



KOOGLER & ASSOCIATES  
ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET  
GAINESVILLE, FLORIDA 32609  
352/377-5822 • FAX/377-7158

KA 173-00-02

October 16, 2000

RECEIVED

OCT 17 2000

BUREAU OF AIR REGULATION

Mr. Al Linero, P.E.  
Florida Department of  
Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Rd  
Tallahassee, FL 32399-2400

Subject: Additional Information for PSD Application  
U.S. Agri-Chemicals Corp.  
File No. 1050051-009-AC, PSD-FL-278

Dear Mr. Linero:

This is a follow up to Pradeep Raval's recent telephone discussion with Mr. Syed Arif regarding the above referenced project.

USAC hereby requests a reduced fluoride emission rate for the Phosphoric Acid Trains A and B from 0.0135 to 0.012 pound per ton P<sub>2</sub>O<sub>5</sub> (lb/ton P<sub>2</sub>O<sub>5</sub>) input. USAC also requests a 30-day rolling average for the 50 ton per hour (tph) P<sub>2</sub>O<sub>5</sub> input rate of each train, not to exceed 55 tph P<sub>2</sub>O<sub>5</sub> input (110%). The 30-day averaging will allow fluctuations in the production rate without affecting the rule applicability for the proposed project. The requested annual fluoride emissions will be reduced from 2.96 to 2.63 tons per year (tpy) for each train while the requested annual phosphoric acid production rate will remain unchanged. Based on the discussions, it is our understanding that this request will not interfere with the status of the project review.

If you have any questions, please do not hesitate to call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES

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

JBK:par

c: S. Arif, FDEP  
J. Girardin, USAC  
R. Brunk, USAC  
*C. Halladay*  
SWD  
EPA  
NPS



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KA 173-00-02

August 28, 2000

**RECEIVED**

**AUG 29 2000**

**BUREAU OF AIR REGULATION**

Mr. Syed Arif, P.E.  
Florida Department of  
Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Rd  
Tallahassee, FL 32399-2400

Subject: Additional Information for PSD Application  
U.S. Agri-Chemicals Corp.  
File No. 1050051-009-AC, PSD-FL-278

Dear Mr. Arif:

This is in response to Mr. Linero's letter dated July 20, 2000 and Cleve Holladay's letter dated July 21, 2000, requesting additional information on the above referenced project. The responses below are presented in the order of the issues raised.

ITEM 1: Stack Test Data

It is our understanding, based on your recent telephone conversation with Pradeep Raval, that the historical stack test information being requested may be summarized in order to facilitate the data review. Such a summary is presented in Attachment 1. Copies of all the respective stack test reports can be submitted, if necessary for FDEP's review.

Information on the variability in scrubber water flow rates and the scrubber pressure drop has also been summarized for a recent 30-day period during which compliance testing was conducted (see Attachment 1).

Emission calculations presented in the application have not been revised to reflect the "lb/ton" emissions data presented in Attachment 1. The use of a different method of calculating actual fluoride emissions will not affect rule applicability for the proposed project.

ITEM 2: Tank Farm Emission Limit

The requested fluoride emission limit is based on the variability of the emissions, as indicated by the information in Attachment 1. Furthermore, a greater "safety margin" is required at the proposed higher operating levels due to increased potential variability that can be expected under the higher operating levels.

ITEM 3: Venturi Scrubber Design Information

As the existing scrubbing system was installed in 1982, there is very limited available information on the details of the scrubber design. A drawing, presented in Attachment 2, indicates the scrubber design dimensions. As information on the inlet fluoride concentration level is not available, it is not possible to accurately calculate the scrubber efficiency. Based on EPA's 1976 guideline document "Final Guideline Document: Control of Fluoride Emissions from Existing Phosphate Fertilizer Plants", a venturi scrubber in a wet process phosphoric acid plant may offer a maximum of 85-90 percent control.

ITEM 4: BACT Control Costs

The BACT evaluation submitted in the application included a cost analysis based on the ultimate cost to USAC. The net environmental benefit, from projected emission reductions resulting from the addition of a new scrubber, indicated the cost of fluoride control at around \$49,000 per ton. A similar assessment for replacement of the existing scrubber with a new crossflow scrubber should include retrofitting costs. Due to space limitations, the new scrubber will have to be installed with a duct connection of about 60 feet. The estimated cost of the duct extension and production loss during the pollution control equipment switchover is estimated by the USAC engineering staff at about \$500,000.

The previously submitted information, addressing A and B Trains and the Tank Farm scrubbers individually, can be revised based on retrofit costs, as follows:

Revised TCI (including retrofit)	= \$ 993,000
Indirect Cost (0.1715 TCI, EPA factor)	= \$170,000
Total Direct Costs	= \$ 60,000
Annual Cost (DC + IC)	= \$ 230,000

The plant's uncontrolled fluoride emissions can be estimated based on the assumption of 75 percent emission reduction offered by the current venturi scrubber. The potential emission reductions from the retrofitting can be estimated based on the assumption of 99 percent control by a packed crossflow scrubber.

Uncontrolled fluoride emissions	= 2.96 tpy / (1-0.75) = 11.8 tpy
Fluorides controlled, new scrubber	= 11.8 tpy x 0.99 = 11.7 tpy
Estimated Control Cost, \$/ton of fluorides removed	= \$230,000 / 11.7 tpy = \$19,600

Based on the above cost analysis the replacement of the existing venturi scrubbers, with crossflow packed-bed scrubbers, is rejected as BACT.

#### ITEM 5: MAP Plant Permitting History

FDEP issued a construction permit for USAC's Prilled MAP Plant in October 1998. Due to changing market conditions, USAC applied for a construction permit in May 1999 for modification of the MAP Plant to produce either a prilled or a granular product. A construction permit for that project was issued in September 1999 (see Attachment 3 for the production capacity provisions of the permit). Construction on that project has not been completed.

The proposed increase in phosphoric acid production will make the additional acid available for the MAP plant. The proposed phosphoric acid production increase will not result in the modification of any units.

#### ITEM 6: Ambient Air Quality Analysis for Sulfur Dioxide

Additional air dispersion modeling was conducted, as requested by Cleve Holladay, by including additional sulfur dioxide emitting sources identified by FDEP (FPC Bartow, FPC Bayboro and FPC Higgins) in the modeling inventory to determine compliance with the ambient air quality standards (AAQS).

The results of the modeling indicated the potential for maximum predicted impacts close to the AAQS. Based on the results of the modeling, refined modeling was required for the AAQS 24-hour period for specific receptor locations identified by Cleve Holladay. These locations corresponded to the location of all impacts within 10 percent of the maximum predicted impact.

August 28, 2000

FDEP also recommended using a background SO<sub>2</sub> concentration level of 31 ug/m<sup>3</sup>, from an ambient SO<sub>2</sub> monitor located in Plant City. The use of this background concentration level, given the proximity of the monitor to nearby sources already included in the emissions inventory, likely results in considerable double counting of impacts. Therefore, it should be recognized that the maximum predicted impacts resulting from this analysis are overly conservative.

The refined modeling was conducted in a manner so as to generate an event file for all predicted impacts that exceeded 228 ug/m<sup>3</sup>. This threshold was based on the standard minus the background concentration level (260 – 32 = 228).

All impacts in excess of the target concentration level of 228 ug/m<sup>3</sup> were evaluated for contribution from the proposed USAC project.

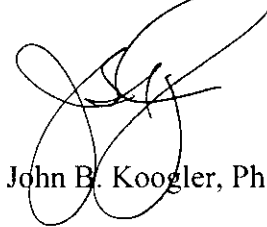
The results of the modeling indicate that there is potential for maximum predicted impacts to exceed the 24-hour AAQS, depending on the choice of background concentration level. However, the analysis further indicated that the maximum predicted USAC contribution to all the predicted impacts over 228 ug/m<sup>3</sup>, were less than significant. The information used in the modeling and the results from the modeling analysis are presented in Attachment 4.

Based on the results of the revised refined air impact analysis, it can be stated that the proposed project will not cause or significantly contribute to any predicted exceedances of the ambient air standards or allowable PSD increments.

If you have any questions, please do not hesitate to call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES



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

JBK:par  
Enc.

c: J. Girardin, USAC  
R. Brunk, USAC  
*S. Arif*  
*C. Kulladom*  
SWD  
EPA  
NPS

ATTACHMENT 1

STACK TEST DATA

**USAC STACK TEST DATA  
PHOSPHORIC ACID TRAINS A and B, and TANK FARM**

A-train							B-train							T-Farm									
Date	P2O5 tpd	Air skcfm	Water gpm	Pdrop "H2O	F Emissions lb/hr	F Emissions lb/tP2O5	Date	P2O5 tpd	Air skcfm	Water gpm	Pdrop "H2O	F Emissions lb/hr	F Emissions lb/tP2O5	Date	P2O5 tpd	Air skcfm	Water gpm	Pdrop "H2O	F Emissions lb/hr	F Emissions lb/tP2O5			
26-Oct-92	818	11.0	590	10.6	0.134	0.0039	27-Oct-92	983	9.6	590	13.7	0.028	0.0007	12-Sep-95	1750	5.6	60	0.9	1.210	0.0168			
30-Sep-93	759	10.2	600	8.3	0.225	0.0071	28-Sep-93	844	9.3	159	15.8	0.051	0.0014	8-Nov-96	1613	4.7	103	1.4	1.034	0.0154			
25-Oct-94	1003	10.3	100	6.6	0.059	0.0014	26-Oct-94	958	10.8	100	13.4	0.026	0.0007	4-Dec-96	1901	3.6	160	1.7	0.427	0.0054			
14-Sep-95	1020	10.1	136	7.2	0.090	0.0021	8-Aug-95	953	11.5	96	9.9	0.085	0.0022	9-Dec-96	2134	3.5	130	1.7	0.760	0.0085			
11-Dec-96	1054	11.1	120	8.1	0.820	0.0008	13-Sep-95	922	10.9	74	12.0	0.057	0.0015	22-Sep-97	1733	4.2	230	3.1	0.856	0.0119			
9-Oct-97	970	10.1	135	9.7	0.074	0.0018	10-Dec-96	1082	10.8	75	11.6	0.022	0.0005	10-Oct-97	1997	3.4	169	3.6	0.155	0.0019			
23-Oct-97	1034	10.0	120	9.5	0.029	0.0007	8-Oct-97	805	9.0	151	12.9	0.080	0.0024	20-Oct-97	1898	3.9	108	3.3	0.201	0.0025			
9-Apr-98	1032	8.4	68	10.9	0.081	0.0019	21-Oct-97	1051	10.4	77	12.3	0.110	0.0025	8-Apr-98	2004	3.3	98	2.3	0.500	0.0059			
9-Nov-98	998	12.3	77	12.6	0.074	0.0017	10-Dec-98	996	11.3	97	14.3	0.039	0.0009	11-Nov-98	1944	3.9	101	3.3	0.570	0.0071			
20-Jan-99	1042	12.7	255	15.4	0.033	0.0008	22-Jan-99	996	11.4	257	17.6	0.022	0.0005	20-Jan-99	2023	3.8	160	3.5	0.080	0.0010			
8-Nov-99	1006	13.5	77	12.9	0.045	0.0011	9-Nov-99	1032	12.7	71	12.8	0.069	0.0016	10-Nov-99	2040	10.4	80	9.8	0.118	0.0014			
2-Feb-00	974	13.0	270	15.9	0.019	0.0005	1-Feb-00	996	12.9	251	14.3	0.022	0.0005	31-Jan-00	1934	9.8	329	18.3	0.350	0.0043			
Emissions summary:					Max	0.820	0.007	Emissions summary:					Max	0.110	0.003	Emissions summary:					Max	1.21	0.02
					S.Dev.	0.221	0.002						S.Dev.	0.030	0.001						S.Dev.	0.37	0.01
					Max+2 SD	1.041	0.011						Max+2 SD	0.169	0.004						Max+2SD	1.96	0.03

- NOTES: (1) Summaries of tests requested by DEP and some earlier tests for Phosphoric acid Trains A and B and Tank Farm.  
(2) Some of the high and low test parameters reflect test protocols discussed with FDEP for permitting purposes.  
(3) As the tank farm receives multiple streams of acid, only the lb/hr emissions are meaningful.  
(4) Test on B Train in Dec 1996 represents projected operation rate for the duration of the test and does not reflect production for that day.

A-train	Water gpm	P.Drop "H2O
Max	292	16.1
Min	122	13.6
~Avg	209	15.0

B-train	Water gpm	P.Drop "H2O
Max	258	15.6
Min	121	12.0
~Avg	207	14.0

T-farm	Water gpm	P.Drop "H2O
Max	376	20.4
Min	140	9.0
~Avg	248	15.8

ATTACHMENT 2

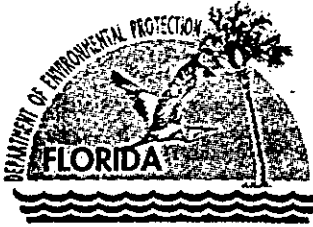
SCRUBBER INFORMATION





ATTACHMENT 3

MAP PLANT PERMIT INFORMATION



# Department of Environmental Protection

Jeb Bush  
Governor

Southwest District  
3804 Coconut Palm Drive  
Tampa, Florida 33619

David B. Scrubs  
Secretary

## PERMITTEE:

U.S. Agri-Chemicals Corp.  
3225 State Road 630 West  
Ft. Meade, FL 33841

Permit No.: 1050051-008-AC  
Effective Date: 09/28/1999  
Expiration Date: 6/1/02  
Project: Granular MAP/DAP Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-204 through 297, and Chapter 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

This permit is for the modification of the existing Prilled monoammonium phosphate (MAP) Plant to allow the production of up to 50 tons per hour (TPH) of granular MAP and/or diammonium phosphate (MAP/DAP) fertilizer. A new Granular MAP/DAP fertilizer plant will be constructed which shares some process equipment and air pollution control equipment with the existing Prilled MAP Plant. The plants will not be operated concurrently. When operating as the Prilled MAP Plant, the facility shall comply with the conditions contained Permit No. PSD-222-FL. When operating as the Granular MAP/DAP Plant, the facility shall comply with the conditions contained in this permit. Additionally, granular fertilizer from this plant and the Bartow facility may be stored in the existing storage building and loaded into railcars or trucks by the existing loadout system.

The new granulation equipment emission sources include the following: reactor, granulator, natural gas fired dryer, product screens, storage bin, bucket elevators, conveyors, and grinding mills. New air pollution control equipment includes a dryer high efficiency cyclone and a cooler high efficiency cyclone. The following existing air pollution control equipment, used at the Prilled MAP Plant, are also used to control emissions from the Granular MAP/DAP Plant: Tower Venturi, Cooler Venturi, and the cyclonic separator. The Granular MAP/DAP Plant process emission sources and associated air pollution control equipment are listed on the next page.

Granular MAP and DAP are made by reacting anhydrous ammonia and phosphoric acid in a covered reaction tank with the further addition of ammonia and acid in a granulator. The granulated product is then dried in a rotary drier. The dried product is sized by screening, grinding of oversized and recycling of undersized. The properly sized product is conveyed to the storage building for eventual loadout.

Emissions from the reactor and granulator are directed to a venturi/cyclonic ammonia absorber (R-G Ammonia Absorber) to recover ammonia and then to the existing Tower Venturi. The R-G Ammonia Absorber also controls particulate matter emissions. Emissions from the rotary dryer and material handling equipment are controlled by the new dryer cyclone and then the Tower

**PERMITTEE:**

U.S. Agri-Chemicals Corp.  
Ft. Meade Chemical Plant

Permit No.: 1050051-008-AC  
Project: Granular MAP/DAP Plant

Venturi. Emissions from the cooler are controlled by the new Cooler Cyclone and the Cooler Venturi. The Tower Venturi and Cooler Venturi are ducted to the cyclonic separator. The cyclonic separator contains a chevron-type mist eliminator to further reduce entrained scrubber liquors prior to exhaust to the atmosphere.

**Granular MAP/DAP Emission Sources & Associated Control Equipment**

Process Emission Source/Identifier*	Control Equipment
MAP/DAP Reactor	Tower Venturi ( <i>existing</i> ), cyclonic separator ( <i>existing</i> )
MAP/DAP Granulator	
Dryer	Dryer Cyclone, Tower Venturi ( <i>existing</i> ), cyclonic separator ( <i>existing</i> )
Screen Feed Elevator	
Product Screen A	
Product Screen B	
Product Bin	
Oversize Mill A	
Oversize Mill B	
Product Feeder	
Recycle Conveyor	
Recycle Elevator	
Product Transfer Conveyor	
Fines Reclaim Conveyor	covered conveyor
Fines Reclaim Hopper	located inside storage building
Cooler ( <i>existing</i> )	Cooler Cyclone, Cooler Venturi ( <i>existing</i> ), cyclonic separator ( <i>existing</i> )
Product Elevator ( <i>existing</i> )	enclosed
Storage Transfer Conveyor ( <i>existing</i> )	covered conveyor

**Notes:**

1. Emissions from the reactor and granulator are ducted to the R-G Ammonia Absorber. Its primary purpose is to recover ammonia, so it is not considered control equipment. However, it controls PM/PM<sub>10</sub> emissions and could be a source of fluoride emissions.
2. The Tower Venturi is labeled "large venturi" in the June 22, 1999 process flow diagram.
3. The Cooler Venturi is labeled "small venturi" in the June 22, 1999 process flow diagram.
4. All equipment is new unless otherwise noted.

\*from process flow diagram received June 22, 1999

**Rule Applicability Notes:**

- The granular DAP Method of Operation is subject to 40 CFR 60 Subpart V, *Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants* and Rule 62-296.403(f), *Phosphate Processing*.
- The granular MAP Method of Operation is subject to Rule 62-296.403(i), F.A.C., *Phosphate Processing*. This rule requires Best Available Control Technology (BACT) to control fluoride emissions during granular MAP production.

**PERMITTEE:**

U.S. Agri-Chemicals Corp.  
Ft. Meade Chemical Plant

Permit No.: 1050051-008-AC  
Project: Granular MAP/DAP Plant

- The facility has requested that this project be permitted as a non-PSD source. Therefore, this permit contains limitations to ensure that this modification does not exceed PSD significant increase levels.

**Location:** Ft. Meade Chemical Plant, State Road 630, 2 miles west of Ft. Meade, Polk County  
**UTM:** 17-416.2 km East     3068.7 km North  
**Latitude:** 27° 44' 40" North and **Longitude:** 81° 51' 08" West.  
**Facility ID No.:** 1050051

**Referenced Attachments**

Best Available Control Technology (BACT) Determination dated September 10, 1999  
Alternate Procedures and Requirements ASP No. 95-H-01

**Permit History:** No previous permits for the Granular MAP/DAP Plant. The Prilled MAP Plant is permitted under Permit No. PSD-222-FL.

The following conditions apply to the emissions unit listed below:

EU No.	EU Description
038	Granular MAP/DAP Plant
Notes: EU = Emissions Unit	
Please reference Permit No. and Emission Unit No. in all correspondence, test report submittals, etc.	

**Specific Conditions:**

1. A part of this permit is the attached 15 General Conditions and BACT determination dated September 10, 1999 [Rule 62-4.160, F.A.C.]
2. All applicable rules and design discharge limitations specified in the application must be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations.  
[Rule 62-210.300, F.A.C.]
3. Unless otherwise indicated, the construction of the Granular MAP/DAP Plant shall be in accordance with the capacities and specifications in the application or in updated submittals.  
[Rule 62-210.300, F.A.C.]
4. Pursuant to Rule 62-204.800, F.A.C., the permittee is subject to 40 CFR 60 Subpart V and the general provisions of 40 CFR 60 Subpart A, where applicable.

**PERMITTEE:**

U.S. Agri-Chemicals Corp.  
Ft. Meade Chemical Plant

Permit No.: 1050051-008-AC ~  
Project: Granular MAP/DAP Plant

Operation Limitations

5. The dryer shall be fired with natural gas only.  
[Rules 62-4.160(2), F.A.C. and 62-213.440(1), F.A.C.]

6. The Granular MAP/DAP Plant is allowed to operate continuously, i.e., 8,760 hours/year.  
[Rule 62-210.200(PTE), F.A.C.]

7. The P<sub>2</sub>O<sub>5</sub> process input rate shall not exceed 26.5 TPH (daily average basis) and 158, 920 tons per consecutive 12-month period.  
[Rule 62-210.200(PTE), F.A.C.]

8. The production rate of granular MAP/DAP shall not exceed 50 TPH (daily average basis) and 300,000 tons per consecutive 12-month period for the total of both products. If any prilled MAP is produced during the same 12-month period, the above annual limitation is presented by the following equation:

$$G = 300,000 - P/1.9$$

where:

G = granular MAP/DAP production limit, tons per consecutive 12-month period

P = production of prilled MAP, tons per consecutive 12-month period

[Rule 62-210.200(PTE), F.A.C.]

*Permitting Note: The production of prilled MAP is currently limited to 358,284 tons per consecutive 12-month period (i.e., 40.9 TPH x 8760 hrs/yr) in Permit No. PSD-FL-222. If the prilled MAP production limit is increased, the above condition must be modified to ensure that the potential fluoride emissions from the production of prilled MAP and granular MAP/DAP do not exceed 2.94 tons per consecutive 12-month period.*

9. The permittee shall not allow any person to circumvent any pollution control device nor allow the emissions of air pollutants without the applicable air pollution control device operating properly.  
[Rule 62-210.650, F.A.C.]

10. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any emissions unit whatsoever, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrially related activities such as loading, unloading, storing or handling without taking reasonable precautions to prevent such emissions.  
[Rule 62-296.320(4)(c)1, F.A.C.]

11. Reasonable precautions may include, but shall not be limited to the following:  
(a) Paving and maintenance of roads, parking areas and yards.

ATTACHMENT 4

REVISED MODELING INFORMATION

**Additional CLASS II Area Sulfur Dioxide Emitting Facilities**

SOURCE DESCRIPTION	F A A Q S						
	UTM COORDINATES (km)		Emissions (g/s)	Height (m)	Temp. (K)	Velocity (m/s)	Diameter (m)
	EAST	NORTH					
FPC BARTOW PEAKING 1-4	-73540	13670	192.89	13.70	772.0	22.30	5.30
FPC BARTOW PIPELINE HEATER (U04)	-73540	13670	1.80	9.10	541.0	5.20	0.90
FPC BARTOW UNIT 1 & 2 (U01&02)	-73540	13670	896.80	91.40	429.0	36.30	2.70
FPC BARTOW UNIT 3 (U03)	-73540	13670	710.54	91.40	408.0	34.40	3.40
FPC BAYBORO PEAKING 1-4	-77140	2370	197.80	12.20	755.0	6.40	7.00
FPC HIGGINS OTHER UNITS	-79440	29470	25.21	16.76	727.4	113.47	4.60
FPC HIGGINS UNIT 3	-79440	29470	129.90	53.00	423.0	7.30	3.80
FPC HIGGINS UNITS 1&2	-79440	29470	192.20	53.00	429.0	8.20	3.80



SO2 Modeling Results for USAC Chemicals Ft Mead

08/13/2000

Class 2 Area FAAQS Standard Analysis

Year	3-Hour High AT (X & Y)		3-Hour HSH AT (X & Y)		24-Hour High AT (X & Y)		24-Hour HSH AT (X & Y)		Annual High AT (X & Y)	
1987	551.25		448.84		191.19		191.18		28.97	
	-5638.16	2052.12	-5638.16	2,052.12	-3762.22	10,336.62	-3762.22	10,336.62	1378.73	-243.11
1988	523.85		475.74		183.91		168.82		25.92	
	-6000.00	10,392.30	-3762.22	10,336.62	-5500.00	9526.28	-5500.00	9526.28	-868.24	-4924.04
1989	432.26		426.08		237.94		200.61		38.84	
	-7517.54	2736.16	-5142.30	6,128.36	-5142.30	6128.36	-5500.00	9826.28	-8457.23	3078.18
1990	488.17		365.03		204.05		193.34		32.47	
	1772.65	-312.57	1049.52	-293.61	-3762.22	10,336.62	-3762.22	10,336.62	-1041.89	-5908.85
1991	473.91		443.02		199.73		177.73		35.61	
	-5500.00	9526.28	-1910.13	10,832.88	-3762.22	10336.62	0.00	-6000.00	1041.89	-5908.85
Maximum	551.25		475.74		237.94		200.61		38.84	
Standard			1300				260		60	

Class 2 Area FAAQS Standard Refined Analysis (24-HR)  
2000 Meter Square Grid of Receptors With 100 Meter Spacing

Year	3-Hour High AT (X & Y)		3-Hour HSH AT (X & Y)		24-Hour High AT (X & Y)		24-Hour HSH AT (X & Y)		Annual High AT (X & Y)	
1987	551.25		448.84		259.93		248.84		28.97	
	-5638.16	2052.12	-5638.16	2,052.12	-4662.22	10,336.62	-4762.22	10,336.62	1378.73	-243.11
1988	523.85		475.74		183.91		168.82		25.92	
	-6000.00	10,392.30	-3762.22	10,336.62	-5500.00	9526.28	-5500.00	9526.28	-868.24	-4924.04
1989	432.26		426.08		275.66		229.40		38.84	
	-7517.54	2736.16	-5142.30	6,128.36	-5400.00	10026.28	-5500.00	9526.28	-8457.23	3078.18
1990	488.17		365.03		294.51		243.87		32.47	
	1772.65	-312.57	1049.52	-293.61	-4762.22	10,736.62	-4762.22	10536.62	-1041.89	-5908.85
1991	473.91		443.02		276.31		234.77		35.61	
	-5500.00	9526.28	-1910.13	10,832.88	-4762.22	10836.62	-4762.22	10636.62	1041.89	-5908.85
Maximum	551.25		475.74		294.51		248.84		38.84	
Standard			1300				260		60	

ISC DESIGNATION	YEAR/MONTH DAY/HOUR	INVENTORY CONTRIBUTION	YEAR/MONTH DAY/HOUR	RECEPTOR EAST (M)	LOCATION WEST (M)	USAC CONTRIBUTION
H1H24001	87050124	259.92529	87040624;	-4762.22	10736.62	USAC = 0.00000 ***
TH240001	87040624	236.06146	87040624;	-4662.22	10736.62	USAC = 0.00000 ***
TH240002	87040624	231.31818	87040624;	-4762.22	10836.62	USAC = 0.00000 ***
TH240003	87040624	259.07553	87040624;	-4662.22	10836.62	USAC = 0.00000 ***
TH240004	87040624	256.30273	87040624;	-4562.22	10836.62	USAC = 0.00000 ***
TH240005	87040624	249.82761	87040624;	-4462.22	10836.62	USAC = 0.00000 ***
TH240006	87040624	241.45158	87040624;	-4362.22	10836.62	USAC = 0.00000 ***
TH240007	87040624	231.76837	87041024;	-4662.22	10536.62	USAC = 0.00000 ***
TH240008	87041024	230.80225	87041024;	-4562.22	10536.62	USAC = 0.00000 ***
TH240009	87041024	239.79283	87041024;	-4462.22	10536.62	USAC = 0.00000 ***
TH240010	87041024	240.86980	87041024;	-4362.22	10536.62	USAC = 0.00000 ***
TH240011	87041024	236.80843	87041024;	-4262.22	10536.62	USAC = 0.00000 ***
TH240012	87041024	229.79604	87041024;	-4762.22	10636.62	USAC = 0.00000 ***
TH240013	87041024	248.84459	87041024;	-4662.22	10636.62	USAC = 0.00000 ***
TH240014	87041024	248.38121	87041024;	-4562.22	10636.62	USAC = 0.00000 ***
TH240015	87041024	242.14792	87041024;	-4462.22	10636.62	USAC = 0.00000 ***
TH240016	87041024	232.74844	87042424;	-4762.22	10736.62	USAC = 0.00000 ***
TH240017	87042424	228.72713	87042424;	-4662.22	10736.62	USAC = 0.00000 ***
TH240018	87042424	229.14398	87042424;	-4762.22	10836.62	USAC = 0.00000 ***
TH240019	87042424	231.54150	87042424;	-4662.22	10836.62	USAC = 0.00000 ***
TH240020	87042424	233.74548	87042424;	-4562.22	10836.62	USAC = 0.00000 ***
TH240021	87042424	231.00334	87050124;	-4662.22	10636.62	USAC = 0.00000 ***
TH240022	87050124	256.08936	87050124;	-4762.22	10636.62	USAC = 0.00000 ***
TH240023	87050124	259.92529	87050124;	-4662.22	10636.62	USAC = 0.00000 ***
TH240024	87050124	257.50311	87050124;	-4562.22	10636.62	USAC = 0.00000 ***
TH240025	87050124	251.33461	87050124;	-4462.22	10636.62	USAC = 0.00000 ***
TH240026	87050124	243.19925	87050124;	-4362.22	10636.62	USAC = 0.00000 ***
TH240027	87050124	234.20825	87050124;	-4262.22	10636.62	USAC = 0.00000 ***
TH240028	87050124	244.61974	87050124;	-4762.22	10736.62	USAC = 0.00000 ***
TH240029	87050124	243.80696	87050124;	-4662.22	10736.62	USAC = 0.00000 ***
TH240030	87050124	238.67160	87050124;	-4562.22	10736.62	USAC = 0.00000 ***
TH240031	87050124	231.15424	87050124;	-4462.22	10736.62	USAC = 0.00000 ***
TH240032	87050824	229.14516	87050824;	-4762.22	10936.62	USAC = 0.00000 ***
TH240033	87050824	230.43066	87050824;	-4662.22	10936.62	USAC = 0.00000 ***
TH240034	87071424	236.16731	87071424;	-4362.22	10236.62	USAC = 0.00000 ***
TH240035	87071424	232.59927	87071424;	-4262.22	10236.62	USAC = 0.00000 ***
TH240036	87071424	239.29390	87071424;	-4662.22	10336.62	USAC = 0.00000 ***
TH240037	87071424	248.55380	87071424;	-4562.22	10336.62	USAC = 0.00000 ***
TH240038	87071424	241.68997	87071424;	-4462.22	10336.62	USAC = 0.00000 ***
TH240039	87071424	238.68286	87071424;	-4762.22	10436.62	USAC = 0.00000 ***
TH240040	87071424	231.40109	87071424;	-4662.22	10436.62	USAC = 0.00000 ***
TH240041	87091924	237.80191	87091924;	-4762.22	10636.62	USAC = 0.00000 ***
TH240042	87091924	238.82964	87091924;	-4662.22	10636.62	USAC = 0.00000 ***
TH240043	87091924	234.76062	87091924;	-4562.22	10636.62	USAC = 0.00000 ***
H1H24001	87050124	259.92529	87040624;	-4762.22	10736.62	USAC = 0.00000 ***
TH240001	87040624	236.06146	87040624;	-4662.22	10736.62	USAC = 0.00000 ***
TH240002	87040624	231.31818	87040624;	-4762.22	10836.62	USAC = 0.00000 ***
TH240003	87040624	259.07553	87040624;	-4662.22	10836.62	USAC = 0.00000 ***
TH240004	87040624	256.30273	87040624;	-4562.22	10836.62	USAC = 0.00000 ***
TH240005	87040624	249.82761	87040624;	-4462.22	10836.62	USAC = 0.00000 ***
TH240006	87040624	241.45158	87040624;	-4362.22	10836.62	USAC = 0.00000 ***
TH240007	87040624	231.76837	87041024;	-4662.22	10536.62	USAC = 0.00000 ***
TH240008	87041024	230.80225	87041024;	-4562.22	10536.62	USAC = 0.00000 ***
TH240009	87041024	239.79283	87041024;	-4462.22	10536.62	USAC = 0.00000 ***
TH240010	87041024	240.86980	87041024;	-4362.22	10536.62	USAC = 0.00000 ***
TH240011	87041024	236.80843	87041024;	-4262.22	10536.62	USAC = 0.00000 ***
TH240012	87041024	229.79604	87041024;	-4762.22	10636.62	USAC = 0.00000 ***
TH240013	87041024	248.84459	87041024;	-4662.22	10636.62	USAC = 0.00000 ***
TH240014	87041024	248.38121	87041024;	-4562.22	10636.62	USAC = 0.00000 ***
TH240015	87041024	242.14792	87041024;	-4462.22	10636.62	USAC = 0.00000 ***
TH240016	87041024	232.74844	87042424;	-4762.22	10736.62	USAC = 0.00000 ***
TH240017	87042424	228.72713	87042424;	-4662.22	10736.62	USAC = 0.00000 ***
TH240018	87042424	229.14398	87042424;	-4762.22	10836.62	USAC = 0.00000 ***
TH240019	87042424	231.54150	87042424;	-4662.22	10836.62	USAC = 0.00000 ***
TH240020	87042424	233.74548	87042424;	-4562.22	10836.62	USAC = 0.00000 ***
TH240021	87042424	231.00334	87050124;	-4662.22	10636.62	USAC = 0.00000 ***
TH240022	87050124	256.08936	87050124;	-4762.22	10636.62	USAC = 0.00000 ***
TH240023	87050124	259.92529	87050124;	-4662.22	10636.62	USAC = 0.00000 ***
TH240024	87050124	257.50311	87050124;	-4562.22	10636.62	USAC = 0.00000 ***
TH240025	87050124	251.33461	87050124;	-4462.22	10636.62	USAC = 0.00000 ***
TH240026	87050124	243.19925	87050124;	-4362.22	10636.62	USAC = 0.00000 ***
TH240027	87050124	234.20825	87050124;	-4262.22	10636.62	USAC = 0.00000 ***
TH240028	87050124	244.61974	87050124;	-4762.22	10736.62	USAC = 0.00000 ***
TH240029	87050124	243.80696	87050124;	-4662.22	10736.62	USAC = 0.00000 ***
TH240030	87050124	238.67160	87050124;	-4562.22	10736.62	USAC = 0.00000 ***
TH240031	87050124	231.15424	87050124;	-4462.22	10736.62	USAC = 0.00000 ***
TH240032	87050824	229.14516	87050824;	-4762.22	10936.62	USAC = 0.00000 ***
TH240033	87050824	230.43066	87050824;	-4662.22	10936.62	USAC = 0.00000 ***
TH240034	87071424	236.16731	87071424;	-4362.22	10236.62	USAC = 0.00000 ***

ISC DESIGNATION	YEAR/MONTH DAY/HOUR	INVENTORY CONTRIBUTION	YEAR/MONTH DAY/HOUR	RECEPTOR EAST (M)	LOCATION WEST (M)	USAC CONTRIBUTION
TH240035	87071424	232.59927	87071424;	-4262.22	10236.62	USAC = 0.00000 ***
TH240036	87071424	239.29390	87071424;	-4662.22	10336.62	USAC = 0.00000 ***
TH240037	87071424	248.55380	87071424;	-4562.22	10336.62	USAC = 0.00000 ***
TH240038	87071424	241.68997	87071424;	-4462.22	10336.62	USAC = 0.00000 ***
TH240039	87071424	238.68286	87071424;	-4762.22	10436.62	USAC = 0.00000 ***
TH240040	87071424	231.40109	87071424;	-4662.22	10436.62	USAC = 0.00000 ***
TH240041	87091924	237.80191	87091924;	-4762.22	10636.62	USAC = 0.00000 ***
TH240042	87091924	238.82964	87091924;	-4662.22	10636.62	USAC = 0.00000 ***
TH240043	87091924	234.76062	87091924;	-4562.22	10636.62	USAC = 0.00000 ***
H1H24001	89070424	275.65573	89030724;	-5500.00	8826.28	USAC = 0.00000 ***
TH240001	89030724	234.34224	89030724;	-5400.00	8826.28	USAC = 0.00000 ***
TH240002	89030724	245.30653	89030724;	-5300.00	8826.28	USAC = 0.00000 ***
TH240003	89030724	240.72571	89030724;	-5500.00	8926.28	USAC = 0.00000 ***
TH240004	89030724	231.16046	89030724;	-5400.00	8926.28	USAC = 0.00000 ***
TH240005	89030724	240.95070	89030724;	-5300.00	8926.28	USAC = 0.00000 ***
TH240006	89030724	233.66057	89030724;	-5400.00	9026.28	USAC = 0.00000 ***
TH240007	89030724	235.61511	89030724;	-5400.00	9126.28	USAC = 0.00000 ***
TH240008	89030724	229.21428	89040624;	-5500.00	9526.28	USAC = 0.00000 ***
TH240009	89040624	229.86299	89040624;	-5500.00	9626.28	USAC = 0.00000 ***
TH240010	89040624	237.23819	89040624;	-5500.00	9726.28	USAC = 0.00000 ***
TH240011	89040624	241.10989	89040624;	-5600.00	9826.28	USAC = 0.00000 ***
TH240012	89040624	230.73804	89040624;	-5500.00	9826.28	USAC = 0.00000 ***
TH240013	89040624	238.09233	89040624;	-5600.00	9926.28	USAC = 0.00000 ***
TH240014	89040624	230.72000	89050224;	-4900.00	9626.28	USAC = 0.00000 ***
TH240015	89050224	228.57281	89050224;	-5000.00	9726.28	USAC = 0.00000 ***
TH240016	89050224	238.55251	89050224;	-5100.00	9826.28	USAC = 0.00000 ***
TH240017	89050224	241.66270	89050224;	-5000.00	9826.28	USAC = 0.00000 ***
TH240018	89050224	236.79933	89050224;	-5200.00	9926.28	USAC = 0.00000 ***
TH240019	89050224	236.42010	89050224;	-5100.00	9926.28	USAC = 0.00000 ***
TH240020	89050224	250.22670	89050224;	-5200.00	10026.28	USAC = 0.00000 ***
TH240021	89050224	250.70393	89050224;	-5100.00	10026.28	USAC = 0.00000 ***
TH240022	89050224	229.36162	89050224;	-5300.00	10126.28	USAC = 0.00000 ***
TH240023	89050224	234.96173	89050224;	-5200.00	10126.28	USAC = 0.00000 ***
TH240024	89050224	238.05421	89050224;	-5300.00	10226.28	USAC = 0.00000 ***
TH240025	89050224	228.42218	89051124;	-5500.00	9826.28	USAC = 0.00000 ***
TH240026	89051124	229.39693	89051124;	-5500.00	9926.28	USAC = 0.00000 ***
TH240027	89051124	233.77882	89051124;	-5500.00	10026.28	USAC = 0.00000 ***
TH240028	89051124	230.39211	89070424;	-5400.00	10026.28	USAC = 0.00000 ***
TH240029	89070424	231.14812	89070424;	-5200.00	9526.28	USAC = 0.00000 ***
TH240030	89070424	243.34947	89070424;	-5300.00	9626.28	USAC = 0.00000 ***
TH240031	89070424	235.18074	89070424;	-5200.00	9626.28	USAC = 0.00000 ***
TH240032	89070424	255.92760	89070424;	-5300.00	9726.28	USAC = 0.00000 ***
TH240033	89070424	233.65956	89070424;	-5200.00	9726.28	USAC = 0.00000 ***
TH240034	89070424	247.22032	89070424;	-5400.00	9826.28	USAC = 0.00000 ***
TH240035	89070424	261.93253	89070424;	-5300.00	9826.28	USAC = 0.00000 ***
TH240036	89070424	266.68695	89070424;	-5400.00	9926.28	USAC = 0.00000 ***
TH240037	89070424	259.25580	89070424;	-5300.00	9926.28	USAC = 0.00000 ***
TH240038	89070424	275.65573	89070424;	-5400.00	10026.28	USAC = 0.00000 ***
TH240039	89070424	247.67610	89070424;	-5300.00	10026.28	USAC = 0.00000 ***
TH240040	89070424	267.46301	89070424;	-5400.00	10126.28	USAC = 0.00000 ***
TH240041	89070424	229.51810	89070424;	-5500.00	10226.28	USAC = 0.00000 ***
TH240042	89070424	234.85187	89070424;	-5400.00	10226.28	USAC = 0.00000 ***
TH240043	89081724	244.46892	89081724;	-4900.00	10726.28	USAC = 0.00000 ***
TH240044	89081724	251.71498	89081724;	-4800.00	10726.28	USAC = 0.00000 ***
TH240045	89081724	251.09904	89081724;	-4700.00	10726.28	USAC = 0.00000 ***
TH240046	89081724	245.41257	89081724;	-4600.00	10726.28	USAC = 0.00000 ***
TH240047	89081724	236.69427	89081724;	-4500.00	10726.28	USAC = 0.00000 ***
TH240048	89081724	237.13135	89081724;	-4900.00	10826.28	USAC = 0.00000 ***
TH240049	89081724	246.03874	89081724;	-4800.00	10826.28	USAC = 0.00000 ***
TH240050	89081724	247.98196	89081724;	-4700.00	10826.28	USAC = 0.00000 ***
TH240051	89081724	245.16888	89081724;	-4600.00	10826.28	USAC = 0.00000 ***
TH240052	89081724	238.94221	89081724;	-4500.00	10826.28	USAC = 0.00000 ***
TH240053	89091824	231.30109	89091824;	-5900.00	9726.28	USAC = 0.00000 ***
TH240054	89091824	249.03174	89091824;	-5900.00	9826.28	USAC = 0.00000 ***
TH240055	89091824	249.66095	89091824;	-5900.00	9926.28	USAC = 0.00000 ***
TH240056	89091824	228.95888	89091824;	-5800.00	10026.28	USAC = 0.00000 ***
TH240057	89091824	238.36450	89091824;	-5800.00	10126.28	USAC = 0.00000 ***
H1H24001	89030724	256.56665	89030724;	-5142.30	7128.36	USAC = 0.00000 ***
TH240001	89030724	228.25398	89030724;	-4942.30	5428.36	USAC = 0.00000 ***
TH240002	89030724	228.42493	89030724;	-5042.30	5528.36	USAC = 0.00000 ***
TH240003	89030724	230.06561	89030724;	-4942.30	5528.36	USAC = 0.00000 ***
TH240004	89030724	228.85469	89030724;	-4842.30	5528.36	USAC = 0.00000 ***
TH240005	89030724	228.03688	89030724;	-5142.30	5628.36	USAC = 0.00000 ***
TH240006	89030724	230.41211	89030724;	-5042.30	5628.36	USAC = 0.00000 ***
TH240007	89030724	231.83620	89030724;	-4942.30	5628.36	USAC = 0.00000 ***
TH240008	89030724	230.02275	89030724;	-4842.30	5628.36	USAC = 0.00000 ***
TH240009	89030724	228.21474	89030724;	-5242.30	5728.36	USAC = 0.00000 ***
TH240010	89030724	229.95647	89030724;	-5142.30	5728.36	USAC = 0.00000 ***

ISC DESIGNATION	YEAR/MONTH DAY/HOUR	INVENTORY CONTRIBUTION	YEAR/MONTH DAY/HOUR	RECEPTOR LOCATION EAST (M)	WEST (M)	USAC CONTRIBUTION
TH240011	89030724	232.40747	89030724;	-5042.30	5728.36	USAC = 0.00000 ***
TH240012	89030724	233.55202	89030724;	-4942.30	5728.36	USAC = 0.00000 ***
TH240013	89030724	231.06087	89030724;	-4842.30	5728.36	USAC = 0.00000 ***
TH240014	89030724	228.98628	89030724;	-5342.30	5828.36	USAC = 0.00000 ***
TH240015	89030724	229.93365	89030724;	-5242.30	5828.36	USAC = 0.00000 ***
TH240016	89030724	231.91011	89030724;	-5142.30	5828.36	USAC = 0.00000 ***
TH240017	89030724	234.40208	89030724;	-5042.30	5828.36	USAC = 0.00000 ***
TH240018	89030724	235.19710	89030724;	-4942.30	5828.36	USAC = 0.00000 ***
TH240019	89030724	231.95245	89030724;	-4842.30	5828.36	USAC = 0.00000 ***
TH240020	89030724	228.84869	89030724;	-5442.30	5928.36	USAC = 0.00000 ***
TH240021	89030724	230.48524	89030724;	-5342.30	5928.36	USAC = 0.00000 ***
TH240022	89030724	231.68715	89030724;	-5242.30	5928.36	USAC = 0.00000 ***
TH240023	89030724	233.89433	89030724;	-5142.30	5928.36	USAC = 0.00000 ***
TH240024	89030724	236.38586	89030724;	-5042.30	5928.36	USAC = 0.00000 ***
TH240025	89030724	236.75446	89030724;	-4942.30	5928.36	USAC = 0.00000 ***
TH240026	89030724	232.67824	89030724;	-4842.30	5928.36	USAC = 0.00000 ***
TH240027	89030724	230.12415	89030724;	-5442.30	6028.36	USAC = 0.00000 ***
TH240028	89030724	232.00623	89030724;	-5342.30	6028.36	USAC = 0.00000 ***
TH240029	89030724	233.47511	89030724;	-5242.30	6028.36	USAC = 0.00000 ***
TH240030	89030724	235.90483	89030724;	-5142.30	6028.36	USAC = 0.00000 ***
TH240031	89030724	238.34679	89030724;	-5042.30	6028.36	USAC = 0.00000 ***
TH240032	89030724	238.20525	89030724;	-4942.30	6028.36	USAC = 0.00000 ***
TH240033	89030724	233.21910	89030724;	-4842.30	6028.36	USAC = 0.00000 ***
TH240034	89030724	231.40611	89030724;	-5442.30	6128.36	USAC = 0.00000 ***
TH240035	89030724	233.54955	89030724;	-5342.30	6128.36	USAC = 0.00000 ***
TH240036	89030724	235.29665	89030724;	-5242.30	6128.36	USAC = 0.00000 ***
TH240037	89030724	237.93602	89030724;	-5142.30	6128.36	USAC = 0.00000 ***
TH240038	89030724	240.27046	89030724;	-5042.30	6128.36	USAC = 0.00000 ***
TH240039	89030724	239.52818	89030724;	-4942.30	6128.36	USAC = 0.00000 ***
TH240040	89030724	233.55591	89030724;	-4842.30	6128.36	USAC = 0.00000 ***
TH240041	89030724	232.69403	89030724;	-5442.30	6228.36	USAC = 0.00000 ***
TH240042	89030724	235.11426	89030724;	-5342.30	6228.36	USAC = 0.00000 ***
TH240043	89030724	237.14998	89030724;	-5242.30	6228.36	USAC = 0.00000 ***
TH240044	89030724	239.98116	89030724;	-5142.30	6228.36	USAC = 0.00000 ***
TH240045	89030724	242.14075	89030724;	-5042.30	6228.36	USAC = 0.00000 ***
TH240046	89030724	240.70122	89030724;	-4942.30	6228.36	USAC = 0.00000 ***
TH240047	89030724	233.66901	89030724;	-4842.30	6228.36	USAC = 0.00000 ***
TH240048	89030724	228.16272	89030724;	-5542.30	6328.36	USAC = 0.00000 ***
TH240049	89030724	233.98671	89030724;	-5442.30	6328.36	USAC = 0.00000 ***
TH240050	89030724	236.69994	89030724;	-5342.30	6328.36	USAC = 0.00000 ***
TH240051	89030724	239.03313	89030724;	-5242.30	6328.36	USAC = 0.00000 ***
TH240052	89030724	242.03117	89030724;	-5142.30	6328.36	USAC = 0.00000 ***
TH240053	89030724	243.93880	89030724;	-5042.30	6328.36	USAC = 0.00000 ***
TH240054	89030724	241.70027	89030724;	-4942.30	6328.36	USAC = 0.00000 ***
TH240055	89030724	233.53877	89030724;	-4842.30	6328.36	USAC = 0.00000 ***
TH240056	89030724	229.06380	89030724;	-5542.30	6428.36	USAC = 0.00000 ***
TH240057	89030724	235.28302	89030724;	-5442.30	6428.36	USAC = 0.00000 ***
TH240058	89030724	238.30568	89030724;	-5342.30	6428.36	USAC = 0.00000 ***
TH240059	89030724	240.94298	89030724;	-5242.30	6428.36	USAC = 0.00000 ***
TH240060	89030724	244.07562	89030724;	-5142.30	6428.36	USAC = 0.00000 ***
TH240061	89030724	245.64299	89030724;	-5042.30	6428.36	USAC = 0.00000 ***
TH240062	89030724	242.49916	89030724;	-4942.30	6428.36	USAC = 0.00000 ***
TH240063	89030724	233.14638	89030724;	-4842.30	6428.36	USAC = 0.00000 ***
TH240064	89030724	229.94603	89030724;	-5542.30	6528.36	USAC = 0.00000 ***
TH240065	89030724	236.58105	89030724;	-5442.30	6528.36	USAC = 0.00000 ***
TH240066	89030724	239.92998	89030724;	-5342.30	6528.36	USAC = 0.00000 ***
TH240067	89030724	242.87538	89030724;	-5242.30	6528.36	USAC = 0.00000 ***
TH240068	89030724	246.10078	89030724;	-5142.30	6528.36	USAC = 0.00000 ***
TH240069	89030724	247.22906	89030724;	-5042.30	6528.36	USAC = 0.00000 ***
TH240070	89030724	243.07155	89030724;	-4942.30	6528.36	USAC = 0.00000 ***
TH240071	89030724	232.47377	89030724;	-4842.30	6528.36	USAC = 0.00000 ***
TH240072	89030724	230.80672	89030724;	-5542.30	6628.36	USAC = 0.00000 ***
TH240073	89030724	237.87891	89030724;	-5442.30	6628.36	USAC = 0.00000 ***
TH240074	89030724	241.57051	89030724;	-5342.30	6628.36	USAC = 0.00000 ***
TH240075	89030724	244.82489	89030724;	-5242.30	6628.36	USAC = 0.00000 ***
TH240076	89030724	248.09142	89030724;	-5142.30	6628.36	USAC = 0.00000 ***
TH240077	89030724	248.66969	89030724;	-5042.30	6628.36	USAC = 0.00000 ***
TH240078	89030724	243.38957	89030724;	-4942.30	6628.36	USAC = 0.00000 ***
TH240079	89030724	231.50313	89030724;	-4842.30	6628.36	USAC = 0.00000 ***
TH240080	89030724	231.63800	89030724;	-5542.30	6728.36	USAC = 0.00000 ***
TH240081	89030724	239.16846	89030724;	-5442.30	6728.36	USAC = 0.00000 ***
TH240082	89030724	243.22002	89030724;	-5342.30	6728.36	USAC = 0.00000 ***
TH240083	89030724	246.78113	89030724;	-5242.30	6728.36	USAC = 0.00000 ***
TH240084	89030724	250.02553	89030724;	-5142.30	6728.36	USAC = 0.00000 ***
TH240085	89030724	249.93309	89030724;	-5042.30	6728.36	USAC = 0.00000 ***
TH240086	89030724	243.42474	89030724;	-4942.30	6728.36	USAC = 0.00000 ***
TH240087	89030724	230.21840	89030724;	-4842.30	6728.36	USAC = 0.00000 ***
TH240088	89030724	232.40273	89030724;	-5542.30	6828.36	USAC = 0.00000 ***
TH240089	89030724	240.42024	89030724;	-5442.30	6828.36	USAC = 0.00000 ***
TH240090	89030724	244.85411	89030724;	-5342.30	6828.36	USAC = 0.00000 ***
TH240091	89030724	248.71248	89030724;	-5242.30	6828.36	USAC = 0.00000 ***
TH240092	89030724	251.85699	89030724;	-5142.30	6828.36	USAC = 0.00000 ***

ISC DESIGNATION	YEAR/MONTH DAY/HOUR	INVENTORY CONTRIBUTION	YEAR/MONTH DAY/HOUR	RECEPTOR LOCATION EAST (M)	WEST (M)	USAC CONTRIBUTION
TH240093	89030724	250.96257	89030724;	-5042.30	6828.36	USAC = 0.00000 ***
TH240094	89030724	243.12834	89030724;	-4942.30	6828.36	USAC = 0.00000 ***
TH240095	89030724	228.59027	89030724;	-4842.30	6828.36	USAC = 0.00000 ***
TH240096	89030724	233.13377	89030724;	-5542.30	6928.36	USAC = 0.00000 ***
TH240097	89030724	241.66167	89030724;	-5442.30	6928.36	USAC = 0.00000 ***
TH240098	89030724	246.49188	89030724;	-5342.30	6928.36	USAC = 0.00000 ***
TH240099	89030724	250.62830	89030724;	-5242.30	6928.36	USAC = 0.00000 ***
TH240100	89030724	253.57603	89030724;	-5142.30	6928.36	USAC = 0.00000 ***
TH240101	89030724	251.73537	89030724;	-5042.30	6928.36	USAC = 0.00000 ***
TH240102	89030724	242.48170	89030724;	-4942.30	6928.36	USAC = 0.00000 ***
TH240103	89030724	233.82704	89030724;	-5542.30	7028.36	USAC = 0.00000 ***
TH240104	89030724	242.88823	89030724;	-5442.30	7028.36	USAC = 0.00000 ***
TH240105	89030724	248.12782	89030724;	-5342.30	7028.36	USAC = 0.00000 ***
TH240106	89030724	252.51544	89030724;	-5242.30	7028.36	USAC = 0.00000 ***
TH240107	89030724	255.15764	89030724;	-5142.30	7028.36	USAC = 0.00000 ***
TH240108	89030724	252.22383	89030724;	-5042.30	7028.36	USAC = 0.00000 ***
TH240109	89030724	241.47168	89030724;	-4942.30	7028.36	USAC = 0.00000 ***
TH240110	89030724	234.47795	89030724;	-5542.30	7128.36	USAC = 0.00000 ***
TH240111	89030724	244.09502	89030724;	-5442.30	7128.36	USAC = 0.00000 ***
TH240112	89030724	249.75470	89030724;	-5342.30	7128.36	USAC = 0.00000 ***
TH240113	89030724	254.35602	89030724;	-5242.30	7128.36	USAC = 0.00000 ***
TH240114	89030724	256.56665	89030724;	-5142.30	7128.36	USAC = 0.00000 ***
TH240115	89030724	252.38916	89030724;	-5042.30	7128.36	USAC = 0.00000 ***
TH240116	89030724	240.07324	89030724;	-4942.30	7128.36	USAC = 0.00000 ***
H1H24001	90062024	294.50577	90042224;	-4762.22	10736.62	USAC = 0.00000 ***
TH240001	90042224	236.38934	90042224;	-4662.22	10736.62	USAC = 0.00000 ***
TH240002	90042224	235.11440	90042224;	-4562.22	10736.62	USAC = 0.00000 ***
TH240003	90042224	230.44542	90042224;	-4762.22	10836.62	USAC = 0.00000 ***
TH240004	90042224	233.24016	90042224;	-4662.22	10836.62	USAC = 0.00000 ***
TH240005	90042224	236.17833	90042224;	-4562.22	10836.62	USAC = 0.00000 ***
TH240006	90042224	233.79259	90042224;	-4462.22	10836.62	USAC = 0.00000 ***
TH240007	90042224	228.08734	90060524;	-4362.22	10436.62	USAC = 0.00000 ***
TH240008	90060524	229.00047	90060524;	-4762.22	10536.62	USAC = 0.00000 ***
TH240009	90060524	230.73271	90060524;	-4662.22	10536.62	USAC = 0.00000 ***
TH240010	90060524	236.25848	90060524;	-4562.22	10536.62	USAC = 0.00000 ***
TH240011	90060524	234.54065	90060524;	-4462.22	10536.62	USAC = 0.00000 ***
TH240012	90060524	228.77940	90060624;	-4662.22	10436.62	USAC = 0.00000 ***
TH240013	90060624	232.11687	90060624;	-4562.22	10436.62	USAC = 0.00000 ***
TH240014	90060624	231.86404	90060624;	-4762.22	10536.62	USAC = 0.00000 ***
TH240015	90060624	242.70345	90060624;	-4662.22	10536.62	USAC = 0.00000 ***
TH240016	90060624	239.77791	90060624;	-4562.22	10536.62	USAC = 0.00000 ***
TH240017	90060624	230.30151	90062024;	-4762.22	10736.62	USAC = 0.00000 ***
TH240018	90062024	294.50577	90062024;	-4762.22	10736.62	USAC = 0.00000 ***
TH240019	90062024	285.96152	90062024;	-4662.22	10736.62	USAC = 0.00000 ***
TH240020	90062024	273.65533	90062024;	-4562.22	10736.62	USAC = 0.00000 ***
TH240021	90062024	259.83185	90062024;	-4462.22	10736.62	USAC = 0.00000 ***
TH240022	90062024	245.87526	90062024;	-4362.22	10736.62	USAC = 0.00000 ***
TH240023	90062024	232.51817	90062024;	-4262.22	10736.62	USAC = 0.00000 ***
TH240024	90062024	293.15964	90062024;	-4762.22	10836.62	USAC = 0.00000 ***
TH240025	90062024	293.07089	90062024;	-4662.22	10836.62	USAC = 0.00000 ***
TH240026	90062024	287.11047	90062024;	-4562.22	10836.62	USAC = 0.00000 ***
TH240027	90062024	277.65732	90062024;	-4462.22	10836.62	USAC = 0.00000 ***
TH240028	90062024	266.45511	90062024;	-4362.22	10836.62	USAC = 0.00000 ***
TH240029	90062024	254.61609	90062024;	-4262.22	10836.62	USAC = 0.00000 ***
TH240030	90062024	242.82771	90062024;	-4162.22	10836.62	USAC = 0.00000 ***
TH240031	90062024	231.49229	90062024;	-4062.22	10836.62	USAC = 0.00000 ***
TH240032	90070124	232.68758	90070124;	-4562.22	10636.62	USAC = 0.00000 ***
TH240033	90070124	234.97150	90070124;	-4462.22	10636.62	USAC = 0.00000 ***
TH240034	90070124	233.88910	90070124;	-4362.22	10636.62	USAC = 0.00000 ***
TH240035	90070124	230.51405	90070124;	-4262.22	10636.62	USAC = 0.00000 ***
TH240036	90070124	230.91751	90070124;	-4762.22	10736.62	USAC = 0.00000 ***
TH240037	90070124	233.55182	90070124;	-4662.22	10736.62	USAC = 0.00000 ***
TH240038	90070124	232.14261	90070124;	-4562.22	10736.62	USAC = 0.00000 ***
TH240039	90080124	234.35495	90080124;	-4662.22	10436.62	USAC = 0.00000 ***
TH240040	90080124	240.84001	90080124;	-4562.22	10436.62	USAC = 0.00000 ***
TH240041	90080124	239.08957	90080124;	-4462.22	10436.62	USAC = 0.00000 ***
TH240042	90080124	231.82436	90080124;	-4362.22	10436.62	USAC = 0.00000 ***
TH240043	90080124	248.92871	90080124;	-4762.22	10536.62	USAC = 0.00000 ***
TH240044	90080124	242.67546	90080124;	-4662.22	10536.62	USAC = 0.00000 ***
TH240045	90080124	231.69330	90080124;	-4562.22	10536.62	USAC = 0.00000 ***
TH240046	90091524	243.87381	90091524;	-4762.22	10536.62	USAC = 0.00000 ***
TH240047	90091524	245.44299	90091524;	-4662.22	10536.62	USAC = 0.00000 ***
TH240048	90091524	237.14084	90091524;	-4562.22	10536.62	USAC = 0.00000 ***
TH240049	90112324	229.58298	90112324;	-4762.22	10736.62	USAC = 0.60496 ***
TH240050	90112324	229.48280	90112324;	-4662.22	10736.62	USAC = 0.46922 ***
H1H24001	90062024	294.50577	90042224;	-4762.22	10736.62	USAC = 0.00000 ***
TH240001	90042224	236.38934	90042224;	-4662.22	10736.62	USAC = 0.00000 ***
TH240002	90042224	235.11440	90042224;	-4562.22	10736.62	USAC = 0.00000 ***
TH240003	90042224	230.44542	90042224;	-4762.22	10836.62	USAC = 0.00000 ***
TH240004	90042224	233.24016	90042224;	-4662.22	10836.62	USAC = 0.00000 ***

ISC DESIGNATION	YEAR/MONTH DAY/HOUR	INVENTORY CONTRIBUTION	YEAR/MONTH DAY/HOUR	RECEPTOR LOCATION EAST (M)	RECEPTOR LOCATION WEST (M)	USAC CONTRIBUTION
TH240005	90042224	236.17833	90042224;	-4562.22	10836.62	USAC = 0.00000 ***
TH240006	90042224	233.79259	90042224;	-4462.22	10836.62	USAC = 0.00000 ***
TH240007	90042224	228.08734	90060524;	-4362.22	10436.62	USAC = 0.00000 ***
TH240008	90060524	229.00047	90060524;	-4762.22	10536.62	USAC = 0.00000 ***
TH240009	90060524	230.73271	90060524;	-4662.22	10536.62	USAC = 0.00000 ***
TH240010	90060524	236.25848	90060524;	-4562.22	10536.62	USAC = 0.00000 ***
TH240011	90060524	234.54065	90060524;	-4462.22	10536.62	USAC = 0.00000 ***
TH240012	90060524	228.77940	90060624;	-4662.22	10436.62	USAC = 0.00000 ***
TH240013	90060624	232.11687	90060624;	-4562.22	10436.62	USAC = 0.00000 ***
TH240014	90060624	231.86404	90060624;	-4762.22	10536.62	USAC = 0.00000 ***
TH240015	90060624	242.70345	90060624;	-4662.22	10536.62	USAC = 0.00000 ***
TH240016	90060624	239.77791	90060624;	-4562.22	10536.62	USAC = 0.00000 ***
TH240017	90060624	230.30151	90062024;	-4762.22	10736.62	USAC = 0.00000 ***
TH240018	90062024	294.50577	90062024;	-4762.22	10736.62	USAC = 0.00000 ***
TH240019	90062024	285.96152	90062024;	-4662.22	10736.62	USAC = 0.00000 ***
TH240020	90062024	273.65533	90062024;	-4562.22	10736.62	USAC = 0.00000 ***
TH240021	90062024	259.83185	90062024;	-4462.22	10736.62	USAC = 0.00000 ***
TH240022	90062024	245.87526	90062024;	-4362.22	10736.62	USAC = 0.00000 ***
TH240023	90062024	232.51817	90062024;	-4262.22	10736.62	USAC = 0.00000 ***
TH240024	90062024	293.15964	90062024;	-4762.22	10836.62	USAC = 0.00000 ***
TH240025	90062024	293.07089	90062024;	-4662.22	10836.62	USAC = 0.00000 ***
TH240026	90062024	287.11047	90062024;	-4562.22	10836.62	USAC = 0.00000 ***
TH240027	90062024	277.65732	90062024;	-4462.22	10836.62	USAC = 0.00000 ***
TH240028	90062024	266.45511	90062024;	-4362.22	10836.62	USAC = 0.00000 ***
TH240029	90062024	254.61609	90062024;	-4262.22	10836.62	USAC = 0.00000 ***
TH240030	90062024	242.82771	90062024;	-4162.22	10836.62	USAC = 0.00000 ***
TH240031	90062024	231.49229	90062024;	-4062.22	10836.62	USAC = 0.00000 ***
TH240032	90070124	232.68758	90070124;	-4562.22	10636.62	USAC = 0.00000 ***
TH240033	90070124	234.97150	90070124;	-4462.22	10636.62	USAC = 0.00000 ***
TH240034	90070124	233.88910	90070124;	-4362.22	10636.62	USAC = 0.00000 ***
TH240035	90070124	230.51405	90070124;	-4262.22	10636.62	USAC = 0.00000 ***
TH240036	90070124	230.91751	90070124;	-4762.22	10736.62	USAC = 0.00000 ***
TH240037	90070124	233.55182	90070124;	-4662.22	10736.62	USAC = 0.00000 ***
TH240038	90070124	232.14261	90070124;	-4562.22	10736.62	USAC = 0.00000 ***
TH240039	90080124	234.35495	90080124;	-4662.22	10436.62	USAC = 0.00000 ***
TH240040	90080124	240.84001	90080124;	-4562.22	10436.62	USAC = 0.00000 ***
TH240041	90080124	239.08957	90080124;	-4462.22	10436.62	USAC = 0.00000 ***
TH240042	90080124	231.82436	90080124;	-4362.22	10436.62	USAC = 0.00000 ***
TH240043	90080124	248.92871	90080124;	-4762.22	10536.62	USAC = 0.00000 ***
TH240044	90080124	242.67546	90080124;	-4662.22	10536.62	USAC = 0.00000 ***
TH240045	90080124	231.69330	90080124;	-4562.22	10536.62	USAC = 0.00000 ***
TH240046	90091524	243.87381	90091524;	-4762.22	10536.62	USAC = 0.00000 ***
TH240047	90091524	245.44299	90091524;	-4662.22	10536.62	USAC = 0.00000 ***
TH240048	90091524	237.14084	90091524;	-4562.22	10536.62	USAC = 0.00000 ***
TH240049	90112324	229.58298	90112324;	-4762.22	10736.62	USAC = 0.60496 ***
TH240050	90112324	229.48280	90112324;	-4662.22	10736.62	USAC = 0.46922 ***
H1H24001	91051424	276.30640	91051424;	-4762.22	10836.62	USAC = 0.00000 ***
TH240001	91051424	239.09563	91051424;	-4762.22	10736.62	USAC = 0.00000 ***
TH240002	91051424	231.50995	91051424;	-4662.22	10736.62	USAC = 0.00000 ***
TH240003	91051424	276.30640	91051424;	-4762.22	10836.62	USAC = 0.00000 ***
TH240004	91051424	273.27130	91051424;	-4662.22	10836.62	USAC = 0.00000 ***
TH240005	91051424	264.86230	91051424;	-4562.22	10836.62	USAC = 0.00000 ***
TH240006	91051424	253.39287	91051424;	-4462.22	10836.62	USAC = 0.00000 ***
TH240007	91051424	240.56839	91051424;	-4362.22	10836.62	USAC = 0.00000 ***
TH240008	91051424	234.02809	91051424;	-4562.22	10936.62	USAC = 0.00000 ***
TH240009	91051424	235.47285	91051424;	-4462.22	10936.62	USAC = 0.00000 ***
TH240010	91051424	232.91360	91051424;	-4362.22	10936.62	USAC = 0.00000 ***
TH240011	91060124	229.60539	91060124;	-4662.22	10736.62	USAC = 0.42341 ***
TH240012	91060124	230.03377	91060124;	-4562.22	10736.62	USAC = 0.39517 ***
TH240013	91060224	234.50822	91060224;	-4562.22	10536.62	USAC = 0.00000 ***
TH240014	91060224	235.46602	91060224;	-4462.22	10536.62	USAC = 0.00000 ***
TH240015	91060224	231.66626	91060224;	-4362.22	10536.62	USAC = 0.00000 ***
TH240016	91060224	269.51224	91060224;	-4762.22	10636.62	USAC = 0.00000 ***
TH240017	91060224	272.40128	91060224;	-4662.22	10636.62	USAC = 0.00000 ***
TH240018	91060224	268.19040	91060224;	-4562.22	10636.62	USAC = 0.00000 ***
TH240019	91060224	259.67877	91060224;	-4462.22	10636.62	USAC = 0.00000 ***
TH240020	91060224	249.02119	91060224;	-4362.22	10636.62	USAC = 0.00000 ***
TH240021	91060224	237.52153	91060224;	-4262.22	10636.62	USAC = 0.00000 ***
TH240022	91060224	234.46086	91060224;	-4762.22	10736.62	USAC = 0.00000 ***
TH240023	91060224	235.31750	91060224;	-4662.22	10736.62	USAC = 0.00000 ***
TH240024	91060224	231.40244	91060224;	-4562.22	10736.62	USAC = 0.00000 ***
TH240025	91070724	234.17247	91070724;	-4762.22	10836.62	USAC = 0.00016 ***
TH240026	91071024	234.77112	91071024;	-4762.22	10636.62	USAC = 0.56843 ***
TH240027	91071024	230.25751	91071024;	-4662.22	10636.62	USAC = 0.63350 ***
TH240028	91080924	235.81720	91080924;	-4762.22	10436.62	USAC = 0.00000 ***

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

AQS-INV	EXE	493,678	08-10-00	SO2 FAAQS STANDARD ANALYSIS
GRID	EXE	221,053	08-14-00	REFINED FAAQS STANDARD ANALYSIS
EVNT-IO	EXE	75,262	08-10-00	CULPABILITY ANALYSIS
CULPB	TXT	38,504	08-10-00	CULPABILITY ANALYSIS SUMMARY
README	TXT	7,131	08-14-00	THIS FILE

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

AQS-INV	EXE	493,678	08-10-00	SO2 FAAQS STANDARD ANALYSIS
GRID	EXE	197,933	08-10-00	REFINED FAAQS STANDARD ANALYSIS
EVNT-IO	EXE	75,262	08-10-00	CULPABILITY ANALYSIS

TO UNARCHIVE THESE FILES COPY THEM TO A HARD DISK DRIVE AND TYPE THE FILE NAME.  
FOR EXAMPLE TO UNARCHIVE THE SO2 FAAQS ISCST3 OUTPUT FILES, TYPE:

AQS-INV  
AND PRESS ENTER.

THE FILES WILL AUTOMATICALLY UNARCHIVE TO THE HARD DISK DRIVE.  
THESE ARCHIVED FILES CONTAIN THE MODELING AND ANALYSIS FILES IN ASCII FORMAT  
DESCRIBED AS FOLLOWS:

THE FILE AQS-INV.EXE CONTAINS A REVISED FAAQS STANDARD ANALYSIS:

AQS87-3	OUT	268,041	07-31-00	3-HOUR	FAAQS STANDARD FOR 1987
AQS87-24	OUT	284,534	07-31-00	24-HOUR	FAAQS STANDARD FOR 1987
AQS87-AN	OUT	216,053	07-31-00	ANNUAL	FAAQS STANDARD FOR 1987
AQS88-3	OUT	273,402	07-31-00	3-HOUR	FAAQS STANDARD FOR 1988
AQS88-24	OUT	284,534	07-31-00	24-HOUR	FAAQS STANDARD FOR 1988
AQS88-AN	OUT	216,545	07-31-00	ANNUAL	FAAQS STANDARD FOR 1988
AQS89-3	OUT	268,041	07-31-00	3-HOUR	FAAQS STANDARD FOR 1989
AQS89-24	OUT	306,658	07-31-00	24-HOUR	FAAQS STANDARD FOR 1989
AQS89-AN	OUT	218,513	07-31-00	ANNUAL	FAAQS STANDARD FOR 1989
AQS90-3	OUT	269,828	07-31-00	3-HOUR	FAAQS STANDARD FOR 1990
AQS90-24	OUT	273,402	07-31-00	24-HOUR	FAAQS STANDARD FOR 1990
AQS90-AN	OUT	217,037	08-01-00	ANNUAL	FAAQS STANDARD FOR 1990
AQS91-3	OUT	273,402	07-31-00	3-HOUR	FAAQS STANDARD FOR 1991
AQS91-24	OUT	282,747	07-31-00	24-HOUR	FAAQS STANDARD FOR 1991
AQS91-AN	OUT	217,529	07-31-00	ANNUAL	FAAQS STANDARD FOR 1991
C2S02-87	OUT	282,909	04-28-00	3-HOUR	FAAQS STANDARD FOR 1987
C2S02-88	OUT	282,909	04-28-00	24-HOUR	FAAQS STANDARD FOR 1987
C2S02-89	OUT	296,995	04-28-00	ANNUAL	FAAQS STANDARD FOR 1987

RECEPTOR GRIDS OF 2 KM IN WIDTH AND WITH 100 METER SPACING WERE PLACED CENTERED AT THE POLAR MOST EXPOSED INDIVIDUAL (MEI) RECEPTORS. THESE ANALYSIS WERE PERFORMED ON THE 24-HOUR AVERAGING PERIOD FOR THE FOLLOWING MEI LOCATIONS

1987	HIGH	HIGH-SECOND-HIGH (H2H)
1989	HIGH	HIGH-SECOND-HIGH
1990	HIGH	HIGH-SECOND-HIGH
1991	HIGH	

A THRESHOLD VALUE WAS REQUESTED FROM THE PROCESSOR TO FLAG ALL 24-HOUR CONCENTRATIONS OVER 228 UG/M<sup>3</sup> OR:

260 STANDARD - 32 BACKGROUND = 228 THRESHOLD

THE PROCESSOR RETURNED ALL IMPACT LOCATION AND OCCURRENCES OVER THE THRESHOLD AND CONSTRUCTS A CORRESPONDING EVENT FILE FOR THOSE OCCURRENCES. FOLLOWING STANDARD ANALYSIS MODELING ARE PROVIDED IN THE FILE GRID.EXE:

AQS87H2H	INP	41,989	08-10-00	INPUT FILE H2H FOR 1987
AQS87HGH	INP	41,752	08-10-00	INPUT FILE HIGH-HIGH FOR 1987
AQS89H2H	INP	41,655	08-10-00	INPUT FILE H2H FOR 1989
AQS89HGH	INP	41,766	08-10-00	INPUT FILE HIGH-HIGH FOR 1989
AQS90H2H	INP	41,765	08-10-00	INPUT FILE H2H FOR 1990
AQS90HGH	INP	41,766	08-10-00	INPUT FILE HIGH-HIGH FOR 1990
AQS91HGH	INP	41,765	08-10-00	INPUT FILE HIGH-HIGH FOR 1991
AQS87H2H	OUT	123,332	08-10-00	OUTPUT FILE H2H FOR 1987
AQS87HGH	OUT	123,332	08-10-00	OUTPUT FILE HIGH-HIGH FOR 1987
AQS89H2H	OUT	123,332	08-10-00	OUTPUT FILE H2H FOR 1989
AQS89HGH	OUT	123,332	08-10-00	OUTPUT FILE HIGH-HIGH FOR 1989
AQS90H2H	OUT	123,332	08-10-00	OUTPUT FILE H2H FOR 1990
AQS90HGH	OUT	123,332	08-10-00	OUTPUT FILE HIGH-HIGH FOR 1990
AQS91HGH	OUT	123,332	08-10-00	OUTPUT FILE HIGH-HIGH FOR 1991
EV-87H2H	INP	47,059	08-10-00	EVENT INPUT FILE H2H FOR 1987
EV-87HGH	INP	47,059	08-10-00	EVENT INPUT FILE HIGH-HIGH FOR 1987
EV-89H2H	INP	49,103	08-10-00	EVENT INPUT FILE H2H FOR 1989
EV-89HGH	INP	57,717	08-10-00	EVENT INPUT FILE HIGH-HIGH FOR 1989
EV-90H2H	INP	48,081	08-10-00	EVENT INPUT FILE H2H FOR 1990
EV-90HGH	INP	48,081	08-10-00	EVENT INPUT FILE HIGH-HIGH FOR 1990
EV-91HGH	INP	44,869	08-10-00	EVENT INPUT FILE HIGH-HIGH FOR 1991
24-H2H87	PRN	4,121	08-10-00	PLOT FILE H2H FOR 1987
24-H2H89	PRN	5,269	08-10-00	PLOT FILE HIGH-HIGH FOR 1987
24-H2H90	PRN	4,695	08-10-00	PLOT FILE H2H FOR 1989
24-HGH87	PRN	4,121	08-10-00	PLOT FILE HIGH-HIGH FOR 1989
24-HGH89	PRN	10,107	08-10-00	PLOT FILE H2H FOR 1990
24-HGH90	PRN	4,695	08-10-00	PLOT FILE HIGH-HIGH FOR 1990
24-HGH91	PRN	2,891	08-10-00	PLOT FILE HIGH-HIGH FOR 1991



CULPABILITY ANALYSIS WERE THEN PERFORMED ON THESE THRESHOLD EXCEEDENCE. THESE EVENT INPUT FILE WERE REWRITTEN SO AS TO ONLY PREDICT IMPACT FROM THE PROPOSED PROJECT AT USAC. THE FOLLOWING CULPABILITY ANALYSIS FILES ARE PROVIDED IN THE FILE EVNT-IO.EXE:

EV-87H2H INP	13,161	08-07-00	REWRITTEN EVENT INPUT FILE H2H 1987
EV-87HGH INP	13,247	08-07-00	REWRITTEN EVENT INPUT FILE HIGH-HIGH 1987
EV-89H2H INP	15,291	08-07-00	REWRITTEN EVENT INPUT FILE H2H 1989
EV-89HGH INP	23,784	08-07-00	REWRITTEN EVENT INPUT FILE HIGH-HIGH 1989
EV-90H2H INP	14,269	08-07-00	REWRITTEN EVENT INPUT FILE H2H 1990
EV-90HGH INP	14,269	08-07-00	REWRITTEN EVENT INPUT FILE HIGH-HIGH 1990
EV-91HGH INP	11,061	08-07-00	REWRITTEN EVENT INPUT FILE HIGH-HIGH 1991

EV-87H2H OUT	90,385	08-07-00	EVENT OUTPUT FILE H2H FOR 1987
EV-87HGH OUT	90,519	08-07-00	EVENT OUTPUT FILE HIGH-HIGH FOR 1987
EV-89H2H OUT	110,889	08-07-00	EVENT OUTPUT FILE H2H FOR 1989
EV-89HGH OUT	196,685	08-07-00	EVENT OUTPUT FILE HIGH-HIGH FOR 1989
EV-90H2H OUT	100,704	08-07-00	EVENT OUTPUT FILE H2H FOR 1990
EV-90HGH OUT	100,704	08-07-00	EVENT OUTPUT FILE HIGH-HIGH FOR 1990
EV-91HGH OUT	68,962	08-07-00	EVENT OUTPUT FILE HIGH-HIGH FOR 1991

A SUMMARY OF THE ABOVE RESULTS WERE COMPILED FROM THE INVENTORY EVENT INPUT FILES AND THE USAC OUTPUT FILES. THIS FILE COMPARES THE IMPACTS AT EACH RECEPTOR AND OCCURRENCE ABOVE THE THRESHOLD VALUE. THE FILE:

CULPB TXT 38,504 08-10-00

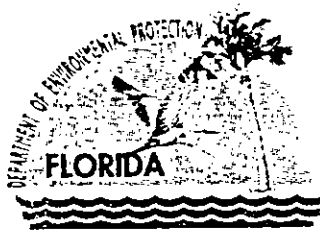
IS A TEXT SUMMARY OF THE CULPABILITY ANALYSIS.

AND:

README TXT 7,131 08-14-00 THIS FILE

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

AUGUST 14, 2000  
MARK KOLETZKE, P.E.  
KOOGLER AND ASSOCIATES  
(352) 377-5822  
KOOGLER@WORLDNET.ATT.NET



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

July 20, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Phong T. Vo  
General Manager, E&TS  
U.S. Agri-Chemicals Corp.  
3225 State Road 630 West  
Fort Meade, Florida 33841

Re: DEP File No. 1050051-009-AC, PSD-FL-278  
Sulfuric and Phosphoric Acid Plant Production Increases

Dear Mr. Vo:

The Department has received your response to our incompleteness letter to you regarding an air construction permit for modification to the existing Sulfuric Acid Plants No. 1 and 2. The response was received on June 23, 2000. In response to our inquiry, you have decided to request an increase in the permitted phosphoric acid production rate of the existing plants. The Department will combine both the sulfuric and phosphoric acid plant production increases into one project. In order to expedite the application, we need the additional information listed below:

1. The application contains only a summary of fluoride stack test data. Please submit the detailed test reports for the 1998 and 1999 annual fluoride stack tests containing data on production rates, stack flows, scrubber conditions, etc. for each test run. Please redo Appendix A of the application by showing actual emissions in terms of lb F/ton  $P_2O_5$ . Also, include additional three years of stack test data summary, if available, for fluoride emissions.
2. Please state the reasons for asking 1.0 lb/hr F emission limit from the Tank Farm area. This emission limit is more than double the actual emissions average submitted with the application.
3. Please submit engineering design data for the venturi scrubbers currently utilized for fluoride control. The data should include at a minimum the design capability; the stated efficiency of the control equipment and the performance curves for the venturi scrubbers.
4. Please provide the cost evaluation of a cross-flow packed scrubber for fluorides control by itself. The cost effectiveness presented in the application is an incremental cost approach that inflated the cost figures.



5. Please provide the permitting history and the recent construction permit for the MAP/DAP plant. Also, indicate the actual production rate attained by this plant. Will the excess phosphoric acid be used in the Prill MAP plant or the granular MAP/DAP plant? Will any excess phosphoric acid be trucked to the Bartow facility for use in the DAP plant?

The Department will resume processing this application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. A new certification statement by the authorized representative or responsible official must accompany any material changes to the application. Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days.

We will be happy to meet and discuss the details with you and your staff. Mr. Syed Arif, P.E. is responsible for the technical review of the application. He may be contacted at 850/921-9528. You may discuss the modeling requirements with Mr. Cleve Holladay at 850/921-8689.

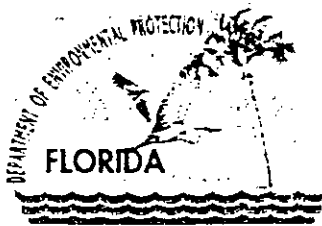
Sincerely,



A. A. Linero, P.E., Administrator  
Bureau of Air Regulation

AAL/sa

cc: John B. Koogler, P.E., K & A  
Bill Thomas, DEP SWD  
Gregg Worley, EPA Region IV  
John Bunyak, NPS



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

July 21, 2000

## CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Phong T. Vo  
General Manager, E&TS  
U.S. Agri-Chemicals Corp.  
3225 State Road 630 West  
Fort Meade, Florida 33841

Re: DEP File No. 1050051-009-AC, PSD-FL-278  
Sulfuric and Phosphoric Acid Plant Production Increases

Dear Mr. Vo:

This letter addresses the modeling information sent with your June 23, 2000 response to the Department's March 3, 2000 incompleteness letter to you regarding an air construction permit for the above referenced project. In order to expedite the application, we need the additional information listed below:

1. The modeling information supplied does not give the Department reasonable assurance that the Ambient Air Quality Standard (AAQS) for the SO<sub>2</sub> 24-hour averaging time will not be violated. At least five of the 24-hour AAQS modeling output files sent with this letter (AQS87S24.OUT, AQS89S24.OUT, AQS89G.OUT, AQS90G24.OUT, and AQS91G24.OUT with highest values of 260, 276, 256, 295, and 246 ug/m<sup>3</sup>, respectively) show highest values, which, when combined with a background concentration, are greater than the 260 ug/m<sup>3</sup> standard. No high second high values (HSH) were calculated with these modeling runs. HSH values should have been calculated since the highest-first high values are projected to be greater than the AAQS. The Department has performed some additional modeling which predicts HSH values greater than 260 ug/m<sup>3</sup>. The project is not permissible with the requested emission limits if it is predicted to significantly contribute to any projected exceedances of the HSH. Please provide detailed and appropriate modeling information that will give the Department reasonable assurance the 24-hour SO<sub>2</sub> AAQS will not be violated. Any additional modeling should include emissions from FPC Bartow, FPC Bayboro and FPC Higgins. These are sources within 100 km of the project, which have allowable emissions much greater than the corresponding 20-D emissions.

The Department will resume processing this application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature.

*"More Protection, Less Process"*

Printed on recycled paper.

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Phong T. Vo  
 General Manager, E&TS  
 U.S. Agrichemicals Corp.  
 3225 SR 630 West  
 Fort Meade, FL 33841

2. Article Number (Copy from service label)  
 Z 031 392 034

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) B. Date of Delivery

7-25-00

C. Signature

X *H. Vo*

Agent  
 Addressee

D. Is delivery address different from item 1?

Yes

If YES, enter delivery address below:  No

3. Service Type

Certified Mail  Express Mail  
 Registered  Return Receipt for Merchandise  
 Insured Mail  C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

Z 031 392 034

US Postal Service  
**Receipt for Certified Mail**

No insurance Coverage Provided.  
 Do not use for International Mail (See reverse)

Sent to	
Mr. Phong T. Vo	
Street & Number	
3225 ST 630 West	
Post Office, State, & ZIP Code	
Bartow, FL 33841	
Postage	\$ 33
Certified Fee	140
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	125
Return Receipt Showing to Whom, Date, & Address	
TOTAL Postage & Fees	\$ 298
Postmark or Date	JUL 22 2000

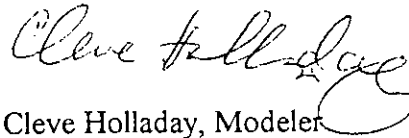
PS Form 3800, April 1995

Mr. Phong T. Vo  
July 21, 2000  
Page 2 of 2

A new certification statement by the authorized representative or responsible official must accompany any material changes to the application. Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days.

We will be happy to meet and discuss the details with you and your staff. You may discuss the modeling requirements with me at 850/921-8689.

Sincerely,

A handwritten signature in cursive script that reads "Cleve Holladay". The signature is written in dark ink and is positioned above the typed name.

Cleve Holladay, Modeler  
Bureau of Air Regulation

CGH/ch

cc: John B. Koogler, P.E., K & A  
Bill Thomas, DEP SWD  
Gregg Worley, EPA Region IV  
John Bunyak, NPS

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:  
 Mr. Phong T. Vo  
 General Manager, E&TS  
 U.S. Agrichemicals Corp.  
 3225 SR 630 West  
 Fort Meade, FL 33841

2. Article Number (Copy from service label)  
 Z 031 392 034

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature  Agent  
**X**  Addressee

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

3. Service Type  
 Certified Mail  Express Mail  
 Registered  Return Receipt for Merchandise  
 Insured Mail  C.O.D.

4. Restricted Delivery? (Extra Fee)  Yes

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

Z 031 392 034

**US Postal Service  
 Receipt for Certified Mail**

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

Sent to		Mr. Phong T. Vo
Street & Number		3225 ST 630 West
Post Office, State, & ZIP Code		Bartow, FL 33841
Postage		\$
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		
Return Receipt Showing to Whom Date & Addressee's Address		
TOTAL Postage & Fees		\$
Postmark or Date		

PS Form 3800, April 1995

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

**CERTIFIED**

Z 031 392 034

**MAIL**





KA 173-99-02

June 8, 2000

**RECEIVED**

JUN 23 2000

BUREAU OF AIR REGULATION

Mr. Al Linero, P.E.  
Florida Department of  
Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Rd  
Tallahassee, FL 32399-2400

Subject: Sulfuric and Phosphoric Acid Plant Production Increases  
US Agri-Chemicals Corporation  
File PSD-FL-278, 1050051-009-AC

Dear Mr. Linero:

This is in response to your letter dated March 3, 2000, requesting additional information on the above referenced project. The issues are addressed in the order presented in your letter.

1. The requested P.E. Certification page, associated with this response as well as the previous response, is presented in Attachment 1.1.
2. The requested updated pages of the application, reflecting the proposed SAM limit of 0.12 lb/ton acid, are presented in Attachment 1.1. The revised corresponding summary table, of the net emissions increases resulting from the proposed sulfuric acid production increase, is presented in Attachment 1.2.
3. The calculations associated with the net emissions increase resulting from the proposed sulfuric acid production increase are presented in Attachment 1.2.
4. It is our understanding, based on discussions with FDEP staff, that the intent behind this information request was to obtain some historical SO<sub>2</sub> emissions data that shows the variability in SO<sub>2</sub> emissions, other than the one-time annual tests. Some of the 1999 SO<sub>2</sub> CEM data have been analyzed. Based on the actual operation rates, the data were converted to a lb/ton emission factor and for the most variable months of March, May and October of 1999, the range of SO<sub>2</sub> emissions calculated for Plant 1 was from 2.7-3.0, 1.4-3.5, 2.2-3.1, lb/ton respectively. Similarly, the SO<sub>2</sub> range for Plant 2 was from 2.3-3.9, 1.6-3.3, 2.2-3.4, lb/ton for the same three months respectively. Additional data can be similarly calculated and submitted, if deemed necessary.

June 8, 2000

5. In the past, the facility had exported excess sulfuric acid that it produced. The proposed increase in production was originally intended to simply add to any excess that would be exported. In response to FDEP's inquiry relative to other emissions units that may be affected by the proposed project, USAC has decided to request an increase in the permitted phosphoric acid production rate of the existing plants. Excess sulfuric acid will allow a phosphoric acid production increase that will supply the recently permitted MAP plant. No other emissions units are expected to be affected by the proposed project. Amended portions of the PSD permit application are presented in Attachments 1.2 and 2.0. The sulfuric acid accounting summary mentioned in your letter is not attached as it is unnecessary given the information presented in this submittal.
6. The significant impact radius for each averaging period for SO<sub>2</sub>, based on the results of the scening analysis, is 11 km, 23 km and 8 km, for the 3-hour, 24-hour and annual averaging periods, respectively. The expanded ISC modeling, however, evaluated air impacts for the 3-hour averaging period to the same distance as the 24-hour averaging period in order to streamline the modeling. This resulted in a more conservative air impacts analysis. Maps, of the receptor locations used in the SO<sub>2</sub> and NO<sub>x</sub> significant impact modeling, are presented in Attachment 1.3. All the modeling runs are presented on the enclosed disk. The difference between the two sets of output files, aqsyinv.out and aqsyinv.ano, was that the "ano" file used a set of receptor locations that represented the area of significant impact unique to the annual averaging period.
7. The air impacts summary tables have been updated to indicate the locations of the tabulated air impacts and indicate the highest second-high impacts for the 3-hour and 24-hour averaging periods. Additional modeling requested by FDEP was conducted, refined to 100-meter resolution around the locations of the high impacts (rectangular grid extending  $\pm 1000$  meters on x and y axes). As the 24-hour averaging period was of most interest to FDEP, given the magnitude of the impacts, the locations of the top three highest-high and top three highest second-high impacts were used in the refined modeling. For the annual and 3-hour averaging periods, only the locations of the highest impacts were used in the refined modeling. The modeling output files are provided on disk. The modeling impacts resulting from the refined modeling are included in the summary tables presented in Attachment 1.5. Regarding the evaluation of higher impacts at or near the edge of the expanded modeling receptor grid, it is our understanding that the expanded ambient air quality analysis may be limited to the area of significant impact resulting from the proposed project. Please note that the modeling receptor locations chosen for the expanded modeling were already extended beyond the proposed project's area of significant impact. Consequently, no further air impacts analysis is warranted.
8. The multisource SO<sub>2</sub> emissions inventory used in the ISC air dispersion modeling extended to 70 kilometers from the proposed project. The revised emission inventory

table, updated to address the earlier discrepancies, is presented in Attachment 1.4. Significant sources beyond the suggested ISC model range of 50 kilometers were included in the modeling in order to be conservative.

9. Please refer to the attached copy of the facility's aerial photograph, presented in Attachment 1.6, indicating the physical barriers precluding public access on to the property. There is a dyke/berm around most of the property boundary that prevents public access. There is a fence along the southeast portion of the property boundary and to the southwest, beyond the area shown on the aerial photograph. Only a small portion of the property, along the main entrance road, is without physical barriers. However, public access to this portion of the property is precluded by 24-hour surveillance by the security guard situated at the main entrance to the property.
10. In our opinion, the incorporation of a background concentration level from an ambient air SO<sub>2</sub> monitor that is surrounded by the same sources used in the air dispersion modeling inventory results in a significant amount of double counting. Based on the discussions between Pradeep Raval (Koogler & Associates), Cleve Holladay (FDEP) and Stan Krivo (EPA), a different SO<sub>2</sub> ambient air monitor has now been selected to provide the background concentration levels. A SO<sub>2</sub> monitor located at Winter Park (12-095-2002) is selected for evaluating the background concentration levels for the proposed project. Please refer to Attachment 1.7, indicating the relative monitoring site and emissions source locations. The corresponding concentration levels, previously provided by FDEP for the year 1998, of 71 ug/m<sup>3</sup>, 18 ug/m<sup>3</sup> and 5 ug/m<sup>3</sup> are used in evaluating the 3-hour, 24-hour and annual averaging periods impacts, respectively. It should be noted that the maximum monitored 1998 SO<sub>2</sub> concentration levels at this monitor are higher than the maximum monitored 1999 levels. The data from this monitor are considered representative of the background SO<sub>2</sub> concentration levels for the proposed project, given that the monitor is:
  - a. located in the same general area of Florida (central) as the proposed project;
  - b. located inland, as is the proposed project; and,
  - c. located closer to the proposed project than other monitors that are also less likely to receive contributions from the major sources included in the modeling inventory.
11. The CALPUFF modeling performed for the proposed project requires specially formatted meteorological data files. As the preparation of the meteorological files is an extremely effort intensive task, prior approval was obtained from FDEP staff for the use of one year's worth of data. As only the 1990 meteorological data were available in a format compatible with the CALPUFF model, the current project evaluation relied on that data.

June 8, 2000

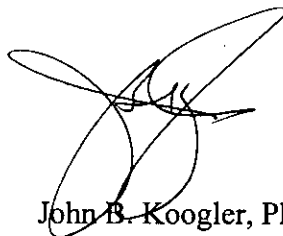
12. Based on telephone conversations with Pradeep Raval and Ellen Porter of the U.S. Fish and Wildlife Service (USFWS), it is our understanding that the information submitted to FDEP and USFWS regarding the maximum predicted Class I area air impacts and the corresponding contributions analysis are satisfactory for the evaluation of this project.

Regarding the comments from the USFWS, Ellen Porter indicated that their review of the proposed project's air impact analysis is complete. Regarding the BACT analysis, it should be noted that while a lower SO<sub>2</sub> emission limit was proposed, it is our understanding that the final permit for Mississippi Phosphates' reflects a SO<sub>2</sub> emissions limitation of 4.0 lb/ton acid and a SAM emissions limitation of 0.15 lb/ton acid. These emission limitations are less stringent than the 3.5 lb/ton acid and 0.12 lb/ton acid limits proposed by USAC for SO<sub>2</sub> and SAM, respectively.

If you have any questions, please do not hesitate to call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES



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