53-260190

COMPANY: US AGRIC-CHEM COUNTY: 53 POLK
(Code/name)

DESCRIPTION/COMMENTS: MAP PLANT

(amend/extend/transfer/etc.) and permit no., when applicable

DATE REC'D (Day 1): 10/28/94

CHECK ATTACHED: Y N Not Required ()

FEE SUBMITTED: correct () incorrect - Should Be \$ 7500.
(ONE \$15,000. CK. RCVD. FOR 2 APP'S) Submitted \$ 7500.
Needed/Refund \$ _____

FEE CHECKED BY: [Signature] DATE: 11/2

APPLICATION ASSIGNED TO: _____ DATE: _____

PERMIT APPLICATION PROCESSING STATUS

	<u>Completed</u>	<u>Initials</u>
Date PATS Updated With Processor Name:	_____	_____
Permit Engineer Submit Finished	_____	_____
Permit Package & Recommendations to District Air Engineer:	_____	_____
Permit Package to District Air Administrator:	_____	_____
Permit Package to Director of District Management:	_____	_____
Permit Package Mailed Out:	_____	_____

DATA FOLLOW UP

Issue Date Updated on PATS: _____
Updated on DEC: _____

RECEIVED

OCT 28 1994
Department of Environmental Protection
BY _____
SOUTHWEST DISTRICT

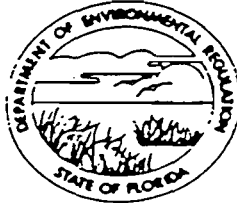
Permit Application for the Construction of a
Mono-Ammonium Phosphate Plant

US

Agri-Chemicals Corporation
A Sinochem Company

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301



RECEIVED
OCT 28 1994
BY: [Signature] DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT

BOB GRAHAM
GOVERNOR
J. TSCHINKEL
SECRETARY

AC 53-260190

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: MAP Plant New¹ Existing¹
APPLICATION TYPE: Construction Operation Modification
COMPANY NAME: U.S. Agri-Chemicals Corporation COUNTY: Polk

Identify the specific emission point source(s) addressed in this application (i.e. Line
Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) MAP Plant with Scrubbers

SOURCE LOCATION: Street 3225 S. R. 630 West City Ft. Meade

UTM: East 17-416 North 3069

Latitude 27° 44' 25" N Longitude 81° 51' 05" W

APPLICANT NAME AND TITLE: Steven J. Susick, P.E., General Manager Engineering & Tech. Services

APPLICANT ADDRESS: 3225 S. R. 630 West, Ft. Meade, Florida 33841-9799

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of U.S. Agri-Chemicals Corp.

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

*Attach letter of authorization

Signed: [Signature]
Steven J. Susick, P.E. General Manager
Name and Title (Please Type)

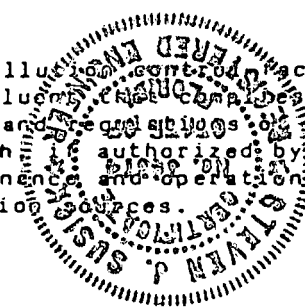
Date: 10/28/94 Telephone No. (813) 285-8121, ext. 34

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

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

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



Signed Steven J. Susick
Steven J. Susick, P.E.
Name (Please Type)

U.S. Agri-Chemicals Corporation
Company Name (Please Type)
3225 S. R. 630 West, Ft. Meade, Florida 33841
Mailing Address (Please Type)

Florida Registration No. 0034374 Date: 10/28/94 Telephone No. (813) 285-8121, ext. 344

SECTION II: GENERAL PROJECT INFORMATION

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

Construction of a new 40 TPH MAP Plant at Ft. Meade, Chemical Facility. Particulate and fluorides are controlled by a Venturi Scrubber. Particulate matter from loadout are to be controlled by a baghouse. Emissions will comply with DEP and EPA air pollution regulations.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction July 1995 Completion of Construction September 1996

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

Estimated to be approximately one million dollars. Actual cost will be submitted with operating permit application.

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

Not applicable because this is a new plant.

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

Actual operation will not exceed 8400 hours a year.

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? No
- a. If yes, has "offset" been applied? N/A
- b. If yes, has "Lowest Achievable Emission Rate" been applied? N/A
- c. If yes, list non-attainment pollutants. _____ N/A

2. Does best available control technology (BACT) apply to this source? Yes¹
If yes, see Section VI.

3. Does the State "Prevention of Significant Deterioration" (PSD) requirement apply to this source? If yes, see Sections VI and VII. Yes¹

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? Yes¹

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No

a. If yes, for what pollutants? N/A

b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

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

¹ See Attached Documentation

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Anhydrous Ammonia	N/A	N/A	10,000	
Phosphoric Acid	Fluorides	0.7 - 1.2	40,800	

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

1. Total Process Input Rate (lbs/hr): 50,000

2. Product Weight (lbs/hr): 80,000

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

1. Map Stack - Refer to Table III.C.2 For Loadout Stack

Name of Contaminant	Emission ²		Allowed Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulate ^A	3.12	131	31.2	31.2	Plant Operated		
Fluorides ^B	1.84	7.73	00.046		Only With Control		
Visible Emission			20% Capacity	N/A			

¹See Section V, item 2.

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

³Calculated from operating rate and applicable standard.

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

A. Process weight Table 17-296.310, FAC . Unit = lbs year hour

B. BACT unit = lbs per ton of MAP product.

SECTION III.C Continued

NAME OF CONTAMINANT	EMISSION		ALLOWED EMISSION RATE PER RULE	ALLOWABL EMISSION LBS./HR	POTENTIAL EMISSION		RELATE TO FLOW DIAGRAM
	MAXIMUM LBS./HR	ACTUAL T/YR			LBS./YR	T/YR	
PARTICULATE C	43.1	24.1	17-2 43.1	43.1	PLANT OPERATED		
VISIBLE EMISSIONS	N/A		20% OPACITY	N/A	ONLY WITH CONTROL		

C: PROCESS WEIGHT TABLE 17 - 296.310, FAC . UNIT = LBS. PER HOUR

TABLE III. C. 2. LOADOUT STACK

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Venturi Scrubber	PM	99+	10-1000	Est.
	FL	99+		Est.

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

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

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

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

Annual Average _____ Maximum _____

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

Scrubber liquid will come from a dedicated scrubber pond. Pond water will be recycled.

MAP Stack. See #.2 for Loadout Stack.

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

Stack Height: 100 ft. Stack Diameter: 3 ft.
 Gas Flow Rate: 25000 ACFM DSCFM Gas Exit Temperature: 120 °F.
 Water Vapor Content: 8 % Velocity: 58 FPS

SECTION IV: INCINERATOR INFORMATION

N/A

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

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

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

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

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

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

H.2 LOADOUT STACK GEOMETRY & CHARACTERISTICS

HEIGHT: 100 FT.

DIAMETER: 3 FT.

FLOW RATE: 30,000 ACFM / 28600 DSCFM

TEMPERATURE: 80° F

WATER VAPOR: AMBIENT

VELOCITY: 71 FPS

Brief description of operating characteristics of control devices: _____

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

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

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

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

Yes No

Contaminant	Rate or Concentration
Fluorides	0.06 lbs/TP ₂ O ₅ Input

FDEP

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

Yes No

Contaminant	Rate or Concentration
Cargill (Permit AC29-194504) F	0.037 lbs per ton of MAP
Cargill (Permit AC29-194508) F	0.018 lbs per ton of MAP

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

Contaminant	Rate or Concentration
Fluorides	0.046 lbs per ton of MAP

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

1. Control Device/System: Wet Scrubbers 2. Operating Principles: Absorbtion
3. Efficiency: + 99+ 4. Capital Costs: One million dollars

Explain method of determining

- 5. Useful Life: 40 years
- 7. Energy: Electricity
- 9. Emissions: See Section III. C

- 6. Operating Costs: 100,000 dollars
- 8. Maintenance Cost: 50,000 dollars

Contaminant	Rate or Concentration

10. Stack Parameters

- a. Height: 100 ft.
- b. Diameter: 3 ft.
- c. Flow Rate: 25,000 ACFM
- d. Temperature: 120 °F.
- e. Velocity: 58 FPS

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

1.

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

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

¹Explain method of determining efficiency.

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device: Scrubber

2. Efficiency:¹ 99+%

3. Capital Cost: \$1 million

4. Useful Life: 40 years

5. Operating Cost: \$100,000

6. Energy:² Data currently

7. Maintenance Cost: \$50,000

8. Manufacturer: Not Available

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

¹Explain method of determining efficiency.

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant	Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant	Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ Wind spd/dir

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent? Yes No
- b. Was instrumentation calibrated in accordance with Department procedures?
 Yes No Unknown

B. Meteorological Data Used for Air Quality Modeling

1. 1 Year(s) of data from 1 / 1 / 86 to 12 / 31 / 86
month day year month day year
2. Surface data obtained from (location) Tampa
3. Upper air (mixing height) data obtained from (location) Tampa
4. Stability wind rose (STAR) data obtained from (location) Tampa

C. Computer Models Used

1. ISCST2 (93109) Modified? NO If yes, attach description.
2. _____ Modified? If yes, attach description.
3. _____ Modified? If yes, attach description.
4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
<u>TPP F</u>	<u>0.23</u>	<u>grams/sec</u>
<u>SO²</u>	_____	<u>grams/sec</u>

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review. See attached document.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources. None expected.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

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- 2.5 Lime Silo
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3.0 RULE REVIEW

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- 2-1 Facility Air Permits
- 2-2 Summary of Facility Emissions
- 3-1 Significant Emission Levels
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- 1.3.1 MAP Process Flow Diagram
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- 2.1.1 Sulfuric Acid Plant Flow Diagram
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APPENDIX A: EMISSIONS CALCULATIONS

APPENDIX B: COMPUTER AIR MODELING

Exhibit A: Model for TSP impact on Hillsborough Maintenance Area.

Exhibit B: Model for TSP impact on the immediate vicinity.

Exhibit C: Model for FL impact on the immediate vicinity due to MAP plant alone.

**Exhibit D: Model for FL impact on the immediate vicinity due to MAP
and phosphoric acid plants.**

Exhibit E: Model for ammonia impact on the immediate vicinity.

1.0 SYNOPSIS OF APPLICATION

1.1 APPLICANT

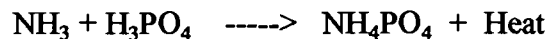
Steven J. Susick, P.E.
General Manager of Engineering and Technical Services
U.S. Agri-Chemicals Corporation
3225 State Road 630 West
Ft. Meade, FL 33841-9799

1.2 FACILITY LOCATION

U.S. Agri-Chemicals (USAC) operates a chemical plant on the property located 2.3 miles west of Ft. Meade, Polk County, Florida. The UTM Coordinates are Zone 17, 416 km East and 3069 km North. Refer to Figure 1.2.1 for the Site Location Map. Refer to Figure 1.2.2 for the Area Location Map. Refer to Figure 1.2.3 for the Plot Plan.

1.3 PROPOSED PROJECT DESCRIPTION

USAC proposes to construct a new 40 tons per hour monoammonium phosphate (MAP) plant at its Ft Meade Chemical facility. The MAP plant design is based on the Swift Prill-tower process. The principle reaction is:



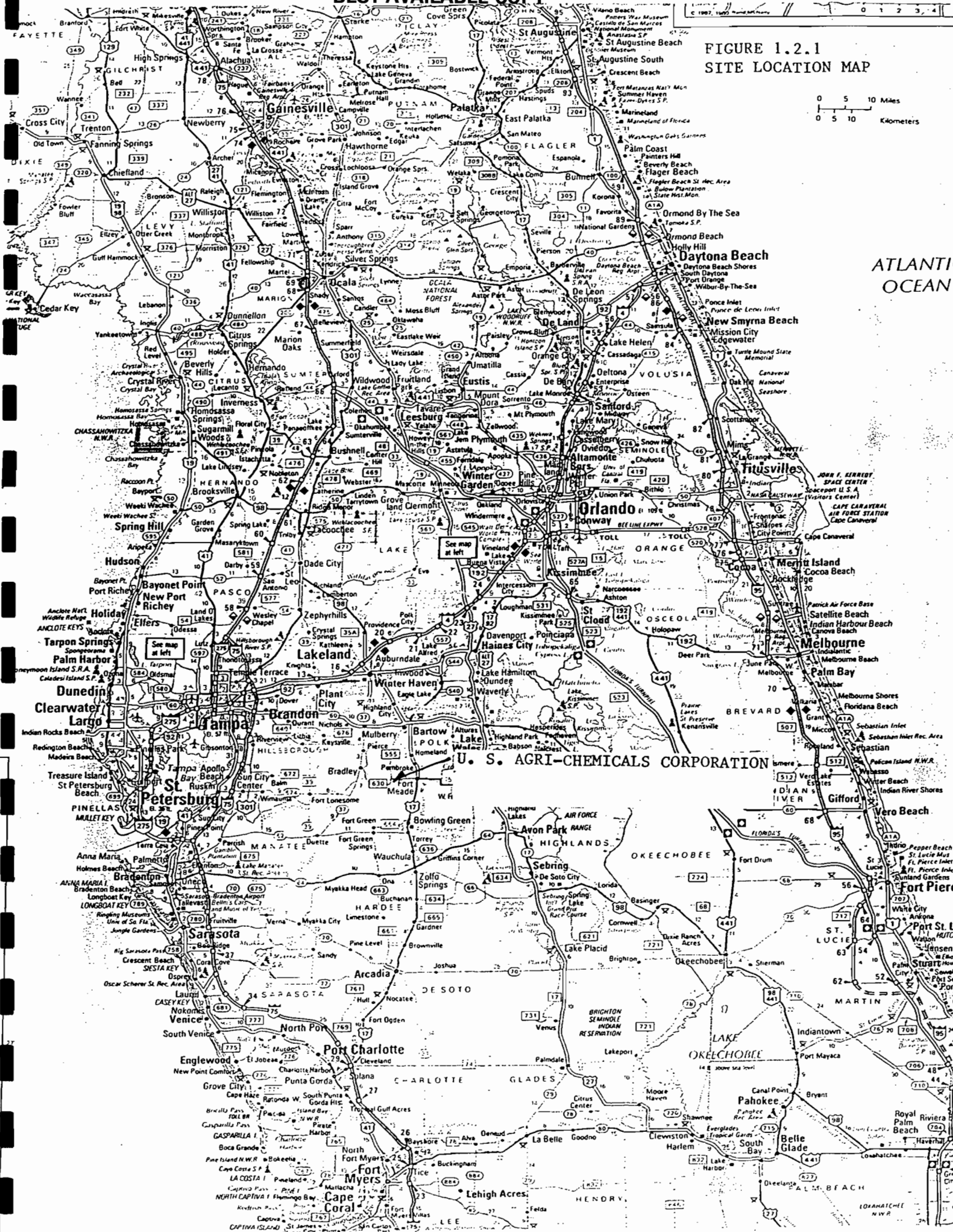
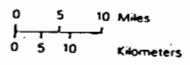
Refer to Figure 2.5 for the Proposed MAP Process Flow Diagram. In the Swift Prill-tower process, water is mixed with the 54% phosphoric acid to reduce it to approximately 50% P₂O₅. The 50% acid is pumped to the spray nozzle in the pipe reactor at the top of the prill tower. Anhydrous ammonia is vaporized and sparged to the pipe reactor. The above reaction produces MAP particles which fall to the bottom of the prill tower. MAP products collected from the prill tower are conveyed to a cooler where ambient air is used to reduce the temperature. The MAP product from the cooler is conveyed to storage area prior to loading into trucks or railcars.

The pollutants from the prill tower and the cooler consist of fluorides, particulate matter, and unreacted ammonia. USAC proposes to control emissions of these pollutants by a scrubbing system. The gas that enters the throat of the venturi breaks the water into fine liquid droplets. The droplets trap the particulate matter and also provide high water surface area for ammonia and fluoride absorption.

1.3.1 PHOSPHORIC ACID STORAGE AND HANDLING SYSTEM

The proposed MAP plant will utilize the existing phosphoric acid transfer and storage system, and the product storage building. Phosphoric acid produced on site will be transferred to two

FIGURE 1.2.1
SITE LOCATION MAP



ATLANTIC OCEAN

U. S. AGRI-CHEMICALS CORPORATION

BEST AVAILABLE COPY
FMCP Plot Plan
Proposed Facility Location

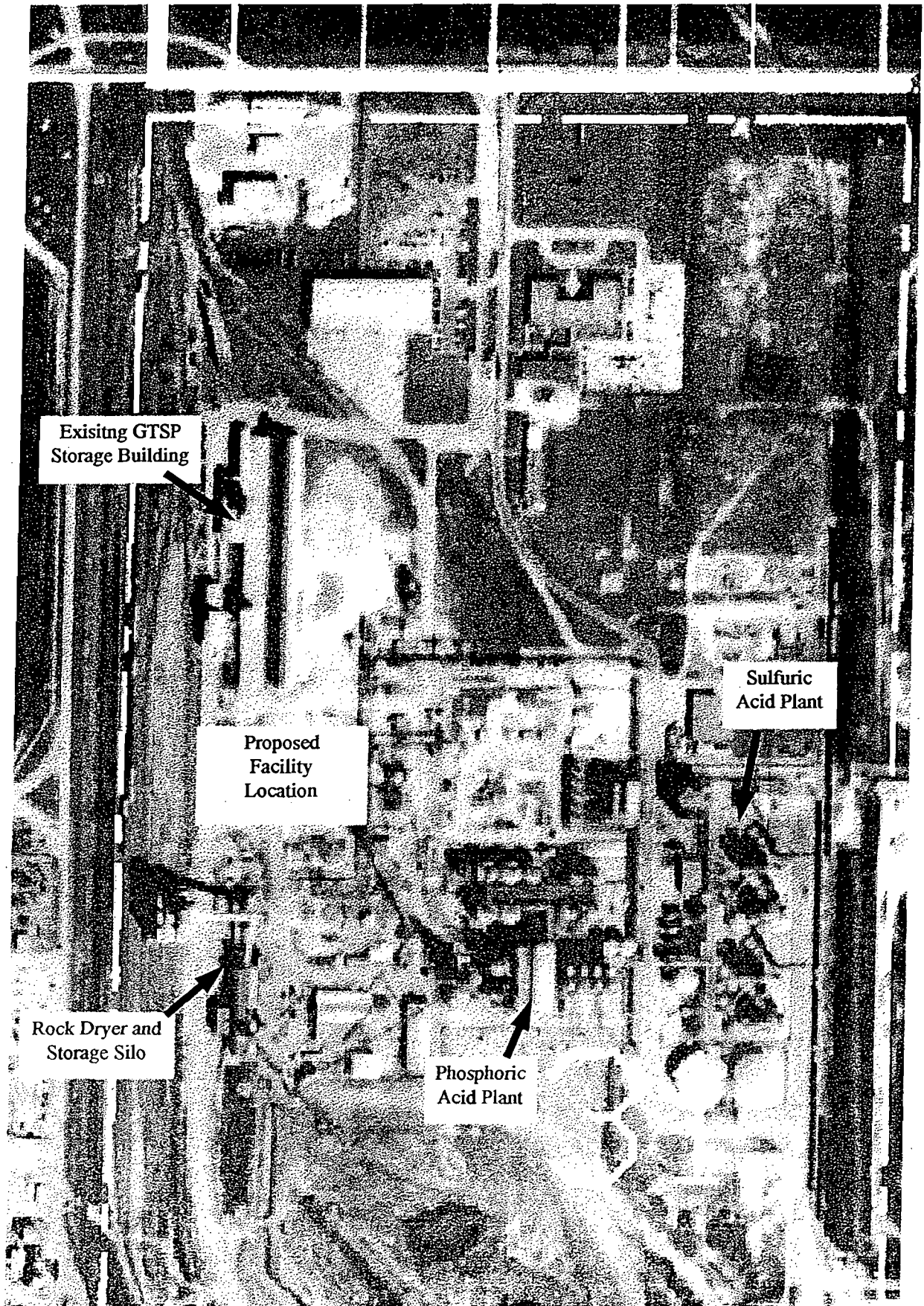
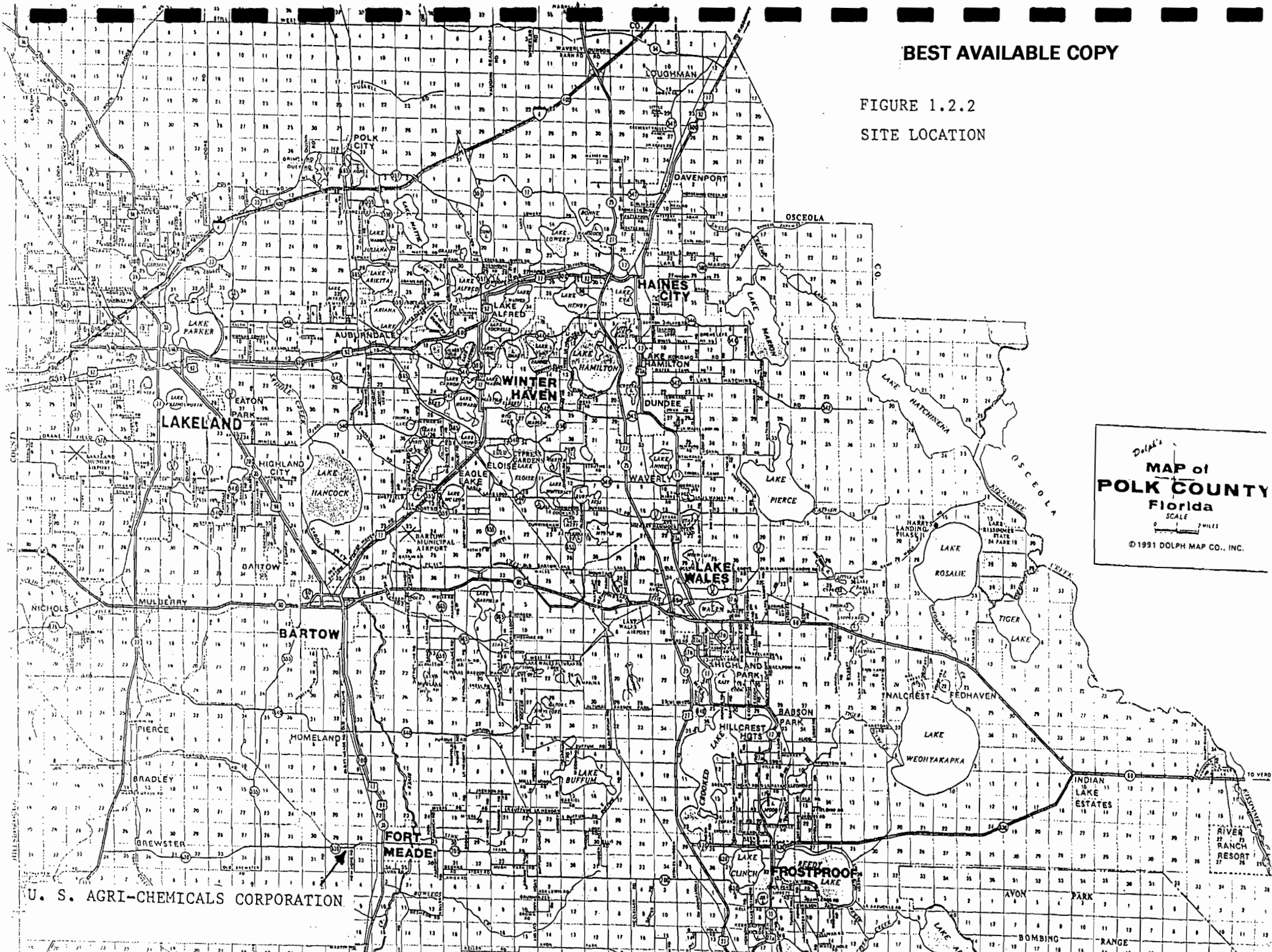


Figure 1.2.3

BEST AVAILABLE COPY

FIGURE 1.2.2
SITE LOCATION

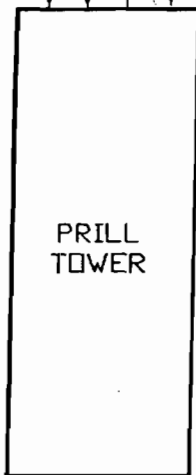


Dolph's
**MAP of
POLK COUNTY
Florida**
SCALE
0 1 2 MILES
© 1991 DOLPH MAP CO., INC.

U. S. AGRI-CHEMICALS CORPORATION

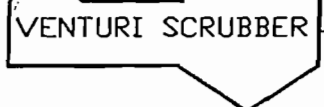
54% PHOSPHORIC ACID

AMMONIA



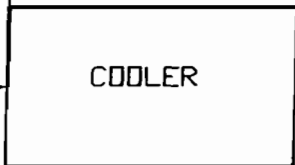
EMISSIONS

SCRUBBER SLURRY



ATMOSPHERE

EMISSIONS



PRODUCT STORAGE

FIG. 1.3.1 MAP FLOW DIAGRAM

MAP Product Loadout

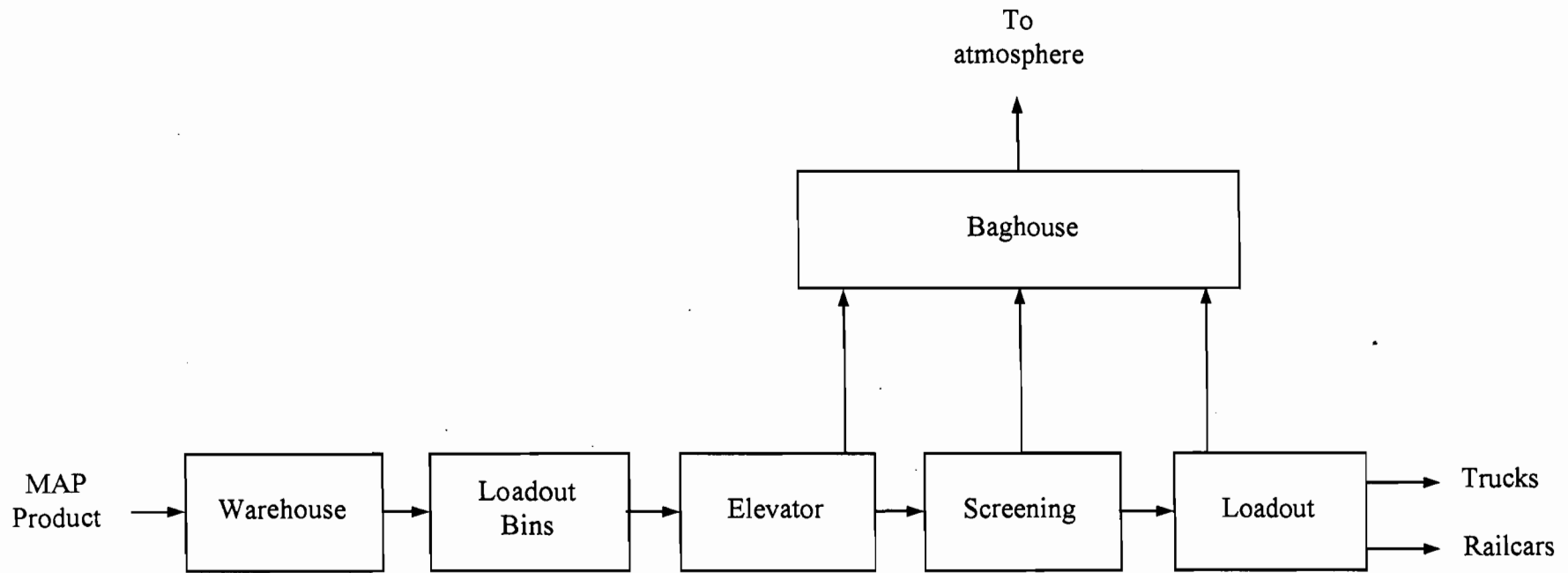


Figure 1.3.3

existing tanks each with a capacity of 248,000 gallons. The tanks will be used to adjust the P₂O₅ concentration prior to feeding the acid to the MAP plant.

The acid tanks are placed inside the containment area. The tanks are inspected and maintained in accordance with a written "Mineral Acid Tank Containment and Integrity Plan".

1.3.2 AMMONIA STORAGE AND HANDLING SYSTEM

Anhydrous ammonia will be received by railcars and trucks. Ammonia will be stored in two bullets (horizontal tanks) each holding approximately 200 tons of ammonia. Refer to Figure 1.3.2 for the Ammonia Flow Diagram.

The railcar unloading pipeline and each bullet will be equipped with a pressure relief valve. An ammonia detection system will be installed in the storage and railcar unloading area. This detection system will provide signals to the water deluge system. When activated, the water deluge system sprays water over the storage and railcar unloading area to absorb ammonia vapors.

Whether by railcar or truck, ammonia transfers are conducted by an onsite operator. The presence of an operator allows rapid assessment and response to any release as well as immediate emergency notification.

Water for the MAP scrubbers will come from a new dedicated scrubber pond.

2.0 EXISTING FACILITY DESCRIPTION

The existing facility consists of two sulfuric acid plants, two phosphoric acid plants, a rock dryer, and the supporting equipment. The supporting equipment include an auxiliary boiler, a lime silo, phosphoric acid tank farm, rock screening and storage, and the sulfur storage. Refer to Figure 2.0.1 for the Existing Facility Flow Diagram. The following table lists the plants and equipment along with the current permits and their capacity.

Plant	Permit#	Capacity
Sulfuric Acid #1	AO53-212737	2200 tons per day
Sulfuric Acid #2	AO53-212738	2200 tons per day
Phosphoric Acid A	AO53-212733	1000 tons per day
Phosphoric Acid B	AO53-212734	1000 tons per day
Phosphoric Acid Tank Farm	AO53-229855	N/A
Sulfur Storage and Handling	AO53-188251	N/A
Auxiliary Boiler	AO53-234085	110 MMBTU/HR
Lime Silo	AO53-238044	N/A
Rock Dryer, Screening and Storage	AO53-221968	200 tons per hour

Ammonia System

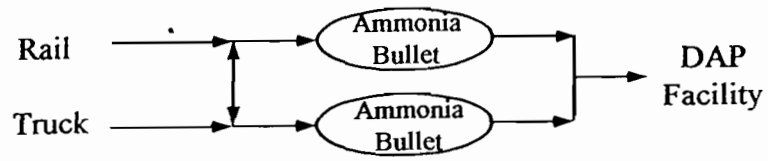


Figure 1.3.2

Existing FMCP Facility Flow Diagram

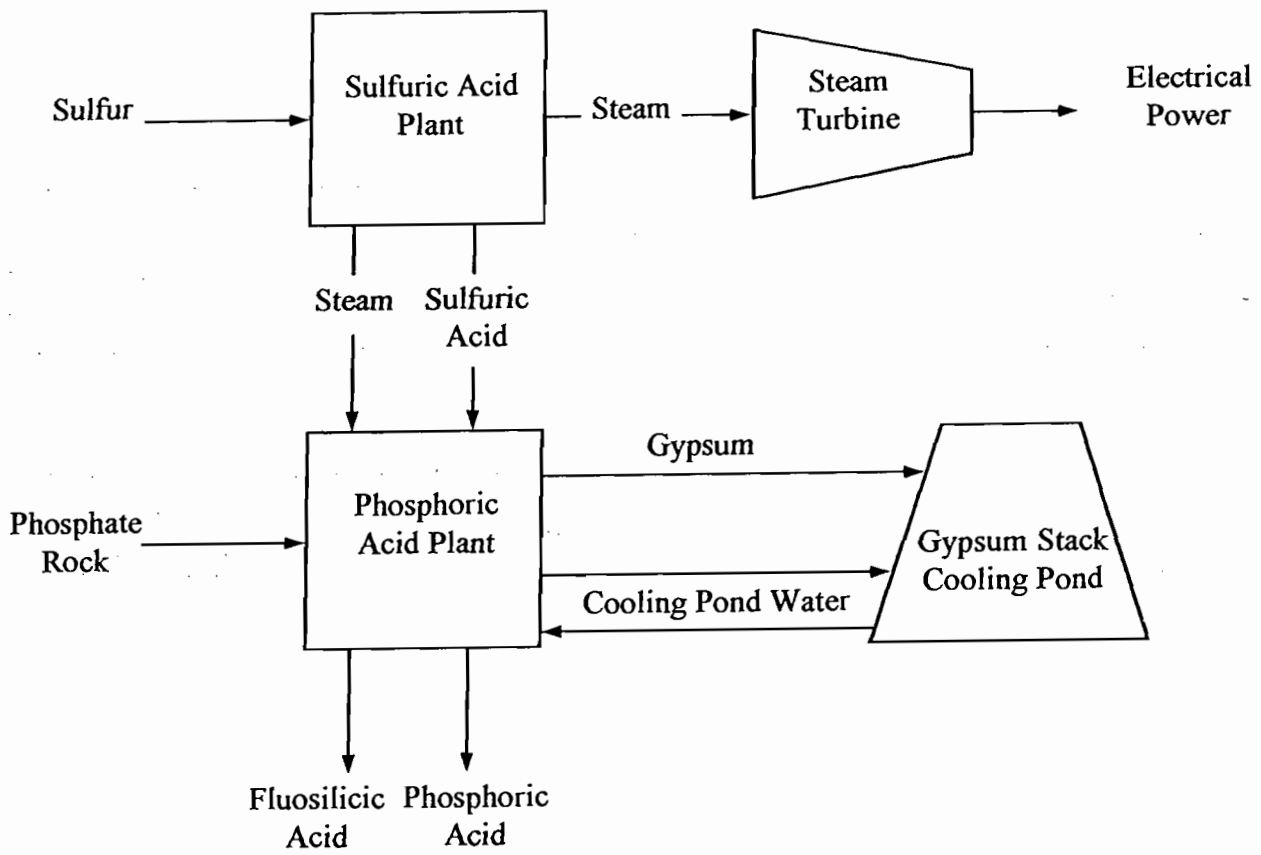


Figure 2.0.1

The permitted and actual emissions from the plants and equipment are summarized in the following table:

Source	Facility Emissions (tpy)									
	Permitted				Actual*				New	
	F	SO ₂	SAM	TSP	F	SO ₂	SAM	TSP	F	TSP
Sulfuric Acid #1		1608	60.4			576	12.7			
Sulfuric Acid #2		1608	60.4			927	12.6			
Phosphoric Acid "A" Train	3.5				0.6					
Phosphoric Acid "B" Train	3.5				0.6					
Phosphoric Acid Tank Farm	Tank farm emissions included in "A" and "B" Train permits									
Sulfur Storage & Handling	Permit does not set mass emission limits									
Auxiliary Boiler		1.3		0.5		.001		0.01		
Lime Silo				0.13				0.13		
Rock Dryer & Storage				231.3						0
MAP Plant									7.73	155
MAP Product Loadout										24.1
Total Facility Emissions	7	3217	121	232	1.2	1503	24.3	0.01	14.7	179

* Actual emissions based on average of last two years except lime silo (issued in '93) is one year

2.1 SULFURIC ACID PLANTS

These plants are designed by Monsanto following the double absorption process. Sulfur from storage tank is pumped into the furnace to be oxidized into sulfur dioxide. Sulfur dioxide is then passed through 3 vanadium pentoxides catalyst beds to be converted into sulfur trioxide which is absorbed in the interpass acid tower to increase acid strength. Water is added as needed to control acid strength to product concentration. Unconverted sulfur dioxide is passed through a fourth catalyst bed to produce additional sulfur trioxide which is absorbed in the final acid tower. Acid mist created in the towers is captured by the mist eliminators. Refer to Figure 2.1.1 for the Sulfuric Acid Plant Flow Diagram.

2.2 PHOSPHORIC ACID PLANTS

These plants are designed by Badger following the dihydrate process. Phosphate rock is ground in a ball mill to produce rock slurry. Rock slurry is digested in the reactor by sulfuric acid to produce 29% phosphoric acid and phosphogypsum. Phosphogypsum is removed by filtering and deposited on the gypsum stack. The 29% phosphoric acid is concentrated by evaporators to produce 40% and 52% acids. The acids are clarified before being pumped to storage tank. Vapors in the evaporators are collected in the condensers to produce fluocilic acid. Fluoride

emissions from the phosphoric acid plants and the tank farm are controlled by venturi scrubbers. Refer to Figure 2.2.1 for the Phosphoric Acid Plant Flow diagram.

2.3 ROCK DRYER, SCREENING AND STORAGE

The rock dryer is used to reduce moisture content in the phosphate rock or concentrate prior to shipping. The dryer has a maximum heat input rate of 111.6 MMBTU/HR. It can be operated on either natural gas or No. 6 fuel oil with a maximum sulfur content of 2.3%. The maximum permitted process rate is 200 tons per hour. Particulate matter emissions from the dryer are controlled by a venturi and an impingement plate scrubbers. Dried rock is conveyed to a screening system to remove oversize prior to being loaded into silo. Particulate matter emissions from the screening system and the silo are controlled by a cyclone and a venturi scrubber. Refer to Figure 2.3.1 for the Rock Dryer, Screening and Storage Flow Diagram.

2.4 SULFUR STORAGE AND HANDLING

The operation of the sulfuric acid plants requires a steady supply of molten sulfur. Sulfur is shipped to the plant by trucks and railcars. These discharge sulfur into a sulfur pit to be pumped into the sulfur tank. Sulfur is withdrawn from the tank as needed to operate the sulfuric acid plants. Air pollutants emitted from sulfur unloading and storage are uncontrolled and may include trace amounts of particulate sulfur, organic compounds, and sulfur dioxides. Refer to Figure 2.4.1 for the Sulfur Storage and Handling Flow Diagram.

2.5 LIME SILO

The operation and maintenance of the phosphoric acid and sulfuric acid plants includes the potential for acid spills and leaks. Lime is used to make a slurry which neutralizes these spills and leaks. Lime is shipped to the plant by trucks and pneumatically pumped into the silo for storage. Lime is withdrawn from the silo and discharge into a mix tank where water is added to produce lime slurry. Particulate matter emitted during silo loading is controlled by a baghouse. Refer to Figure 2.5.1 for the Lime Silo Flow Diagram.

2.6 AUXILIARY BOILER

The normal operation of the sulfuric acid plants provide adequate steam for the operation of the phosphoric acid plants. Therefore, the boiler is not operating for the majority of the time. Whenever the sulfuric acid plants are shutdown, the boiler can be operated to provide steam to the phosphoric acid plant. The boiler is designed to operate on either natural gas or #2 fuel oil. Natural gas is the primary fuel and #2 fuel oil is used only as a backup when natural gas is not available. Air pollutants emitted due to fuel combustion are uncontrolled.

3.0 RULE REVIEW

The preconstruction review for stationary sources are covered under Florida Administrative Code, Rule 62-212. This Rule specifies requirements for sources subject to: i) Prevention of

FMCP Sulfuric Acid Plant Gas Flow

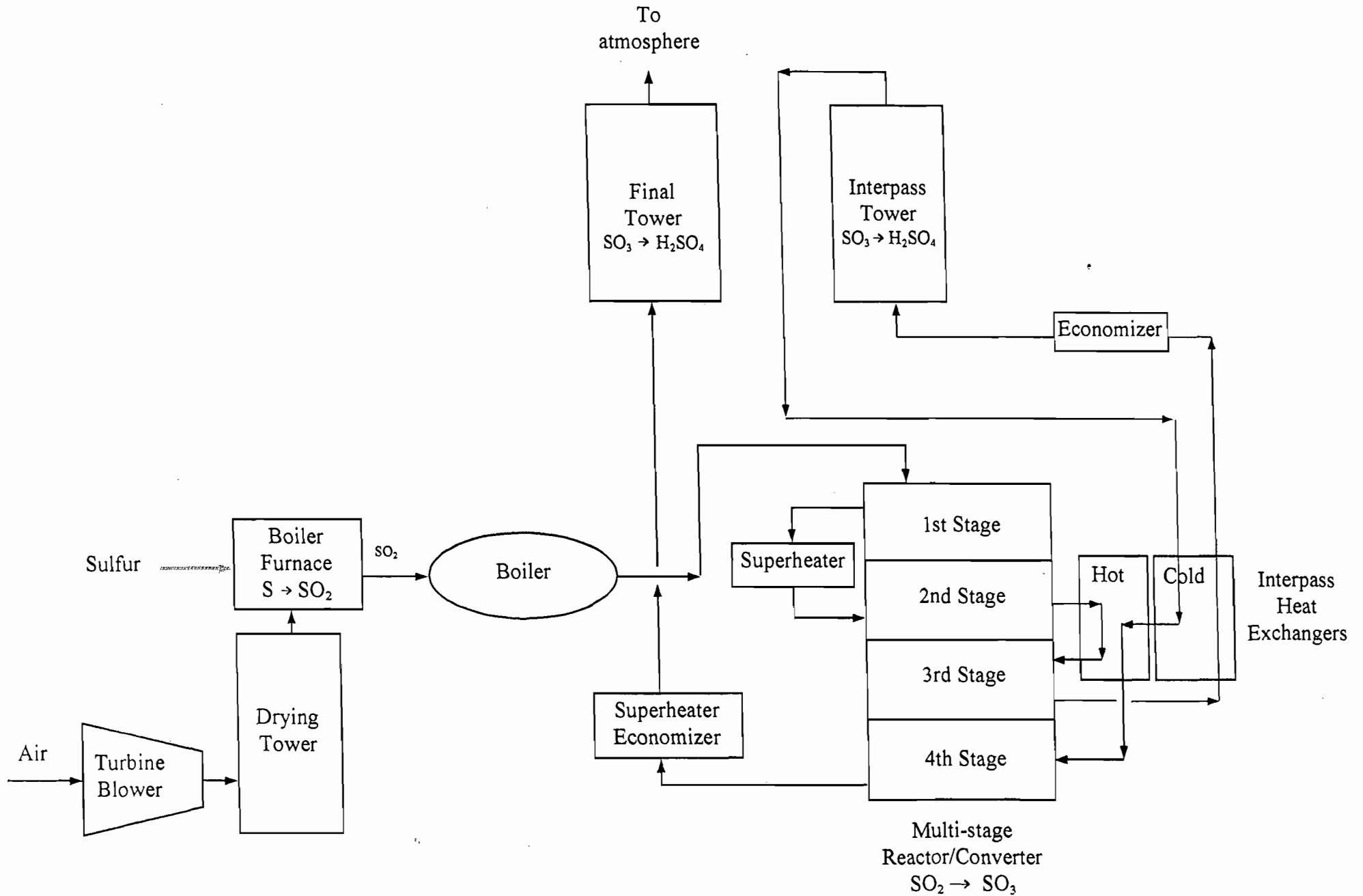


Figure 2.1.1

FMCP Wet Phosphoric Acid Process

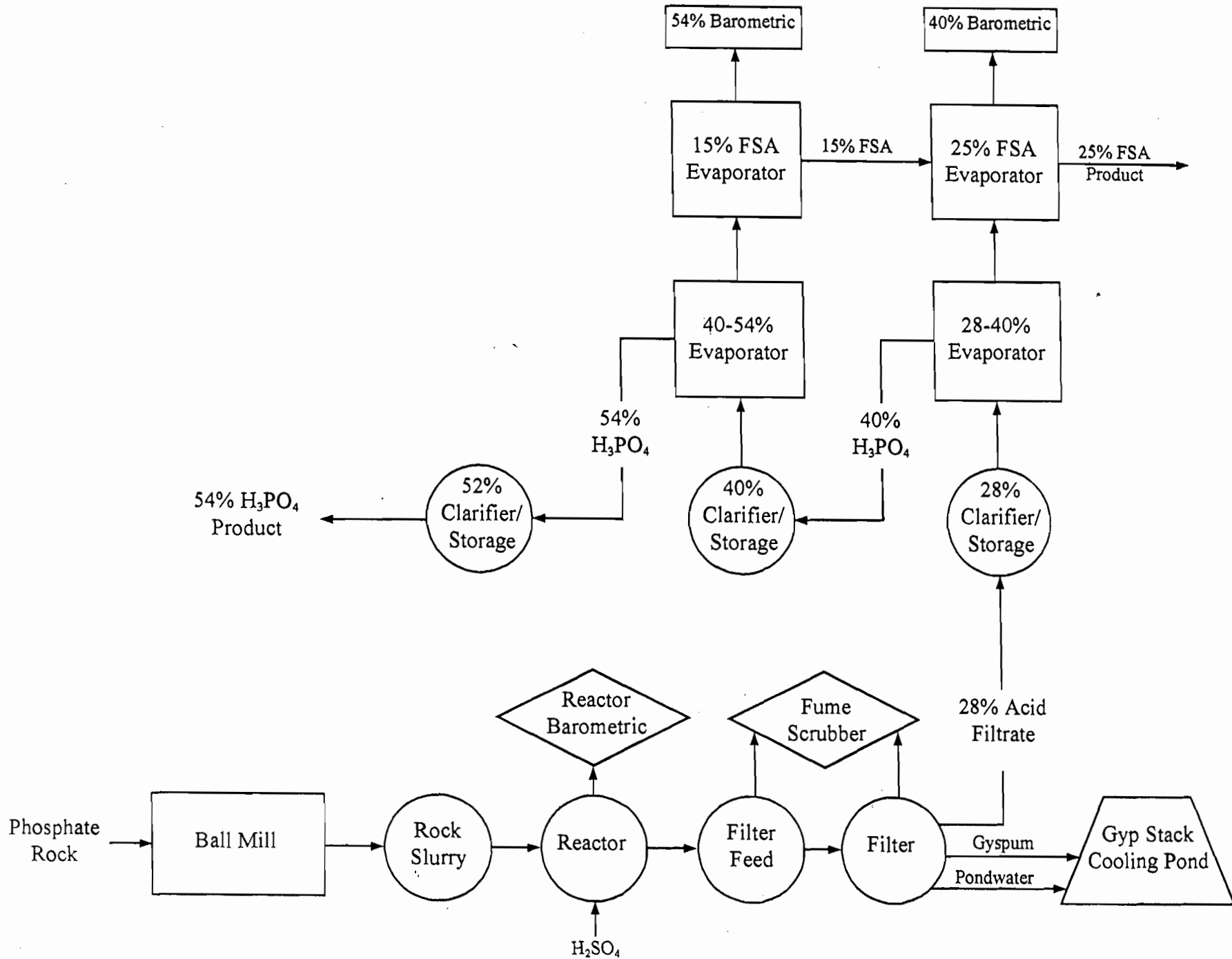


Figure 2.2.1

FMCP Phosphate Rock Drying, Screening, and Storage

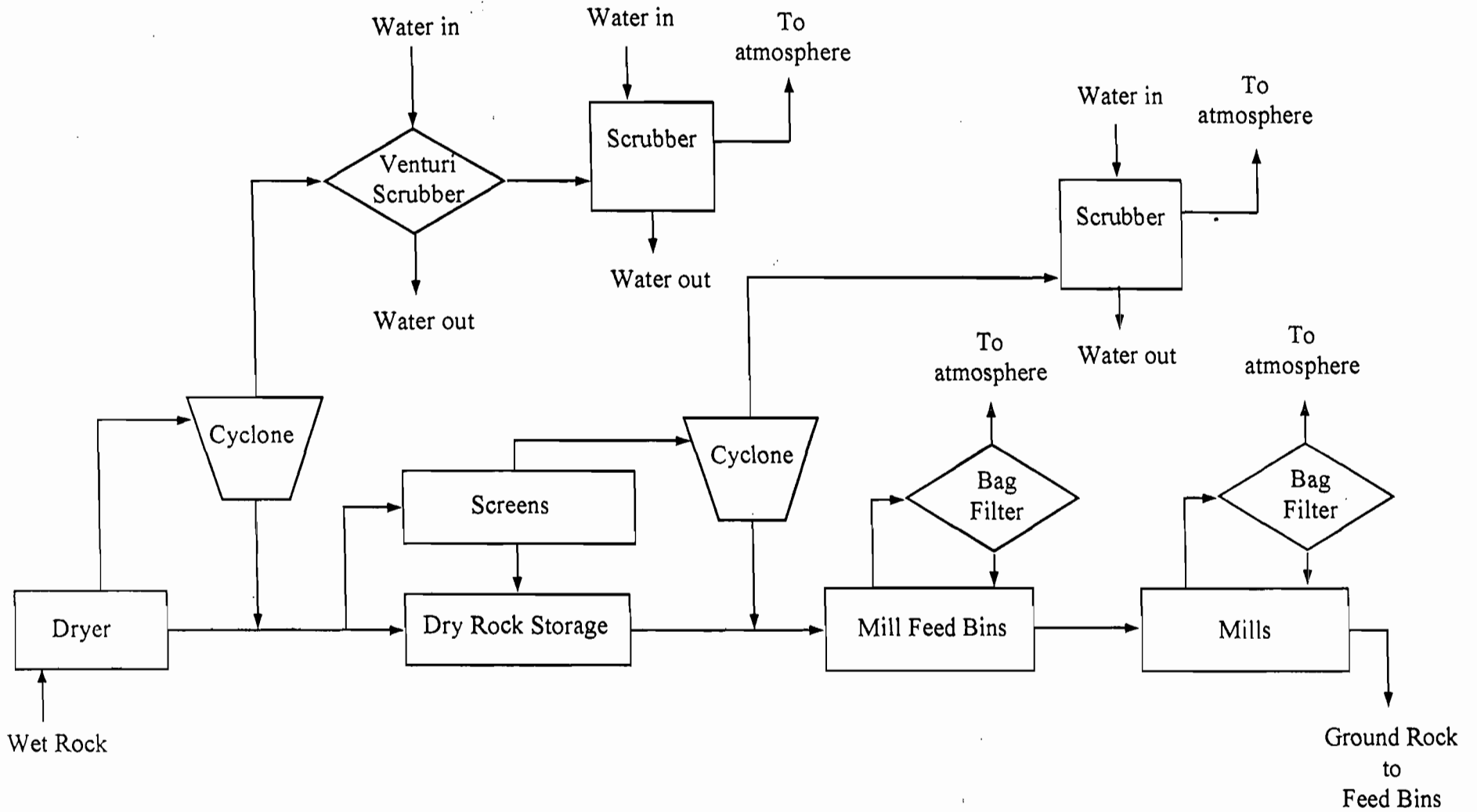


Figure 2.3.1

FMCP Molten Sulfur Storage and Handling

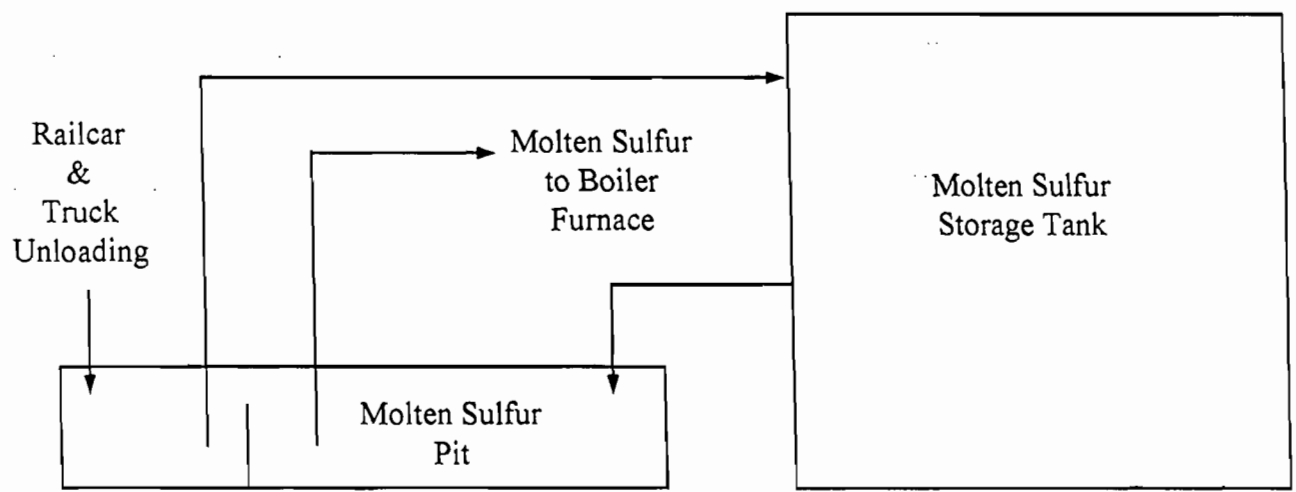


Figure 2.4.1

FMCP Neutralizing System Hydrated Lime Storage Silo

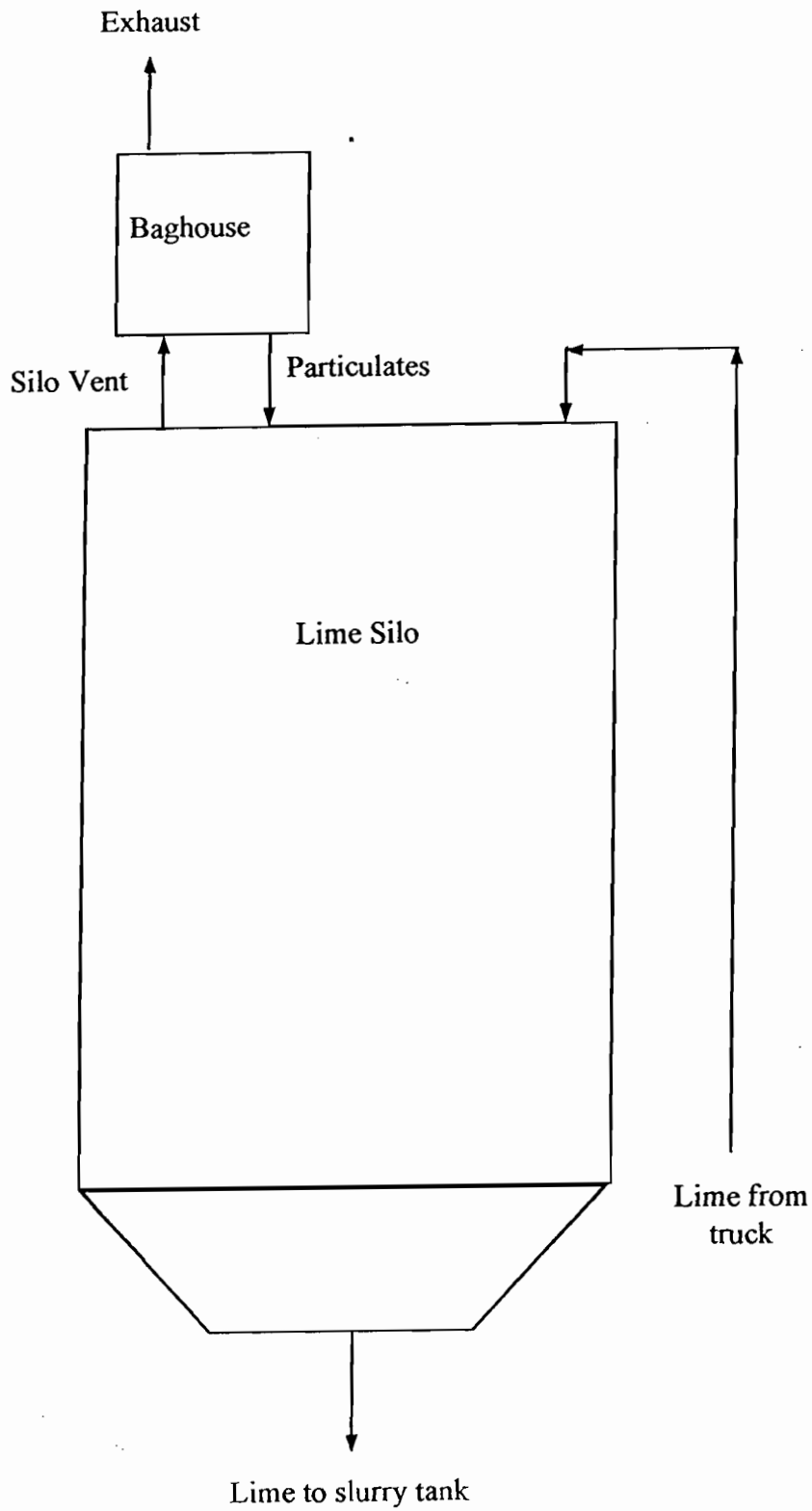


Figure 2.5.1

Significant Deterioration (PSD), ii) Non-attainment areas, and iii) not subject to PSD or non-attainment.

3.1 PSD RULE REVIEW

The PSD Rule is found in 62-212.400, FAC. It prohibits the construction or modification of any source that would cause or contribute to a violation of the ambient air quality standard. 40 CFR 51, Subpart I, Section 51.165 states that a major source or modification will be considered to cause or contribute to a violation of the ambient air quality standard when such source exceeds the following significant levels (see Table 3-1) at a locality that does not or would not meet the applicable ambient air quality standards (AAQS):

Pollutant	Annual	24-hrs	8-hrs	3-hrs	1-hr
SO ₂	1 µg/m ³	5 µg/m ³		25 µg/m ³	
PM ₁₀	1 µg/m ³	5 µg/m ³			
NO ₂	1 µg/m ³				
CO	1 µg/m ³		0.5 µg/m ³		2 µg/m ³

Air Quality Areas designations are found under Rule 62-275, FAC. Polk County has been designated as meeting AAQS for pollutants SO₂, CO, and NO₂, and as unclassifiable for pollutant PM₁₀. However, a particulate matter air quality maintenance area exists 50 km to the west of the proposed project. This area is "That portion of Hillsborough County which falls within the area of the circle having a centerpoint at the intersection of U.S. 41 South and State Road 60 and a radius of 12 kilometers." In order to determine whether or not the particulate matter emissions from the proposed project exceeds the above significant level, computer modeling was run. Emissions from the proposed project were modeled with a receptor placed at the above maintenance area. Exhibit A is a print out of the results of the run showing an annual particulate matter impact of 0.04 ug/m³ compared to the significant level of 1 ug/m³. It also show a 24-hour impact of 0.58 ug/m³ compared to the significant level of 5 ug/m³. Since the results are well below the significant levels, it can be concluded that the proposed project will not cause or contribute to violation of the particulate matter AAQS.

The Rule also prohibits an increase in the baseline concentration above the allowable PSD increments. The size of the allowable increment depends on the classification of the area in which the source would be located or have an impact. Class I areas include specific national parks, wilderness areas and memorial parks. Class II areas are all areas not designated as Class I areas, and Class III areas are industrial areas in which greater deterioration than Class II areas would be allowed. There are no designated Class III areas in Florida.

The Ft. Meade Chemical Plant is located in a Class II area. The nearest Class I area is the Chassahowitzka National Wild Life Refuge which is more than 125 kilometers from the facility.

In the PSD regulations, as amended August 7, 1980, baseline concentration is defined as the ambient concentration level for a given pollutant which exists in the baseline area at the time of the applicable baseline date. This includes the actual emissions representative of facilities in existence on the applicable baseline date and the allowable emissions of major stationary facilities which commenced construction before January 6, 1975, but were not in operation by the applicable baseline date.

The emissions not included in the baseline concentration and, therefore, affecting PSD increment consumption, are the actual emissions from any major stationary facility on which construction commenced after January 6, 1975, for SO₂ and PM (TSP); after February 8, 1988, for NO₂; and the actual emission increases and decreases at any stationary facility occurring after the baseline date. The PSD increments are provided for Classes I, II, and III areas. The proposed project location is designated under Rule 62-275.800 as Class II area. The allowable PSD increments are listed under Rule 62-212.400(4) and are presented in Table 3-2.

Pollutant	Period	Class I	Class II	Class III
TSP	Annual	5	19	37
TSP	24-hr	10	37	75
SO ₂	Annual	2	20	40
SO ₂	24-hr	5	91	182
SO ₂	3-hr	25	512	700
NO ₂	Annual	2.2	25	50

Particulate emissions from the proposed project were modeled with a polar receptor network placed at 10 degrees increments and at distances of 250, 500, 750, 1000, 1500, and 2000 meters. Exhibit B is a print out of the run. The results show the highest annual particulate matter impact of 4.8 $\mu\text{g}/\text{m}^3$ compared to the PSD increment of 19 $\mu\text{g}/\text{m}^3$. It also show the highest 24-hour impact of 35.6 $\mu\text{g}/\text{m}^3$ compared to the PSD increment of 37 $\mu\text{g}/\text{m}^3$. Both of these impacts occur 500 meters from the plant in a northerly direction. No other particulate matter PSD increment consuming sources are expected to have a significant impact in this area. Since the results are well below the PSD increments, it can be concluded that the proposed project will not exceed the allowable PSD increments.

The PSD review applies to the construction or modification of major facilities located in attainment areas. Since the proposed project is located in an attainment area, the PSD review is required. PSD review process determines whether the construction or modification would trigger the PSD New Source Review (NSR) requirements in Rule 62-212.400(5).

The following sections explore Rule 62-212.400 to determine whether or not the proposed plant is subject to PSD New Source Review (NSR) requirements.

A new facility is subject to the PSD NSR if it is:

- A facility which has the potential to emit 250 tons per year (tpy) of any regulated pollutant.
- A facility which has the potential to emit 100 tons per year (tpy) of any regulated pollutant and it belongs to one of the 28 specific source categories listed in the Standard Industrial Classification Code (SIC) (see Table 3-3).
- A facility which has the potential to emit 5 tons of lead per year (tpy) or more.
- A minor facility which becomes a major facility due to a modification.

Table 3-3 Major Facility Categories
Fossil fuel fired steam electric plants of more than 250 MMBTU/hr heat input
Coal cleaning plants (with thermal dryers)
Kraft pulp mills
Portland cement plants
Primary zinc smelters
Iron and steel mill plants
Primary aluminum ore reduction plants
Primary copper smelters
Municipal incinerators capable of charging more than 250 tons of refuse per day
Hydrofluoric acid plants
Sulfuric acid plants
Nitric acid plants
Petroleum refineries
Lime plants
Phosphate rock processing plants
Coke oven batteries
Sulfur recovery plants
Carbon black plants (furnace process)
Primary lead smelters
Fuel conversion plants
Sintering plants
Secondary metal production plants
Chemical process plants
Fossil fuel boilers (or combinations thereof) totaling more than 250 million BTU/hr heat input
Petroleum storage and transfer units with total storage capacity exceeding 300,000 barrels

Table 3-3 Major Facility Categories	
Taconite ore processing plants	
Glass fiber processing plants	
Charcoal production plants	

A modification to a major facility is subject to the PSD NSR if:

- The facility would be subject to the PSD NSR if it were itself a proposed new facility.
- The modification will result in a significant net emission increase of any pollutant (see Table 3-4)

Table 3-4 Significant Emission Rates of Regulated Pollutants		
Pollutant	tons/yr	lbs/yr
CO	100	
NO _x	40	
SO ₂	40	
Ozone	40	
PM	25	
PM10	15	
TRS (including H ₂ S)	10	
H ₂ SO ₄ mist	7	
Fluorides	3	
Vinyl Chloride	1	
Lead		1200
Mercury		200
Asbestos		14
Beryllium		0.8

The Fort Meade Chemical Plant (FMCP) is listed under SIC Code 38 "Chemical Process Plant. It has the potential to emit more than 100 tons per year of a regulated pollutant, SO₂. The proposed MAP Plant is also listed in the SIC Codes under "Chemical Process Plants". It has the potential to emit 155 tons per year of particulate matter and 7.73 tons per year of fluorides. It would be subject to the PSD NSR if it were itself a proposed new facility. The proposed construction of the MAP plant is considered a modification to a major facility. The modification will result in a significant net emission increase of fluoride and particulate matter. SO₂ emissions will not be significant because the MAP dryer will be fired only with natural gas.

As stated under existing facility description, the Ft. Meade Chemical Plant also has a rock drying operation. The allowable annual particulate matter emissions for this operation is 232 tons per

year. USAC proposes to surrender the permits associated with the drying operation to obtain particulate matter emission credits to offset the increase due to the proposed project. USAC will agree to a condition in the MAP plant construction permit which revokes the drying operation permits to ensure that the particulate matter net emissions increase is less than significant. Table 3-5 provides a summary of the net emissions increases when offset is applied.

Pollutant	Current	New Allowable	Net Increase
TSP	232	155	-77
F	1.2	14.73	14.73

Therefore only a PSD NSR for fluoride is required.

PSD NSR requirements may include technology review, source impact analysis, air quality analysis, pre- and post construction ambient air monitoring, Good Engineering Practices (GEPs), stack height, and additional environmental impact analyses.

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

A source impact analysis is required for a proposed major source subject to PSD for each pollutant for which the increase in emissions exceeds the significant emission rate. Because the increase in fluorides is significant, fluoride impact analysis is required. Approved atmospheric dispersion models are required in performing the impact analysis. The analysis should demonstrate the project's compliance with AAQS (see Table 3-6) and allowable PSD increments (Table 3-2). It should be noted there is not an AAQS for fluorides and the PSD increments for fluorides does not exist. It should also be noted that Florida has a fluorides 24-hour "no threat level" of $6 \mu\text{g}/\text{m}^3$. The impact analysis for criteria pollutants may be limited to only the new or modified source if the net increase in impacts due to the new or modified source is below significant impact levels. De Minimus Ambient Impacts are found under Rule 62-212.400(3) and are presented here as Table 3-7.

**Table 3-6
Ambient Air Quality Standards**

		USEPA (National)					
		FDEP (State)		Primary		Secondary	
Pollutant	Period	$\mu\text{g}/\text{m}^3$	ppm	$\mu\text{g}/\text{m}^3$	ppm	$\mu\text{g}/\text{m}^3$	ppm
SO ₂	3-hr	1,300	0.5			1300	0.5
	24-hr	260	0.1	365	0.14		
	Annual	60	0.02	80	0.03		
PM10	24-hr	150		150		150	
	Annual	50		50		50	
CO	1-hr	40,000	35	40,000	35		
	8-hr	10,000	9	10,000	9		
Ozone	1-hr	235	0.12	235	0.12	235	0.12
NO ₂	Annual	100	0.053	100		100	
Lead	Quarterly	1.5		1.5		1.5	

**Table 3-7
De Minimus Ambient Impacts**

Pollutant	$\mu\text{g}/\text{m}^3$	Period
CO	575	8 hour
NOx	14	NO ₂ , annual
SO ₂	13	24 hour
TSP	10	24 hour
PM10	10	24 hour
Fluorides	0.25	24 hour
Vinyl Chloride	15	24 hour
Lead	0.1	quarterly
Mercury	0.25	24 hour
Beryllium	0.001	24 hour
Hydrogen Sulfide	0.2	1 hour
Ozone	No de minimus. Increase of 100 tpy VOC subject to NSR will require ambient impact analysis	

Impact analysis for fluorides due to the proposed project was conducted using the approved computer dispersion model ISC2 and Tampa 1986 meteorological data. The results showed a 24-hour ambient impact to be $1.05 \mu\text{g}/\text{m}^3$, which is higher than the De Minimus impact level of

0.25 $\mu\text{g}/\text{m}^3$ (see Exhibit C). Therefore, additional impact analysis was performed by modeling fluorides emissions from the existing phosphoric acid plants as well as that from the proposed MAP plant. The results showed a highest 24-hour ambient impact to be 2.6 $\mu\text{g}/\text{m}^3$ and a highest annual impact of 0.35 $\mu\text{g}/\text{m}^3$ (see Exhibit D).

Although the 24-hour Deminimus level was exceeded, the 24-hour ambient impact of 2.6 $\mu\text{g}/\text{m}^3$ is well below the Florida "no threat level" of 6 $\mu\text{g}/\text{m}^3$.

Because the EPA has not approved an ambient monitor for fluorides, pre- and post construction ambient air monitoring can not be accomplished. Also, since there is not an AAQS for fluorides, the air quality analysis was conducted by approved computer air dispersion model.

The last pollutant which may requires ambient impact analysis is ammonia. As is the case with fluorides, ammonia has neither an AAQS nor a PSD increment. Therefore, the ambient impact analysis is conducted similar to fluorides analysis.

Impact analysis for ammonia due to the proposed project was conducted using computer dispersion model ISC2 and Tampa 1986 meteorological data. The results showed a highest 24-hour ambient impact to be 9.2 $\mu\text{g}/\text{m}^3$ and a highest annual impact of 1.2 $\mu\text{g}/\text{m}^3$ (see Exhibit E). These are well below the Florida "no threat levels" of 40.8 $\mu\text{g}/\text{m}^3$ and 100 $\mu\text{g}/\text{m}^3$, respectively.

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

1. 65 meters (m), or
2. A height established by applying the formula:

$$H_g = H + 1.5 L$$

where:

H_g - GEP stack height,

H - Height of the structure or nearby structure, and

L - Lesser dimension, height or projected width of nearby structure(s)

3. A height demonstrated by a model or field study.

The GEP stack height regulation requires that the stack height used in modeling for determining compliance with AAQS and PSD increments not exceed the GEP stack height. In order to obtain the worst case results, the stack height used in the modeling was 40 meters. The actual stack height may be higher or lower.

The PSD rules also require analysis of the impairment to visibility and the impact on soils and vegetation that would occur as a result of the project. A visibility impairment analysis must be conducted for Class I areas if any is located within 100 kilometers of the proposed project.

Impacts due to commercial, residential, industrial, and other growth associated with the source must be addressed.

The air quality modeling demonstrates that the level of fluoride expected at the Ft. Meade Chemical Plant, as a result of the proposed project, will exceed the de minimis impact level established by FDER. However, studies conducted by several fertilizer companies in the area in accordance with past FDER requirements had shown little or no effect on vegetation from airborne fluorides at even higher concentrations than those evaluated for this project. In the case of particulate matter, the net increase as a result of the proposed project is insignificant, therefore the de minimis level for particulates is not applicable.

The Ft. Meade Chemical plant property and the surrounding areas are comprised of mining lands (phosphate), flatwoods, marshes, and sloughs. The soils of the area are primarily sandy and are typically low in both clay and silt content. These characteristics and the semi-tropical climatic factors of high temperature and rainfall are the natural factors which determine the terrestrial communities of the region.

The land in the vicinity of Ft. Meade Chemical plant supports various plant communities. Much of the natural vegetation on the site and the surrounding areas has been altered due to mining and industrial use; there is very little undisturbed land in existence in the vicinity of the plant. As a result, no adverse impacts from the proposed project are expected on the soils and vegetation in the vicinity of the facility.

The response of vegetation to air pollutants is influenced by the concentration of the pollutant, the duration of the exposure, and the frequency of the exposure. The pattern of exposure expected from a single facility is that of a few episodes of relatively high concentrations interdispersed with long periods of no exposure or extremely low concentrations. This is the pattern of exposure that would be expected from fluorides and particulate matter emissions.

As in the case of Class II area impacts, the fluoride emissions from the proposed project are not expected to have any adverse impacts on vegetation because the impacts are close to de minimis levels in the vicinity of the Ft. Meade Chemical plant and correspondingly insignificant at the Class I area located over 125 kilometers away.

In the previous section, the impact of the air emission increases on air quality related values in the vicinity of the proposed project was addressed. The increased emissions on air quality related values to the Chassahowitzka Class I PSD area is not applicable because it is more than 125 kilometers northwest of the plant.

Based upon the expected fluoride concentrations in the Ft. Meade Chemical area resulting from the increased emissions from the Ft. Meade Chemical plant, it is not expected that there will be any adverse impact on the native soils.

As the predicted fluoride levels are below those known to affect vegetation, the proposed project is not expected to have any impact on the wildlife in the Ft. Meade Chemical area.

The proposed modification will require the additional 50 persons to operate the facility. Also, there will be an increase in delivery truck tanker traffic, but this will have a negligible impact on traffic in the area as compared with traffic levels that presently exist. Therefore, no additional growth impacts are expected as a result of the proposed project.

3.2 NON-ATTAINMENT AREA REVIEW

Because the facility is located in an area which is in attainment for all pollutants, and it is also located outside of the area of influent, non-attainment requirements do not apply. Therefore, non-attainment preconstruction review is omitted.

3.3 NOT SUBJECT TO PSD OR NON-ATTAINMENT REVIEW

Under Rule 62-296.400, Specific Emission Limiting and Performance Standards, the standards for a new source is the "Federal New Source Performance Standards" adopted in Rule 62-296.800, unless a different and more stringent standard is required by Rules 62-296.401 through 62-296.414. (A review of the Federal New Source Performance Standards will follow the FAC Rule review.)

FLUORIDES

A review of Rules 62-296.401 through 62-296.414 reveals that Rule 62-296.403, Phosphate Processing, listed a fluorides standards for various phosphate production and equipment (there is no standard for any other pollutants). For new plants, the fluorides standards (per ton of P₂O₅ input) are:

- (a) Wet phosphoric Acid Production: 0.02 lbs.
- (b) Run-of-Pile TSP belt and den: 0.05 lbs.
- (c) Run-of-Pile TSP curing and storage: 0.12 lbs.
- (d) GTSP: 1. GTSP by Run-of-Pile TSP: 0.06 lbs.
2. GTSP by Phosphoric Acid and Rock: 0.15 lbs.
- (e) GTSP Storage: 0.05 lbs.
- (f) DAP: 0.06 lbs.
- (g) Calciner: 0.05 lbs.
- (h) Rock Defluorinator: 0.37 lbs.
- (i) All plants, sections, operations not listed above: BACT as determined pursuant to Rule 62-296.330.

Therefore, the fluorides standard for the proposed MAP plant is BACT as determined pursuant to Rule 62-296.330.

PARTICULATE MATTER AND VISIBLE EMISSIONS

Since Rules 62-296.401 through 62-296.414 do not set particulate matter and visible emission standards for the MAP plant, the General Particulate Emission Limiting Standard under Rule 62-296.310 applies.

Rule 62-296.310 sets standards for particulate matter and visible emissions. The particulate matter standard is determined by use of the equation:

$$E = 17.31 P^{0.16}$$

where: E is emissions in lbs. per hour,
and P is process weight rate in tons per hour.

For the 40 tons per hour MAP plant, the particulate matter standard is 31.2 lbs. per hour.

Similarly, for the 300 tons per hour railcar loadout system, the particulate matter standard is 43.12 lbs. per hour.

According to Rule 62-296.310, the visible emissions standard for the MAP plant and the loadout system is 20% opacity.

Since the facility is located in Polk County, which is classified as attainment for all pollutants, and it is also located outside of the area of influence, RACT Rules do not apply.

3.4 EPA RULE REVIEW

Rule 62-296.800 adopted the EPA New Source Performance Standards (NSPS) codified under 40 C.F.R. 60.

The Regulation pertains to the MAP plant is found under Subpart V - Standard of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants. The standard for fluorides is 0.06 lbs per ton, which is identical to the Florida standard. There is no standard for any other pollutants.

The federal standards referenced are the New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAP) in 40 CFR Parts 60 and 61, respectively. A review of NSPS was presented under paragraph 3.2, EPA Rule Review. The review of NESHAP shows no applicable standard for the proposed project.

The state standards referenced are those found in Chapter 62-296. They are: general standards, specific standards, RACT, NSPS, and NESHAP, and BACT. General standards are not applicable because there are specific standards for the proposed project. A review of the Specific Standards and RACT were presented under paragraph 3.1, FAC Rule Review. As mentioned above, NESHAP does not apply. Therefore, BACT is the last state Rule to be reviewed.

BACT is defined in Chapter 62-212, FAC as: “an emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted which the Department, on a case-by-case basis, taking into account energy, environmental, and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of such pollutant.

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

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

Rule 62-212.410 specifies that the Department has the responsibility to make a determination of BACT. The Department is required to give consideration to the followings:

- BACT determination pursuant to the Clean Air Act, Section 169.
- The NSPS and the NESHAP emissions standards in 40 CFR 60 and 61. The BACT, as a minimum, has to comply with the applicable NSPS and NESHAP for the source.
- All scientific, engineering, and technical material and other information available.
- The emission standards or BACT determinations of any other state.
- The social and economic impact of the application of such technology.

EPA currently requires the “top-down” approach to BACT determination. The top-down approach requires identification of 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 control level is evaluated. This process continues until a control level cannot be eliminated by any substantial or unique technical, environmental or economic objections.

The emission standard propose by the applicant is:

- Fluorides: 0.046 lbs. per ton of MAP product

The emissions standard selected by the applicant represents the fluorides emission limit imposed by the BACT standard for fluoride applied by FDEP to two MAP plants operated by Cargill Fertilizer in Florida. Cargill MAP BACT for each of two reactors is 0.037 lbs F/ ton product and that for the cooler (which processes product from both reactors) is 0.018. Therefore, the combined BACT is $0.037 + (0.018/2) = 0.046$. The permits mentioned above are AC29-194504, 07 & 08.

Appendix A

Supplemental Requirements

The following information includes process input rates, product weight, emissions estimates, control system efficiencies, control system critical operating parameters, and proposed methods to show proof of compliance. Most of the information is estimates provided by engineering consultants being considered for the construction project.

1. Process Input Rate and Product Weight

Input

Phosphoric Acid	40,800 lbs/hr as 100% P ₂ O ₅
Ammonia	10,000 lbs/hr

Product

Diammonium Phosphate	80,000 lbs
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2. Estimated Air Pollution Discharged

MAP Plant

Fluorides	1.84 lbs/hr
Particulates	31.2 lbs/hr

Loadout

Particulates	43.1 lbs/hr
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The proposed methods to show compliance are:

Particulates	Method 5
Fluoride	Method 13b
Visible Emissions	Method 9

3. Potential Discharges

The potential discharges per AP42 Table 6.10.3-1 "Average Controlled Emission Factors for the Production of Ammonium Phosphates" are given as controlled emission factors:

AP42 Table 6.10.3-1 (excerpted)						
	Fluorides as F		Particulates		Ammonia	
Emission point	lb/ton Product	Factor Rating	lb/ton Product	Factor Rating	lb/ton Product	Factor Rating
Reactor/ammoniator granulator	0.05	E	1.52	E		
Dryer/cooler	0.04	E	1.50	E		
Product sizing and material transfer	0.002	E	0.06	E		
Total Plant Emissions	0.04	A	0.68	A	0.14	E

Since the MAP production rate is 40 tph, the emissions become:

Potential Emissions						
	Fluorides as F		Particulates		Ammonia	
Emission point	lbs/hr	Factor Rating	lbs/hr	Factor Rating	lbs/hr	Factor Rating
Reactor/ammoniator granulator	2	E	60.08	E		
Dryer/cooler	1.6	E	60	E		
Product sizing and material transfer	0.08	E	2.4	E		
Total Plant Emissions	3.68	A	123	A	21	E

4 & 5. Control Device Efficiencies and Critical Parameters

Venturi Scrubber Data:

Efficiency = 99%

Liquid flow = 200-500 gpm

Pressure drop = 8-40 "H₂O

Air flow = cfm

Baghouse Data:

Efficiency = 93.7%

Pressure drop = 15" H₂O

Air flow = 30,000 f³/min

512 bags x 0.375' x 10' each = 6032 f²

Air to cloth ratio = 4.97

EXHIBIT A

U.S. AGRI-CHEMICALS

TSP MODELING OUTPUT

**IMPACT ON HILLSBOROUGH MAINTENANCE AREA
DUE TO PROPOSED MAP PLANT**

CO STARTING
TITLEONE U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING
MODELOPT DFAULT RURAL CONC
AVERTIME 24 PERIOD
POLLUTID PM10
RUNORNOT RUN
ERRORFIL errors.out
CO FINISHED

SO STARTING
** SRCID SRCTYP X Y Z
LOCATION MAP POINT 0.0 0.0 0.0
LOCATION LOAD POINT -25 100 0.0
** QS HS TS VS DS
SRCPARAM MAP 3.9 30.5 321.9 17.9 0.92
SRCPARAM LOAD 5.435 30.5 299.7 23.2 0.92
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE DISCPOLR MAP 50000 292
RE DISCPOLR LOAD 50000 292
RE FINISHED

ME STARTING
ME INPUTFIL C:\AIRMODEL\MISC2\TPAMET86.ASC
ME ANEMHGHT 10.0 FEET
ME SURFDATA 12842 1986 Tampa
ME UAIRDATA 12842 1986 Ruskin
ME DAYRANGE 1-365
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST SECOND
OU MAXTABLE ALLAVE 10
OU FINISHED

*** SETUP Finishes Successfully ***

*** 10:44:12

PAGE 1

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates PERIOD Averages

**This Run Includes: 2 Source(s); 1 Source Group(s); and 2 Receptor(s)

**The Model Assumes A Pollutant Type of: PM10

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 3.05 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Input Runstream File: MAPPM10X.INP ; **Output Print File: MAPPM10X.OUT

**Detailed Error/Message File: errors.out

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
10/28/94

*** 10:44:12

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

NUMBER	EMISSION RATE	BASE	STACK	STACK	STACK	STACK	BUILDING	EMISSION RATE		
SOURCE	PART. (GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT VEL.	DIAMETER	EXISTS	SCALAR
VARY										
ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)		BY
MAP	0	0.39000E+01	0.0	0.0	0.0	30.50	321.90	17.90	0.92	NO
LOAD	0	0.54350E+01	-25.0	100.0	0.0	30.50	299.70	23.20	0.92	NO

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

ALL MAP ,LOAD ,

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DISCRETE POLAR RECEPTORS ***

ORIGIN: (DIST, DIR, ZELEV, ZFLAG)

SRCID: (METERS,DEG,METERS,METERS)

MAP :(50000.0, 292.0, 0.0, 0.0); LOAD :(50000.0, 292.0, 0.0, 0.0); □□

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: C:\AIRMODEL\ISC2\TPAMET86.ASC FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1)
SURFACE STATION NO.: 12842 UPPER AIR STATION NO.: 12842
NAME: TAMPA NAME: RUSKIN
YEAR: 1986 YEAR: 1986

FLOW SPEED TEMP STAB MIXING HEIGHT (M)
YEAR MONTH DAY HOUR VECTOR (M/S) (K) CLASS RURAL URBAN

86	1	1	1	351.0	4.12	291.5	4	416.0	416.0
86	1	1	2	348.0	3.60	292.6	4	416.0	416.0
86	1	1	3	174.0	4.63	291.5	4	416.0	416.0
86	1	1	4	293.0	3.09	289.8	4	416.0	416.0
86	1	1	5	3.0	1.54	289.8	4	416.0	416.0
86	1	1	6	322.0	2.57	289.8	4	416.0	416.0
86	1	1	7	345.0	3.60	289.8	4	416.0	416.0
86	1	1	8	343.0	2.57	290.4	4	416.0	416.0
86	1	1	9	337.0	3.09	290.9	4	416.0	416.0
86	1	1	10	341.0	3.09	292.6	3	416.0	416.0
86	1	1	11	4.0	2.57	294.3	3	416.0	416.0
86	1	1	12	356.0	3.09	294.8	2	416.0	416.0
86	1	1	13	23.0	2.57	295.9	2	416.0	416.0
86	1	1	14	59.0	2.57	294.8	3	416.0	416.0
86	1	1	15	42.0	3.09	293.2	4	416.0	416.0
86	1	1	16	54.0	1.54	293.7	4	416.0	416.0
86	1	1	17	51.0	2.06	293.2	4	416.0	416.0
86	1	1	18	47.0	0.00	293.2	5	419.0	418.0
86	1	1	19	134.0	2.06	291.5	6	428.0	424.0
86	1	1	20	127.0	0.00	290.9	6	437.0	430.0
86	1	1	21	130.0	0.00	290.9	6	447.0	435.0
86	1	1	22	132.0	0.00	289.8	6	456.0	441.0
86	1	1	23	270.0	1.54	290.9	6	465.0	447.0
86	1	1	24	290.0	2.06	290.4	6	474.0	453.0

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
10/28/94

*** 10:44:12
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MAP , LOAD ,

*** DISCRETE POLAR RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

ORIGIN			ORIGIN				
SRCID	DIST (M)	DIR (DEG)	CONC	SRCID	DIST (M)	DIR (DEG)	CONC
MAP	: 50000.00	292.00	0.03711	LOAD	: 50000.00	292.00	0.03696 □□

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MAP , LOAD ,

*** DISCRETE POLAR RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

ORIGIN	ORIGIN						
SRCID	DIST (M)	DIR (DEG)	CONC (YYMMDDHH)	SRCID	DIST (M)	DIR (DEG)	CONC
(YYMMDDHH)							

MAP	: 50000.00	292.00	0.58421c (86092724)	LOAD	: 50000.00	292.00	0.58000c (86092724)

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MAP , LOAD ,

*** DISCRETE POLAR RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

ORIGIN SRCID	DIST (M)	DIR (DEG)	ORIGIN CONC (YYMMDDHH)	SRCID	DIST (M)	DIR (DEG)	CONC (YYMMDDHH)
MAP	50000.00	292.00	0.53605c (86061524)	LOAD	50000.00	292.00	0.52958c (86061524)

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): MAP , LOAD ,

** CONC OF PM10 IN MICROGRAMS/M**3 **

RANK CONC (YYMMDDHH) AT RECEPTOR (XR,YR) OF TYPE RANK CONC (YYMMDDHH) AT
RECEPTOR (XR,YR) OF TYPE

1. 0.58421c(86092724) AT (-46359.20, 18730.33) DP 6. 0.43366c(86040424) AT (-46384.20, 18830.33) DP
2. 0.58000c(86092724) AT (-46384.20, 18830.33) DP 7. 0.34340c(86022824) AT (-46359.20, 18730.33) DP
3. 0.53605c(86061524) AT (-46359.20, 18730.33) DP 8. 0.33731c(86050124) AT (-46359.20, 18730.33) DP
4. 0.52958c(86061524) AT (-46384.20, 18830.33) DP 9. 0.33325c(86022824) AT (-46384.20, 18830.33) DP
5. 0.43818c(86040424) AT (-46359.20, 18730.33) DP 10. 0.33001c(86050124) AT (-46384.20, 18830.33) DP

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

GROUP ID AVERAGE CONC NETWORK
RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE GRID-ID

ALL	1ST HIGHEST VALUE IS	0.03711	AT (	-46359.20,	18730.33,	0.00,	0.00)	DP
	2ND HIGHEST VALUE IS	0.03696	AT (	-46384.20,	18830.33,	0.00,	0.00)	DP
	3RD HIGHEST VALUE IS	0.00000	AT (	0.00,	0.00,	0.00,	0.00)	
	4TH HIGHEST VALUE IS	0.00000	AT (	0.00,	0.00,	0.00,	0.00)	
	5TH HIGHEST VALUE IS	0.00000	AT (	0.00,	0.00,	0.00,	0.00)	
	6TH HIGHEST VALUE IS	0.00000	AT (	0.00,	0.00,	0.00,	0.00)	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

GROUP ID	DATE	NETWORK	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE
GRID-ID	AVERAGE CONC (YYMMDDHH)			

ALL HIGH 1ST HIGH VALUE IS 0.58421c ON 86092724: AT (-46359.20, 18730.33, 0.00, 0.00) DP
HIGH 2ND HIGH VALUE IS 0.53605c ON 86061524: AT (-46359.20, 18730.33, 0.00, 0.00) DP

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT

DFAULT

*** Message Summary For ISC2 Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 816 Informational Message(s)
A Total of 816 Calm Hours Identified

***** FATAL ERROR MESSAGES *****

*** NONE ***

***** WARNING MESSAGES *****

*** NONE ***

*** ISCST2 Finishes Successfully ***

EXHIBIT B

U.S. AGRI-CHEMICALS

TSP MODELING OUTPUT

**IMPACT ON FT. MEADE CHEMICALS PLANT AREA
DUE TO PROPOSED MAP PLANT**

CO STARTING
TITLEONE U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING
MODELOPT DFAULT RURAL CONC
AVERTIME 24 PERIOD
POLLUTID PM10
RUNORNOT RUN
ERRORFIL errors.out
CO FINISHED

SO STARTING
** SRCID SRCTYP X Y Z
LOCATION MAP POINT 0.0 0.0 0.0
LOCATION LOAD POINT -25 100 0.0
** QS HS TS VS DS
SRCPARAM MAP 3.9 30.5 321.9 17.9 0.92
SRCPARAM LOAD 5.435 30.5 299.7 23.2 0.92
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL1 STA
GRIDPOLR POL1 ORIG 0.0 0.0
GRIDPOLR POL1 DIST 250.0 500.0 750.0 1000.0 1500.0 2000.0
GRIDPOLR POL1 GDIR 36 10 10
GRIDPOLR POL1 END
RE FINISHED

ME STARTING
ME INPUTFIL C:\AIRMODEL\MSC2\TPAMET86.ASC
ME ANEMHGHT 10.0 FEET
ME SURFDATA 12842 1986 Tampa
ME UAIRDATA 12842 1986 Ruskin
ME DAYRANGE 1-365
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST SECOND
OU MAXTABLE ALLAVE 10
OU FINISHED

*** SETUP Finishes Successfully ***

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING
10/28/94

*** 10:50:16

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates PERIOD Averages

**This Run Includes: 2 Source(s); 1 Source Group(s); and 216 Receptor(s)

**The Model Assumes A Pollutant Type of: PM10

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 3.05 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Input Runstream File: MAPPM10.INP ; **Output Print File: MAPPM10.OUT

**Detailed Error/Message File: errors.out

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

	NUMBER	EMISSION	RATE		BASE	STACK	STACK	STACK	STACK	BUILDING	EMISSION	RATE
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT	VEL.	DIAMETER	EXISTS	SCALAR
VARY	ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)		BY	
MAP	0	0.39000E+01	0.0	0.0	0.0	30.50	321.90	17.90	0.92	NO		
LOAD	0	0.54350E+01	-25.0	100.0	0.0	30.50	299.70	23.20	0.92	NO		

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL MAP ,LOAD ,

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING ***
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = 0.00 ; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***
(METERS)

250.0, 500.0, 750.0, 1000.0, 1500.0, 2000.0,

*** DIRECTION RADIALS OF NETWORK ***
(DEGREES)

10.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0,
110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0,
210.0, 220.0, 230.0, 240.0, 250.0, 260.0, 270.0, 280.0, 290.0, 300.0,
310.0, 320.0, 330.0, 340.0, 350.0, 360.0,

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING
10/28/94

*** 10:50:16

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: C:\AIRMODEL\ISC2\TPAMET86.ASC FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1)
SURFACE STATION NO.: 12842 UPPER AIR STATION NO.: 12842
NAME: TAMPA NAME: RUSKIN
YEAR: 1986 YEAR: 1986

FLOW SPEED TEMP STAB MIXING HEIGHT (M)
YEAR MONTH DAY HOUR VECTOR (M/S) (K) CLASS RURAL URBAN

86	1	1	1	351.0	4.12	291.5	4	416.0	416.0
86	1	1	2	348.0	3.60	292.6	4	416.0	416.0
86	1	1	3	174.0	4.63	291.5	4	416.0	416.0
86	1	1	4	293.0	3.09	289.8	4	416.0	416.0
86	1	1	5	3.0	1.54	289.8	4	416.0	416.0
86	1	1	6	322.0	2.57	289.8	4	416.0	416.0
86	1	1	7	345.0	3.60	289.8	4	416.0	416.0
86	1	1	8	343.0	2.57	290.4	4	416.0	416.0
86	1	1	9	337.0	3.09	290.9	4	416.0	416.0
86	1	1	10	341.0	3.09	292.6	3	416.0	416.0
86	1	1	11	4.0	2.57	294.3	3	416.0	416.0
86	1	1	12	356.0	3.09	294.8	2	416.0	416.0
86	1	1	13	23.0	2.57	295.9	2	416.0	416.0
86	1	1	14	59.0	2.57	294.8	3	416.0	416.0
86	1	1	15	42.0	3.09	293.2	4	416.0	416.0
86	1	1	16	54.0	1.54	293.7	4	416.0	416.0
86	1	1	17	51.0	2.06	293.2	4	416.0	416.0
86	1	1	18	47.0	0.00	293.2	5	419.0	418.0
86	1	1	19	134.0	2.06	291.5	6	428.0	424.0
86	1	1	20	127.0	0.00	290.9	6	437.0	430.0
86	1	1	21	130.0	0.00	290.9	6	447.0	435.0
86	1	1	22	132.0	0.00	289.8	6	456.0	441.0
86	1	1	23	270.0	1.54	290.9	6	465.0	447.0
86	1	1	24	290.0	2.06	290.4	6	474.0	453.0

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): MAP ,LOAD ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

DIRECTION | (DEGREES)|	DISTANCE (METERS)					
	250.00	500.00	750.00	1000.00	1500.00	2000.00
10.00 |	0.98887	2.18436	1.86002	1.51395	1.01981	0.74942
20.00 |	1.18546	2.35875	2.02387	1.63742	1.07120	0.76242
30.00 |	1.59329	2.52030	2.05042	1.65224	1.10812	0.80931
40.00 |	2.21200	2.84288	2.08363	1.59460	1.00237	0.70881
50.00 |	2.90195	3.51122	2.46022	1.83311	1.16325	0.84683
60.00 |	3.57235	4.17285	2.82924	2.01283	1.19795	0.83856
70.00 |	3.87508	4.66396	3.16490	2.23905	1.30559	0.88551
80.00 |	3.63456	4.84235	3.47892	2.48997	1.43370	0.95234
90.00 |	3.16656	4.35599	3.30573	2.44646	1.45183	0.97497
100.00 |	2.38759	3.43741	2.69766	2.05840	1.28375	0.88968
110.00 |	1.72833	2.60397	2.29207	1.86863	1.24664	0.90327
120.00 |	1.34522	1.96515	1.81235	1.55523	1.12414	0.86523
130.00 |	1.22276	1.67765	1.52472	1.31221	0.97466	0.77326
140.00 |	1.17685	1.60884	1.41372	1.18707	0.86724	0.68684
150.00 |	0.99578	1.45864	1.35553	1.15244	0.82080	0.62525
160.00 |	0.88764	1.16496	1.00457	0.82387	0.57200	0.43254
170.00 |	0.99737	1.33345	1.14803	0.93866	0.64565	0.48323
180.00 |	1.01946	1.39660	1.23153	1.02108	0.72055	0.55344
190.00 |	0.97248	1.34364	1.22530	1.04784	0.77697	0.61896
200.00 |	0.97942	1.35932	1.28218	1.11778	0.82028	0.63438
210.00 |	1.12944	1.60500	1.47639	1.25717	0.90326	0.69605
220.00 |	1.40834	2.12559	2.08707	1.90241	1.50262	1.22591
230.00 |	1.73449	2.85301	2.81924	2.53377	1.98199	1.63528
240.00 |	2.06106	3.48578	3.36191	3.01066	2.33946	1.91791
250.00 |	2.22941	3.72910	3.40473	2.90163	2.16874	1.77140
260.00 |	2.27611	3.56059	3.01318	2.52104	1.86534	1.51939
270.00 |	2.22407	3.48755	3.17228	2.76889	2.08297	1.67672
280.00 |	1.97416	3.40216	3.08038	2.65419	1.96320	1.55111
290.00 |	1.84078	3.22132	2.72965	2.30981	1.74915	1.42795
300.00 |	1.73337	3.43186	3.09557	2.70213	2.09749	1.71824
310.00 |	1.51390	3.61062	3.38826	2.93946	2.13172	1.64023
320.00 |	1.17341	2.99810	2.65608	2.21026	1.53949	1.15626
330.00 |	0.85015	2.26071	2.08623	1.79845	1.31115	1.01426
340.00 |	0.69854	1.77176	1.65689	1.43594	1.03819	0.79358
350.00 |	0.72653	1.74931	1.57612	1.33448	0.94521	0.71995
360.00 |	0.85677	2.07267	1.85238	1.54439	1.06618	0.79334

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): MAP , LOAD ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	250.00	500.00	750.00	1000.00	1500.00
10.0 |	13.22469c(86080224)	23.74205c(86041224)	23.25964 (86020624)	21.60809 (86020624)	14.85161 (86020624)
20.0 |	17.84847c(86080224)	34.61739c(86080224)	22.50008c(86080224)	23.88492c(86022124)	
18.00253c(86022124)					
30.0 |	16.77908c(86080224)	20.95308c(86080224)	16.48797 (86070424)	18.27185c(86072924)	16.13537 (86070424)
40.0 |	17.62263c(86071624)	21.35970c(86071824)	20.85808 (86030424)	20.39659 (86030424)	14.11261 (86030424)
50.0 |	23.36775c(86071624)	23.86364c(86100424)	24.10903 (86022724)	22.00493 (86022724)	14.15110 (86022724)
60.0 |	25.78476c(86071624)	31.49518c(86100424)	20.88390c(86100424)	16.09569 (86022724)	12.98921 (86022724)
70.0 |	26.11402c(86080124)	26.44666c(86100424)	20.92153 (86070224)	17.24063 (86070224)	12.97486c(86040824)
80.0 |	22.52781c(86071624)	27.77423c(86081524)	18.84317c(86042924)	13.69378 (86070224)	11.03900 (86070224)
90.0 |	22.73756 (86072024)	35.62733c(86081524)	26.93471c(86081524)	18.44276c(86081524)	11.20310 (86040924)
100.0 |	19.14680c(86050924)	28.28691c(86060924)	27.50057c(86060924)	22.98580c(86060924)	
14.81702c(86060924)					
110.0 |	16.29910c(86082424)	22.57587c(86081724)	22.79982c(86081624)	20.69911c(86081624)	
15.27341c(86081624)					
120.0 |	17.90438c(86052224)	20.05405c(86081724)	22.04043c(86012024)	21.22614c(86012024)	
16.23726c(86012024)					
130.0 |	25.70036c(86052224)	23.32859c(86071924)	20.56164 (86012724)	18.89522 (86012724)	13.51797 (86012724)
140.0 |	24.46374c(86052224)	23.85583c(86061024)	19.68763c(86061024)	15.03923c(86061024)	
9.10053c(86061024)					
150.0 |	16.32189 (86061824)	19.09171 (86061824)	18.73728 (86021224)	16.07242 (86021224)	12.36171c(86030124)
160.0 |	19.10815c(86062624)	17.87079c(86010524)	22.58756c(86010524)	21.04582c(86010524)	
15.53198c(86010524)					
170.0 |	17.56758c(86062624)	16.82608c(86021324)	17.18648c(86101524)	15.25093c(86101524)	
10.80240c(86101524)					
180.0 |	16.38346c(86021324)	18.75095 (86032224)	21.49901 (86103024)	21.66302 (86103024)	16.88241 (86103024)
190.0 |	15.86521c(86082424)	22.98533 (86011124)	20.84007 (86032224)	17.11535 (86032224)	11.45015 (86032224)
200.0 |	17.54662 (86112124)	16.40072 (86112124)	20.61738 (86110224)	22.37343 (86110224)	18.46157 (86110224)
210.0 |	18.52373 (86112124)	20.78231c(86011224)	18.26753c(86102824)	17.41699c(86102824)	
13.34503c(86102824)					
220.0 |	17.97288c(86102024)	27.69693c(86102024)	28.58204c(86102724)	33.88936c(86102724)	
30.23438c(86102724)					
230.0 |	22.81850c(86102024)	32.14479c(86102024)	32.36735 (86122724)	26.79881 (86122724)	20.51576 (86010824)
240.0 |	21.14534c(86082324)	26.55926c(86102024)	27.52657 (86010824)	24.17716 (86111424)	18.86564 (86111424)
250.0 |	23.14244c(86082324)	27.38194 (86033024)	25.82875 (86010924)	24.79735 (86010924)	16.43109 (86010924)
260.0 |	23.90391c(86082324)	30.26007 (86091524)	25.82775 (86091724)	20.49615 (86091724)	17.19998 (86091724)
270.0 |	23.12241c(86070724)	30.19018c(86082324)	25.94994c(86082324)	21.07913c(86082324)	
14.22840c(86060324)					
280.0 |	26.01401c(86070724)	31.30813c(86070724)	28.86521c(86040424)	23.70762c(86040424)	
15.73643c(86061424)					
290.0 |	22.28947c(86070724)	28.39987c(86070724)	21.16813 (86052724)	17.24241c(86051524)	
14.72735c(86121924)					
300.0 |	21.52405c(86082624)	31.56624c(86082624)	23.83998 (86070524)	22.40097 (86070524)	
16.20620c(86121924)					
310.0 |	17.68055c(86070824)	30.30637c(86101324)	23.74522c(86080824)	22.64321 (86031324)	16.57989
(86031324)					
320.0 |	9.81303 (86092924)	23.23940c(86101324)	21.16562 (86031324)	19.64045 (86031324)	13.71016 (86031324)
330.0 |	9.95352 (86052824)	22.10382c(86112524)	19.30098c(86112524)	19.09698 (86021024)	15.61841 (86021024)
340.0 |	9.56136c(86051224)	20.00941c(86071324)	22.82142 (86082024)	22.40756 (86082024)	17.14457 (86082024)
350.0 |	11.29396 (86050624)	15.89378 (86050624)	18.71656c(86010124)	18.18193 (86082024)	13.61555 (86082024)
360.0	10.24459c(86072524)	17.88850c(86072524)	18.05005 (86113024)	17.87238c(86072924)	13.30433
(86121124)					

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MAP , LOAD ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

DIRECTION |	DISTANCE (METERS)
(DEGREES) |	2000.00
10.0 |	10.46070 (86020624)
20.0 |	12.97730c(86022124)
30.0 |	13.60872 (86070424)
40.0 |	9.76690c(86122424)
50.0 |	10.49473 (86022024)
60.0 |	10.21776 (86022724)
70.0 |	10.15880c(86040824)
80.0 |	9.32347 (86070224)
90.0 |	8.14781 (86040924)
100.0 |	10.39108c(86081824)
110.0 |	12.39582c(86081624)
120.0 |	12.43916c(86012024)
130.0 |	9.84657 (86012724)
140.0 |	6.71658 (86012724)
150.0 |	10.22722c(86030124)
160.0 |	11.60407c(86010524)
170.0 |	8.12867 (86102924)
180.0 |	12.90614 (86103024)
190.0 |	8.22988 (86032224)
200.0 |	14.47678 (86110224)
210.0 |	10.25045c(86102824)
220.0 |	24.64660c(86102724)
230.0 |	15.40912 (86010824)
240.0 |	14.64641 (86111424)
250.0 |	12.44838 (86092024)
260.0 |	9.70263 (86011824)
270.0 |	12.10604 (86110824)
280.0 |	14.39240c(86061424)
290.0 |	13.21440c(86121924)
300.0 |	13.65542c(86121924)
310.0 |	12.04853 (86031024)
320.0 |	11.58182c(86120124)
330.0	12.51792 (86021024)
340.0	12.99903 (86082024)
350.0	9.96407 (86082024)
360.0	9.83061 (86121124)

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 *** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): MAP , LOAD ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF PM10 IN MICROGRAMS/M**

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	250.00	500.00	750.00	1000.00	1500.00
10.0 | 12.22489c(86072524)	23.69712c(86080224)	17.90785c(86031124)	13.79736c(86031124)	10.39200	
(86021124)					
20.0 | 14.40134c(86082824)	23.34275c(86082824)	21.66344c(86022124)	17.41451 (86011024)		
14.02652c(86031124)					
30.0 | 14.27657c(86090724)	19.80341c(86022224)	15.93874c(86072924)	17.68283 (86070424)		
15.74604c(86072924)					
40.0 | 16.19366c(86090724)	15.52236c(86022224)	16.59069c(86012524)	15.75992c(86012524)		
11.66505c(86122424)					
50.0 | 22.72008c(86080724)	22.38805c(86062024)	16.16657 (86021924)	16.95074 (86111824)	12.95621 (86022024)	
60.0 | 24.74313c(86080124)	30.11541c(86062024)	20.51826 (86072124)	15.49190 (86072124)	10.30924 (86073124)	
14.02652c(86031124)					
70.0 | 24.14862c(86071624)	26.41605c(86062024)	19.27596 (86072124)	17.13464c(86040824)	12.22328 (86022024)	
80.0 | 22.33465c(86080124)	27.44228c(86100524)	18.83789c(86060624)	12.84222c(86040824)		
10.07778c(86100924)					
90.0 | 22.44251c(86050924)	29.92338 (86072024)	22.70597c(86060724)	17.37866c(86060724)		
10.53868c(86122424)					
100.0 | 17.49094 (86072024)	27.74306c(86081724)	21.16232c(86081724)	18.17929c(86081824)		
14.23193c(86081824)					
110.0 | 15.30574c(86081724)	19.81948c(86062624)	19.88010c(86081724)	17.74627c(86081724)		
14.43376c(86081724)					
120.0 | 17.44536c(86071924)	19.90506c(86040224)	18.94707c(86081724)	15.12209c(86081724)	11.37036	
(86120224)					
130.0 | 20.38072c(86071924)	21.10928c(86052224)	18.03941c(86071924)	14.14334c(86071924)		
9.94474c(86071924)					
140.0 | 19.47963c(86090324)	23.38411c(86052224)	15.41794c(86052224)	11.96568 (86012724)	8.80778 (86012724)	
150.0 | 15.80393c(86062624)	18.65252 (86021224)	15.83370c(86030124)	15.31798c(86030124)		
11.89376c(86022324)					
160.0 | 12.91200 (86101624)	16.13358 (86021224)	14.90003 (86021224)	12.29781 (86021224)	8.33365 (86021224)	
170.0 | 16.48779c(86021324)	16.06971c(86101524)	11.88820 (86102924)	12.36859 (86102924)	10.19071 (86102924)	
180.0 | 16.15741c(86082424)	18.11630c(86082424)	18.77114 (86032124)	16.45071 (86032124)	11.36453 (86032124)	
190.0 | 14.48117c(86032824)	22.55589 (86032224)	20.60849 (86011124)	16.43126 (86011124)	10.79942 (86011124)	
200.0 | 16.87723c(86032824)	16.04615c(86032824)	15.94544 (86120424)	15.46024 (86103024)	13.17165 (86103024)	
210.0 | 17.71737c(86032824)	19.37356c(86032824)	17.91291 (86110224)	16.49346 (86110224)	11.38210 (86103024)	
220.0 | 16.86811c(86032824)	19.88049 (86120524)	25.96184 (86120524)	28.80016 (86122724)	26.77639 (86122724)	
230.0 | 16.32960c(86082324)	24.41562 (86122724)	26.01412 (86010824)	26.44512 (86010824)	18.25454c(86102724)	
240.0 | 20.96961c(86102024)	25.30756 (86010824)	24.51608 (86111424)	22.10423 (86010824)	15.39161 (86110224)	
250.0 | 18.04237c(86042424)	25.06480c(86092124)	25.59893 (86111424)	21.11911 (86111424)	15.10458 (86123124)	
260.0 | 18.01187c(86042424)	30.04460 (86091724)	22.83607 (86091524)	16.99577 (86091524)	12.34998 (86011824)	
270.0 | 21.57729c(86082324)	27.88244c(86070724)	20.39903c(86060324)	18.51146c(86060324)	14.06328	
(86110824)					
280.0 | 13.17085 (86091724)	27.14791c(86040424)	21.97348c(86082324)	19.04252 (86110724)	14.67774 (86110724)	
290.0 | 17.51183c(86082624)	26.02815 (86111124)	18.53241c(86051524)	16.90648 (86052724)	13.37803 (86081224)	
300.0 | 19.00831c(86070824)	26.20429c(86080824)	21.11861c(86082624)	18.11986c(86121924)	15.84441	
(86070524)					
310.0 | 15.95106c(86082624)	28.50554c(86080824)	22.83613 (86112424)	21.56067 (86031024)	16.13587 (86031024)	
320.0 | 9.46072c(86070824)	19.82264c(86100924)	17.49186c(86112524)	15.18432 (86061624)		
13.58142c(86120124)					
330.0 | 9.07109c(86051224)	18.16002 (86052824)	18.59019 (86021024)	14.41202c(86112524)	13.40222c(86090624)	
340.0 | 9.42878c(86071324)	18.64566c(86100824)	17.88437c(86010124)	17.26703c(86010124)		
12.36325c(86010124)					
350.0 | 9.65909c(86091124)	15.28190c(86072524)	17.37340 (86082024)	17.35662c(86010124)		
12.68498c(86022124)					
360.0 10.12040 (86080624)	16.47961 (86051924)	17.81254c(86072924)	17.62415 (86121124)	13.22499c(86072924)	

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MAP , LOAD ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 2000.00

10.0 | 8.37355 (86021124)
20.0 | 11.46475c(86031124)
30.0 | 12.13097c(86072924)
40.0 | 9.61820 (86030424)
50.0 | 10.17832c(86073024)
60.0 | 9.01715 (86111824)
70.0 | 9.70550 (86022024)
80.0 | 9.00728c(86100924)
90.0 | 7.95651c(86030624)
100.0 | 10.03295c(86060924)
110.0 | 11.93368c(86081724)
120.0 | 9.43869 (86120224)
130.0 | 8.04561c(86071924)
140.0 | 6.61737 (86040924)
150.0 | 9.69391c(86022324)
160.0 | 6.15783 (86021224)
170.0 | 7.92182c(86101524)
180.0 | 8.16279 (86032124)
190.0 | 7.86855 (86011124)
200.0 | 10.51880 (86103024)
210.0 | 8.25881 (86103024)
220.0 | 22.66491 (86122724)
230.0 | 13.30499c(86102724)
240.0 | 11.49136 (86010924)
250.0 | 12.25475 (86091724)
260.0 | 9.51579 (86091724)
270.0 | 11.04007c(86060324)
280.0 | 11.32074 (86110724)
290.0 | 11.62195 (86081224)
300.0 | 11.16971 (86070524)
310.0 | 11.98807 (86031324)
320.0 | 10.71104 (86031624)
330.0 | 11.20886c(86090624)
340.0 | 8.87734c(86010124)
350.0 | 9.82239c(86022124)
360.0 | 9.70668c(86072924)

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): MAP ,LOAD ,

** CONC OF PM10 IN MICROGRAMS/M**3 **

RANK CONC (YYMMDDHH) AT RECEPTOR (XR,YR) OF TYPE RANK CONC (YYMMDDHH) AT
RECEPTOR (XR,YR) OF TYPE

1. 35.62733c(86081524) AT (500.00, 0.00) GP 6. 31.56624c(86082624) AT (-433.01, 250.00) GP
2. 34.61739c(86080224) AT (171.01, 469.85) GP 7. 31.49518c(86100424) AT (433.01, 250.00) GP
3. 33.88936c(86102724) AT (-642.79, -766.04) GP 8. 31.30813c(86070724) AT (-492.40, 86.82) GP
4. 32.36735 (86122724) AT (-574.53, -482.09) GP 9. 30.30637c(86101324) AT (-383.02, 321.39) GP
5. 32.14479c(86102024) AT (-383.02, -321.39) GP 10. 30.26007 (86091524) AT (-492.40, -86.82) GP

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

GROUP ID AVERAGE CONC NETWORK
RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE GRID-ID

ALL 1ST HIGHEST VALUE IS 4.84235 AT (492.40, 86.82, 0.00, 0.00) GP POL1
2ND HIGHEST VALUE IS 4.66396 AT (469.85, 171.01, 0.00, 0.00) GP POL1
3RD HIGHEST VALUE IS 4.35599 AT (500.00, 0.00, 0.00, 0.00) GP POL1
4TH HIGHEST VALUE IS 4.17285 AT (433.01, 250.00, 0.00, 0.00) GP POL1
5TH HIGHEST VALUE IS 3.87508 AT (234.92, 85.51, 0.00, 0.00) GP POL1
6TH HIGHEST VALUE IS 3.72910 AT (-469.85, -171.01, 0.00, 0.00) GP POL1

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

BD = BOUNDARY

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

GROUP ID	DATE	NETWORK	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE
GRID-ID	AVERAGE CONC (YYMMDDHH)			

ALL HIGH 1ST HIGH VALUE IS 35.62733c ON 86081524: AT (500.00, 0.00, 0.00, 0.00) GP POL1
HIGH 2ND HIGH VALUE IS 30.11541c ON 86062024: AT (433.01, 250.00, 0.00, 0.00) GP POL1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT PM10 MODELING
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*** MODELING OPTIONS USED: CONC RURAL FLAT

DEFAULT

*** Message Summary For ISC2 Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 816 Informational Message(s)
A Total of 816 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST2 Finishes Successfully ***

EXHIBIT C

U.S. AGRI-CHEMICALS

FLUORIDES MODELING OUTPUT

**IMPACT ON FT. MEADE CHEMICALS PLANT AREA
DUE TO PROPOSED MAP PLANT**

CO STARTING
TITLEONE U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING
MODELOPT DFAULT RURAL CONC
AVERTIME 24
POLLUTID SO2
RUNORNOT RUN
ERRORFIL errors.out
CO FINISHED

SO STARTING
** SRCID SRCTYP X Y Z
LOCATION MAP POINT 0.0 0.0 0.0
** QS HS TS VS DS
SRCPARAM MAP 0.23 30.5 321.9 17.9 0.92
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL1 STA
GRIDPOLR POL1 ORIG 0.0 0.0
GRIDPOLR POL1 DIST 100.0 250.0 500.0 750.0 1000.0
GRIDPOLR POL1 GDIR 36 10 10
GRIDPOLR POL1 END
RE FINISHED

ME STARTING
ME INPUTFIL C:\AIRMODEL\MISC2\TPAMET86.ASC
ME ANEMHGHT 10.0 FEET
ME SURFDATA 12842 1986 Tampa
ME UAIRDATA 12842 1986 Ruskin
ME DAYRANGE 1-365
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST SECOND
OU MAXTABLE ALLAVE 50
OU FINISHED

*** SETUP Finishes Successfully ***

*** 11:48:30

PAGE 1

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR

**This Run Includes: 1 Source(s); 1 Source Group(s); and 180 Receptor(s)

**The Model Assumes A Pollutant Type of: SO2

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours

m for Missing Hours

b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 3.05 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0

Emission Units = GRAMS/SEC

; Emission Rate Unit Factor = 0.1000E+07

Output Units = MICROGRAMS/M**3

**Input Runstream File: MAPFLX.INP

; **Output Print File: MAPFLX.OUT

**Detailed Error/Message File: errors.out

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
10/28/94

*** 11:48:30

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*** MODELING OPTIONS USED: CONC RURAL FLAT

DFAULT

*** POINT SOURCE DATA ***

NUMBER	EMISSION RATE	BASE	STACK	STACK	STACK	STACK	BUILDING	EMISSION RATE		
SOURCE	PART. (GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT VEL.	DIAMETER	EXISTS	SCALAR
VARY										
ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)	BY	
MAP	0	0.23000E+00	0.0	0.0	0.0	30.50	321.90	17.90	0.92	NO

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL MAP ,

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***

X-ORIG = 0.00 ; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***
(METERS)

100.0, 250.0, 500.0, 750.0, 1000.0,

*** DIRECTION RADIALS OF NETWORK ***
(DEGREES)

10.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0,
110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0,
210.0, 220.0, 230.0, 240.0, 250.0, 260.0, 270.0, 280.0, 290.0, 300.0,
310.0, 320.0, 330.0, 340.0, 350.0, 360.0,

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: C:\AIRMODEL\ISC2\TPAMET86.ASC FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1)
SURFACE STATION NO.: 12842 UPPER AIR STATION NO.: 12842
NAME: TAMPA NAME: RUSKIN
YEAR: 1986 YEAR: 1986

FLOW SPEED TEMP STAB MIXING HEIGHT (M)
YEAR MONTH DAY HOUR VECTOR (M/S) (K) CLASS RURAL URBAN

86 1 1 1 351.0 4.12 291.5 4 416.0 416.0
86 1 1 2 348.0 3.60 292.6 4 416.0 416.0
86 1 1 3 174.0 4.63 291.5 4 416.0 416.0
86 1 1 4 293.0 3.09 289.8 4 416.0 416.0
86 1 1 5 3.0 1.54 289.8 4 416.0 416.0
86 1 1 6 322.0 2.57 289.8 4 416.0 416.0
86 1 1 7 345.0 3.60 289.8 4 416.0 416.0
86 1 1 8 343.0 2.57 290.4 4 416.0 416.0
86 1 1 9 337.0 3.09 290.9 4 416.0 416.0
86 1 1 10 341.0 3.09 292.6 3 416.0 416.0
86 1 1 11 4.0 2.57 294.3 3 416.0 416.0
86 1 1 12 356.0 3.09 294.8 2 416.0 416.0
86 1 1 13 23.0 2.57 295.9 2 416.0 416.0
86 1 1 14 59.0 2.57 294.8 3 416.0 416.0
86 1 1 15 42.0 3.09 293.2 4 416.0 416.0
86 1 1 16 54.0 1.54 293.7 4 416.0 416.0
86 1 1 17 51.0 2.06 293.2 4 416.0 416.0
86 1 1 18 47.0 0.00 293.2 5 419.0 418.0
86 1 1 19 134.0 2.06 291.5 6 428.0 424.0
86 1 1 20 127.0 0.00 290.9 6 437.0 430.0
86 1 1 21 130.0 0.00 290.9 6 447.0 435.0
86 1 1 22 132.0 0.00 289.8 6 456.0 441.0
86 1 1 23 270.0 1.54 290.9 6 465.0 447.0
86 1 1 24 290.0 2.06 290.4 6 474.0 453.0

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): MAP ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**

DIRECTION | (DEGREES)|	DISTANCE (METERS)				
	100.00	250.00	500.00	750.00	1000.00
10.0 |	0.02579 (86080624)	0.54274c(86063024)	0.60157c(86041224)	0.55728 (86020624)	0.48452 (86020624)
20.0 |	0.02166c(86072524)	0.92773c(86080224)	0.81435c(86080224)	0.55983c(86031124)	0.52859c(86022124)
30.0 |	0.02299c(86090124)	0.79073c(86080224)	0.82669c(86080224)	0.66717 (86070424)	0.62290 (86070424)
40.0 |	0.03432c(86090724)	0.57024c(86090724)	0.55626c(86071824)	0.48540c(86021824)	0.44713c(86021824)
50.0 |	0.04335c(86090724)	0.75900c(86090724)	0.53620c(86071824)	0.51440 (86022724)	0.44006 (86022724)
60.0 |	0.04692c(86071624)	0.80617c(86071624)	0.84300c(86100424)	0.64160 (86022724)	0.57986 (86022724)
70.0 |	0.04719c(86071624)	0.89504c(86062024)	0.81941c(86100424)	0.60540 (86072124)	0.46089 (86072124)
80.0 |	0.04154c(86080724)	0.82848c(86100524)	0.69932c(86042924)	0.55628 (86070224)	0.44914 (86070224)
90.0 |	0.04299c(86080124)	0.94288c(86100524)	0.95947c(86081524)	0.62801c(86060724)	0.44456c(86060724)
100.0 |	0.03788c(86080124)	0.73923c(86050924)	0.99813c(86081524)	0.78249c(86060924)	0.59729c(86060924)
110.0 |	0.01807c(86062024)	0.56782c(86050924)	0.68060c(86081724)	0.54893c(86030624)	0.44833c(86030624)
120.0 |	0.01423c(86051124)	0.42931c(86082424)	0.60270c(86012024)	0.68166c(86012024)	0.60969c(86012024)
130.0 |	0.00641c(86051124)	0.54862c(86052224)	0.64418c(86071924)	0.53382 (86012724)	0.48977 (86012724)
140.0 |	0.01244c(86061124)	0.68743c(86052224)	0.73282c(86061024)	0.60374c(86061024)	0.45213c(86061024)
150.0 |	0.01327c(86061124)	0.43715c(86052224)	0.55459 (86061824)	0.45728 (86021224)	0.40272 (86021224)
160.0 |	0.01506c(86062624)	0.51073c(86062624)	0.42327 (86101624)	0.58824c(86010524)	0.55983c(86010524)
170.0 |	0.01248c(86062624)	0.43608c(86062624)	0.45573c(86021324)	0.48024c(86101524)	0.42478c(86101524)
180.0 |	0.01199c(86041824)	0.41047c(86082424)	0.52449c(86082424)	0.51077 (86032224)	0.51824 (86103024)
190.0 |	0.01432c(86041824)	0.42597c(86032824)	0.56810 (86011124)	0.54459 (86011124)	0.43765 (86011124)
200.0 |	0.01722c(86052224)	0.53945 (86112124)	0.52595c(86032824)	0.65324 (86110224)	0.68471 (86110224)
210.0 |	0.02076c(86052224)	0.46773c(86102024)	0.70687c(86011224)	0.56954c(86102824)	0.50630c(86102824)
220.0 |	0.03528c(86082324)	0.66575c(86102024)	0.85534c(86102024)	1.00603 (86122724)	1.04821 (86122724)
230.0 |	0.04190c(86082324)	0.63357c(86082324)	0.90778c(86102024)	0.87864 (86010824)	0.79283 (86010824)
240.0 |	0.02833c(86082324)	0.69502c(86082324)	0.86932 (86033024)	0.84559 (86111424)	0.76814 (86111424)
250.0 |	0.02379c(86043024)	0.77969 (86091724)	0.96147 (86091724)	0.73780 (86091724)	0.58240c(86121724)
260.0 |	0.02076c(86082224)	0.87999c(86070724)	0.83903 (86091524)	0.60569 (86091524)	0.47935 (86102324)
270.0 |	0.01606 (86050524)	0.94487c(86070724)	1.00673c(86082324)	0.86992c(86082324)	0.69258c(86082324)
280.0 |	0.02513c(86082624)	0.83237c(86070724)	0.78431c(86070724)	0.61326c(86040424)	0.45596c(86040424)
290.0 |	0.03627c(86082624)	0.92053c(86082624)	0.68681c(86082624)	0.52655c(86051524)	0.45683c(86121924)
300.0 |	0.02812c(86082624)	0.91708c(86082624)	0.85704c(86082624)	0.58744 (86092924)	0.47674c(86121924)
310.0 |	0.01970c(86062724)	0.66534c(86070824)	0.78680c(86101324)	0.75642 (86031324)	0.64646 (86031324)
320.0 |	0.01411c(86062224)	0.42075 (86092924)	0.56443c(86112524)	0.46726 (86081224)	0.40528 (86031324)
330.0 |	0.01355c(86061124)	0.52214 (86052824)	0.54847c(86112524)	0.51376 (86021024)	0.48962 (86021024)
340.0 |	0.01718c(86092324)	0.48101c(86071324)	0.54050 (86082024)	0.58038 (86082024)	0.51191 (86082024)
350.0 |	0.01996 (86080624)	0.51982 (86050624)	0.45721c(86010124)	0.50346c(86010124)	0.47038 (86082024)
360.0 |	0.03114 (86080624)	0.43000c(86072524)	0.47904c(86072524)	0.50679c(86072924)	0.46376c(86072924)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): MAP ,

*** NETWORK ID: POLI ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION | (DEGREES)|	DISTANCE (METERS)				
	100.00	250.00	500.00	750.00	1000.00
10.0 |	0.02199c(86072524)	0.53576c(86041224)	0.50471 (86020624)	0.38821c(86041224)	0.31115 (86121224)
20.0 |	0.02048c(86082724)	0.68739c(86082824)	0.57227 (86111724)	0.55890c(86022124)	0.50149c(86031124)
30.0 |	0.02260c(86072524)	0.66103c(86082824)	0.59278 (86070424)	0.61408c(86072924)	0.54692c(86072924)
40.0 |	0.02582c(86090124)	0.55441c(86090124)	0.54330c(86061924)	0.46001 (86030424)	0.37861 (86030424)
50.0 |	0.02563c(86071624)	0.56267c(86071824)	0.51122c(86020724)	0.42863c(86010324)	0.40645 (86022024)
60.0 |	0.03246c(86080724)	0.77099c(86062024)	0.75406c(86062024)	0.53506c(86100424)	0.36141c(86082724)
70.0 |	0.04506c(86080724)	0.85600c(86071624)	0.79655c(86062024)	0.48692c(86073024)	0.44178c(86073024)
80.0 |	0.02879c(86080124)	0.76634c(86080724)	0.68328c(86040824)	0.47107c(86040824)	0.35100c(86100924)
90.0 |	0.03553c(86071324)	0.92079c(86081824)	0.88139c(86060724)	0.62417c(86081524)	0.42913c(86030624)
100.0 |	0.02895c(86071324)	0.72541 (86072024)	0.95324c(86060924)	0.72783c(86081524)	0.51602c(86081524)
110.0 |	0.01760c(86080124)	0.49579c(86072424)	0.62814 (86041624)	0.53107c(86081724)	0.42647c(86081724)
120.0 |	0.01315c(86062024)	0.35121c(86041124)	0.57003c(86081724)	0.57961c(86081624)	0.48709c(86081624)
130.0 |	0.00600c(86061124)	0.45783c(86071924)	0.57427c(86082424)	0.52840c(86071924)	0.41733c(86071924)
140.0 |	0.00726c(86071424)	0.50368c(86071924)	0.67297c(86052224)	0.41499c(86071924)	0.31598 (86012724)
150.0 |	0.00941c(86062624)	0.42150c(86042924)	0.48814 (86101624)	0.38054 (86061824)	0.37865c(86030124)
160.0 |	0.00736c(86061124)	0.29987 (86101624)	0.41600c(86010524)	0.38147 (86021224)	0.31710 (86021224)
170.0 |	0.00604 (86060124)	0.32694c(86021324)	0.44009c(86101524)	0.30336c(86021324)	0.31493 (86102924)
180.0 |	0.01016 (86060124)	0.29870c(86021324)	0.51909 (86032224)	0.50288 (86103024)	0.43015 (86032124)
190.0 |	0.00895 (86060124)	0.37856c(86041824)	0.47409 (86032224)	0.46621 (86032224)	0.39621 (86032224)
200.0 |	0.01108c(86042624)	0.48144c(86041824)	0.51998 (86112124)	0.51538 (86101624)	0.45251 (86101624)
210.0 |	0.01543c(86082324)	0.45925c(86042324)	0.62559c(86102024)	0.49594c(86011224)	0.42638 (86103024)
220.0 |	0.01879c(86062724)	0.47925c(86082324)	0.61453 (86032924)	0.91490c(86102724)	0.98249c(86102724)
230.0 |	0.02083c(86062724)	0.57473c(86102024)	0.66415 (86010824)	0.70097c(86102024)	0.62679 (86120624)
240.0 |	0.01879c(86040324)	0.57000 (86033024)	0.83472c(86092124)	0.70831 (86010924)	0.67318 (86010924)
250.0 |	0.02000c(86090124)	0.64553c(86082324)	0.81629c(86092824)	0.56717c(86092824)	0.56518 (86091724)
260.0 |	0.01884c(86090124)	0.70465 (86091724)	0.71316 (86091724)	0.55960 (86102324)	0.43473 (86091524)
270.0 |	0.01535 (86070624)	0.56376c(86082324)	0.76621c(86070724)	0.72601c(86060324)	0.65285c(86060324)
280.0 |	0.01736c(86060424)	0.67792 (86111124)	0.78076c(86040424)	0.54795 (86112324)	0.43002 (86112324)
290.0 |	0.02140c(86070824)	0.74610c(86070824)	0.63571 (86052724)	0.46928c(86120924)	0.44831c(86120924)
300.0 |	0.02601c(86070824)	0.91662c(86070824)	0.79594 (86092924)	0.58512 (86051424)	0.46962 (86051424)
310.0 |	0.01917c(86080824)	0.61617c(86101324)	0.75038 (86112424)	0.68963 (86031824)	0.58831 (86031824)
320.0 |	0.00999c(86062724)	0.40477c(86051224)	0.55778c(86080324)	0.46419c(86080324)	0.38435 (86031624)
330.0 |	0.01294c(86082624)	0.42895c(86051224)	0.49371 (86052824)	0.40137c(86112524)	0.42544c(86090624)
340.0 |	0.01288c(86082624)	0.46030c(86051224)	0.51261c(86071324)	0.49441c(86010124)	0.44527c(86010124)
350.0 |	0.01847c(86092324)	0.45488c(86091124)	0.44534c(86072524)	0.50239 (86082024)	0.44070c(86010124)
360.0 |	0.01846c(86072524)	0.41039c(86082224)	0.40087 (86051924)	0.49399 (86121124)	0.46348 (86121124)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): MAP ,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC (YYMMDDHH) AT RECEPTOR (XR,YR) OF TYPE	RECEPTOR (XR,YR) OF TYPE	RANK	CONC (YYMMDDHH) AT RECEPTOR (XR,YR) OF TYPE
1.	1.04821 (86122724) AT (-642.79, -766.04) GP	26.	0.85600c(86071624) AT (234.92, 85.51) GP	
2.	1.00673c(86082324) AT (-500.00, 0.00) GP	27.	0.85534c(86102024) AT (-321.39, -383.02) GP	
3.	1.00603 (86122724) AT (-482.09, -574.53) GP	28.	0.84559 (86111424) AT (-649.52, -375.00) GP	
4.	0.99813c(86081524) AT (492.40, -86.82) GP	29.	0.84300c(86100424) AT (433.01, 250.00) GP	
5.	0.98249c(86102724) AT (-642.79, -766.04) GP	30.	0.84070c(86042524) AT (234.92, 85.51) GP	
6.	0.96147 (86091724) AT (-469.85, -171.01) GP	31.	0.83903 (86091524) AT (-492.40, -86.82) GP	
7.	0.95947c(86081524) AT (500.00, 0.00) GP	32.	0.83872 (86072024) AT (500.00, 0.00) GP	
8.	0.95324c(86060924) AT (492.40, -86.82) GP	33.	0.83472c(86092124) AT (-433.01, -250.00) GP	
9.	0.94487c(86070724) AT (-250.00, 0.00) GP	34.	0.83284c(86071524) AT (234.92, 85.51) GP	
10.	0.94288c(86100524) AT (250.00, 0.00) GP	35.	0.83237c(86070724) AT (-246.20, 43.41) GP	
11.	0.92773c(86080224) AT (85.51, 234.92) GP	36.	0.82848c(86100524) AT (246.20, 43.41) GP	
12.	0.92079c(86081824) AT (250.00, 0.00) GP	37.	0.82669c(86080224) AT (250.00, 433.01) GP	
13.	0.92053c(86082624) AT (-234.92, 85.51) GP	38.	0.81941c(86100424) AT (469.85, 171.01) GP	
14.	0.91708c(86082624) AT (-216.51, 125.00) GP	39.	0.81629c(86092824) AT (-469.85, -171.01) GP	
15.	0.91662c(86070824) AT (-216.51, 125.00) GP	40.	0.81435c(86080224) AT (171.01, 469.85) GP	
16.	0.91490c(86102724) AT (-482.09, -574.53) GP	41.	0.80813c(86080824) AT (-216.51, 125.00) GP	
17.	0.90778c(86102024) AT (-383.02, -321.39) GP	42.	0.80617c(86071624) AT (216.51, 125.00) GP	
18.	0.89504c(86062024) AT (234.92, 85.51) GP	43.	0.80464c(86100424) AT (234.92, 85.51) GP	
19.	0.88139c(86060724) AT (500.00, 0.00) GP	44.	0.79790c(86081524) AT (250.00, 0.00) GP	
20.	0.87999c(86070724) AT (-246.20, -43.41) GP	45.	0.79655c(86062024) AT (469.85, 171.01) GP	
21.	0.87864 (86010824) AT (-574.53, -482.09) GP	46.	0.79594 (86092924) AT (-433.01, 250.00) GP	
22.	0.86992c(86082324) AT (-750.00, 0.00) GP	47.	0.79533c(86100524) AT (500.00, 0.00) GP	
23.	0.86932 (86033024) AT (-433.01, -250.00) GP	48.	0.79364c(86081724) AT (492.40, -86.82) GP	
24.	0.86462c(86081824) AT (500.00, 0.00) GP	49.	0.79283 (86010824) AT (-766.04, -642.79) GP	
25.	0.85704c(86082624) AT (-433.01, 250.00) GP	50.	0.79073c(86080224) AT (125.00, 216.51) GP	

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	DATE	NETWORK
GRID-ID	AVERAGE CONC (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE

ALL HIGH 1ST HIGH VALUE IS 1.04821 ON 86122724: AT (-642.79, -766.04, 0.00, 0.00) GP POL1
HIGH 2ND HIGH VALUE IS 0.98249c ON 86102724: AT (-642.79, -766.04, 0.00, 0.00) GP POL1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 816 Informational Message(s)
A Total of 816 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST2 Finishes Successfully ***

EXHIBIT D

U.S. AGRI-CHEMICALS

FLUORIDES MODELING OUTPUT

**IMPACT ON FT. MEADE CHEMICALS PLANT AREA
DUE TO PROPOSED MAP PLANT AND
EXISTING PHOSPHORIC ACID PLANTS**

CO STARTING
TITLEONE U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING
MODELOPT DFAULT RURAL CONC
AVERTIME 24 PERIOD
POLLUTID SO2
RUNORNOT RUN
ERRORFIL errors.out
CO FINISHED

SO STARTING
** SRCID SRCTYP X Y Z
LOCATION MAP POINT 0.0 0.0 0.0
LOCATION PADA POINT 182.9 121.9 0.0
LOCATION PADB POINT 182.9 175.3 0.0
** QS HS TS VS DS
SRCPARAM MAP 0.23 30.5 321.9 17.9 0.92
SRCPARAM PADA 0.111 25.9 316.3 12.22 0.76
SRCPARAM PADB 0.111 25.9 316.3 12.22 0.76
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL1 STA
GRIDPOLR POL1 ORIG 0.0 0.0
GRIDPOLR POL1 DIST 100.0 250.0 500.0 750.0 1000.0
GRIDPOLR POL1 GDIR 36 10 10
GRIDPOLR POL1 END
RE FINISHED

ME STARTING
ME INPUTFIL C:\AIRMODEL\ISC2\TPAMET86.ASC
ME ANEMHGHT 10.0 FEET
ME SURFDATA 12842 1986 Tampa
ME UAIRDATA 12842 1986 Ruskin
ME DAYRANGE 1-365
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST SECOND
OU MAXTABLE ALLAVE 50
OU FINISHED

*** SETUP Finishes Successfully ***

*** 12:02:20

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates PERIOD Averages

**This Run Includes: 3 Source(s); 1 Source Group(s); and 180 Receptor(s)

**The Model Assumes A Pollutant Type of: SO2

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 3.05 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Input Runstream File: MAPFL6.INP ; **Output Print File: MAPFL6.OUT

**Detailed Error/Message File: errors.out

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

	NUMBER	EMISSION	RATE			BASE	STACK	STACK	STACK	STACK	BUILDING	EMISSION	RATE
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT	VEL.	DIAMETER	EXISTS	SCALAR	
VARY	ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)		BY		
MAP	0	0.23000E+00	0.0	0.0	0.0	30.50	321.90	17.90	0.92		NO		
PADA	0	0.11100E+00	182.9	121.9	0.0	25.90	316.30	12.22	0.76		NO		
PADB	0	0.11100E+00	182.9	175.3	0.0	25.90	316.30	12.22	0.76		NO		

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL MAP ,PADA ,PADB ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***

X-ORIG = 0.00 ; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***
(METERS)

100.0, 250.0, 500.0, 750.0, 1000.0,

*** DIRECTION RADIALS OF NETWORK ***
(DEGREES)

10.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0,
110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0,
210.0, 220.0, 230.0, 240.0, 250.0, 260.0, 270.0, 280.0, 290.0, 300.0,
310.0, 320.0, 330.0, 340.0, 350.0, 360.0,

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: C:\AIRMODEL\ISC2\TPAMET86.ASC FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1)
SURFACE STATION NO.: 12842 UPPER AIR STATION NO.: 12842
NAME: TAMPA NAME: RUSKIN
YEAR: 1986 YEAR: 1986

FLOW SPEED TEMP STAB MIXING HEIGHT (M)
YEAR MONTH DAY HOUR VECTOR (M/S) (K) CLASS RURAL URBAN

86	1	1	1	351.0	4.12	291.5	4	416.0	416.0
86	1	1	2	348.0	3.60	292.6	4	416.0	416.0
86	1	1	3	174.0	4.63	291.5	4	416.0	416.0
86	1	1	4	293.0	3.09	289.8	4	416.0	416.0
86	1	1	5	3.0	1.54	289.8	4	416.0	416.0
86	1	1	6	322.0	2.57	289.8	4	416.0	416.0
86	1	1	7	345.0	3.60	289.8	4	416.0	416.0
86	1	1	8	343.0	2.57	290.4	4	416.0	416.0
86	1	1	9	337.0	3.09	290.9	4	416.0	416.0
86	1	1	10	341.0	3.09	292.6	3	416.0	416.0
86	1	1	11	4.0	2.57	294.3	3	416.0	416.0
86	1	1	12	356.0	3.09	294.8	2	416.0	416.0
86	1	1	13	23.0	2.57	295.9	2	416.0	416.0
86	1	1	14	59.0	2.57	294.8	3	416.0	416.0
86	1	1	15	42.0	3.09	293.2	4	416.0	416.0
86	1	1	16	54.0	1.54	293.7	4	416.0	416.0
86	1	1	17	51.0	2.06	293.2	4	416.0	416.0
86	1	1	18	47.0	0.00	293.2	5	419.0	418.0
86	1	1	19	134.0	2.06	291.5	6	428.0	424.0
86	1	1	20	127.0	0.00	290.9	6	437.0	430.0
86	1	1	21	130.0	0.00	290.9	6	447.0	435.0
86	1	1	22	132.0	0.00	289.8	6	456.0	441.0
86	1	1	23	270.0	1.54	290.9	6	465.0	447.0
86	1	1	24	290.0	2.06	290.4	6	474.0	453.0

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): MAP ,PADA ,PADB ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION | (DEGREES)|	DISTANCE (METERS)				
	100.00	250.00	500.00	750.00	1000.00
10.00 |	0.09578	0.13415	0.13710	0.12156	0.09559
20.00 |	0.07807	0.08569	0.15681	0.12754	0.09689
30.00 |	0.06152	0.05733	0.16753	0.14313	0.10931
40.00 |	0.04892	0.05745	0.17990	0.14293	0.10030
50.00 |	0.04131	0.07213	0.22608	0.16490	0.11556
60.00 |	0.03811	0.09406	0.31227	0.20009	0.12808
70.00 |	0.03841	0.11254	0.35345	0.23298	0.14819
80.00 |	0.04080	0.12742	0.31127	0.24137	0.16262
90.00 |	0.04439	0.13585	0.25150	0.20735	0.14908
100.00 |	0.04876	0.12154	0.18987	0.16765	0.12763
110.00 |	0.05355	0.10551	0.15340	0.13003	0.10518
120.00 |	0.05865	0.09396	0.12909	0.10572	0.08729
130.00 |	0.06412	0.09078	0.09966	0.09650	0.07629
140.00 |	0.06982	0.09046	0.09342	0.07589	0.06612
150.00 |	0.07569	0.08549	0.09541	0.07460	0.05828
160.00 |	0.08201	0.08065	0.08480	0.06788	0.05091
170.00 |	0.08944	0.08756	0.08737	0.06924	0.05499
180.00 |	0.09862	0.09428	0.08865	0.07143	0.05824
190.00 |	0.10941	0.10014	0.09165	0.07433	0.05960
200.00 |	0.12076	0.11891	0.09847	0.08010	0.06515
210.00 |	0.13179	0.15018	0.12990	0.09937	0.07702
220.00 |	0.14221	0.17604	0.17444	0.14993	0.12593
230.00 |	0.15213	0.20050	0.20213	0.17081	0.14324
240.00 |	0.16148	0.22689	0.23745	0.20048	0.16705
250.00 |	0.16946	0.23788	0.22919	0.18371	0.14969
260.00 |	0.17449	0.23295	0.21014	0.16497	0.13327
270.00 |	0.17561	0.22482	0.21103	0.17460	0.14466
280.00 |	0.17374	0.21565	0.20890	0.17403	0.14335
290.00 |	0.17023	0.22084	0.22032	0.16521	0.12594
300.00 |	0.16562	0.23316	0.21530	0.16472	0.13499
310.00 |	0.16013	0.22803	0.20971	0.17435	0.14960
320.00 |	0.15403	0.20759	0.20316	0.17893	0.14458
330.00 |	0.14692	0.19130	0.21412	0.16099	0.11489
340.00 |	0.13794	0.18405	0.19486	0.13157	0.09951
350.00 |	0.12635	0.18161	0.16781	0.11509	0.08515
360.00 |	0.11221	0.16912	0.15282	0.11206	0.08578

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): MAP ,PADA ,PADB ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	100.00	250.00	500.00	750.00	1000.00
10.0 |	1.00187c(86082324)	1.19099c(86080824)	1.21062c(86010124)	1.07213c(86022124)	0.96783 (86020624)
20.0 |	0.88773c(86082324)	0.92773c(86080224)	1.30357c(86072524)	1.06928c(86031124)	1.14708 (86020624)
30.0 |	0.79171c(86082324)	0.79074c(86080224)	1.99706c(86080224)	1.51710c(86022124)	1.69322c(86022124)
40.0 |	0.73164c(86082324)	0.57024c(86090724)	1.77460c(86080224)	1.35054c(86021824)	1.27767c(86021824)
50.0 |	0.69657c(86082324)	0.75900c(86090724)	1.72181c(86071824)	1.34600 (86022724)	1.15696 (86022024)
60.0 |	0.65026c(86082324)	0.80617c(86071624)	2.51709c(86100424)	1.57016c(86100424)	1.28270 (86022724)
70.0 |	0.57426c(86082324)	0.89670c(86062024)	1.79059c(86100524)	1.43022 (86070224)	1.11311 (86070224)
80.0 |	0.54110c(86102024)	0.82848c(86100524)	1.90571c(86081524)	1.37943c(86081524)	0.82926c(86042924)
90.0 |	0.58712c(86042324)	0.94288c(86100524)	1.49192c(86081524)	1.45440c(86081524)	1.14483c(86081524)
100.0 |	0.70443 (86112124)	0.90883c(86062624)	1.65029c(86081724)	1.51022c(86081624)	1.10729c(86081624)
110.0 |	0.79768 (86112124)	1.03651c(86062624)	1.36175c(86071924)	1.16981c(86081724)	0.96609c(86081724)
120.0 |	0.84411 (86112124)	1.05879c(86082424)	1.01009c(86052224)	0.91891c(86061024)	0.80572c(86081624)
130.0 |	0.91719c(86011224)	1.30686c(86082424)	1.21138 (86021224)	1.08869 (86012724)	0.88290 (86012724)
140.0 |	1.03589c(86011224)	1.01461c(86082424)	1.23784c(86061024)	0.90269c(86010524)	0.72248 (86021224)
150.0 |	1.13872c(86102024)	0.97519 (86011124)	0.90890 (86103024)	0.83361 (86021224)	0.78354 (86021224)
160.0 |	1.30091c(86102024)	0.95617 (86101624)	1.01552 (86032124)	1.03321 (86103024)	0.68277c(86010524)
170.0 |	1.43619c(86102024)	1.00250 (86101624)	1.06610 (86011124)	0.90102 (86032224)	0.87265 (86103024)
180.0 |	1.52849c(86102024)	1.13238c(86032824)	1.04728 (86032224)	1.04347 (86032224)	0.89548 (86032224)
190.0 |	1.57918c(86102024)	1.10922c(86032824)	1.31894 (86110224)	1.19595 (86110224)	0.87679 (86110224)
200.0 |	1.60323c(86102024)	1.23184c(86102024)	0.99724c(86102824)	1.35866 (86110224)	1.35677 (86110224)
210.0 |	1.61405c(86102024)	1.64935c(86102024)	1.60585c(86102724)	1.41837c(86102724)	1.15518c(86102724)
220.0 |	1.60313c(86102024)	1.93413c(86102024)	2.38644 (86122724)	2.60020 (86122724)	2.39361 (86122724)
230.0 |	1.53819c(86102024)	1.94284c(86102024)	1.93559 (86010824)	1.88278 (86010824)	1.58052 (86010824)
240.0 |	1.40739c(86102024)	1.64122 (86033024)	1.70071 (86111424)	1.73904 (86111424)	1.50320 (86111424)
250.0 |	1.28688 (86033024)	1.78468 (86033024)	1.61693 (86010924)	1.45753 (86010924)	1.16060 (86010924)
260.0 |	1.37097 (86033024)	1.73845 (86091724)	1.72057 (86091724)	1.26872 (86091724)	0.94529 (86091724)
270.0 |	1.36694 (86033024)	1.69476 (86091724)	1.45332c(86082324)	1.21983c(86082324)	0.98305c(86082324)
280.0 |	1.32030c(86092824)	1.68001c(86070724)	1.32715c(86040424)	1.23997c(86040424)	1.04418c(86040424)
290.0 |	1.37675 (86091724)	1.62706c(86070724)	1.33583c(86040424)	1.02586 (86110724)	0.81813c(86112924)
300.0 |	1.47382 (86091724)	1.56791c(86082324)	1.35399 (86070524)	1.00392c(86051524)	1.11149c(86121924)
310.0 |	1.49815 (86091724)	1.49997c(86082324)	1.28421 (86052724)	1.09631 (86122324)	1.02375 (86031024)
320.0 |	1.47060 (86091724)	1.49009c(86040424)	1.23175 (86092924)	1.01010 (86081224)	1.02023 (86031324)
330.0 |	1.40714 (86091724)	1.44065c(86070724)	1.23299c(86101324)	1.11248c(86112524)	0.76025 (86031324)
340.0 |	1.34465c(86070724)	1.65681c(86082624)	1.19440 (86031324)	0.82504c(86080324)	0.80543 (86082024)
350.0 |	1.28899c(86070724)	1.85903c(86082624)	0.98063c(86080324)	1.12594 (86082024)	1.13420 (86082024)
360.0 |	1.16028c(86070724)	1.58742c(86082624)	1.05322 (86052824)	1.41447c(86010124)	1.11797c(86010124)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): MAP , PADA , PADB ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	100.00	250.00	500.00	750.00	1000.00
10.0 |	0.95456c(86070724)	1.14469c(86070824)	0.96950c(86041224)	1.04258 (86070424)	0.90309 (86121124)
20.0 |	0.69254c(86042424)	0.73739c(86082924)	1.12559c(86080224)	1.03191 (86020624)	1.03491c(86031124)
30.0 |	0.59335c(86042424)	0.66172c(86082824)	1.33511c(86041224)	1.42441c(86080224)	1.27084 (86011024)
40.0 |	0.49185c(86042424)	0.55456c(86090124)	1.38089c(86061924)	1.13980c(86061924)	0.87077c(86012524)
50.0 |	0.45904c(86062324)	0.56267c(86071824)	1.46596c(86090724)	1.22811c(86010324)	1.15191 (86022724)
60.0 |	0.48003c(86102024)	0.77100c(86062024)	2.43924c(86062024)	1.45222c(86062024)	0.91935c(86100424)
70.0 |	0.51938c(86102024)	0.85600c(86071624)	1.77688c(86062024)	1.33566c(86040824)	1.08917c(86040824)
80.0 |	0.53351c(86062724)	0.80725c(86042924)	1.72844 (86072024)	1.23397 (86072024)	0.81874 (86070324)
90.0 |	0.57160 (86112124)	0.92079c(86081824)	1.41000c(86081724)	1.41512c(86060924)	1.02730c(86060924)
100.0 |	0.64640c(86032824)	0.73923c(86050924)	1.39784c(86071924)	1.37042c(86081724)	1.03473c(86081724)
110.0 |	0.74218c(86032824)	0.75905c(86030524)	1.19971c(86061024)	1.00001c(86071924)	0.96180c(86012024)
120.0 |	0.81676c(86032824)	0.90813c(86062624)	0.96110 (86042224)	0.84229c(86081624)	0.80399 (86012724)
130.0 |	0.86823c(86032824)	0.85858c(86071924)	0.90269c(86010524)	1.02607 (86021224)	0.67655c(86071924)
140.0 |	0.97413c(86102024)	0.94810 (86032224)	0.83061 (86122924)	0.78042c(86061024)	0.68584c(86030124)
150.0 |	1.11600c(86011224)	0.91191 (86101624)	0.90708c(86101524)	0.75663 (86102924)	0.74706c(86010524)
160.0 |	1.11694c(86011224)	0.95133 (86111524)	0.92887 (86032224)	0.70659 (86032124)	0.60497 (86102924)
170.0 |	1.01360c(86011224)	0.91397 (86111524)	0.99206 (86032224)	0.80378c(86101524)	0.63782c(86101524)
180.0 |	0.93734 (86032924)	0.96164 (86111524)	1.01681 (86011124)	0.96143 (86011124)	0.79857 (86032124)
190.0 |	1.02797 (86032924)	1.05406c(86011224)	1.08321 (86111524)	0.82814 (86103024)	0.71115 (86120424)
200.0 |	1.05176 (86032924)	1.14306 (86112124)	0.96877 (86110224)	1.00794 (86103024)	0.89883 (86103024)
210.0 |	1.02529 (86032924)	1.62408 (86122724)	1.36910 (86120524)	1.25752c(86102824)	1.04072c(86102824)
220.0 |	0.99637c(86121624)	1.58786 (86122724)	2.14300c(86102724)	2.40573c(86102724)	2.23646c(86102724)
230.0 |	1.05723 (86101924)	1.34044 (86010824)	1.83305c(86102024)	1.55329 (86120624)	1.31029 (86120624)
240.0 |	1.17358 (86101924)	1.55611c(86102024)	1.65914 (86033024)	1.44311 (86010924)	1.27701 (86010924)
250.0 |	1.24417c(86092124)	1.58189c(86092124)	1.50199c(86092824)	1.23800 (86123124)	1.15878c(86121724)
260.0 |	1.28192c(86092124)	1.72072 (86091524)	1.50103 (86091524)	1.17021c(86121724)	0.92668c(86121724)
270.0 |	1.24582c(86092124)	1.64914c(86070724)	1.17986c(86070724)	1.14417 (86010924)	0.98003 (86010924)
280.0 |	1.29489 (86033024)	1.39348 (86091724)	1.29590c(86070724)	1.20301c(86060324)	1.02674c(86060324)
290.0 |	1.36111c(86092824)	1.27696c(86092824)	1.33482c(86060324)	1.01042c(86040424)	0.74508 (86110724)
300.0 |	1.37324 (86091524)	1.49897c(86070724)	1.19495 (86052724)	0.96603 (86052724)	0.84798 (86081124)
310.0 |	1.40904 (86091524)	1.46517c(86040424)	1.12997c(86080824)	1.09463c(86120924)	0.91816 (86122324)
320.0 |	1.39810 (86091524)	1.43022c(86070724)	1.19159 (86070524)	0.95942c(86071224)	0.83747c(86080824)
330.0 |	1.34296 (86091524)	1.25641 (86111124)	1.17309 (86092924)	1.07404 (86031324)	0.72882c(86120124)
340.0 |	1.31766 (86091724)	1.29963c(86070724)	1.18509c(86051224)	0.82026 (86082024)	0.73927 (86011824)
350.0 |	1.21118c(86082324)	1.43454c(86070824)	0.94352c(86112524)	0.83527 (86021024)	0.92162c(86010124)
360.0	1.11455c(86082324)	1.53186c(86080824)	0.94656c(86071324)	1.27657 (86082024)	1.08565 (86082024)

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL

*** INCLUDING SOURCE(S): MAP ,PADA ,PADB ,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC (YYMMDDHH) AT RECEPTOR (XR,YR) OF TYPE	RECEPTOR (XR,YR) OF TYPE	RANK	CONC (YYMMDDHH) AT RECEPTOR (XR,YR) OF TYPE
1.	2.60020 (86122724) AT (-482.09, -574.53) GP	26.	1.73845 (86091724) AT (-246.20, -43.41) GP	
2.	2.51709c(86100424) AT (433.01, 250.00) GP	27.	1.73237c(86071524) AT (469.85, 171.01) GP	
3.	2.43924c(86062024) AT (433.01, 250.00) GP	28.	1.72844 (86072024) AT (492.40, 86.82) GP	
4.	2.40573c(86102724) AT (-482.09, -574.53) GP	29.	1.72181c(86071824) AT (383.02, 321.39) GP	
5.	2.39361 (86122724) AT (-642.79, -766.04) GP	30.	1.72072 (86091524) AT (-246.20, -43.41) GP	
6.	2.38644 (86122724) AT (-321.39, -383.02) GP	31.	1.72057 (86091724) AT (-492.40, -86.82) GP	
7.	2.23646c(86102724) AT (-642.79, -766.04) GP	32.	1.70071 (86111424) AT (-433.01, -250.00) GP	
8.	2.14300c(86102724) AT (-321.39, -383.02) GP	33.	1.69476 (86091724) AT (-250.00, 0.00) GP	
9.	1.99706c(86080224) AT (250.00, 433.01) GP	34.	1.69322c(86022124) AT (500.00, 866.03) GP	
10.	1.94284c(86102024) AT (-191.51, -160.70) GP	35.	1.69081c(86040824) AT (469.85, 171.01) GP	
11.	1.93559 (86010824) AT (-383.02, -321.39) GP	36.	1.68715c(86042524) AT (469.85, 171.01) GP	
12.	1.93413c(86102024) AT (-160.70, -191.51) GP	37.	1.68001c(86070724) AT (-246.20, 43.41) GP	
13.	1.91703c(86091224) AT (433.01, 250.00) GP	38.	1.67284 (86120524) AT (-482.09, -574.53) GP	
14.	1.90571c(86081524) AT (492.40, 86.82) GP	39.	1.66768c(86071424) AT (433.01, 250.00) GP	
15.	1.88278 (86010824) AT (-574.53, -482.09) GP	40.	1.65914 (86033024) AT (-433.01, -250.00) GP	
16.	1.85903c(86082624) AT (-43.41, 246.20) GP	41.	1.65889 (86120524) AT (-321.39, -383.02) GP	
17.	1.83305c(86102024) AT (-383.02, -321.39) GP	42.	1.65681c(86082624) AT (-85.51, 234.92) GP	
18.	1.82048c(86082724) AT (433.01, 250.00) GP	43.	1.65244 (86120624) AT (-383.02, -321.39) GP	
19.	1.79059c(86100524) AT (469.85, 171.01) GP	44.	1.65029c(86081724) AT (492.40, -86.82) GP	
20.	1.78468 (86033024) AT (-234.92, -85.51) GP	45.	1.64935c(86102024) AT (-125.00, -216.51) GP	
21.	1.77688c(86062024) AT (469.85, 171.01) GP	46.	1.64914c(86070724) AT (-250.00, 0.00) GP	
22.	1.77460c(86080224) AT (321.39, 383.02) GP	47.	1.64122 (86033024) AT (-216.51, -125.00) GP	
23.	1.77177c(86100424) AT (469.85, 171.01) GP	48.	1.63259c(86082224) AT (433.01, 250.00) GP	
24.	1.74244c(86060624) AT (469.85, 171.01) GP	49.	1.63155c(86042524) AT (433.01, 250.00) GP	
25.	1.73904 (86111424) AT (-649.52, -375.00) GP	50.	1.62706c(86070724) AT (-234.92, 85.51) GP	

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
10/28/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID AVERAGE CONC NETWORK
RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE GRID-ID

ALL 1ST HIGHEST VALUE IS 0.35345 AT (469.85, 171.01, 0.00, 0.00) GP POL1
2ND HIGHEST VALUE IS 0.31227 AT (433.01, 250.00, 0.00, 0.00) GP POL1
3RD HIGHEST VALUE IS 0.31127 AT (492.40, 86.82, 0.00, 0.00) GP POL1
4TH HIGHEST VALUE IS 0.25150 AT (500.00, 0.00, 0.00, 0.00) GP POL1
5TH HIGHEST VALUE IS 0.24137 AT (738.61, 130.24, 0.00, 0.00) GP POL1
6TH HIGHEST VALUE IS 0.23788 AT (-234.92, -85.51, 0.00, 0.00) GP POL1

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	DATE	NETWORK	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE
GRID-ID	AVERAGE CONC (YYMMDDHH)			

ALL HIGH 1ST HIGH VALUE IS 2.60020 ON 86122724: AT (-482.09, -574.53, 0.00, 0.00) GP POL1
HIGH 2ND HIGH VALUE IS 2.43924c ON 86062024: AT (433.01, 250.00, 0.00, 0.00) GP POL1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT FLUORIDE MODELING ***
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*** MODELING OPTIONS USED: CONC RURAL FLAT

DFAULT

*** Message Summary For ISC2 Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 816 Informational Message(s)
A Total of 816 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST2 Finishes Successfully ***

EXHIBIT E

U.S. AGRI-CHEMICALS

AMMONIA MODELING OUTPUT

**IMPACT ON FT. MEADE CHEMICALS PLANT AREA
DUE TO PROPOSED MAP PLANT**

CO STARTING
TITLEONE U.S.AGRICHEMICALS MAP POWDER PLANT AMMONIA MODELING
MODELOPT DFAULT RURAL CONC
AVERTIME 24 PERIOD
POLLUTID SO2
RUNORNOT RUN
ERRORFIL errors.out
CO FINISHED

SO STARTING
** SRCID SRCTYP X Y Z
LOCATION MAP POINT 0.0 0.0 0.0
** QS HS TS VS DS
SRCPARAM MAP 3.15 30.5 338.6 35.8 0.92
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL1 STA
GRIDPOLR POL1 ORIG 0.0 0.0
GRIDPOLR POL1 DIST 100.0 250.0 500.0 750.0 1000.0
GRIDPOLR POL1 GDIR 36 10 10
GRIDPOLR POL1 END
RE FINISHED

ME STARTING
ME INPUTFIL C:\AIRMODEL\ISC2\TPAMET86.ASC
ME ANEMHIGHT 10.0 FEET
ME SURFDATA 12842 1986 Tampa
ME UAIRDATA 12842 1986 Ruskin
ME DAYRANGE 1-365
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST SECOND
OU MAXTABLE ALLAVE 50
OU FINISHED

*** SETUP Finishes Successfully ***

*** 09:41:39

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates PERIOD Averages

**This Run Includes: 1 Source(s); 1 Source Group(s); and 180 Receptor(s)

**The Model Assumes A Pollutant Type of: SO2

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 3.05 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor =

0.10000E+07

Output Units = MICROGRAMS/M**3

**Input Runstream File: MAPNH3.INP

; **Output Print File: MAPNH3.OUT

**Detailed Error/Message File: errors.out

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT
AMMONIA MODELING *** 10/10/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

NUMBER	EMISSION RATE	BASE	STACK	STACK	STACK	STACK	STACK	STACK	STACK
BUILDING	EMISSION RATE								
SOURCE	PART. (GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT VEL.		
DIAMETER	EXISTS	SCALAR	VARY						
ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)		
(METERS)	BY								

MAP 0 0.31500E+01 0.0 0.0 0.0 30.50 338.60 35.80 0.92 NO

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

ALL MAP ,

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT
AMMONIA MODELING *** 10/10/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***

X-ORIG = 0.00 ; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***

(METERS)

100.0, 250.0, 500.0, 750.0, 1000.0,

*** DIRECTION RADIALS OF NETWORK ***

(DEGREES)

10.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0,
110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0,
210.0, 220.0, 230.0, 240.0, 250.0, 260.0, 270.0, 280.0, 290.0, 300.0,
310.0, 320.0, 330.0, 340.0, 350.0, 360.0,

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
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1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY					
	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY WIND SPEED CATEGORY

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: C:\AIRMODEL\ISC2\TPAMET86.ASC FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1)
SURFACE STATION NO.: 12842 UPPER AIR STATION NO.: 12842
NAME: TAMPA NAME: RUSKIN
YEAR: 1986 YEAR: 1986

YEAR	MONTH	DAY	HOUR	FLOW	SPEED	TEMP	STAB	MIXING	HEIGHT (M)
				VECTOR	(M/S)	(K)	CLASS	RURAL	URBAN
86	1	1	1	351.0	4.12	291.5	4	416.0	416.0
86	1	1	2	348.0	3.60	292.6	4	416.0	416.0
86	1	1	3	174.0	4.63	291.5	4	416.0	416.0
86	1	1	4	293.0	3.09	289.8	4	416.0	416.0
86	1	1	5	3.0	1.54	289.8	4	416.0	416.0
86	1	1	6	322.0	2.57	289.8	4	416.0	416.0
86	1	1	7	345.0	3.60	289.8	4	416.0	416.0
86	1	1	8	343.0	2.57	290.4	4	416.0	416.0
86	1	1	9	337.0	3.09	290.9	4	416.0	416.0
86	1	1	10	341.0	3.09	292.6	3	416.0	416.0
86	1	1	11	4.0	2.57	294.3	3	416.0	416.0
86	1	1	12	356.0	3.09	294.8	2	416.0	416.0
86	1	1	13	23.0	2.57	295.9	2	416.0	416.0
86	1	1	14	59.0	2.57	294.8	3	416.0	416.0
86	1	1	15	42.0	3.09	293.2	4	416.0	416.0
86	1	1	16	54.0	1.54	293.7	4	416.0	416.0
86	1	1	17	51.0	2.06	293.2	4	416.0	416.0
86	1	1	18	47.0	0.00	293.2	5	419.0	418.0
86	1	1	19	134.0	2.06	291.5	6	428.0	424.0
86	1	1	20	127.0	0.00	290.9	6	437.0	430.0
86	1	1	21	130.0	0.00	290.9	6	447.0	435.0
86	1	1	22	132.0	0.00	289.8	6	456.0	441.0
86	1	1	23	270.0	1.54	290.9	6	465.0	447.0
86	1	1	24	290.0	2.06	290.4	6	474.0	453.0

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT
AMMONIA MODELING *** 10/10/94

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR
SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): MAP ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 100.00 250.00 500.00 750.00 1000.00

10.00 |	0.00093	0.21259	0.44881	0.39995	0.33490
20.00 |	0.00097	0.22716	0.47850	0.42822	0.36159
30.00 |	0.00101	0.23888	0.51387	0.46537	0.39373
40.00 |	0.00116	0.27374	0.54109	0.44797	0.35678
50.00 |	0.00154	0.36096	0.65730	0.52358	0.41090
60.00 |	0.00200	0.48348	0.86216	0.66710	0.50113
70.00 |	0.00222	0.57331	1.03003	0.78633	0.58174
80.00 |	0.00211	0.59961	1.14312	0.88773	0.65841
90.00 |	0.00181	0.56948	1.18599	0.95107	0.71464
100.00 |	0.00130	0.42466	0.93219	0.77969	0.60302
110.00 |	0.00071	0.26236	0.65218	0.59490	0.48830
120.00 |	0.00035	0.15351	0.42825	0.43267	0.38406
130.00 |	0.00024	0.11851	0.33785	0.34645	0.31274
140.00 |	0.00023	0.11502	0.32658	0.32626	0.28682
150.00 |	0.00021	0.09768	0.28823	0.30583	0.28100
160.00 |	0.00017	0.07555	0.22225	0.22753	0.20085
170.00 |	0.00016	0.07996	0.25506	0.26080	0.22937
180.00 |	0.00015	0.07859	0.25182	0.26555	0.23933
190.00 |	0.00018	0.07727	0.23268	0.25415	0.23786
200.00 |	0.00026	0.09536	0.25239	0.26625	0.25005
210.00 |	0.00043	0.13767	0.33598	0.33587	0.30226
220.00 |	0.00062	0.18533	0.46255	0.48948	0.46808
230.00 |	0.00072	0.22740	0.60557	0.62232	0.57299
240.00 |	0.00078	0.26443	0.73275	0.75271	0.68383
250.00 |	0.00089	0.28595	0.71518	0.68383	0.59698
260.00 |	0.00099	0.29494	0.68791	0.64317	0.55678
270.00 |	0.00099	0.30464	0.72827	0.70814	0.63542
280.00 |	0.00099	0.29081	0.66577	0.61086	0.52445
290.00 |	0.00103	0.29734	0.67656	0.61164	0.51719
300.00 |	0.00100	0.31808	0.75837	0.70700	0.61350
310.00 |	0.00081	0.29227	0.73296	0.70791	0.62389
320.00 |	0.00058	0.22236	0.56127	0.53540	0.46425
330.00 |	0.00051	0.17728	0.43032	0.41151	0.36323
340.00 |	0.00058	0.16295	0.35458	0.33721	0.29985
350.00	0.00071	0.17219	0.35630	0.32597	0.28288
360.00	0.00084	0.19329	0.42310	0.39918	0.34776

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*** MODELING OPTIONS USED: CONC RURAL FLAT DEFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR
 SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): MAP ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	100.00	250.00	500.00	750.00	1000.00
10.0 |	0.03450 (86080624)	3.24234c(86063024)	4.73088c(86041224)	4.03937	
(86020624)	4.18744 (86020624)				
20.0 |	0.02741c(86082724)	4.95422c(86080224)	8.22256c(86080224)		
5.50023c(86080224)	3.92341c(86031124)				
30.0 |	0.02706c(86090124)	3.88165c(86080224)	7.67304c(86080224)		
5.71811c(86080224)	5.36924 (86070424)				
40.0 |	0.04588c(86090724)	3.87726c(86090724)	4.58442c(86022224)	3.73355	
(86030424)	3.44075 (86030424)				
50.0 |	0.05791c(86090724)	5.01156c(86090724)	4.76906c(86071824)	4.40350	
(86022724)	4.37937 (86022724)				
60.0 |	0.06715c(86071624)	6.15463c(86071624)	7.24506c(86100424)		
5.80387c(86100424)	5.64584 (86022724)				
70.0 |	0.06841c(86071624)	6.33704c(86071624)	7.61379c(86100424)	6.19654	
(86072124)	5.00045 (86072124)				
80.0 |	0.05393c(86080724)	5.17829c(86080724)	7.10380c(86060624)	5.39050	
(86070224)	4.59530 (86070224)				
90.0 |	0.05770c(86080124)	6.02183c(86081824)	9.22740c(86081824)		
6.84818c(86060724)	5.16137c(86060724)				
100.0 |	0.05095c(86080124)	4.52235 (86072024)	8.79273c(86081524)		
7.59253c(86081524)	5.97473c(86060924)				
110.0 |	0.02378c(86080124)	3.21526c(86050924)	5.85499c(86081724)		
5.24784c(86081724)	4.80606c(86030624)				
120.0 |	0.01012c(86072424)	1.93512c(86082424)	4.30924c(86082424)		
5.48220c(86012024)	5.59701c(86012024)				
130.0 |	0.00733c(86061124)	2.63010c(86052224)	5.35586c(86052224)		
4.88918c(86071924)	4.69276 (86012724)				
140.0 |	0.01443c(86061124)	3.24662c(86052224)	6.47211c(86052224)		
5.59721c(86061024)	4.72910c(86061024)				
150.0 |	0.01533c(86061124)	2.16411c(86061124)	4.18942 (86061824)	3.69614	
(86061824)	3.55746 (86021224)				
160.0 |	0.01668c(86062624)	2.60078c(86062624)	3.55089c(86062624)		
4.41600c(86010524)	4.86392c(86010524)				
170.0 |	0.01433c(86062624)	2.13707c(86062624)	3.70246c(86021324)		
3.57911c(86101524)	3.73445c(86101524)				
180.0 |	0.01168 (86060124)	1.98794c(86082424)	4.54729c(86082424)	4.60799	
(86032224)	4.29675 (86032224)				

190.0 |	0.01036 (86060124)	2.23411c(86032824)	4.05114 (86011124)	5.10357
(86011124)	4.65495 (86011124)			
200.0 |	0.01604c(86052224)	2.24301 (86112124)	4.51851 (86112124)	
3.72338c(86032824)	3.99279 (86110224)			
210.0 |	0.02070c(86082324)	2.53156c(86042324)	5.56059c(86011224)	
5.14161c(86011224)	4.74890c(86102824)			
220.0 |	0.04730c(86082324)	3.55880c(86082324)	6.59601c(86102024)	5.76713
(86120524)	7.06717 (86122724)			
230.0 |	0.05634c(86082324)	4.46187c(86082324)	5.94923c(86102024)	7.31537
(86010824)	7.83390 (86010824)			
240.0 |	0.03783c(86082324)	4.21435c(86082324)	6.77592c(86092124)	6.78984
(86111424)	7.38374 (86111424)			
250.0 |	0.02816c(86043024)	3.91494 (86091724)	8.21775 (86091724)	7.01376
(86091724)	5.68224 (86091724)			
260.0 |	0.02788c(86082224)	4.73676c(86070724)	7.55782 (86091524)	6.28171
(86091524)	4.83650 (86091524)			
270.0 |	0.01985 (86050524)	4.88732c(86070724)	7.87026c(86070724)	
7.11283c(86082324)	6.34856c(86082324)			
280.0 |	0.03227c(86082624)	4.28944c(86070724)	7.50438c(86070724)	
6.32247c(86040424)	5.08604c(86040424)			
290.0 |	0.04698c(86082624)	5.09629c(86082624)	6.64048c(86082624)	
4.97700c(86051524)	4.23259c(86051524)			
300.0 |	0.03735c(86082624)	4.63483c(86082624)	7.69169c(86082624)	5.94868
(86092924)	4.71219 (86092924)			
310.0 |	0.02567c(86062724)	3.23380c(86070824)	6.87476 (86112424)	6.81169
(86031324)	6.71776 (86031324)			
320.0 |	0.01875c(86062224)	2.14058c(86051224)	4.73585c(86112524)	
4.55608c(86112524)	3.88451 (86031324)			
330.0 |	0.01579c(86061124)	3.30435 (86052824)	4.97866 (86052824)	
4.33914c(86112524)	3.31857c(86112524)			
340.0 |	0.02262c(86092324)	2.75852 (86050624)	4.06175c(86100824)	4.00484
(86082024)	4.33532 (86082024)			
350.0 |	0.02668 (86080624)	3.72434 (86050624)	4.04877 (86050624)	
3.53265c(86010124)	3.71597c(86010124)			
360.0	0.04173 (86080624)	3.03485 (86080624)	3.70277 (86051924)	
3.90833c(86072924)	4.27214c(86072924)			

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR
 SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): MAP ,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M*** **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	100.00	250.00	500.00	750.00	1000.00
10.0 |	0.02928c(86072524)	3.00637c(86080224)	4.48019c(86063024)		
3.88551c(86041224)	3.27763 (86121224)				
20.0 |	0.02603c(86072524)	3.61551c(86082824)	5.64343c(86082824)	4.26684	
(86111724)	3.88817c(86022124)				
30.0 |	0.02523c(86072524)	3.55922c(86082824)	5.34054c(86082824)		
5.16171c(86072924)	5.29319c(86072924)				
40.0 |	0.03018c(86090124)	3.43032c(86090124)	4.51441c(86071824)		
3.61410c(86071824)	3.31227c(86021824)				
50.0 |	0.03620c(86071624)	3.80571c(86071624)	4.58871c(86090724)		
3.36104c(86020724)	2.74015c(86020724)				
60.0 |	0.04306c(86080724)	4.27567c(86080724)	6.18425c(86062024)	5.34914	
(86022724)	4.11194c(86100424)				
70.0 |	0.05945c(86080724)	5.64163c(86071524)	7.39314c(86042524)		
5.47501c(86100424)	4.27719c(86073024)				
80.0 |	0.03849c(86080124)	4.96823c(86081824)	7.03900c(86100524)		
5.15156c(86042924)	3.77429c(86040824)				
90.0 |	0.04538c(86071324)	5.21975c(86080124)	8.64085c(86081524)		
6.76296c(86081524)	4.83221c(86081524)				
100.0 |	0.03705c(86071324)	4.27134c(86080124)	7.56847 (86072024)		
7.03196c(86060924)	5.85975c(86081524)				
110.0 |	0.01744c(86072424)	2.87798c(86072424)	5.68575 (86041624)	5.21885	
(86041624)	4.33708c(86081724)				
120.0 |	0.00912c(86062024)	1.60915 (86042224)	4.10461c(86041124)		
4.31828c(86040224)	4.15318c(86081624)				
130.0 |	0.00704c(86071424)	2.39205c(86071924)	5.34296c(86071924)		
4.30905c(86082424)	4.13934c(86071924)				
140.0 |	0.00912c(86071424)	2.67003c(86071924)	5.50539c(86071924)		
4.65205c(86052224)	3.23982c(86071924)				
150.0 |	0.01055c(86062624)	2.16022c(86042924)	4.01924c(86052224)	3.48302	
(86021224)	3.08307c(86050324)				
160.0 |	0.00885c(86061124)	1.26951c(86072224)	2.78588 (86061824)	3.08913	
(86021224)	2.93070 (86021224)				
170.0 |	0.00719 (86060124)	1.39202c(86052224)	3.66801c(86062624)		
3.17264c(86021324)	2.58303 (86011124)				
180.0 |	0.00709c(86052424)	1.40096c(86032824)	3.74161 (86032224)	3.89378	
(86032124)	4.13915 (86032124)				

190.0 |	0.00730c(86052224)	1.73429c(86041824)	3.46797 (86032224)	4.11082
(86032224)	3.91188 (86032224)			
200.0 |	0.00996c(86090824)	2.20971c(86032824)	4.31994c(86032824)	3.56132
(86112124)	3.12983c(86032824)			
210.0 |	0.01945c(86052224)	2.28726c(86032824)	4.76631c(86102024)	
4.55037c(86102824)	3.91336c(86011224)			
220.0 |	0.02492c(86062724)	2.86853c(86062724)	5.20480 (86032924)	
5.61279c(86102024)	6.31836 (86120524)			
230.0 |	0.02795c(86062724)	2.77214c(86062724)	5.17966 (86091924)	6.04238
(86120624)	6.20324 (86120624)			
240.0 |	0.02216c(86043024)	2.50434c(86092124)	6.76792 (86033024)	
6.41887c(86092124)	5.82606 (86010824)			
250.0 |	0.02668c(86090124)	3.33873 (86091524)	7.32173 (86091524)	
5.81346c(86092824)	4.45710c(86041424)			
260.0 |	0.02521c(86090124)	3.87435 (86091724)	7.26499c(86070724)	5.14967
(86091724)	4.26010 (86102324)			
270.0 |	0.01909 (86070624)	2.75592 (86091824)	6.80519c(86082324)	
6.07487c(86040424)	5.47422 (86110824)			
280.0 |	0.02137c(86060424)	3.34970 (86111124)	6.90524 (86111124)	
5.27259c(86070724)	4.31204 (86112324)			
290.0 |	0.02531c(86070824)	3.95037c(86080824)	6.16316 (86111124)	4.76722
(86052724)	3.59152c(86120924)			
300.0 |	0.03089c(86080824)	4.60381c(86080824)	6.70987c(86080824)	
5.47638c(86082624)	4.20396 (86051424)			
310.0 |	0.02558c(86080824)	3.14642c(86080824)	6.51316c(86101324)	6.53466
(86031824)	6.17395 (86031824)			
320.0 |	0.01317c(86062724)	2.01824 (86081024)	3.96211c(86101324)	4.03030
(86081224)	3.60764c(86112524)			
330.0 |	0.01510c(86082624)	2.42212c(86051224)	4.84737c(86112524)	3.53149
(86052824)	3.25770 (86021024)			
340.0 |	0.01495c(86082624)	2.61340c(86092324)	4.01178c(86071324)	
3.19426c(86100824)	3.41290c(86010124)			
350.0 |	0.02426c(86092324)	2.99314c(86091124)	3.66282c(86091124)	3.01532
(86082024)	3.70849 (86082024)			
360.0	0.02531c(86072524)	2.46139c(86091124)	3.55065c(86072524)	3.53997
(86113024)	4.08999 (86121124)			

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 24-HR AVERAGE CONCENTRATION VALUES FOR
SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MAP ,

** CONC OF SO2 IN MICROGRAMS/M**3

**

RANK	CONC (YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC
1.	9.22740c(86081824) AT (	500.00, 0.00) GP	26.	7.20303c(86081724) AT (
492.40,	-86.82) GP			
2.	8.79273c(86081524) AT (	492.40, -86.82) GP	27.	7.17914c(86062024) AT (
469.85,	171.01) GP			
3.	8.64085c(86081524) AT (	500.00, 0.00) GP	28.	7.11283c(86082324) AT (-
750.00,	0.00) GP			
4.	8.44034c(86060724) AT (	500.00, 0.00) GP	29.	7.10582c(86060724) AT (
492.40,	-86.82) GP			
5.	8.31919 (86072024) AT (	500.00, 0.00) GP	30.	7.10380c(86060624) AT (
492.40,	86.82) GP			
6.	8.22256c(86080224) AT (	171.01, 469.85) GP	31.	7.06717 (86122724) AT (-
642.79,	-766.04) GP			
7.	8.21775 (86091724) AT (	-469.85, -171.01) GP	32.	7.03900c(86100524) AT (
492.40,	86.82) GP			
8.	8.16613c(86100524) AT (	500.00, 0.00) GP	33.	7.03196c(86060924) AT (
738.61,	-130.24) GP			
9.	7.87026c(86070724) AT (	-500.00, 0.00) GP	34.	7.01376 (86091724) AT (-
704.77,	-256.52) GP			
10.	7.83390 (86010824) AT (	-766.04, -642.79) GP	35.	7.00594c(86040824) AT (
500.00,	0.00) GP			
11.	7.80898c(86060624) AT (	500.00, 0.00) GP	36.	6.99890c(86060924) AT (
492.40,	-86.82) GP			
12.	7.69169c(86082624) AT (	-433.01, 250.00) GP	37.	6.96750 (86072124) AT (
469.85,	171.01) GP			
13.	7.67304c(86080224) AT (	250.00, 433.01) GP	38.	6.90524 (86111124) AT (-
492.40,	86.82) GP			
14.	7.61379c(86100424) AT (	469.85, 171.01) GP	39.	6.88413c(86040424) AT (-
492.40,	86.82) GP			
15.	7.59253c(86081524) AT (	738.61, -130.24) GP	40.	6.87476 (86112424) AT (-
383.02,	321.39) GP			
16.	7.56847 (86072024) AT (	492.40, -86.82) GP	41.	6.84818c(86060724) AT (
750.00,	0.00) GP			
17.	7.55782 (86091524) AT (	-492.40, -86.82) GP	42.	6.84227c(86042924) AT (
492.40,	86.82) GP			
18.	7.50438c(86070724) AT (	-492.40, 86.82) GP	43.	6.81169 (86031324) AT (-
574.53,	482.09) GP			
19.	7.39314c(86042524) AT (	469.85, 171.01) GP	44.	6.80519c(86082324) AT (-
500.00,	0.00) GP			

20.	7.38374 (86111424) AT (	-866.03,	-500.00) GP	45.	6.78984 (86111424) AT (-
	649.52,	-375.00) GP				
21.	7.32173 (86091524) AT (	-469.85,	-171.01) GP	46.	6.77592c(86092124) AT (-
	433.01,	-250.00) GP				
22.	7.31537 (86010824) AT (	-574.53,	-482.09) GP	47.	6.76792 (86033024) AT (-
	433.01,	-250.00) GP				
23.	7.28838c(86050924) AT (	492.40,	-86.82) GP	48.	6.76296c(86081524) AT (
	750.00,	0.00) GP				
24.	7.26499c(86070724) AT (	-492.40,	-86.82) GP	49.	6.71776 (86031324) AT (-
	766.04,	642.79) GP				
25.	7.24506c(86100424) AT (	433.01,	250.00) GP	50.	6.70987c(86080824) AT (-
	433.01,	250.00) GP				

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF
TYPE GRID-ID				

ALL	1ST HIGHEST VALUE IS	1.18599 AT (	500.00,	0.00,	0.00,	0.00)	GP	POL1
	2ND HIGHEST VALUE IS	1.14312 AT (	492.40,	86.82,	0.00,	0.00)	GP	POL1
	3RD HIGHEST VALUE IS	1.03003 AT (	469.85,	171.01,	0.00,	0.00)	GP	POL1
	4TH HIGHEST VALUE IS	0.95107 AT (	750.00,	0.00,	0.00,	0.00)	GP	POL1
	5TH HIGHEST VALUE IS	0.93219 AT (	492.40,	-86.82,	0.00,	0.00)	GP	POL1
	6TH HIGHEST VALUE IS	0.88773 AT (	738.61,	130.24,	0.00,	0.00)	GP	POL1

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT
AMMONIA MODELING *** 10/10/94
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*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT
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*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	DATE	AVERAGE CONC	(YYMMDDHH)	NETWORK
ZELEV, ZFLAG)	OF TYPE	GRID-ID		RECEPTOR (XR, YR,

ALL HIGH 1ST HIGH VALUE IS	9.22740c	ON 86081824:	AT (	500.00, 0.00, 0.00,
0.00) GP POL1				
HIGH 2ND HIGH VALUE IS	8.64085c	ON 86081524:	AT (	500.00, 0.00, 0.00,
0.00) GP POL1				

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** U.S.AGRICHEMICALS MAP POWDER PLANT
AMMONIA MODELING *** 10/10/94

*** 09:41:39
PAGE 13

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 816 Informational Message(s)

A Total of 816 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST2 Finishes Successfully ***

AFFIDAVIT OF PUBLICATION

THE LEDGER

Lakeland, Polk County, Florida

Case No.

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Robert Lee, who on oath says that he is Classified Manager of The Ledger, a daily newspaper published in Polk County, Florida; that the attached copy of advertisement, being a

...Notice of Intent.....

in the matter of

...Phosphate Fertilizer.....

in the

Court, was published in said newspaper in the issues of
August 1;

1995

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Signed 
Classified Advertising Manager

by Robert E. Lee who is personally known to me

Sworn to and subscribed before me this 1st

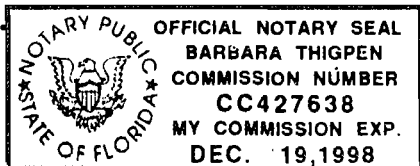
day of August A.D. 19 95

(Seal)


Notary Public

BARBARA THIGPEN

My Commission Expires
U.S. Agri-
Chemical Corp.



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO ISSUE PERMIT
PSD-FL-222

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit to US Agri-Chemicals, Inc., 3225 State Road 630 West, Fort Meade, Florida 33841. This company operates a phosphate fertilizer manufacturing facility at that address. The permit will allow the construction of a 60 tons per hour prilled monoammonium phosphate plant. A determination of Best Available Control Technology (BACT) was required since the proposed project is subject to Prevention of Significant Deterioration (PSD) regulations. Fluoride and particulate matter emissions from the tower and cooler will be controlled using a state-of-the-art scrubbing systems while a fabric filter will control product loadout emissions. Modeling indicates that emissions from the new facility are not expected to have any adverse environmental impact. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

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

If a petition is filed, the administration hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons who substantial interests will be affected by any decision of the Department with regard to the application/request have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

The application/request is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Southwest District
8407 Laurel Fair Circle
Tampa, Florida 33619

Any person may send written comments on the proposed action to Administrator, New Source Review at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination.

Further a public hearing can be requested by any person(s). Such requests must be submitted within 30 days of this notice.

F115 8-1; 1995