SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 144-82-01

Bill

September 23, 1982

DER
SEP 24 1982
BAQM

Mr. Clair H. Fancy
Deputy Bureau Chief
Bureau of Air Quality Management
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301

Subject: AMAX Phosphates, Inc.
AC29-57072
AC29-57074

Dear Mr. Fancy:

In response to your letter of September 9, 1982 to Mr. J. J. Lewis of AMAX Phosphates, we are submitting the enclosed information to complete the referenced Air Pollution Source Construction Permit Applications.

The information requested in your letter is summarized on the two pages attached to this letter. The following comments will clarify the information provided.

1. Fuel Analysis. Self Explanatory

2. Annual Fuel Consumption. In your September 9, 1982 letter, you request the annual fuel consumption per reactor based on the maximum consumption per start-up. The maximum consumption during a start-up occurs when a reactor is started following the replacement of a reactor grid. During such a start-up No. 2 fuel oil is used at an average rate of 100 gallons per hour for a time period of approximately 82 hours. Based on an average of 10 start-ups per reactor per year, the annual fuel consumption, based on the maximum consumption per start-up, would be 82,000 gallons. In contrast, the average annual consumption of No. 2 fuel oil per reactor is 39,400 gallons per year. This annual average consumption is based on 10 start-ups per year per reactor and a mix of start-ups including some start-ups following no reactor repair, some start-ups following reactor refractory repair and some start-ups following the replacement of a reactor grid.

Over the two-year period of record the maximum fuel consumption per reactor was 25,600 gallons or a consumption approximately 16 percent greater than the average. For permitting purposes, it would probably safe to assume the maximum consumption of No. 2 fuel oil per reactor will be 50,000 gallons; a consumption 27 percent greater than the average consumption.

3. Maximum Heat Input. The maximum fuel consumption rate was assumed to be 125 gallons per hour or 125 percent of the average fuel consumption rate. Based on this fuel consumption and the reported heating value of the fuel oil, the maximum hourly heat input to a reactor would be 17.0 million BTU per hour.

4. Pollutant Emission Rates. The potential air pollutant emission rates of various pollutants expected from the combustion of No. 2 fuel oil were calculated using emission factors set forth in EPA publication AP-42, Supplement 7. The annual average fuel consumption per reactor was used for calculating these emission rates. The maximum emission rate of any single pollutant was 2.8 tons per year per reactor for sulfur dioxide.

If there are any questions regarding these data, please feel free to contact me.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS, INC.

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

JBK:sc
Attachments

cc: Mr. Fred Mullins

1. Fuel Oil Analysis

Fuel - No. 2 Fuel oil (virgin oil)
API gravity (60°F) - 36.1
Heat Content - 136,100 BTU/gallon
19,530 BTU/lb.
Density - 6.97 lbs/gallon
Sulfur Content - 1.0% (max.)
Nitrogen Content - Trace
Ash Content - Trace

2.

Reactor	Year	Number of Start-ups	Total Number of Hours on Oil	Total No. 2 Fuel Oil Consumption
1	1980	8	258	25,800 gallons
1	1981	12	432	43,200 gallons
2	1980	11	456	45,600 gallons
2	1981	9	430	43,000 gallons
Average		10/yr.	394 hrs/yr.	39,400 gallons/yr.

Average number of start-ups per reactor per year - 10
Average number of hours per start up - 39.4 hours(1)
Average annual consumption of No. 2 fuel oil per reactor - 39,400 gallons
Average hourly consumption of No. 2 fuel oil - 100 gallons.

(1) Individual start-up times average 30 hours for a start up with no repairs; 48 hours for a start up following refractory repairs; and 82 hours for a start up following the replacement of a reactor grid.

3. Hourly Heat Input

Hourly fuel consumption - 125 gallons/hr (125% of average)
Heating Value - 136,100 BTU/gallon
Hourly Heat Input = 125 gal/hr x 136,100 BTU/gal
= 17.0×10^6 BTU/hr (max)

4. Potential Annual Emissions (AP-42, Supplement 7)

Average Annual Fuel Consumption per Reactor - 39,400 gal/yr.

Particulate Matter

E_p = 39,400 gal/yr x 0.002 lb PM/gal x 1/2000 ton/lb
= 0.04 tons/yr/reactor (average)

4. Potential Annual Emissions (Continued)

SO2

E_S = 39,400 x 0.142(1.0) x 1/2000
= 2.80 tons/yr/reactor (average)

CO

E_C = 39,400 x 0.005 x 1/2000
= 0.10 tons/yr/reactor (average)

HC

E_H = 39,400 x 0.001 x 1/2000
= 0.02 tons/yr/reactor (average)

NOx

E_N = 39,400 x 0.022 x 1/2000
= 0.43 tons/yr/reactor (average)

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

September 9, 1982

Mr. J. J. Lewis
Plant Manager
c/o AMAX Phosphate, Inc.
P. O. Box 790
Plant City, Florida 33566

Re: AC 29-57072 (No. 1 Unit)
29-57074 (No. 2 Unit)

Dear Mr. Lewis:

In a phone conversation with Dr. John Koogler on September 8, 1982, the fact that AMAX Phosphate, Inc., will be using No. 2 Fuel Oil to bring the two Fluid Bed Reactors on line was confirmed. Therefore, to render the referenced applications complete submit the following data to the Bureau:

1. Lab analysis of the No. 2 Fuel Oil,
2. Annual consumption of No. 2 Fuel Oil per source, based on the maximum consumption per start-up,
3. Maximum Btu per hour heat input, and
4. Potential pollutants emissions, based on the maximum percent pollutant content by weight.

Submit all calculations and reference documents used to determine the above. The requested data should be submitted as an amendment to the referenced applications.

If there are any questions, please call Willard Hanks at (904)488-1344 or write to me at the above address.

Sincerely,

C. H. Fancy, P. E.
Deputy Bureau Chief
Bureau of Air Quality
Management

CH/RBM/bjm

cc: Fred Mullins
John Koogler
Dan Williams
Martha Harrell Hall
John Egan, NCEPC

P16 7682420

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J. J. Lewis

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P. O. Box 790

P.O., STATE AND ZIP CODE
Plant City, FL 33566

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2. ARTICLE ADDRESSED TO:
J. J. Lewis, AMAX Phosphate
P. O. Box 790
Plant City, FL 33566

3. ARTICLE DESCRIPTION:

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☆GPO : 1979-300-459

FOWLER, WHITE, GILLEN, BOGGS, VILLAREAL AND BANKER, P. A.

ATTORNEYS AT LAW

501 EAST KENNEDY BOULEVARD
TAMPA, FLORIDA 33602
(813) 228-7411

601 FLORIDA NATIONAL BANK BUILDING
ST. PETERSBURG, FLORIDA 33701
(813) 896-0601

600 CLEVELAND STREET, SUITE 760
CLEARWATER, FLORIDA 33515
(813) 446-8525

1525 SOUTH FLORIDA AVENUE
LAKELAND, FLORIDA 33803
(813) 688-8517

CABLE ADDRESS
FOWHITE
TELEX 52776

1922 VICTORIA AVENUE
FT. MYERS, FLORIDA 33901
(813) 334-7892

PLEASE REPLY TO:
P. O. BOX 1438
TAMPA, FLORIDA 33601

August 11, 1982

Mr. Clair Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301-8241

SUBJECT: Letter of Completeness Review for AMAX Phosphate, Inc.
Sources: AC29-57072, AC29-57073, AC29-57074

Dear Mr. Fancy:

Before responding to the various points raised in your letter of July 17, 1982, I would like to reiterate the basic request made by AMAX.

Essentially, AMAX is requesting two things:
(1) The administrative realignment of the permits to achieve conformance with the present permitting policy of the Department; and
(2) An increase in production rate.

Both of these requests fall outside the ambit of the PSD rule, because neither rises to the level of "construction" or "modification" as specified in F.A.C. 17-2.500(1)(a).

Specifically, the request to separate the conglomerate permit to provide individual treatment of the input rates under the Process Weight Table, is merely a reflection of the Department's explicit amendment of the Rules.

Likewise, the second request, to increase production rate, falls outside the PSD rule, because it is clearly excluded under 17-2.100(102)(b), which states: "A physical change or change in the method of operation shall not include (b) an increase . . . in the production rate, unless such change would be prohibited under any federally enforceable permit condition . . . ." In this case, a review of the construction and operating permits, will reveal the absence of any such proscription.

On the basis of the above, points 2 through 7 of your letter become moot. However, before proceeding with a response to Point One, I would like to clarify our position regarding the use of Contemporaneous and Creditable Offsets.

The offsets offered as a result of the 1981 Particulate Emissions Improvement Project for the AMAX Plant City CDP Truck Loading Unit are both contemporaneous and creditable. This statement is not made in derogation of F.A.C. 17-2.610(3)(c), but rather in conjunction therewith.

The CDP Truck Loading Unit was operated under DER permit #AO29-6317. At the time of the issuance of that permit, DER made a determination of "reasonable precautions", as required under F.A.C. 17-4.03 and 17-4.07, and included them as conditions of the permit. Specifically, the unit employed the use of hoods, fans, filters (in the form of a bag collector) and non-ventilated steel covers over the conveyors to contain and capture unconfined emissions. Therefore, the enforcement of F.A.C. 17-2.610(3)(c) is inapplicable, particularly in light of the language citing the listed precautions as representative, but not mandatory.

The system improvement project described in Permit Application AC29-43906 and AO29-52854, brought the unit from reasonable control technology to Best Available Control Technology, in which case the emissions offset offered would be both contemporaneous and creditable under the provisions of F.A.C. 17-2.500 (2)(e) 3 & 4.

The only question left which requires response is Point One, concerning the need for additional information for sulfur dioxide emissions from the firing of #5 fuel oil in the sources. The fluid bed reactors 1 and 2 (AC29-57072 and AC29- 57074) are not presently capable of utilizing any fuel other than natural gas. The use of #5 fuel oil indicated on page 4 of these two permit applications was done as a possible alternative for the future energy needs. However, recent conversations with company management indicate that the use of fuel oil in fluid bed reactors 1 and 2 is not technically or economically feasible; and page 4, Section E of Permit Applications AC29-57072 and AC29-57074 should be changed to reflect the fact that fuel oil will not be used as an alternative energy source.

The Paragon kiln #2 (Permit No. AC29-57073) will continue to use #5 fuel oil as an alternate fuel. The requested permit

changes will not alter the fuel consumption of the paragon kiln, increase the production rate, or change the operating hours of this source. Therefore, these permit changes will not have any effect on the individual or combined sulfur dioxide emissions for the three sources.

We certainly appreciate your help with these requests and should you require additional information or clarification, we propose a meeting with you during the week of August 23 - 27, 1982.

Sincerely yours,

Rhea L Law

RHEA F. LAW

RFL/wr

cc: Ms. Martha Hall
Mr. Fred Mullins

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

July 15, 1982

Mr. J. J. Lewis
Plant Manager
c/o AMAX Phosphate, Inc.
P.O. Box 790
Plant City, Florida 33566

Subject: Completeness review of applications to construct/ modify existing sources: AC 29-57072
AC 29-57073
AC 29-57074

Dear Mr. Lewis:

The Bureau has received and reviewed three (3) applications to construct/modify sources at the existing facility located in Plant City, Hillsborough County, Florida. Before further processing, the following points of incompleteness must be addressed/answered and sent to the Bureau:

1. Calculate, per affected source, the maximum potential emissions after modification for SO_2 from firing No. 5 Fuel Oil and attach the calculations. Base the emissions on maximum firing of the fuel.

2. In establishing the historical facility emissions, prevention of significant deterioration (PSD) review allows the use of established actual emissions or if actual emissions cannot be estimated, the allowable emissions, if federally enforceable. Submit by source for the entire facility the annual actual emissions for the pollutants particulate matter (PM) and fluorides since December 27, 1977 (baseline date) and for SO_2 since March 11, 1978 (baseline date) (reference the document used: stack test, annual operation report, etc.).

3. Submit the annual operating reports, DER Form 17.2.122(44) Page 1 of 1, that were required in the operating permit AO 29-6778, Specific Condition No. 5, since June 16, 1978. Include the type and amount of fuel oil consumed and the percent sulfur content, be weight (include lab analysis report(s))

4. Submit the test reports for emissions of the pollutants PM and fluorides for the tests conducted every 6 months since March, 1978, as required by Specific Conditions No. 2 and 3 of the operating permit AO 29-6778.

5. If PSD review is required, the company must meet the requirements of Chapter 17-2.500, Florida Administrative Code (FAC). Within the review, a best available control technology (BACT) determination shall be requested by the applicant and a determination will be made by the Bureau. This BACT determination requires consideration of new source performance standards (NSPS), 40 CFR 60, that have been promulgated though not adopted by the Department. On April 16, 1982, the NSPS, 40 CFR 60, Subpart NN for Phosphate Rock Plants was published in the Federal Register. Therefore, the standard for PM, 40 CFR 60.402(a)(3) will be considered in the BACT determination if applicable.

6. If PSD review is not required and the NSPS, 40 CFR 60, Subpart NN is applicable, the Environmental Protection Agency (EPA) Region IV Permitting Section will be notified that a federal determination of NSPS applicability is required.

7. The reduction in PM emissions from unconfined sources achieved by the Company can not be used as contemporaneous and creditable emissions reductions, 17-2.500(3)3. and 4., FAC, because reasonable control of the unconfined PM emissions from uncontrolled source(s) was required by Chapter 17-2.610(3), FAC.

If there are any questions call Bruce Mitchell (904) 488-1344 or write to me at the above address.

Sincerely,

Clair Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CF:ras

cc: Dan Williams
Martha Harrell Hall
Anthony R. Lenkei
John Egan - Hillsborough EPC

P16 7682473

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2. ARTICLE ADDRESSED TO:
J. J. Lewis, Plant Manager
AMAX Phosphate, Inc.
P.O. Box 290
Plant City, FL 33566

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ENVIRONMENTAL PROTECTION
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JERRY M. BOWMER
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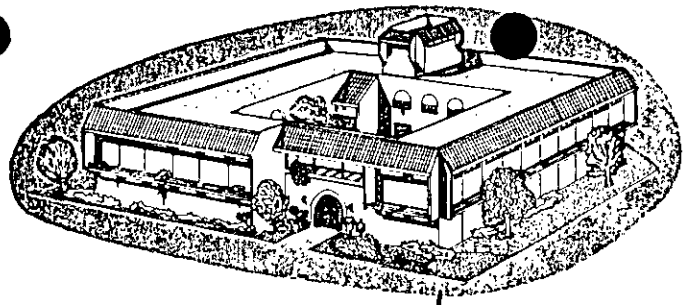
JAN KAMINIS PLATT



ROGER P. STEWART
DIRECTOR
1900 - 9th AVE.
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

JUL 15 1982

BAQM

July 13, 1982

Willard Bruce

Mr. Clair Fancy
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Mr. Fancy:

The following is in response to AMAX Phosphates request to separate its fluid bed reactors 1 and 2, and the paragon kiln into 3 separate permits. The company is requesting to double its current emissions from the now 20.02 lbs/hr to 41.07 lbs/hr. The company is offering offsets of 100 TPY to cover the potential increase of 89.80 TPY.

Hillsborough County recognizes the tremendous improvements made by AMAX in cleaning up its Plant City operation. However we have certain reservations with AMAX's request. In order to clarify our concerns we will address their request on two levels, Quantitative and Regulatory.

Quantitative

(A.) The air flow figure of 12,500 ft^3/min used in Sholtes and Koogler's uncontrolled fugitive emissions calculation is the design flow of the bag collector system, actual stack test data shows this flow to be in the 11,500 ft^3/min range.

(B.) The loading figure of 3.67 gr/ft^3 is based on the old storage shed which had a single collection point in the roof of the shed. The stack test data indicates that 3.67 gr/ft^3 was the single highest figure from the tests and is not an average. Estimate of available data indicates this figure should be closer to 1.5 gr/ft^3.

(C.) The figure of 136.4 TPY arrived at by Sholtes and Koogler is in excess 100% of what EPA-450/3-77-010 suggests as representative. The EPA manual on page 2-17 Table 2-4 suggests the figure of 1.5 lb/ton is the range the uncontrolled emissions should be in. Based on the EPA book figure of 1.5 lb/ton and 86,750 tons transfered, we derive a figure of 65.06 tons/yr. We recalculated the uncontrolled fugitive emissions based on both the 11,500 + 12,500 ft^3min using an average of 1.5 gr/ft^3 loading. Our figures indicate the emissions fall within a range of from 51.3 to 55.76 TPY. Using the EPA manual's figure of 1.5 lb per ton transferred we get a figure of 65.06 TPY. It is our belief that the uncontrolled futitives should fall within the range of 51.3 to 65.06 TPY.

In order to resolve the calculated data problem, Hillsborough County would agree to the following.

1. A new stack test. If a new stack test is conducted the 3600 CFM line that vents the midwest loader should not be used as this data is representative of the truck bed and its intake is too close to the surface of the flowing material. We would agree to stack test data from the hood vent line which is above the truck bed and is more representative of the conditions in the shed.

2. Use of the 1.5 lb/ton figure as given in Table 2-4, Page 2-17 of EPA 450/3-77-010 of March 1977. Which gives a figure of 65.06 TPY.

3. Use of an average of the stack test data from the old loading shed. This could be the most accurate as the intake was a simple opening in the roof of the shed and the material it collected should be a close representation of the airborne fugatives. From data review a figure of 1.5 gr/ft^3 seems to be reasonable.

The transfer and conveying figures increased to 1.5 lb/ton as per EPA 450/3-77-010 of March 1977, gives a total of 32.54 TPY. This figure plus the 65 TPY estimate of the shed gives the following.

	65.06	Generated fugitives (highest figure).
-	6.506	Captured. Assuming only 10% efficiency.
+	.05	Particulates emitted from original bag collector.
	59.054	
+	32.54	Transfer and conveying.
=	91.594	

The 91.6 TPY figure is less than the 100 TPY offset the company is offering, but is in line with the 89.80 TPY the company needs to offset.

Regulatory

The owners in these permits have made several requests that, if granted may not be consistant with the rules of Hillsborough County and Florida Department of Environmental Regulation.

Hillsborough County is of the belief that the improvements made at the bulk truck loading facility were made to come into compliance. the bulk truck loading was controlled by a bag collector with an allowable opacity of 20%. The collector had demonstrated an inability to capture all the dust generated by the process under certain conditions. Canvas tarps were used to enclose the loading operation. However, the tarps were sometimes torn away or askew and the orientation of the building was such that the wind vector was often through the building resulting in unnecessary particulate emissions.

The owners took reasonable precaution not to cause such an occurance. The modifications made by the company were not above and beyond what the rule called for. The fact that the owner did this voluntarily, should have no bearing on whether these emissions are creditable. The offset policy was only meant to apply in cases when sources took action above and beyond what was required for the source.

In summary, Hillsborough County is not opposed to properly verified offsets per se. Rather, we want the requesting organization to insure that the quantified data is both accurate and representative, and that the intent of all directives is not violated.

We suggest this permit request be held in abeyance pending clarification of the above listed concerns.

Sincerely,

John Egan
Environmental Engineer
Hillsborough County Environmental
Protection Commission

JE/lw
cc: Steve Smallwood, F.D.E.R.
W. K. Hennessey, F.D.E.R.
Dan Williams, F.D.E.R.

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

October 20, 1980

DER
JUL 1 2 1982
BAQM

Mr. James L. Cox
AMAX Phosphate, Inc.
402 S. Kentucky Avenue
Suite 600
Lakeland, Fla. 33801

Modification of Permit NO: AO29-6778

We are in receipt of your request for a modification of the above permit. The permit is changed as follows:

Request for transfer of permit from Borden, Inc. Division of Borden Chemical to:

AMAX Phosphates, Inc.

AMAX Phosphates, Inc. hereby assumes all rights and liabilities associated with permit and conditions originally assigned to Borden Chemical.

This letter must be attached to your permit and becomes a part of that permit.

Sincerely,

W.K. Hennessey
District Manager

DAW/rkt

cc: Record Center
HCPEC
Bruce Galloway

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

REUBIN O'D. ASKEW
GOVERNOR

June 16, 1978
Borden, Inc.
Hillsborough County - AP

JOSEPH W. LANDERS, JR.
SECRETARY

P. David Puchaty
District Manager

Mr. B. V. Gallaway, Environmental Manager
Borden, Inc.
P.O. Box 790
Plant City, Fla. 33566

Pursuant to Section 403.061(16), Florida Statutes, your application has been approved by the Department and, therefore, we are issuing to you the enclosed permit no. AO29-6778 which will expire on May 31, 1983

This permit is not effective unless you accept it, including any and all of the conditions contained therein. If you do not choose to accept it, you must file an appropriate petition for a hearing pursuant to the provisions of Section 120.57, Florida Statutes.

A petition for a hearing must comply with the requirements of Florida Administrative Code, Section 28-5.15 and be filed (postmarked) with the Secretary of the Department of Environmental Regulation at Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301, with a copy to this office within fourteen (14) days from receipt of this letter. Petitions which are not filed in accordance with the above provisions may be subject to dismissal.

Any time limits imposed in the permit are a condition to this permit and are enforceable under Section 403.061, Florida Statutes. You are hereby placed on notice that the Department will review this permit to check for compliance and will initiate enforcement action for violations of the conditions and requirements of this permit.

Your continued cooperation in this matter is appreciated. Please refer to your assigned permit number in all future communications.

Sincerely,

P. David Puchaty
District Manager

cc: Central Files
HCEPC
Anthony R. Lenkei, P.E.

Enclosures

RULES OF THE ADMINISTRATION COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

(1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.

(2) All petitions filed under these rules should contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name and address of the petitioner or petitioners;

(c) All disputed issues of material fact. If there are none, the petition must so indicate;

(d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;

(e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;

(f) A demand for the relief to which the petitioner deems himself entitled; and,

(g) Such other information which the petitioner contends is material.

NOTE: At a formal hearing all parties shall have an opportunity to present evidence and argument on all issues involved, to conduct cross-examination and submit rebuttal evidence, to submit proposed findings of fact and orders, to file exceptions to any order or hearing officer's recommended order, and to be represented by counsel.

SERIAL XXXXXXXXXX

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

NEDS No. 0075
Point ID. 03

OPERATION PERMIT

FOR BORDEN, INC.
P. O. BOX 790
PLANT CITY, FL 33566

PERMIT NO. A029-6778 DATE OF ISSUE June 16, 1978

PURSUANT TO THE PROVISIONS OF SECTIONS 403.061 (16) AND 403.707 OF CHAPTER 403 FLORIDA STATUTES AND CHAPTERS 17-4 AND 17-7 FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
MR. B. V. GALLAWAY, ENVIRONMENTAL MANAGER

FOR THE OPERATION OF THE FOLLOWING:
DEFLUORINATING UNITS, REACTORS NO. 1 and 2, and PARAGON NO. 2 WITH APPROPRIATE CONTROL EQUIPMENT SUBJECT TO ATTACHED CONDITIONS OF APPROVAL NOS: 1,2,3,5,6, & 7.

LOCATED AT: CORONET ROAD (SOUTHEAST), PLANT CITY
Y TNL 17-393.8E 3096.3N

IN ACCORDANCE WITH THE APPLICATION DATED APRIL 1978

ANY CONDITIONS OR PROVISOS WHICH ARE ATTACHED HERETO ARE INCORPORATED INTO AND MADE A PART OF THIS PERMIT AS THOUGH FULLY SET FORTH HEREIN. FAILURE TO COMPLY WITH SAID CONDITIONS OR PROVISOS SHALL CONSTITUTE A VIOLATION OF THIS PERMIT AND SHALL SUBJECT THE APPLICANT TO SUCH CIVIL AND CRIMINAL PENALTIES AS PROVIDED BY LAW.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ISSUE UNTIL MAY 31, 1983

OR UNLESS REVOKED OR SURRENDERED AND SHALL BE SUBJECT TO ALL LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

DISTRICT ENGINEER

JOSEPH W. LANDERS, JR.
SECRETARY

ROGER P. STEWART, DIRECTOR
HILLS. CTY. ENV. PROTECTION COMM.

DISTRICT MANAGER

JG Replaces AC29-2494

101800052007503

DER Form PERM 11-3 (Mar. 76)

State of Florida
Department of Environmental Regulation

OPERATION PERMIT CONDITIONS
FOR AIR POLLUTION SOURCES

Permit No.: AO29-6778 Date: June 16, 1978

An (X) indicates applicable conditions

(X) 1. The permit holder must comply with Florida Statute, Chapter 403 and the applicable Chapters of the Department of Environmental Regulation in addition to the conditions of this permit (Chapter 403.161(1)(b), Florida Statutes).

(X) 2. Test the emissions for the following pollutant(s) at intervals of six MONTHS from the date MARCH, 1978 and submit a copy of test data to the District Engineer of this agency within fifteen days of such testing (Chapter 17-2.07(1), Florida Administrative Code (F.A.C.)).

(X) Particulates	( ) Sulfur Oxides
(X) Fluorides	( ) Nitrogen Oxides
( ) Plume Density	( ) Hydrocarbons
	( ) Total Reduced Sulfur

(X) 3. Testing of emissions must be accomplished at approximately the rates as stated in the application. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data (Chapter 403.161(1)(c), Florida Statutes).

( ) 4. Submit for this source quarterly reports showing the type and monthly quantities of fuels used in the operation of this source. Also state the sulfur content of each fuel (Chapter 17-4.14, F.A.C.).

(X) 5. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Chapter 17-4.14, F.A.C.

(A) Annual amount of materials and/or fuels utilized.
(B) Annual emissions (note calculation basis).
(C) Any changes in the information contained in the permit application.

(X) 6. In the event the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the District Office of the D.E.R. as per Chapter 17-4.13, F.A.C. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement actions by the Department.

(X) 7. According to the Process Weight Table within Chapter 17-2.04(2), F.A.C., the maximum allowable emission rate of particulate matter for a process rate of 16 tons/hour is 20 pounds/hour. At lesser process rates, the allowable emission rates can be determined from the graph.

( ) 8. This permit is associated with a Development of Regional Impact (D.R.I.). It does not waive any other permits that may be required from this or any other state, federal, or local agency.

101800052007503

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

CONSTRUCTION PERMIT

FOR BORDEN, INC. (PLANT CITY)
P. O. BOX 790
PLANT CITY, FLORIDA 33566

PERMIT NO. AC29-2494 DATE OF ISSUE March 29, 1977

PURSUANT TO THE PROVISIONS OF SECTIONS 403.061(16) AND 403.707 OF CHAPTER 403 FLORIDA STATUTES AND CHAPTERS 17-4 AND 17-7 FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
BRUCE V. GALLOWAY, ENVIRONMENTAL MANAGER

FOR THE CONSTRUCTION OF THE FOLLOWING:
A CEILCOTE WET IONIZING SCRUBBER, WHICH WILL BRING THE TWO FLUID BED REACTORS INTO COMPLIANCE. THE SOURCE IS SUBJECT TO ATTACHED CONDITIONS OF APPROVAL NOS: 1,2,3,4,5,7,8,9. & 6.

LOCATED AT: CORONET ROAD (SOUTHEAST), PLANT CITY
UTM: 17-393.8E - 3096.3N

IN ACCORDANCE WITH THE APPLICATION DATED 2/7/77

ANY CONDITIONS OR PROVISOS WHICH ARE ATTACHED HERETO ARE INCORPORATED INTO AND MADE A PART OF THIS PERMIT AS THOUGH FULLY SET FOURTH HEREIN. FAILURE TO COMPLY WITH SAID CONDITIONS OR PROVISOS SHALL CONSTITUTE A VIOLATION OF THIS PERMIT AND SHALL SUBJECT THE APPLICANT TO SUCH CIVIL AND CRIMINAL PENALTIES AS PROVIDED BY LAW.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ISSUE UNTIL 11/1/77 OR UNTIL REVOKED OR SURRENDERED AND SHALL BE SUBJECT TO ALL LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

John C Barnett
DISTRICT ENGINEER

J W Landers Jr.
JOSEPH W. LANDERS, JR.
SECRETARY

Roger P. Stewart
ROGER P. STEWART, DIRECTOR
HILLS. COUNTY ENV. PROTECTION COMMISSION

DISTRICT MANAGER

DER FS 7
8/75

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CONSTRUCTION PERMIT PROVISOS

AIR POLLUTION SOURCES

Permit No. AC29-2494 Date: 3-29-77

(X) 1. Construction of this installation shall be completed by 9/1/77. Application for Permit to Operate to be submitted by 10/1/77.

(X) 2. This construction permit expires on 11/1/77 following an initial period of operation for appropriate testing to determine compliance with the Rules of the Florida Department of Environmental Regulation Commission.

(X) 3. All applicable rules of the Department including design discharge limitations specified in the application shall be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction.

(X) 4. The applicant shall continue the retention of the engineer of record for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. A report of such inspection shall be submitted by the engineer to the Department of Environmental Regulation for consideration toward the issuance of an operation permit.

(X) 5. This Wet Scrubber shall be tested* for Particulates and Fluorides within 30 days after it is placed in operation. These test results are required prior to our issuance of an operation permit and shall be submitted in duplicate to the Florida Department of Environmental Regulation and Hillsborough County Environmental Protection Commission

* Fuel Analysis May be Submitted for Required Sulfur Dioxide Emission Test.

(X) 6. The operation of this installation shall be observed for visible emissions in accordance with Method 9-Visible Determination of the Opacity of Emissions from Stationary Sources (36FR24895; Federal Register, December 23, 1971). The observation results are required prior to our issuance of an operation permit, and shall be submitted in duplicate to the Department of Environmental Regulation District Office, 225 Ave. D., N.W., Winter Haven, FL 33880

(X) 7. Satisfactory ladders, platforms, and other safety devices shall be provided/available as well as necessary ports to facilitate the carrying out of an adequate sampling program.

(X) 8. There shall be no discharges of liquid effluents or contaminated runoff from the plant site.

(X) 9. All fugitive dust generated at this site shall be adequately controlled.

( ) 10. This permit is associated with a Development of Regional Impact (D.R.I.). It does not waive any other permits that may be required from this or any other State, Federal, or local agency.

ATTACHMENT H

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee

To: Dan Williams Loctn.: Tampa
To: _____ Loctn.: _____
To: _____ Loctn.: _____
From: _____ Date: _____
Reply Optional ( ) Reply Required ( ) Info. Only (X)
Date Due: _____ Date Due: _____

D.E.R.

APR 26 1982

SOUTHWEST DISTRICT
TAMPA

TO: Dan Williams
District Air Engineer, Tampa

THROUGH: Steve Smallwood
Chief, Air Quality Management

FROM: Bill Thomas, Bureau Air Quality Management
Martha Harrell Hall, Assistant General Counsel

DATE: April 21, 1982

SUBJECT: Amax Phosphate, Inc.

In your memorandum of February 19, 1982, you describe various changes underway and planned at the Amax facility in Plant City. The questions you ask will be addressed in the order set out in your memorandum.

1. Amax currently holds an operating permit for two reactors and a kiln with a total allowable emission rate of 20.03 pounds per hour of particulates. This emission rate was calculated by applying the Process Weight Table to the sum of the emissions from the reactors and kiln. DER cannot hold Amax to this emission rate if they request a permit modification since the Process Weight Table is to be applied to each source separately.

2. If Amax does request a modification of its permit and increases production to an emission rate of 41.07 pounds per hour, this could trigger PSD. PSD applicability would depend upon several factors, including: (1) the current actual emissions of the facility; (2) the potential emissions resulting from the increased production; and (3) the availability of any contemporaneous, creditable emissions decreases.

It should be noted that an increase in production is considered a modification only if formally prohibited by a federally enforceable permit condition -- that is, prohibited by a State construction permit.

3. The reduced emissions from other sources might offset the proposed increase in emissions from the reactors. However, reductions in emissions can not be credited unless

they meet the requirements of Florida Administrative Code Rule 17-2.500(2)(e)3 and 4. These provisions require:

(1) that there be decreases in actual emissions;

(2) that the decreases have occurred no earlier than five years before the modification application is filed and no later than the date the modification is to begin operation;

(3) that the decrease hasn't already been relied upon by the Department in issuing a permit;

(4) that the old level of actual emissions exceeds the actual emissions after the modification is completed and operating;

(5) that the decrease is federally enforceable; and

(6) that the emissions which decrease have approximately the same public health and welfare impacts as the emissions proposed to increase.

4. You describe efforts by Amax to control unconfined particulates but relate a fear on their part that such clean-up efforts will make them subject to nonattainment requirements. Chapter 17-2 now differentiates between unconfined emissions and fugitive emissions. Fugitive emissions are defined in Rule 17-2.100(72) to include those emissions which cannot be passed through a stack while unconfined emissions are defined merely as those emissions which escape from unenclosed operations or do not pass through a stack. While some fugitive emissions (those which cannot be quantified) need not be considered when determining the impact of facilities in the area of influence upon the nonattainment area, all unconfined emissions which are not fugitive and all quantifiable fugitive emissions must be considered. Therefore, in adding control devices to reduce unconfined particulate emissions, Amax is not increasing the emissions utilized in calculating its impact upon the nonattainment area. Those particulate emissions should have been considered all along.

5. You state that Amax has verbally agreed to a 0.02 grains per dry standard cubic foot emission limit. If the facility is not subject to PSD, no BACT determination would be made. However, the use of baghouses with the ability to limit emissions to 0.02 gr/dscf could be required of the facility pursuant to Rule 17-2.610(3)(c) which relates to the use of reasonable precautions to control unconfined particulate emissions. If Amax wanted a higher emission rate in the future, it would have to prove that the 0.02 gr/dscf was no longer a reasonable limit.

6. The answer to your final question is discussed above. Basically, emissions which can be controlled but presently are not, are unconfined emissions -- not fugitive emissions. If, through the addition of control devices, Amax decreases its overall particulate emissions, it may be able to escape PSD and NSR permitting.

SS:MHH:jy

cc: Marshall Mott-Smith
Jack Preece
Tom Moody
Johnny Cole
J. Ketteringham
Chuck Collins
Dan Williams
Dave Knowles
Jim Williams

ATTACHMENT G

SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

March 26, 1982

Mr. Fred Mullins
AMAX PHOSPHATES, INC.
402 S. Kentucky Avenue
Suite 600
Lakeland, FL 33801

Subject: Quantifying Fugitive Particulate Emissions at AMAX Plant City Facility

Dear Fred:

In accordance with our recent discussions I have prepared the following proposal for quantifying fugitive particulate matter emissions from your Plant City facility both as the facility originally operated and as it will operate after the initiation of fugitive particulate matter control measures.

As I related to you, I feel that it is very much to your advantage to quantify fugitive particulate matter reductions since state and federal PSD regulations both recognize quantifiable fugitive particulate matter emissions from phosphate rock processing facilities. Since fugitive emissions are recognized, reductions in fugitive emissions, if quantified and documented, can be used to offset point source or fugitive particulate matter increases from other projects at a facility.

In accordance with our discussions, I would propose that Sholtes & Koogler Environmental Consultants (SKEC) visit your Plant City facility to review all areas in which fugitive particulate matter control measures have been instituted. SKEC will then estimate fugitive particulate matter emissions from each of these areas as the areas existed prior to control measures. Fugitive emissions will then be estimated for each area taken into consideration the effectiveness of the control measures instituted. The procedures used for estimating fugitive emissions will be procedures outline in the document Technical Guidance for Control of Industrial Process Fugitive Particulate Emissions, EPA-450/3-77-010, March 1977 and companion documents.

The estimated cost for quantifying the fugitive emissions will be $2500.00. This cost will include a visit to your Plant City facility, a quantification of fugitive emissions both with and without controlled

measures and the preparation of the report summarizing all fugitive emission estimates. I realize this cost is somewhat higher than I related to you by telehone recently but it more accurately reflects the effort that will be required.

We will be able to begin work on this project with a week of notification. I would estimate that the entire project can be completed within a two week period.

If you have any questions regarding this proposal please give me a call.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS

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

JBK:ls

8. Bulk Truck Loading

Material load out rate	86,750 TPY
Loading rate	125 tons/hour
Measured particulate matter concentration at inlet to bag collector	3.67 gr/ft^3
Permitted emission rate from bag collector	2.15 lb/hr

Uncontrolled fugitive emissions:

P_u = 86,750 tons/yr x 1/125 hr/ton x 60 min/hr
x 12,500 ft^3/min x 3.67 gr/ft^3 x 1/7,000 lb/gr
x 1/2,000 tons/hr
= 136.4 TPY TOO HIGH

8,600 → 12,500 CFM? actual flow 12,500 CFM

Highest conc. measured (1.5 gr/ft^3 is avg of flow rate)

65.06 TPY Correct

Particulate matter emitted from bag collector of modified system:

PS_m = 86,750 tons/yr x 1/125 hr/ton x 2.15 lb/hr x 1/2,000 tons/lb
= 0.7 TPY

Particulate matter captured by original system assuming 10 percent efficiency:

PC_x = 136.4 x 0.10 (65.06?)
= 13.6 TPY − 6.506

Particulate matter emitted from original bag collector at 8,600 cfm and 0.02 grains per cubic foot:

PS_x = 86,750 tons/yr x 1/125 hr/ton x 60 min/hr x 8,600 ft^3/min
x 0.02 gr/ft^3 x 1/7,000 lb/gr x 1/2,000 tons/lb
= 0.5 TPY

Particulate matter emitted from original system:

P_x = 136.4 tpy generated (65.06)
− 13.6 tpy captured 6.506
+ 0.5 tpy emitted from bag collector

= 123.3 tpy emitted to the atmosphere.
59.054 ACEPC

Net reduction in particulate matter emissions resulting from modifications to the bulk truck loading facility:

P_r = 123.3 − 0.7
= 122.6 TPY

65 + 32 = 91.594 offset (less 100 TPY offset)

The following assumptions were made in calculating fugitive emissions under the original conditions and under the modified conditions:

1. The annual loading rate of the materials, based on 1980 and 1981 records, is 86,750 tons per year.

2. The open ended loading shed had zero effectiveness for containing generated fugitive particulate emissions(2).

3. The original general ventilation system in the loading shed was 10 percent effective for the capture and control of the fugitive particulate matter generated within the shed.

4. The uncontrolled fugitive particulate matter generation rate within the loading shed is based on test data collected at the inlet of the bag collector venting the gas stream from the loading shed.

5. Covering the conveyors reduced emissions from the conveying operation by 50 percent(3).

6. The fugitive particulate matter emission factor for the transfer and conveying operation was assumed to be 1.0 pounds per ton of material transferred. This is a conservative reduction based on an emission factor of 1.5 pounds per ton(4).

Emission Calculations

A. Transfer and Conveying

Number of transfers	1 for all material.
Material Load out rate	86,750 TPY
Uncontrolled emission factor	1.0 lb/ton/transfer

Uncontrolled fugitive emissions:

P_u = 86,750 tons/year x 1.0 lb/ton x 1 transfer x 1/2,000 ton/lb
= 43.4 TPY

Controlled emission rate at 50 percent control:

P_p = 43.4 x 0.5
= 21.7 TPY

Net reduction in particulate matter emissions resulting from covering the conveyor feeding the bulk truck loading silos:

P_r = 43.4 - 21.7
= 21.7 TPY

II. TRUCK BULK LOADING

Defluorinated feed products are conveyed to two bulk storage silos from which they are loaded into trucks for transport off site. Fugitive particulate emissions are generated during the conveying of the material to the storage silos and during the transfer of material from the silos to the trucks.

In the existing bulk loading system, the conveyors used to convey the defluorinated product to the bulk storage silos were uncovered. The silos, however, were vented through small bag collectors. The truck loading facility consisted of an open ended shed (open in the east-west direction). The length of the shed in the east-west direction was approximately the same length as the trucks using the loading facility. The defluorinated feed product was discharged from the silos and would free fall approximately eight feet into the trucks. There was a general ventilation system in the loading shed with a total air flow rate of 8,600 cubic feet per minute.

The modifications to the truck bulk loading facility have been completed. These modifications have included:

1. Covering the conveyors used for transferring material to the storage silos,

2. Extending the length of the loading shed 20 feet on each end (40 feet total), and placing automatic closing, strip doors on each end of the load-out shed. These doors close automatically when the truck driver inserts a card to a system which activates the loading process,

3. A Mid-West Loader spout was installed on the silos to reduce the free fall distance of bulk material to approximately one foot,

4. The ventilation rate within the loading shed was increased to 12,500 cubic feet per minute. This includes the general ventilation system and the vent system on the Mid-West Loader spout, and

5. The bag collectors on the bulk storage silos have been retained.

These modifications result in the complete enclosure of the truck bulk loading operation. The fugitive particulate matter generated within the loading shed is almost entirely captured and vented through a fabric filter. Observations by personnel from the Hillsborough County Environmental Protection Commission have confirmed that visible emissions from the loading facility have an opacity of zero percent.

ATTACHMENT I

SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 144-81-06

February 3, 1982

Mr. Fred Mullins
Amax Phosphates, Inc.
Suite 600, 402 S. Kentucky Ave.
Lakeland, FL 33801

Subject: Impact of Amax Plant City Particulate Matter Emissions on the Hillsborough County Non-Attainment Area

Dear Fred:

In accordance with your recent request I have conducted the necessary air quality modeling to determine the impact of the particulate matter emitting sources at your Plant City facility on the particulate matter non-attainment area in Hillsborough County. In conducting this modeling I used the revised emission rates for the reactor/paragon, the No. 6 and 7 kilns and the feed preparation sources that you relayed to me by phone on January 28, 1982. The results of the modeling indicate that your Plant City facility, with all particulate matter emitting sources emitting at emission rates shown in Table 1 and operating at 100 percent of rated capacity, will not have a significant impact on the Hillsborough County non-attainment area for either the annual or 24-hour period.

Modeling that I conducted was done with the unmodified CRSTER air quality model. Prior to running this model the meteorological data which were used (Tampa data for the period 1970-1974) were preprocessed with a program developed by the Florida Department of Environmental Regulation (FDER) to select only days containing a vector which would result in the transport of pollutants from your facility to the non-attainment area. These meteorological data and the source emission data summarized in Table 1 were then input to the CRSTER air quality model.

The distance from your facility to the boundary of the particulate matter non-attainment area was determined to be 19.7 kilometers. The direction of the non-attainment area from your facility is between 240° to 290° from north. This location is shown in Figure 1.

The results of the air quality modeling are summarized in Table 2. These results show that the maximum annual impact of particulate matter emissions from your Plant City facility on the non-attainment area will be 0.6 micrograms per cubic meter. A significant impact for the annual period is defined to be 1.0 micrograms per cubic meter. For the 24-hour period, the maximum impact of your facility on the non-attainment area will be 4.2 micrograms per cubic meter. This compares with the significant impact level of 5.0 micrograms per cubic meter. The computer print-outs from which these data were derived are attached hereto.

It can be concluded that the particulate matter emissions from your Plant City facility, with all sources operating at the emission rates summarized in Table 1 and at 100 percent of rated capacity, will not have a significant impact on the Hillsborough County non-attainment area for either the annual or the 24-hour period. It should be noted that the maximum annual impact of 0.6 micrograms per cubic meter was calculated using only the days which contain a vector which would allow pollutants from your facility to be transported to the non-attainment area. If the annual impact was calculated using all days of the year, as would normally be done, the impact would be significantly lower. A more refined estimate of the annual impact was not deemed necessary; however, since even under the most extreme conditions the impact predicted was only 60 percent of the significant impact level, the assumption stated in this paragraph will have no effect on the predicted 24-hour impacts.

If you have any questions or comments regarding these data, please give me a call.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS

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

JBK:sc
Attachments

TABLE 1

PARTICULATE MATTER EMISSION RATES

AMAX PHOSPHATES, INC.
PLANT CITY, FLORIDA

Source	Particulate Matter Emission (lbs/hr.)	Stack Parameters Ht. (m)	Dia. (m)	Vel. (m/s)	Temp. (°K)
Reactor/paragon	42.0*	45.7	1.76	17.4	315
3, 4, 5 kilns	16.76	45.7	1.76	14.7	315
6, 7 kilns	15.0*	61.0	1.76	17.6	315
Feed Prep.	20.0*	30.5	1.37	11.5	318
Dical	13.33	24.4	1.68	8.6	338
Bag Collectors No. 1 Millroom	Particulate matter concentration in gas stream assumed to be 0.03 grains per standard cubic foot.				
All Others	Particulate matter concentration in gas stream assumed to be 0.02 grains per standard cubic foot.				

*Revised 1/28/82

TABLE 2

SUMMARY OF IMPACTS OF AMAX -PLANT CITY PARTICULATE MATTER EMISSIONS* ON THE HILLSBOROUGH COUNTY PARTICULATE MATTER NON-ATTAINMENT AREA

Year	Particulate Matter Impacts (ug/m^3)	
	Annual	24-Hour
1970	0.5	4.0
1971	0.4	3.2
1972	0.6	4.2
1973	0.4	2.6
1974	0.4	3.0

Distance - 19.7 km
Range - 240°-290°

* As revised 1/28/82

FIGURE 1

LOCATION OF AMAX PLANT CITY RELATION
TO HILLSBOROUGH COUNTY PARTICULATE MATTER
NON-ATTAINMENT AREA

AMAX PHOSPHATES, INC.
PLANT CITY, FLORIDA

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J4395 A

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*A START JOB 4395 ANAA70  0001 0001 NER   AMAX-PLANT CITY   80001046.002  10.37.05 PM 01 FEB 82 PRINTER1 SYS NER1
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1970

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PLANT NAME: [illegible]                    POLLUTANT: PART      EMISSION UNITS: GM/SEC     AIR QUALITY UNITS: GM/M**3
IMPACT [illegible] NON-ATTAINMENT AREA
TAMPA MET DATA

              MET FILE        REQUESTED
            STN NO.  YR     STN NO.  YR
 SURFACE     12842   70      12842   70
 UPPER AIR   12842   70      12842   70
PLANT LOCATION: RURAL
OUTPUT TAPE TO BE WRITTEN
MET DATA WILL NOT BE PRINTED

DAY--  1 1 0 1 1 1 0 0 1 1   1 0 1 1 1 1 1 0 0 0   1 1 1 1 1 1 1 1 1 0   1 1 1 0 1 1 1 1 1 0   0 0 0 0 1 1 0 0 0 0
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       1 1 1 1 1 0 0 0 0 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 0 0 0 0 1   1 1 0 0 0 0 0 1 1 1   0 1 1 1 1 1 1 0 0 0
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       1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 0 0 1 1 1 0 1 1
       1 1 1 1 1 1 0 0 0 1   1 1 1 0 1 1 0 0 0 1   1 1 1 1 1 1 1 0 1 1   1 1 1 1 1 1 1 1 1 0   1 1 1 1 1 1 0 1 1 0
       0 1 1 1 1 1 0 0 0 1   1 1 1 1 0 0
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* N O T E *

ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN "ANNUAL" IN THE HEADING ARE BASED ONLY ON THOSE DAYS

MARKED BY "1" IN THE ABOVE TABLE

FLAG DISTANCES(KM)= 1.[illegible] 25.00 [illegible] 15.00 [illegible].00

STACK # 1--FEED PREP [illegible]
STACK # 2--FEED PREP STOR. GAS USE TANK. TRUCK LDG
STACK # 3--LIME BIN. COP BIN. DIKAL. BOOT BIN. BLK LDG
STACK # 4--FILLERCOM 1 & 2
STACK # 5--[illegible]EWAY
STACK # 6--REACTOR [illegible]ARAGON & KILNS 3,4,&5
STACK # 7--KILNS 6 & 7
STACK # 8--FEED PREP
STACK # 9--DIKAL

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M**3/SEC)
1	ALL	0.1200	20.60	0.32	15.20	317.00	1.22
2	ALL	0.4100	20.90	0.43	15.20	317.00	2.21
3	ALL	0.6400	15.10	0.46	15.20	317.00	2.53
4	ALL	1.1100	11.30	0.84	15.20	317.00	8.42
5	ALL	4.3200	53.40	2.81	15.20	317.00	94.26
6	ALL	7.4300	45.72	1.77	16.01	316.30	39.39
7	ALL	1.8900	60.96	1.77	17.56	316.30	43.21
8	ALL	2.5200	30.48	1.37	11.50	339.50	16.95
9	ALL	1.5800	24.38	1.68	8.56	318.50	18.98

PLANT NAME: ARAK - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

MAXIMUM YEAR 2000= 4.934 E-07 DIRECTION= 27 DISTANCE= 19.7 KM

YEAR= 70

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	5.535278E-08	4.167140E-08	3.151330E-08	2.791640E-08	2.382250E-08
2	4.322340E-08	3.132270E-08	2.377900E-08	2.099970E-08	1.784400E-08
3	4.248630E-08	3.196450E-08	2.411010E-08	2.133620E-08	1.822200E-08
4	3.766330E-08	2.809410E-08	2.566910E-08	1.644620E-08	1.393120E-08
5	2.976760E-08	2.217990E-08	1.663310E-08	1.469290E-08	1.250110E-08
6	3.110350E-08	2.377610E-08	1.820500E-08	1.624200E-08	1.400730E-08
7	2.607470E-08	1.922070E-08	1.431240E-08	1.260550E-08	1.068050E-08
8	2.637000E-08	1.980040E-08	1.388030E-08	1.215290E-08	1.022020E-08
9	5.355975E-08	5.105370E-08	3.795360E-08	3.343980E-08	2.840980E-08
10	5.724230E-08	4.252170E-08	3.189970E-08	2.819900E-08	2.401440E-08
11	5.575630E-08	4.197170E-08	3.151070E-08	2.793390E-08	2.364810E-08
12	4.231070E-08	3.212250E-08	2.413950E-08	2.132890E-08	1.813840E-08
13	3.698810E-08	6.563300E-08	4.962050E-08	4.391800E-08	3.741340E-08
14	3.079530E-08	6.152640E-08	4.698650E-08	4.178450E-08	3.583220E-08
15	1.264350E-07	8.199710E-08	5.703610E-08	5.619990E-08	4.833100E-08
16	7.516530E-08	7.321500E-08	5.598710E-08	4.979130E-08	4.269640E-08
17	7.551500E-08	5.777510E-08	4.431020E-08	3.946210E-08	3.390010E-08
18	1.258520E-07	9.619670E-08	7.365510E-08	6.554890E-08	5.625700E-08
19	5.528240E-08	4.165300E-08	3.151140E-08	2.791740E-08	2.381120E-08
20	8.359600E-08	6.398010E-08	4.900130E-08	4.366450E-08	3.755570E-08
21	1.520750E-07	1.166050E-07	8.961650E-08	7.990580E-08	6.875290E-08
22	1.119010E-07	8.637490E-08	6.613675E-08	5.769410E-08	4.917210E-08
23	2.332220E-07	1.760770E-07	1.346630E-07	1.198100E-07	1.027960E-07
24	3.334510E-07	2.532710E-07	1.945650E-07	1.734210E-07	1.491510E-07
25	3.330330E-07	2.531490E-07	1.943910E-07	1.731080E-07	1.486910E-07
26	3.418520E-07	2.605920E-07	1.995420E-07	1.775530E-07	1.523420E-07
27	4.934580E-07	3.789070E-07	2.908610E-07	2.586900E-07	2.219050E-07
28	3.701220E-07	2.790820E-07	2.122730E-07	1.892540E-07	1.609600E-07
29	2.221930E-07	1.671370E-07	1.282550E-07	1.141770E-07	9.530850E-08
30	3.437310E-07	2.639770E-07	2.020030E-07	1.797600E-07	1.542720E-07
31	1.436590E-07	1.079030E-07	8.142520E-08	7.206460E-08	6.142650E-08
32	1.466230E-07	1.118300E-07	8.562990E-08	7.625590E-08	6.552520E-08
33	1.427130E-07	1.092010E-07	8.383460E-08	7.481340E-08	6.441920E-08
34	3.735220E-08	6.822190E-08	5.041200E-08	4.477990E-08	3.834610E-08
35	3.343410E-08	2.530440E-08	1.926120E-08	1.711480E-08	1.466470E-08
36	5.263940E-08	4.561130E-08	3.502140E-08	3.121920E-08	2.686120E-08

PLANT NAME: TVA - PLANT CITY CELLULOSE PAPER EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

ANNUAL MAXIMUM 24-HOUR CONCENTRATION= 3.1143E-06 DIRECTION= 32 DISTANCE= 19.7 KM DAY=174

YEAR= 76

HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
DIR					
1	2.2397E-06 (228)	1.7960E-06 (228)	1.2051E-06 (228)	1.1462E-06 (228)	9.7376E-07 (228)
2	1.7334E-06 (101)	1.3235E-06 (101)	1.0142E-06 (101)	9.0283E-07 (101)	7.7492E-07 (101)
3	2.1316E-06 (119)	1.7283E-06 (119)	1.3913E-06 (119)	1.2616E-06 (119)	1.1083E-06 (119)
4	1.7795E-06 (192)	1.3993E-06 (192)	1.0227E-06 (192)	9.0605E-07 (192)	7.7261E-07 (192)
5	2.2305E-06 (28)	1.7977E-06 (28)	1.4332E-06 (28)	1.3005E-06 (28)	1.1379E-06 (28)
6	1.9607E-06 (249)	1.6356E-06 (249)	1.3349E-06 (249)	1.1384E-06 (249)	1.0498E-06 (249)
7	1.1291E-06 (346)	3.8603E-07 (346)	6.5164E-07 (346)	5.8203E-07 (346)	4.9368E-07 (346)
8	6.3524E-07 (115)	5.2978E-07 (115)	4.0156E-07 (115)	3.5868E-07 (115)	3.0550E-07 (115)
9	2.1035E-06 (65)	1.6935E-06 (65)	1.3599E-06 (65)	1.2313E-06 (65)	1.0807E-06 (65)
10	2.4344E-06 (312)	1.9430E-06 (312)	1.5517E-06 (312)	1.4031E-06 (312)	1.2201E-06 (312)
11	2.2727E-06 (78)	1.7045E-06 (78)	1.3113E-06 (78)	1.2447E-06 (78)	1.0739E-06 (78)
12	1.1767E-06 (214)	9.5375E-07 (214)	7.6073E-07 (214)	7.0010E-07 (214)	6.1768E-07 (214)
13	1.4726E-06 (215)	1.1823E-06 (175)	9.5994E-07 (175)	8.7486E-07 (175)	7.7385E-07 (175)
14	2.4369E-06 (160)	1.9735E-06 (160)	1.5927E-06 (160)	1.4407E-06 (160)	1.2787E-06 (160)
15	3.0800E-06 (315)	2.4690E-06 (315)	1.9389E-06 (315)	1.7801E-06 (315)	1.5578E-06 (315)
16	1.5034E-06 (45)	1.2059E-06 (45)	9.5327E-07 (45)	8.6418E-07 (45)	7.5329E-07 (45)
17	2.0451E-06 (91)	2.4053E-06 (91)	1.9478E-06 (91)	1.7710E-06 (91)	1.5605E-06 (91)
18	3.0310E-06 (341)	2.4819E-06 (341)	1.9346E-06 (341)	1.7959E-06 (341)	1.5759E-06 (341)
19	1.4128E-06 (322)	1.1693E-06 (322)	9.5675E-07 (322)	8.7563E-07 (322)	7.7075E-07 (322)
20	3.6296E-06 (164)	2.8870E-06 (164)	2.3157E-06 (164)	2.0914E-06 (164)	1.9417E-06 (164)
21	1.7215E-06 (52)	1.3861E-06 (333)	1.1380E-06 (333)	1.0414E-06 (333)	9.2596E-07 (333)
22	2.2566E-06 (39)	1.7936E-06 (39)	1.4255E-06 (39)	1.2867E-06 (39)	1.1231E-06 (39)
23	2.9357E-06 (255)	2.3916E-06 (255)	1.9060E-06 (255)	1.7235E-06 (255)	1.5087E-06 (255)
24	4.8230E-06 (162)	3.8655E-06 (162)	3.0936E-06 (162)	2.8025E-06 (162)	2.4608E-06 (162)
25	4.7455E-06 (119)	3.8926E-06 (119)	3.1703E-06 (119)	2.8900E-06 (119)	2.5561E-06 (119)
26	4.2632E-06 (343)	3.5343E-06 (343)	2.8529E-06 (343)	2.6142E-06 (343)	2.3170E-06 (343)
27	4.0533E-06 (289)	3.2678E-06 (289)	2.6798E-06 (289)	2.4510E-06 (289)	2.1779E-06 (289)
28	2.6611E-06 (102)	2.0701E-06 (251)	1.6482E-06 (251)	1.4860E-06 (251)	1.2956E-06 (251)
29	2.3582E-06 (153)	1.8744E-06 (86)	1.5054E-06 (86)	1.3630E-06 (86)	1.1963E-06 (86)
30	3.6722E-06 (302)	2.9287E-06 (302)	2.3119E-06 (302)	2.1085E-06 (302)	1.9467E-06 (302)
31	1.7599E-06 (231)	1.3771E-06 (231)	1.0753E-06 (231)	9.6416E-07 (231)	8.3505E-07 (231)
32	5.1143E-06 (174)	5.0237E-06 (174)	4.1015E-06 (174)	3.7451E-06 (174)	3.3202E-06 (174)
33	3.2502E-06 (363)	2.6507E-06 (363)	2.1557E-06 (363)	1.9749E-06 (363)	1.7401E-06 (363)
34	2.5090E-06 (211)	1.9629E-06 (211)	1.5488E-06 (211)	1.3942E-06 (211)	1.2144E-06 (211)
35	1.4185E-06 (169)	1.1455E-06 (169)	9.1869E-07 (169)	8.3233E-07 (169)	7.3016E-07 (169)
36	2.4823E-06 (189)	1.9374E-06 (189)	1.5926E-06 (189)	1.4291E-06 (189)	1.2487E-06 (189)

PLANT OR SOURCE = PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY SECOND HIGHEST 24-HOUR CONCENTRATION= 1.4393E-06 DIRECTION= 27 DISTANCE= 19.7 KM DAY=289

YEAR= 70

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	19.7 KM	25.3 KM	31.6 KM	35.3 KM	40.0 KM
1	1.3258E-06 (25)	1.0921E-06 (25)	8.7579E-07 (25)	7.9742E-07 (25)	7.0297E-07 (25)
2	9.2997E-07 (29)	7.4395E-07 (29)	5.9327E-07 (29)	5.3653E-07 (29)	4.6967E-07 (29)
3	1.1418E-06 (225)	9.1261E-07 (225)	7.2329E-07 (225)	6.5308E-07 (225)	5.7095E-07 (225)
4	9.0651E-07 (180)	6.9535E-07 (180)	5.1510E-07 (180)	4.5491E-07 (180)	3.8504E-07 (180)
5	8.3599E-07 (219)	6.9644E-07 (219)	4.4091E-07 (219)	3.8351E-07 (219)	3.1934E-07 (219)
6	1.3545E-06 (77)	1.1035E-06 (77)	9.0231E-07 (77)	8.2322E-07 (77)	7.2911E-07 (77)
7	9.2241E-07 (324)	7.0614E-07 (324)	5.3431E-07 (324)	4.7092E-07 (324)	3.9784E-07 (324)
8	6.1197E-07 (46)	4.7083E-07 (46)	3.6243E-07 (46)	3.2297E-07 (46)	2.7746E-07 (46)
9	1.7022E-06 (325)	1.2770E-06 (325)	9.6146E-07 (325)	8.4947E-07 (325)	7.2192E-07 (325)
10	1.4743E-06 (338)	1.2095E-06 (338)	9.7464E-07 (338)	8.8627E-07 (338)	7.8183E-07 (338)
11	1.2860E-06 (97)	1.0236E-06 (97)	8.0145E-07 (97)	7.2721E-07 (97)	6.3194E-07 (97)
12	1.1475E-06 (197)	9.1612E-07 (197)	7.2776E-07 (197)	6.5701E-07 (197)	5.7386E-07 (197)
13	1.3501E-06 (175)	1.1515E-06 (215)	9.1226E-07 (102)	8.3146E-07 (102)	7.3551E-07 (102)
14	1.9108E-06 (112)	1.5677E-06 (112)	1.2746E-06 (112)	1.1605E-06 (112)	1.0243E-06 (112)
15	2.2242E-06 (27)	1.7934E-06 (27)	1.4363E-06 (27)	1.3001E-06 (27)	1.1397E-06 (27)
16	1.3841E-06 (164)	1.1310E-06 (164)	9.1718E-07 (164)	8.3566E-07 (164)	7.3895E-07 (164)
17	2.3427E-06 (138)	1.8990E-06 (138)	1.5281E-06 (138)	1.3849E-06 (138)	1.2152E-06 (138)
18	2.5867E-06 (329)	2.0881E-06 (329)	1.6751E-06 (329)	1.5189E-06 (329)	1.3333E-06 (329)
19	1.3465E-06 (106)	1.0939E-06 (106)	8.8190E-07 (106)	8.0050E-07 (106)	7.0389E-07 (106)
20	1.5509E-06 (31)	1.2141E-06 (31)	9.4980E-07 (31)	8.5232E-07 (31)	7.3910E-07 (31)
21	1.6756E-06 (54)	1.3709E-06 (54)	1.1279E-06 (54)	1.0327E-06 (54)	9.1698E-07 (54)
22	1.5161E-06 (256)	1.1737E-06 (256)	9.0740E-07 (256)	8.1006E-07 (256)	6.9759E-07 (256)
23	2.4672E-06 (304)	1.9133E-06 (304)	1.5096E-06 (171)	1.3468E-06 (171)	1.1676E-06 (171)
24	2.7744E-06 (114)	3.0612E-06 (114)	2.4529E-06 (114)	2.2324E-06 (114)	1.9594E-06 (114)
25	2.1196E-06 (182)	1.7042E-06 (132)	1.3551E-06 (143)	1.2349E-06 (143)	1.0925E-06 (143)
26	3.7034E-06 (115)	2.9143E-06 (115)	2.3242E-06 (115)	2.0902E-06 (115)	1.8157E-06 (115)
27	3.9539E-06 (289)	3.1771E-06 (241)	2.4920E-06 (241)	2.2402E-06 (241)	1.9477E-06 (241)
28	2.6067E-06 (251)	2.0626E-06 (102)	1.5375E-06 (102)	1.4113E-06 (102)	1.2072E-06 (102)
29	2.3139E-06 (36)	1.7925E-06 (153)	1.3655E-06 (153)	1.2132E-06 (153)	1.0387E-06 (153)
30	3.1131E-06 (355)	2.5272E-06 (355)	2.0302E-06 (355)	1.8546E-06 (355)	1.6348E-06 (355)
31	1.3577E-06 (135)	1.0492E-06 (135)	8.3321E-07 (172)	7.5430E-07 (172)	6.6151E-07 (172)
32	2.6541E-06 (154)	2.1296E-06 (154)	1.6947E-06 (154)	1.5355E-06 (154)	1.3433E-06 (154)
33	2.5962E-06 (238)	2.0988E-06 (238)	1.6815E-06 (238)	1.5270E-06 (238)	1.3448E-06 (238)
34	2.0684E-06 (26)	1.6790E-06 (26)	1.3537E-06 (26)	1.2280E-06 (26)	1.0792E-06 (26)
35	1.0452E-06 (238)	8.2604E-07 (238)	6.5199E-07 (238)	5.8751E-07 (238)	5.1212E-07 (238)
36	1.7002E-06 (165)	1.3341E-06 (165)	1.0489E-06 (165)	9.4390E-07 (165)	8.2192E-07 (165)

ANA71

J4417 A

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*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
*A START JOB 4417 ANAA71  0001 0001 NER   AMAX-PLANT CITY   80001046.002  11.42.43 PM 01 FEB 82 PRINTER1 SYS NER1 START A*
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PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3
IMPACT = HILLSBOROUGH CO. NON-ATTAINMENT AREA
TAMPA MET DATA

	MET FILE STN NO.	YR	REQUESTED STN NO.	YR
SURFACE	12842	71	12842	71
UPPER AIR	12842	71	12842	71

PLANT LOCATION: RURAL
OUTPUT TAPE TO BE WRITTEN
MET DATA WILL NOT BE PRINTED

DAY--

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0 1 1 1 0 1 1 1 0 1   1 1 1 1 0 1 1 0 0 1   1 1 0 1 1 0 0 0 1 0   0 1 1 1 1 1 0 1 1 0   0 1 1 1 0 0 1 1 1 1
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0 1 1 0 0 0 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   0 1 0 1 1 1 1 0 1 1   0 1 1 1 1 1 1 1 0 1
0 1 1 1 1 1 0 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 0 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 0 1 1 1 1 1   1 1 1 1 1 1 0
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* NOTE *

ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN "ANNUAL" IN THE HEADING ARE BASED ONLY ON THOSE DAYS MARKED BY "1" IN THE ABOVE TABLE

RING DISTANCES(KM)= 19.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NO3
STACK # 2--FEED PREP SODA, BAG HSE ECM, TRUCK LOG
STACK # 3--LIME BIN, CO2 BIN, DIKAL, BOOT BIN, DLK LOG
STACK # 4--MILLROOM 1 & 2
STACK # 5--CRANEWAY
STACK # 6--REACTOR PARASON & KILNS 3,4,&5
STACK # 7--KILNS 6 & 7
STACK # 8--FEED PREP
STACK # 9--DIKAL

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M**3/SEC)
1	ALL	0.1200	29.60	0.32	15.20	317.00	1.22
2	ALL	0.4400	20.90	0.43	15.20	317.00	2.21
3	ALL	0.6400	15.10	0.46	15.20	317.00	2.53
4	ALL	1.1100	11.30	0.84	15.20	317.00	8.42
5	ALL	4.3200	53.40	2.81	15.20	317.00	94.26
6	ALL	7.4000	45.72	1.77	16.01	316.30	39.39
7	ALL	1.8900	60.96	1.77	17.56	316.30	43.21
8	ALL	2.5200	33.48	1.37	11.50	333.50	16.95
9	ALL	1.6800	29.38	1.68	8.56	313.50	18.98

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 4.2773E-07 DIRECTION= 27 DISTANCE= 19.7 KM

YEAR= 71

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	5.77414E-08	4.26669E-08	3.17048E-08	2.78871E-08	2.35779E-08
2	5.41195E-08	4.00271E-08	2.97622E-08	2.61833E-08	2.21388E-08
3	3.30865E-08	2.38069E-08	1.73351E-08	1.51446E-08	1.27047E-08
4	2.64757E-08	1.93818E-08	1.43493E-08	1.26142E-08	1.06645E-08
5	5.41983E-08	4.11485E-08	3.14494E-08	2.79912E-08	2.40425E-08
6	4.78426E-08	3.61441E-08	2.74818E-08	2.44138E-08	2.09148E-08
7	2.97035E-08	2.19037E-08	1.63704E-08	1.44611E-08	1.23107E-08
8	3.97655E-08	2.91091E-08	2.16436E-08	1.90904E-08	1.62261E-08
9	1.01944E-07	7.43570E-08	5.48603E-08	4.82037E-08	4.07457E-08
10	5.23669E-08	3.79218E-08	2.77812E-08	2.43297E-08	2.04757E-08
11	5.14823E-08	3.80910E-08	2.93919E-08	2.50210E-08	2.12172E-08
12	5.73099E-08	5.06142E-08	3.32229E-08	3.38377E-08	2.88478E-08
13	5.81124E-08	4.29028E-08	3.17712E-08	2.78028E-08	2.34933E-08
14	1.03246E-07	7.87802E-08	6.02219E-08	5.35670E-08	4.59383E-08
15	1.10020E-07	8.41512E-08	6.44731E-08	5.74030E-08	4.92867E-08
16	8.91143E-09	6.74081E-08	5.11274E-08	4.53273E-08	3.97072E-08
17	4.83233E-08	3.61158E-08	2.71508E-08	2.40030E-08	2.04410E-08
18	1.61695E-07	1.23936E-07	9.49873E-08	8.45166E-08	7.24947E-08
19	7.01406E-08	5.34836E-08	4.08308E-08	3.62950E-08	3.10906E-08
20	5.89477E-08	4.46341E-08	3.39073E-08	3.00840E-08	2.57217E-08
21	1.77956E-07	1.36824E-07	1.05327E-07	9.39538E-08	8.08732E-08
22	1.16846E-07	8.71851E-08	6.53611E-08	5.76887E-08	4.89984E-08
23	2.51084E-07	1.90039E-07	1.44239E-07	1.27928E-07	1.09311E-07
24	2.77459E-07	2.11031E-07	1.60928E-07	1.43010E-07	1.22519E-07
25	2.71629E-07	2.07844E-07	1.59280E-07	1.41799E-07	1.21739E-07
26	3.53567E-07	2.72348E-07	2.10161E-07	1.87663E-07	1.61782E-07
27	4.27701E-07	3.27678E-07	2.51479E-07	2.24043E-07	1.92547E-07
28	2.93037E-07	2.23214E-07	1.70448E-07	1.51525E-07	1.29867E-07
29	2.71503E-07	2.07839E-07	1.59421E-07	1.41980E-07	1.21962E-07
30	3.70031E-07	2.83579E-07	2.17680E-07	1.93920E-07	1.66625E-07
31	1.76939E-07	1.33595E-07	1.01195E-07	8.96816E-08	7.65629E-08
32	1.59540E-07	1.21338E-07	9.26519E-08	8.24164E-08	7.07163E-08
33	1.77389E-07	1.34709E-07	1.02830E-07	9.14783E-08	7.85083E-08
34	9.18088E-08	6.89395E-08	5.20896E-08	4.61488E-08	3.93994E-08
35	5.21885E-08	4.74071E-08	3.62436E-08	3.22439E-08	2.76602E-08
36	9.66309E-08	7.39421E-08	5.67307E-08	5.05468E-08	4.34511E-08

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY MAXIMUM 24-HOUR CONC= 4.9071E-06 DIRECTION= 11 DISTANCE= 19.7 KM DAY=224

YEAR= 71

HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	1.1421E-06 (201)	9.1150E-07 (201)	7.2170E-07 (201)	6.5474E-07 (201)	5.7254E-07 (201)
2	1.3791E-06 (22)	1.1236E-06 (22)	9.1232E-07 (22)	8.3166E-07 (22)	7.3594E-07 (22)
3	5.8423E-07 (50)	4.1656E-07 (50)	3.0342E-07 (50)	2.6288E-07 (116)	2.2473E-07 (116)
4	9.8235E-07 (116)	7.2592E-07 (116)	5.3941E-07 (116)	4.7292E-07 (116)	3.9886E-07 (116)
5	3.5258E-06 (72)	2.8077E-06 (72)	2.2106E-06 (72)	1.9981E-06 (72)	1.7369E-06 (72)
6	1.7313E-06 (219)	1.3715E-06 (219)	1.0865E-06 (219)	9.8120E-07 (219)	8.5823E-07 (219)
7	9.9039E-07 (161)	7.5389E-07 (161)	5.7418E-07 (161)	5.0929E-07 (161)	4.3495E-07 (161)
8	1.3529E-06 (239)	1.0644E-06 (239)	8.3558E-07 (239)	7.5128E-07 (239)	6.5294E-07 (239)
9	1.9449E-06 (155)	1.4812E-06 (155)	1.1307E-06 (155)	1.0052E-05 (155)	8.6148E-07 (155)
10	1.5308E-06 (253)	1.2233E-05 (253)	9.7180E-07 (253)	8.7709E-07 (253)	7.6580E-07 (253)
11	4.9071E-06 (224)	3.8838E-06 (224)	3.0653E-06 (224)	2.7600E-05 (224)	2.4036E-06 (224)
12	2.2883E-06 (351)	1.8413E-06 (351)	1.4725E-06 (351)	1.3317E-05 (351)	1.1657E-06 (351)
13	1.1100E-06 (169)	8.9082E-07 (169)	7.1078E-07 (169)	6.4280E-07 (169)	5.6266E-07 (169)
14	2.3059E-06 (70)	1.8513E-06 (70)	1.4865E-06 (70)	1.3493E-06 (70)	1.1891E-06 (70)
15	3.4775E-06 (115)	2.7909E-06 (115)	2.2284E-06 (115)	2.0159E-05 (115)	1.7653E-06 (115)
16	2.0485E-06 (99)	1.6492E-06 (99)	1.3215E-06 (99)	1.1977E-06 (99)	1.0516E-06 (99)
17	1.2970E-06 (29)	1.0672E-06 (29)	8.7255E-07 (29)	7.9720E-07 (29)	7.0749E-07 (29)
18	3.9553E-06 (257)	3.1444E-05 (257)	2.4822E-06 (257)	2.2319E-06 (257)	1.9384E-06 (257)
19	2.8098E-06 (276)	2.2491E-06 (276)	1.7911E-06 (276)	1.6190E-06 (276)	1.4167E-06 (276)
20	1.3382E-06 (364)	1.0974E-06 (364)	8.9456E-07 (364)	8.1653E-07 (364)	7.2359E-07 (364)
21	2.1340E-06 (273)	1.7263E-06 (273)	1.3967E-06 (273)	1.2719E-06 (273)	1.1251E-06 (273)
22	2.2919E-06 (188)	1.8514E-06 (188)	1.4957E-06 (188)	1.3457E-06 (188)	1.1802E-06 (188)
23	3.3434E-06 (270)	2.5664E-06 (270)	1.9715E-06 (270)	1.7564E-06 (270)	1.5091E-06 (270)
24	3.0997E-06 (2)	2.5145E-06 (2)	2.0276E-06 (2)	1.8411E-06 (2)	1.6203E-06 (2)
25	2.6079E-06 (12)	2.0673E-06 (12)	1.6287E-06 (12)	1.4639E-05 (12)	1.2712E-06 (12)
26	4.3970E-06 (152)	3.6336E-05 (152)	2.9971E-06 (152)	2.7341E-05 (152)	2.4325E-06 (152)
27	4.5346E-06 (265)	3.5800E-06 (265)	2.8246E-06 (265)	2.5450E-05 (265)	2.2190E-06 (265)
28	4.4589E-06 (247)	3.5497E-06 (247)	2.8229E-06 (247)	2.5522E-05 (247)	2.2353E-06 (247)
29	2.4364E-06 (11)	2.0071E-06 (235)	1.6397E-06 (235)	1.5592E-06 (235)	1.4007E-06 (235)
30	3.1670E-06 (348)	2.4964E-06 (348)	1.9565E-06 (348)	1.7552E-05 (348)	1.5201E-06 (348)
31	1.8778E-06 (340)	1.5242E-06 (340)	1.2132E-06 (340)	1.1227E-05 (340)	9.9189E-07 (340)
32	2.2087E-06 (201)	1.6995E-06 (201)	1.3504E-06 (234)	1.2194E-06 (234)	1.0654E-06 (234)
33	3.7460E-06 (332)	2.9612E-06 (332)	2.3158E-06 (332)	2.1027E-05 (332)	1.8303E-06 (332)
34	2.2224E-06 (230)	1.7853E-06 (230)	1.4253E-06 (230)	1.2893E-06 (230)	1.1287E-06 (230)
35	1.8549E-06 (176)	1.4402E-06 (176)	1.1179E-06 (176)	1.0301E-06 (176)	8.6379E-07 (176)
36	2.4960E-06 (237)	2.0711E-06 (237)	1.7054E-06 (237)	1.5623E-06 (237)	1.3907E-06 (237)

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 3.4803E-06 DIRECTION= 18 DISTANCE= 19.7 KM DAY=151

YEAR= 71

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM		25.0 KM		31.6 KM		35.0 KM		40.0 KM	
1	1.0973E-06	(34)	8.7341E-07	(295)	6.9904E-07	(295)	5.3288E-07	(295)	5.5470E-07	(295)
2	1.2701E-06	(24)	9.6659E-07	(24)	7.3130E-07	(24)	5.4589E-07	(24)	5.4764E-07	(24)
3	5.2642E-07	(361)	3.8841E-07	(116)	2.9618E-07	(116)	2.6186E-07	(50)	2.1913E-07	(50)
4	7.2922E-07	(69)	5.3438E-07	(69)	3.9252E-07	(69)	3.4326E-07	(69)	2.8778E-07	(69)
5	1.1893E-06	(216)	9.4515E-07	(216)	7.5468E-07	(216)	6.8443E-07	(216)	6.0268E-07	(216)
6	1.5178E-06	(178)	1.2921E-06	(178)	9.4648E-07	(178)	8.5099E-07	(178)	7.3913E-07	(178)
7	6.5422E-07	(4)	5.0921E-07	(4)	3.9216E-07	(4)	3.4850E-07	(4)	2.9769E-07	(4)
8	1.0241E-06	(178)	8.2529E-07	(178)	6.6290E-07	(178)	6.0193E-07	(178)	5.2998E-07	(178)
9	1.0100E-06	(214)	7.8190E-07	(214)	6.0537E-07	(214)	5.4144E-07	(214)	4.6750E-07	(214)
10	5.6540E-07	(351)	6.5862E-07	(351)	4.9691E-07	(351)	4.3788E-07	(351)	3.7004E-07	(351)
11	7.6222E-07	(115)	5.5692E-07	(115)	4.0801E-07	(115)	3.5645E-07	(115)	2.9844E-07	(115)
12	1.7605E-06	(55)	1.4527E-06	(55)	1.1873E-06	(55)	1.0830E-06	(55)	9.5821E-07	(55)
13	8.7718E-07	(107)	6.9378E-07	(107)	5.4186E-07	(107)	4.8395E-07	(107)	4.1602E-07	(107)
14	2.1129E-06	(55)	1.7215E-06	(55)	1.3935E-06	(55)	1.2679E-06	(55)	1.1186E-06	(55)
15	1.8841E-06	(70)	1.4921E-06	(70)	1.1785E-06	(70)	1.0519E-06	(70)	9.2557E-07	(70)
16	1.3798E-06	(217)	1.0814E-06	(217)	8.4559E-07	(217)	7.5882E-07	(217)	6.5790E-07	(217)
17	1.1647E-06	(330)	9.2897E-07	(330)	7.3698E-07	(330)	6.6755E-07	(77)	5.9077E-07	(77)
18	3.4803E-06	(151)	2.7717E-06	(151)	2.1998E-06	(258)	1.9985E-06	(258)	1.7592E-06	(258)
19	1.0964E-06	(332)	8.9651E-07	(332)	7.2897E-07	(332)	6.6479E-07	(332)	5.8848E-07	(332)
20	1.0001E-06	(90)	8.1156E-07	(90)	6.5406E-07	(90)	5.9364E-07	(90)	5.2201E-07	(90)
21	1.8038E-06	(225)	1.4282E-06	(131)	1.1675E-06	(131)	1.0668E-06	(131)	9.4657E-07	(131)
22	2.0584E-06	(272)	1.5611E-06	(272)	1.1990E-06	(272)	1.0561E-06	(272)	9.0451E-07	(272)
23	2.7859E-06	(268)	2.2167E-06	(268)	1.7608E-06	(268)	1.5910E-06	(258)	1.3923E-06	(268)
24	2.7473E-06	(276)	2.2069E-06	(276)	1.7677E-06	(276)	1.6029E-06	(276)	1.4091E-06	(276)
25	2.3915E-06	(107)	1.9488E-06	(107)	1.5779E-06	(107)	1.4359E-06	(107)	1.2671E-06	(107)
26	3.2259E-06	(248)	2.6025E-06	(248)	2.0904E-06	(248)	1.8971E-06	(249)	1.6688E-06	(248)
27	3.2107E-06	(241)	2.5110E-06	(241)	1.9607E-06	(241)	1.7587E-06	(241)	1.5244E-06	(241)
28	2.9354E-06	(306)	2.3434E-06	(306)	1.8664E-06	(306)	1.6868E-06	(306)	1.4760E-06	(306)
29	2.3865E-06	(145)	1.8645E-06	(145)	1.4524E-06	(145)	1.3010E-06	(240)	1.1419E-06	(240)
30	2.9377E-06	(289)	2.3549E-06	(289)	1.8302E-06	(289)	1.7018E-06	(289)	1.4920E-06	(289)
31	1.6293E-06	(345)	1.2919E-06	(289)	1.0311E-06	(289)	9.3327E-07	(289)	8.1833E-07	(289)
32	2.1242E-06	(234)	1.6986E-05	(234)	1.3176E-06	(201)	1.1659E-06	(201)	1.0025E-06	(201)
33	2.3490E-06	(252)	1.8804E-06	(252)	1.5094E-06	(252)	1.3712E-05	(252)	1.2094E-06	(252)
34	1.6650E-06	(332)	1.3058E-06	(332)	1.0203E-06	(332)	9.1467E-07	(332)	7.9159E-07	(332)
35	1.3169E-06	(72)	1.0725E-06	(72)	8.6558E-07	(72)	7.8722E-07	(72)	6.9290E-07	(72)
36	2.0052E-06	(8)	1.5322E-06	(8)	1.1830E-06	(25)	1.0668E-06	(116)	9.4657E-07	(116)

ANAA72

J4437 A

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*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001045.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001045.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001045.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001045.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
*A START JOB 4437 ANAA72    0001 0001 NER    AMAX-PLANT CITY    80001046.002  12.26.15 AM 02 FEB 82 PRINTER1 SYS NER1 START  A*
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1972

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PLANT NAME: AMAX - PLANT CITY          POLLUTANT: PART       EMISSION UNITS: GM/SEC     AIR QUALITY UNITS: GM/M**3
IMPACT @ HILLSBOROUGH CO. NON-ATTAINMENT AREA
TAMPA MET DATA

              MET FILE      REQUESTED
              STN NO. YR    STN NO. YR
 SURFACE      12842  72     12842  72
 UPPER AIR    12842  72     12842  72
PLANT LOCATION: RURAL
OUTPUT TAPE TO BE WRITTEN
MET DATA WILL NOT BE PRINTED

DAY--  1 0 1 1 0 0 1 1 1 1   0 0 0 0 0 1 1 1 1 1   1 1 0 1 0 1 1 1 0 0   1 1 1 1 0 1 1 0 1 1   1 1 1 0 1 1 1 1 0 0
       0 1 1 1 0 1 1 1 1 1   1 1 0 0 0 1 1 0 1 1   1 1 1 1 0 0 0 1 1 1   1 0 0 0 0 1 1 0 1 1   0 0 0 1 0 1 0 1 0 1
       1 1 1 0 0 1 0 0 1 1   1 1 0 1 1 1 1 1 1 1   1 1 1 1 0 1 1 1 0 0   1 1 1 1 0 1 1 1 1 1   1 0 0 0 0 0 1 1 1 1
       0 0 0 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   0 0 0 0 0 0 0 0 0 0   0 0 0 0 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
       1 1 1 1 1 1 1 1 1 0   1 1 1 1 1 1 1 1 1 0   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 0 1 1 1 1   1 1 1 1 1 1 1 1 1 1
       1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 0   0 0 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
       0 0 0 1 1 1 1 0 1 1   1 1 0 1 1 1 1 1 0 0   0 1 1 1 0 0 0 0 1 1   1 1 1 1 0 1 1 1 1 1   1 1 1 1 1 1 1 1 1 0
       0 1 1 1 1 1 0 0 1 0   0 0 1 1 1 1
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* NOTE *

ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN "ANNUAL" IN THE HEADING ARE BASED ONLY ON THOSE DAYS

MARKED BY "1" IN THE ABOVE TABLE

RING DISTANCES(KM)= 19.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NOS
STACK # 2--FEED PREP SODA, BAG HSE E&W, TRUCK LDG
STACK # 3--LIME BIN, COP BIN, DIKAL, DUST BIN, BLK LDG
STACK # 4--MILLROOM 1 & 2
STACK # 5--CRANEWAY
STACK # 6--REACTOR PARAGON & KILNS 3,4,&5
STACK # 7--KILNS 6 & 7
STACK # 8--FEED PREP
STACK # 9--DIKAL

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M**3/SEC)
1	ALL	0.1200	29.60	0.32	15.20	317.00	1.22
2	ALL	0.4400	23.90	0.43	15.20	317.00	2.21
3	ALL	0.6400	15.10	0.46	15.20	317.00	2.53
4	ALL	1.1100	11.30	0.84	15.20	317.00	8.42
5	ALL	4.3200	53.40	2.81	15.20	317.00	94.26
6	ALL	7.4000	45.72	1.77	16.01	316.30	39.39
7	ALL	1.8900	63.96	1.77	17.56	316.30	43.21
8	ALL	2.5200	33.48	1.37	11.50	338.50	16.95
9	ALL	1.6800	21.38	1.68	8.56	313.50	18.98

PLANT NAME: AAAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 5.8999E-07 DIRECTION= 27 DISTANCE= 19.7 KM

YEAR= 72

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	3.12385E-08	3.07770E-08	2.31076E-08	2.04166E-08	1.73548E-08
2	5.57204E-08	4.92953E-08	3.72885E-08	3.30795E-08	2.33007E-08
3	4.85951E-08	3.67457E-08	2.79933E-08	2.48974E-08	2.13696E-08
4	4.22545E-08	3.16157E-08	2.38119E-08	2.10674E-08	1.79543E-08
5	4.44584E-08	3.37787E-08	2.58305E-08	2.29981E-08	1.97651E-08
6	4.87701E-08	3.71530E-08	2.84979E-08	2.54073E-08	2.18703E-08
7	4.06550E-08	3.00237E-08	2.24061E-08	1.97732E-08	1.68068E-08
8	3.05057E-08	2.23747E-08	1.66538E-08	1.46898E-08	1.24857E-08
9	1.09167E-07	8.10127E-08	6.07070E-08	5.36558E-08	4.56838E-08
10	5.47329E-08	4.77094E-08	3.54992E-08	3.12773E-08	2.65193E-08
11	4.64158E-08	3.37117E-08	2.46559E-08	2.15519E-08	1.80772E-08
12	3.15439E-08	3.86077E-08	2.30872E-08	2.57398E-08	2.19415E-08
13	5.71885E-08	5.07021E-08	3.94719E-08	3.41320E-08	2.91932E-08
14	9.04352E-08	6.87966E-08	5.23871E-08	4.65044E-08	3.97707E-08
15	6.63103E-08	5.04398E-08	3.84831E-08	3.42048E-08	2.93117E-08
16	7.75294E-08	5.96385E-08	4.59732E-08	4.10371E-08	3.53601E-08
17	5.85557E-08	4.46126E-08	3.40601E-08	3.02679E-08	2.59229E-08
18	7.71753E-08	5.87729E-08	4.48685E-08	3.98935E-08	3.41956E-08
19	7.95332E-08	6.08735E-08	4.66484E-08	4.15265E-08	3.56501E-08
20	5.07897E-08	3.75539E-08	2.79012E-08	2.45272E-08	2.07224E-08
21	1.70533E-07	1.32086E-07	1.02403E-07	9.16134E-08	7.91605E-08
22	1.54281E-07	1.16421E-07	8.81665E-08	7.81442E-08	6.67247E-08
23	3.19866E-07	2.44076E-07	1.86711E-07	1.66153E-07	1.42602E-07
24	3.14844E-07	3.19011E-07	2.45730E-07	2.19259E-07	1.88812E-07
25	3.94212E-07	2.99936E-07	2.28540E-07	2.02935E-07	1.73631E-07
26	4.12434E-07	3.13445E-07	2.38527E-07	2.11832E-07	1.81184E-07
27	5.89990E-07	4.52256E-07	3.47253E-07	3.09417E-07	2.65966E-07
28	3.67870E-07	2.81890E-07	2.16533E-07	1.93018E-07	1.66023E-07
29	2.55950E-07	1.95272E-07	1.49302E-07	1.32935E-07	1.14095E-07
30	2.93228E-07	2.31753E-07	1.80307E-07	1.61553E-07	1.39871E-07
31	1.50927E-07	1.14489E-07	8.73143E-08	7.76520E-08	6.66283E-08
32	8.41634E-08	6.29372E-08	4.74449E-08	4.20255E-08	3.58898E-08
33	1.11133E-07	8.50571E-08	6.53336E-08	5.82531E-08	5.01286E-08
34	6.93661E-08	5.25023E-08	3.99950E-08	3.55640E-08	3.05170E-08
35	6.91098E-08	5.27513E-08	4.03475E-08	3.58864E-08	3.07740E-08
36	5.42549E-08	4.08589E-08	3.09589E-08	2.74656E-08	2.34933E-08

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY MAXIMUM 24-HOUR CONC= 4.7100E-06 DIRECTION= 27 DISTANCE= 19.7 KM DAY= 1

YEAR= 72

HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	1.6004E-06 (10)	1.2344E-06 (10)	9.4961E-07 (10)	8.4448E-07 (10)	7.2700E-07 (9)
2	2.0836E-06 (89)	1.5467E-05 (99)	1.1327E-06 (89)	1.0148E-05 (99)	8.5850E-07 (89)
3	2.7722E-06 (258)	2.2712E-05 (258)	1.8486E-06 (258)	1.6856E-06 (258)	1.4917E-06 (258)
4	1.6523E-06 (274)	1.2810E-06 (274)	9.8635E-07 (274)	8.7719E-07 (274)	7.5066E-07 (274)
5	2.5304E-06 (24)	2.0344E-06 (24)	1.7201E-06 (24)	1.5731E-06 (24)	1.3973E-06 (24)
6	2.0695E-06 (334)	1.6746E-05 (334)	1.3476E-06 (334)	1.2233E-06 (334)	1.0757E-06 (334)
7	1.1446E-06 (219)	9.0217E-07 (219)	7.0932E-07 (219)	6.3785E-07 (219)	5.5439E-07 (219)
8	1.3615E-06 (219)	1.0736E-05 (219)	8.4544E-07 (219)	7.6103E-07 (219)	6.6245E-07 (219)
9	2.5503E-06 (334)	1.9546E-06 (334)	1.4881E-06 (334)	1.3190E-06 (334)	1.1451E-06 (67)
10	1.9754E-06 (24)	1.5767E-05 (24)	1.2527E-06 (24)	1.1305E-06 (24)	9.8708E-07 (24)
11	1.0790E-06 (349)	8.0691E-07 (349)	5.0236E-07 (349)	5.2929E-07 (349)	4.4616E-07 (349)
12	1.0940E-06 (138)	1.4690E-05 (138)	1.1445E-06 (138)	1.0265E-05 (138)	8.9062E-07 (138)
13	2.7209E-06 (291)	2.2309E-05 (291)	1.8187E-06 (291)	1.6595E-06 (291)	1.4701E-06 (291)
14	1.5812E-06 (322)	1.2280E-05 (322)	9.7052E-07 (231)	8.7469E-07 (231)	7.6230E-07 (231)
15	2.4291E-06 (45)	1.9557E-06 (45)	1.5685E-06 (45)	1.4223E-06 (45)	1.2500E-06 (45)
16	1.9894E-06 (78)	1.6190E-05 (78)	1.3077E-06 (78)	1.1873E-06 (78)	1.0446E-06 (78)
17	2.0310E-06 (81)	1.6515E-06 (81)	1.3328E-06 (81)	1.2099E-06 (81)	1.0641E-06 (81)
18	1.6100E-06 (48)	1.2561E-06 (48)	9.8394E-07 (48)	8.8616E-07 (333)	7.7281E-07 (333)
19	3.3610E-06 (78)	2.7226E-06 (78)	2.1874E-06 (78)	1.9817E-06 (78)	1.7382E-06 (78)
20	1.1904E-06 (300)	8.9877E-07 (300)	6.7106E-07 (300)	5.9259E-07 (300)	4.9936E-07 (300)
21	2.0484E-06 (337)	1.6667E-05 (337)	1.3484E-06 (337)	1.2267E-06 (337)	1.0824E-06 (337)
22	2.0130E-06 (345)	1.6305E-06 (345)	1.3134E-06 (345)	1.1929E-05 (345)	1.0503E-06 (345)
23	3.4929E-06 (289)	2.8418E-06 (289)	2.3055E-06 (289)	2.0982E-05 (289)	1.8530E-06 (289)
24	4.0126E-06 (244)	3.2369E-05 (244)	2.5944E-06 (244)	2.3492E-06 (244)	2.0596E-06 (244)
25	4.0063E-06 (246)	3.1779E-06 (246)	2.5131E-06 (246)	2.2659E-06 (246)	1.9766E-06 (246)
26	3.6708E-06 (364)	2.9230E-06 (364)	2.3211E-06 (364)	2.0953E-06 (364)	1.8309E-06 (364)
27	4.7100E-06 (1)	3.7795E-06 (1)	3.0247E-06 (1)	2.7414E-06 (1)	2.4083E-06 (1)
28	4.0097E-06 (242)	3.2447E-06 (242)	2.6143E-06 (242)	2.3739E-06 (242)	2.0900E-06 (242)
29	2.5992E-06 (260)	2.0691E-05 (260)	1.6181E-06 (260)	1.4754E-06 (260)	1.2846E-06 (260)
30	3.3075E-06 (48)	2.7126E-05 (48)	2.2114E-06 (48)	2.0178E-05 (48)	1.7872E-06 (48)
31	1.9426E-06 (61)	1.5627E-05 (51)	1.2502E-06 (61)	1.1318E-06 (61)	9.9199E-07 (61)
32	1.5739E-06 (348)	1.1975E-05 (348)	9.1271E-07 (348)	8.1007E-07 (348)	6.9229E-07 (348)
33	3.1034E-06 (158)	2.4933E-06 (158)	1.9908E-06 (158)	1.8009E-05 (158)	1.5760E-06 (158)
34	1.5073E-06 (237)	1.1618E-05 (237)	9.0856E-07 (241)	8.2357E-07 (241)	7.2294E-07 (241)
35	2.4794E-06 (324)	1.9926E-05 (324)	1.6036E-06 (324)	1.4573E-06 (324)	1.2856E-06 (324)
36	1.4127E-06 (359)	1.1162E-06 (359)	8.7871E-07 (359)	7.9014E-07 (359)	6.8664E-07 (359)

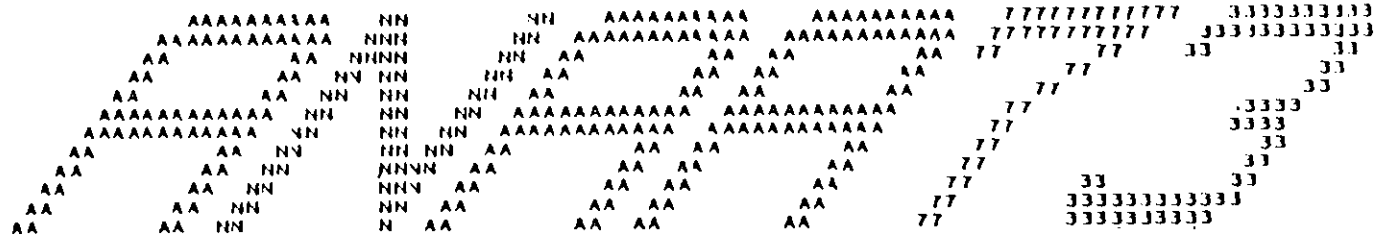
PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

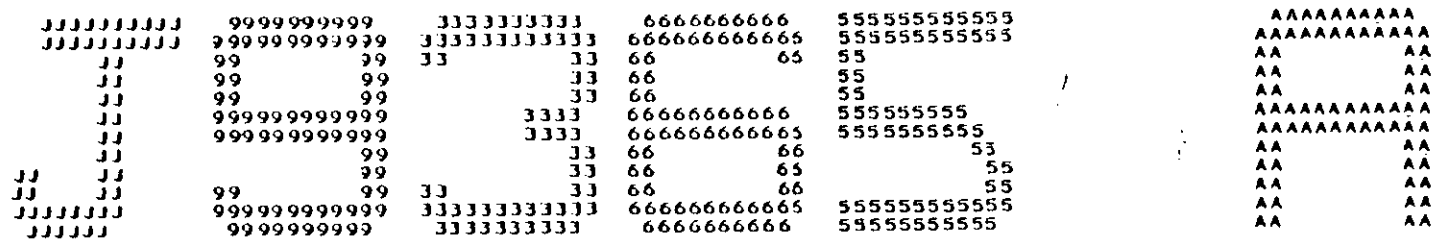
YEARLY SECOND MAXIMUM 24-HOUR CONC= 4.2351E-06 DIRECTION= 27 DISTANCE= 19.7 KM DAY=275

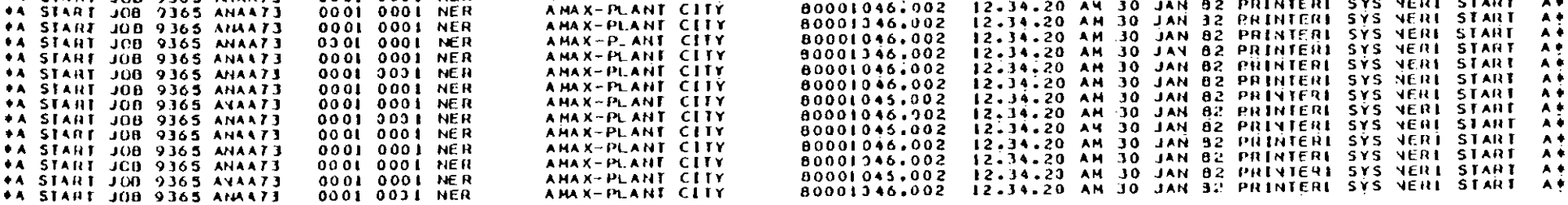
YEAR= 72

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM		25.0 KM		31.6 KM		35.0 KM		40.0 KM	
1	1.3476E-06	(9)	1.1041E-06	(9)	8.9931E-07	(9)	8.2064E-07	(9)	7.2417E-07	(10)
2	1.5641E-06	(10)	1.2099E-06	(10)	9.3808E-07	(195)	3.5503E-07	(195)	7.5593E-07	(195)
3	1.1257E-06	(61)	9.1762E-07	(61)	7.4413E-07	(61)	6.7797E-07	(61)	5.9943E-07	(61)
4	1.3900E-06	(4)	1.1075E-06	(4)	8.8309E-07	(4)	7.9520E-07	(4)	6.9577E-07	(4)
5	1.0217E-06	(312)	7.8848E-07	(312)	6.0822E-07	(312)	5.4291E-07	(312)	4.6757E-07	(312)
6	2.0462E-06	(239)	1.5597E-05	(239)	1.1869E-06	(239)	1.0519E-06	(239)	8.9716E-07	(239)
7	9.1493E-07	(58)	6.8466E-07	(58)	5.0902E-07	(58)	4.4720E-07	(74)	3.8987E-07	(74)
8	5.4511E-07	(243)	4.3586E-07	(243)	3.4967E-07	(243)	3.1758E-07	(243)	2.7999E-07	(243)
9	2.3855E-06	(67)	1.8699E-05	(67)	1.4665E-06	(67)	1.3180E-06	(67)	1.1245E-06	(334)
10	1.8037E-06	(259)	1.4767E-06	(259)	1.2320E-06	(259)	1.0967E-05	(259)	9.7127E-07	(259)
11	6.8322E-07	(290)	5.1917E-07	(290)	3.9985E-07	(243)	3.6503E-07	(243)	3.2411E-07	(243)
12	1.2800E-06	(237)	9.5521E-07	(237)	7.1220E-07	(237)	6.3699E-07	(292)	5.5803E-07	(292)
13	1.4142E-06	(206)	1.1523E-06	(206)	9.3404E-07	(206)	9.5085E-07	(205)	7.5212E-07	(206)
14	1.5436E-06	(231)	1.2272E-05	(231)	9.5119E-07	(322)	8.4997E-07	(322)	7.3263E-07	(322)
15	1.9618E-06	(138)	1.5793E-05	(138)	1.2633E-06	(138)	1.1435E-05	(139)	1.0020E-06	(138)
16	1.6766E-06	(112)	1.3420E-06	(112)	1.0682E-06	(112)	9.6520E-07	(112)	8.4391E-07	(112)
17	1.1594E-06	(314)	9.2735E-07	(314)	7.3704E-07	(314)	6.6520E-07	(314)	5.8068E-07	(314)
18	1.5631E-06	(333)	1.2417E-06	(333)	9.8296E-07	(333)	9.8440E-07	(48)	7.6924E-07	(48)
19	1.6375E-06	(87)	1.2802E-05	(87)	9.9193E-07	(87)	8.8695E-07	(87)	7.6242E-07	(87)
20	9.6961E-07	(322)	7.5060E-07	(322)	5.7910E-07	(322)	5.1609E-07	(322)	4.4319E-07	(322)
21	1.9740E-06	(279)	1.5796E-06	(279)	1.2608E-06	(279)	1.1413E-06	(279)	1.0010E-06	(279)
22	1.7577E-06	(204)	1.4442E-05	(204)	1.1792E-06	(204)	1.0769E-06	(204)	9.5502E-07	(204)
23	3.0242E-06	(323)	2.4408E-06	(323)	1.9519E-06	(323)	1.7802E-06	(323)	1.5650E-06	(323)
24	2.5820E-06	(333)	2.0528E-06	(333)	1.6297E-06	(333)	1.4716E-05	(333)	1.2869E-06	(333)
25	2.3940E-06	(227)	1.8383E-05	(227)	1.4144E-06	(227)	1.2608E-06	(227)	1.0846E-06	(227)
26	2.6486E-06	(253)	2.1227E-06	(253)	1.6956E-06	(253)	1.5337E-05	(253)	1.3441E-06	(253)
27	4.2351E-06	(275)	3.3814E-06	(275)	2.6871E-06	(275)	2.4258E-06	(275)	2.1189E-06	(275)
28	2.5698E-06	(54)	2.1177E-06	(54)	1.7338E-06	(54)	1.5850E-06	(54)	1.4074E-06	(54)
29	2.3706E-06	(224)	1.8815E-06	(224)	1.4908E-06	(224)	1.3456E-05	(224)	1.1762E-06	(224)
30	3.1671E-06	(355)	2.5344E-05	(355)	2.0150E-06	(355)	1.8188E-05	(355)	1.5881E-06	(355)
31	1.5414E-06	(238)	1.2146E-06	(317)	9.7685E-07	(317)	8.8703E-07	(317)	7.8109E-07	(317)
32	1.1431E-06	(162)	9.2975E-07	(162)	7.5256E-07	(162)	6.8520E-07	(162)	6.0534E-07	(162)
33	2.2712E-06	(4)	1.8431E-06	(4)	1.4873E-06	(4)	1.3518E-05	(4)	1.1912E-06	(4)
34	1.3986E-06	(241)	1.1313E-06	(241)	9.0309E-07	(237)	8.0569E-07	(237)	6.9735E-07	(237)
35	2.4475E-06	(359)	1.9417E-06	(359)	1.5298E-06	(359)	1.3752E-05	(359)	1.1940E-06	(359)
36	1.3647E-06	(234)	1.0372E-05	(234)	7.8947E-07	(234)	5.9869E-07	(234)	5.9598E-07	(234)







1973

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PLANT NAME: AMAX - PLANT CITY          POLLUTANT: PART        EMISSION UNITS: GM/SEC     AIR QUALITY UNITS: GM/M**3
IMPACT @ HILLSBOROUGH CO. NON-ATTAINMENT AREA
TAMPA MET DATA

           MET FILE       REQUESTED
          STN NO. YR     STN NO. YR
 SURFACE    12842  73     12842  73
 UPPER AIR  12942  73     12842  73
PLANT LOCATION: RURAL
OUTPUT TAPE TO BE WRITTEN
MET DATA WILL NOT BE PRINTED

DAY--  1 1 1 0 1 0 1 1 1 1   1 0 0 0 0 1 1 1 1 1   1 0 1 1 1 1 1 1 0 1   1 1 0 0 1 1 1 1 1 0   0 1 1 1 1 0 0 1 1 1
       0 0 0 0 1 1 0 0 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 0 0 0 0 1 1 0   1 1 1 0 0 1 1 1 1 0   0 0 1 0 0 1 1 0 1 0
       0 1 1 1 1 1 1 1 1 1   1 1 1 1 0 0 0 0 1 1   1 1 1 0 1 1 1 1 0 0   0 0 1 1 1 0 0 0 0 0   0 0 0 0 0 0 1 0 0 1
       1 1 1 1 1 1 1 1 0 0   1 0 1 1 1 0 0 0 0 1   1 1 1 0 0 1 1 1 0 0   1 1 1 1 1 1 0 0 1 1   1 1 0 0 0 0 0 1 1 1
       1 1 1 1 1 1 1 0 0 0   1 0 0 0 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
       1 1 0 0 1 1 1 0 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 0 0 1 1
       1 0 1 1 1 1 1 1 0 1   1 0 0 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 0 0   0 0 0 1 1 1 1 1 0 0   0 0 1 1 0 1 0 0 0 0
       1 1 1 0 0 1 1 1 1 0   0 1 0 0 0 0

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        ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN "ANNUAL" IN THE HEADING ARE BASED ONLY ON THOSE DAYS

        MARKED BY "1" IN THE ABOVE TABLE
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RING DISTANCES(KM)= 19.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NOS
STACK # 2--FEED PREP SODA, BAG HSE E&W, TRUCK LDG
STACK # 3--LIME BIN, COP BIN, DIKAL, BOOT BIN, BLK LDG
STACK # 4--MILLROOM 1 & 2
STACK # 5--CRANEWAY
STACK # 6--REACTOR PARAGON & KILNS 3,4,&5
STACK # 7--KILNS 6 & 7
STACK # 8--FEED PREP
STACK # 9--DIKAL

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M**3/SEC)
1	ALL	0.1200	29.60	0.32	15.20	317.00	1.22
2	ALL	0.4400	20.90	0.43	15.20	317.00	2.21
3	ALL	0.6400	15.10	0.46	15.20	317.00	2.53
4	ALL	1.1100	11.30	0.84	15.20	317.00	8.42
5	ALL	4.3200	53.40	2.81	15.20	317.00	94.26
6	ALL	7.4000	45.72	1.77	16.01	316.30	39.39
7	ALL	1.8900	60.96	1.77	17.56	316.30	43.21
8	ALL	2.5200	33.48	1.37	11.50	339.50	16.95
9	ALL	1.6800	24.38	1.68	8.56	318.50	18.98

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 4.4985E-07 DIRECTION= 25 DISTANCE= 19.7 KM

YEAR= 73

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR \ RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	3.77035E-08	2.73215E-08	1.99602E-08	1.74525E-08	1.46509E-08
2	2.48094E-08	1.74810E-08	1.24521E-08	1.07803E-08	8.93483E-09
3	2.79253E-08	2.04976E-08	1.52394E-08	1.34377E-08	1.14114E-08
4	3.51417E-08	2.63644E-08	1.99309E-08	1.76719E-08	1.51042E-08
5	2.42527E-08	1.78129E-08	1.32296E-08	1.16465E-08	9.86767E-09
6	4.10461E-08	3.08249E-08	2.33662E-08	2.07508E-08	1.77823E-08
7	6.89609E-08	5.17895E-08	3.91208E-08	3.46353E-08	2.95315E-08
8	3.53419E-08	2.55690E-08	1.37502E-08	1.64329E-08	1.38472E-08
9	5.38360E-08	3.90574E-08	2.86950E-08	2.51833E-08	2.12610E-08
10	4.48027E-08	3.30213E-08	2.45403E-08	2.16069E-08	1.83013E-08
11	4.52948E-08	3.35611E-08	2.50001E-08	2.20111E-08	1.86329E-08
12	1.03412E-07	7.92510E-08	6.07709E-08	5.40012E-08	4.63939E-08
13	8.37841E-08	6.35405E-08	4.82569E-08	4.27869E-08	3.65337E-08
14	8.19031E-08	6.18659E-08	4.68617E-08	4.15297E-08	3.54482E-08
15	4.54843E-08	3.36640E-08	2.49991E-08	2.19703E-08	1.85495E-08
16	5.83768E-08	4.37072E-08	3.28036E-08	2.89407E-08	2.45680E-08
17	8.10234E-08	6.14232E-08	4.56900E-08	4.14381E-08	3.54434E-08
18	9.88858E-08	7.56621E-08	5.80471E-08	5.17161E-08	4.44554E-08
19	9.86546E-08	6.74301E-08	5.14077E-08	4.56741E-08	3.91118E-08
20	8.37272E-08	6.21881E-08	4.64396E-08	4.09265E-08	3.46948E-08
21	2.11718E-07	1.61609E-07	1.23696E-07	1.10110E-07	9.45467E-08
22	2.01176E-07	1.53867E-07	1.18022E-07	1.05152E-07	9.03972E-08
23	2.23348E-07	1.69722E-07	1.29327E-07	1.14902E-07	9.84004E-08
24	3.83674E-07	2.95097E-07	2.27348E-07	2.02875E-07	1.74729E-07
25	4.49854E-07	3.45349E-07	2.65579E-07	2.36792E-07	2.03708E-07
26	3.38374E-07	2.58536E-07	1.97971E-07	1.76213E-07	1.51261E-07
27	4.06350E-07	3.07209E-07	2.32889E-07	2.06439E-07	1.76265E-07
28	2.81110E-07	2.12719E-07	1.61572E-07	1.43409E-07	1.22684E-07
29	2.39706E-07	1.80556E-07	1.36530E-07	1.20931E-07	1.03174E-07
30	3.12746E-07	2.37945E-07	1.81531E-07	1.61353E-07	1.38270E-07
31	1.87348E-07	1.41242E-07	1.06972E-07	9.48350E-08	8.10113E-08
32	1.17789E-07	8.72898E-08	6.50938E-08	5.73518E-08	4.86083E-08
33	9.06296E-08	6.80371E-08	5.14634E-08	4.56456E-08	3.90405E-08
34	7.78321E-08	5.87317E-08	4.46525E-08	3.96876E-08	3.40394E-08
35	4.66590E-08	3.47152E-08	2.59330E-08	2.28445E-08	1.93461E-08
36	5.94691E-08	4.43435E-08	3.33057E-08	2.94437E-08	2.50662E-08

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY MAXIMUM 24-HOUR CONC= 5.0902E-06 DIRECTION= 12 DISTANCE= 19.7 KM DAY=362

YEAR= 73

HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM	25.0 KM	31.6 KM	35.3 KM	40.0 KM
1	1.1064E-06 (45)	8.0826E-07 (45)	6.1797E-07 (3)	5.5624E-07 (3)	4.8402E-07 (3)
2	9.0435E-07 (338)	6.5586E-07 (338)	4.7773E-07 (338)	4.1664E-07 (338)	3.4829E-07 (338)
3	1.2111E-06 (186)	9.7911E-07 (186)	7.8940E-07 (186)	7.1797E-07 (186)	6.3339E-07 (186)
4	2.1574E-06 (56)	1.6066E-05 (56)	1.1998E-06 (56)	1.0575E-06 (56)	8.9610E-07 (56)
5	1.6147E-06 (307)	1.2552E-06 (307)	9.6878E-07 (307)	8.6233E-07 (307)	7.3875E-07 (307)
6	1.3961E-06 (181)	1.1146E-06 (181)	8.8907E-07 (181)	8.0533E-07 (181)	7.0722E-07 (181)
7	2.5698E-06 (20)	1.9851E-06 (20)	1.5268E-06 (20)	1.3584E-05 (20)	1.1637E-06 (20)
8	8.7274E-07 (63)	6.5192E-07 (63)	4.8832E-07 (63)	4.3045E-07 (63)	3.6476E-07 (63)
9	1.4674E-06 (27)	1.0758E-05 (27)	7.9126E-07 (27)	5.9309E-07 (27)	5.8252E-07 (27)
10	1.3184E-06 (38)	1.0829E-06 (38)	8.8402E-07 (38)	8.0731E-07 (39)	7.1589E-07 (38)
11	1.8827E-06 (222)	1.4259E-06 (222)	1.0004E-06 (222)	9.5694E-07 (222)	8.1563E-07 (222)
12	5.0902E-06 (362)	3.9906E-06 (362)	3.1104E-06 (362)	2.7323E-06 (362)	2.4003E-06 (362)
13	3.3832E-06 (206)	2.6935E-06 (206)	2.1345E-06 (206)	1.9240E-05 (205)	1.6771E-06 (206)
14	3.0230E-06 (86)	2.3239E-05 (86)	1.7862E-06 (86)	1.5914E-06 (86)	1.3671E-06 (86)
15	1.4234E-06 (37)	1.1177E-06 (37)	8.7643E-07 (37)	7.8789E-07 (37)	6.8827E-07 (346)
16	1.5308E-06 (263)	1.1912E-06 (263)	9.2598E-07 (263)	9.2942E-07 (263)	7.1752E-07 (263)
17	1.9523E-06 (233)	1.5735E-06 (233)	1.2622E-06 (233)	1.1448E-06 (233)	1.0062E-06 (233)
18	1.7980E-06 (249)	1.4735E-06 (249)	1.2003E-06 (249)	1.0953E-06 (249)	9.7036E-07 (249)
19	2.0478E-06 (334)	1.6227E-06 (334)	1.2918E-06 (334)	1.1547E-06 (334)	1.0061E-06 (334)
20	1.3812E-06 (221)	1.0885E-05 (221)	8.5450E-07 (221)	7.6753E-07 (221)	6.6602E-07 (221)
21	2.1993E-06 (280)	1.7260E-06 (280)	1.3508E-06 (280)	1.2180E-06 (221)	1.0690E-06 (221)
22	3.2951E-06 (30)	2.6971E-06 (30)	2.1918E-06 (30)	1.9955E-06 (30)	1.7621E-06 (30)
23	2.1767E-06 (265)	1.7319E-06 (265)	1.3734E-06 (265)	1.2399E-06 (265)	1.0832E-06 (265)
24	2.6822E-06 (307)	2.1508E-06 (307)	1.7154E-06 (307)	1.5500E-06 (307)	1.3552E-06 (307)
25	2.5995E-06 (285)	2.0763E-06 (237)	1.6561E-06 (237)	1.4974E-06 (237)	1.3104E-06 (237)
26	2.3573E-06 (327)	1.8439E-06 (327)	1.4385E-06 (327)	1.2892E-05 (327)	1.1159E-06 (327)
27	2.7781E-06 (263)	2.2369E-06 (263)	1.7941E-06 (263)	1.6267E-06 (263)	1.4291E-06 (263)
28	2.6560E-06 (358)	2.0788E-06 (358)	1.6261E-06 (358)	1.4599E-06 (359)	1.2667E-06 (358)
29	3.1361E-06 (39)	2.5888E-06 (39)	2.1177E-06 (39)	1.9327E-06 (39)	1.7114E-06 (39)
30	2.3246E-06 (21)	1.8586E-05 (2)	1.4796E-06 (2)	1.3368E-06 (2)	1.1693E-06 (2)
31	2.9619E-06 (182)	2.4184E-06 (182)	1.9641E-06 (182)	1.7894E-06 (192)	1.5821E-06 (182)
32	1.2695E-06 (152)	1.0320E-06 (152)	8.3556E-07 (152)	7.6109E-07 (152)	6.7265E-07 (152)
33	2.8911E-06 (228)	2.3533E-06 (228)	1.9043E-06 (228)	1.7326E-06 (228)	1.5288E-06 (220)
34	1.8243E-06 (153)	1.4457E-06 (153)	1.1452E-06 (153)	1.0343E-06 (153)	9.0462E-07 (153)
35	2.2042E-06 (73)	1.7738E-06 (73)	1.4184E-06 (73)	1.2838E-06 (73)	1.1247E-06 (73)
36	1.3817E-06 (3)	1.1276E-06 (3)	9.1555E-07 (3)	8.3449E-07 (3)	7.3823E-07 (3)

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 2.6463E-06 DIRECTION= 24 DISTANCE= 19.7 KM DAY=205

YEAR= 73

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

RANGE DIR	19.7 KM		25.0 KM		31.6 KM		35.0 KM		40.0 KM	
1	9.8900E-07	(3)	7.8351E-07	(3)	5.9282E-07	(45)	5.1843E-07	(45)	4.3484E-07	(45)
2	3.2863E-07	(79)	2.2783E-07	(79)	1.6208E-07	(221)	1.4019E-07	(221)	1.1589E-07	(221)
3	6.5153E-07	(178)	4.8429E-07	(178)	3.6129E-07	(178)	3.1902E-07	(178)	2.6903E-07	(178)
4	1.3879E-06	(69)	1.1330E-06	(59)	9.2008E-07	(69)	8.3869E-07	(69)	7.4199E-07	(69)
5	7.8115E-07	(301)	5.6047E-07	(301)	4.1453E-07	(301)	3.6103E-07	(301)	3.0106E-07	(301)
6	1.0757E-06	(178)	8.4760E-07	(178)	6.6444E-07	(178)	5.9641E-07	(178)	5.1702E-07	(178)
7	1.9711E-06	(114)	1.5185E-06	(325)	1.1744E-06	(325)	1.0467E-06	(325)	8.9852E-07	(325)
8	7.2749E-07	(301)	5.4307E-07	(322)	4.0901E-07	(322)	3.6069E-07	(322)	3.0557E-07	(322)
9	1.1060E-06	(319)	8.0662E-07	(319)	7.0696E-07	(319)	6.3917E-07	(319)	5.5932E-07	(319)
10	1.1644E-06	(19)	9.2325E-07	(19)	7.3175E-07	(19)	5.6110E-07	(19)	5.7852E-07	(19)
11	1.1096E-06	(135)	8.9159E-07	(135)	7.1230E-07	(135)	6.4444E-07	(135)	5.6438E-07	(135)
12	2.5780E-06	(19)	2.0620E-05	(19)	1.6415E-06	(19)	1.4820E-06	(19)	1.2946E-06	(19)
13	1.4083E-06	(170)	1.1481E-06	(170)	9.3100E-07	(170)	8.4821E-07	(170)	7.4993E-07	(170)
14	1.7793E-06	(289)	1.3064E-06	(289)	9.6048E-07	(289)	8.3987E-07	(289)	7.0395E-07	(289)
15	1.2961E-06	(346)	1.0586E-05	(346)	8.5923E-07	(346)	7.8065E-07	(346)	6.8512E-07	(37)
16	1.1957E-06	(42)	9.4541E-07	(42)	7.4521E-07	(42)	6.7060E-07	(42)	5.8340E-07	(42)
17	1.8368E-06	(103)	1.4614E-06	(103)	1.1630E-06	(103)	1.0521E-06	(103)	9.2268E-07	(103)
18	1.3881E-06	(326)	1.1051E-06	(326)	8.7778E-07	(326)	7.9832E-07	(25)	7.0841E-07	(25)
19	1.8710E-06	(16)	1.5332E-06	(16)	1.2462E-06	(16)	1.1342E-06	(16)	1.0009E-06	(16)
20	1.2180E-06	(278)	9.4581E-07	(278)	7.3563E-07	(278)	6.5961E-07	(278)	5.7177E-07	(270)
21	2.0984E-06	(221)	1.6807E-06	(221)	1.3446E-06	(221)	1.2122E-05	(290)	1.0508E-06	(200)
22	1.7322E-06	(96)	1.3958E-06	(96)	1.1241E-06	(96)	1.0219E-06	(96)	9.0171E-07	(96)
23	1.8602E-06	(239)	1.4920E-06	(239)	1.1931E-06	(239)	1.0807E-06	(239)	9.4846E-07	(239)
24	2.6463E-06	(205)	2.1063E-06	(205)	1.6680E-06	(205)	1.5049E-05	(205)	1.3117E-06	(205)
25	2.5885E-06	(237)	1.9967E-06	(285)	1.5715E-06	(286)	1.4201E-06	(286)	1.2429E-06	(286)
26	2.2610E-06	(308)	1.7495E-06	(308)	1.3542E-06	(308)	1.2105E-06	(308)	1.0445E-06	(308)
27	2.3999E-06	(203)	1.8700E-06	(203)	1.4573E-06	(203)	1.3071E-06	(203)	1.1330E-06	(203)
28	1.9211E-06	(300)	1.5111E-06	(300)	1.1961E-06	(300)	1.0657E-06	(300)	9.2582E-07	(300)
29	2.5771E-06	(344)	2.1256E-06	(344)	1.7441E-06	(344)	1.5956E-06	(344)	1.4186E-06	(344)
30	2.1851E-06	(320)	1.7621E-06	(320)	1.4109E-06	(320)	1.2763E-06	(320)	1.1175E-06	(320)
31	2.4358E-06	(62)	1.9580E-05	(62)	1.5671E-06	(62)	1.4192E-06	(62)	1.2449E-06	(52)
32	1.2459E-06	(223)	9.5983E-07	(223)	7.4968E-07	(326)	6.7522E-07	(326)	5.8891E-07	(326)
33	1.8981E-06	(252)	1.5533E-06	(252)	1.2643E-06	(252)	1.1534E-06	(252)	1.0216E-06	(252)
34	1.2053E-06	(150)	9.3329E-07	(226)	7.3445E-07	(226)	6.6125E-07	(226)	5.7592E-07	(226)
35	9.9055E-07	(228)	7.6254E-07	(228)	5.8183E-07	(228)	5.1539E-07	(228)	4.3852E-07	(228)
36	1.1597E-06	(170)	9.4157E-07	(170)	7.6097E-07	(170)	6.9248E-07	(170)	6.1135E-07	(170)

ANAA74

J9378 A

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♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
♦A START JOB 9378 ANAA74   0001 0001 NER     AMAX-PLANT CITY     80001046.002  12.35.21 AM 30 JAN 82 PRINTER1 SYS NER1 START  A♦
```

1974

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3
IMPACT 3 HILLSBOROUGH CO. NON-ATTAINMENT AREA
TAMPA MET DATA

	MET FILE STN NO.	YR	REQUESTED STN NO.	YR
SURFACE	12842	74	12842	74
UPPER AIR	12842	74	12842	74

PLANT LOCATION: RURAL
OUTPUT TAPE TO BE WRITTEN
MET DATA WILL NOT BE PRINTED

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DAY--  0 0 0 0 1 1 1 1 1 0   1 1 1 1 1 1 1 1 1 0   1 1 1 0 1 1 1 1 1 0   0 0 0 0 1 0 0 0 1 1   0 0 0 1 1 1 1 1 1 0
       0 1 0 1 1 0 1 0 0 0   1 1 1 1 1 1 1 1 1 1   1 1 1 0 1 1 1 1 0 1   1 0 0 1 1 0 1 1 1 0   0 0 0 1 1 1 0 0 0 1
       1 0 1 1 1 1 0 0 0 1   1 1 1 1 1 1 0 0 1 1 1   1 1 1 1 1 1 0 1 0 0 1   1 1 1 0 0 1 1 1 1 1   1 1 1 1 1 1 0 0 0 0
       1 1 0 1 1 1 0 1 1 1   1 1 1 1 1 0 0 1 1 1 1   0 1 1 1 1 1 1 0 0 1 1   1 1 1 0 1 1 1 1 1 1   1 1 1 1 1 1 1 0 0 1
       1 1 1 0 0 1 1 1 1 1   0 0 0 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 0 1 1   1 1 0 0 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
       1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1   1 1 0 0 0 1 1 1 1 1 1   1 0 1 1 1 1 1 1 1 1   1 1 1 1 0 1 1 1 1 1
       1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 0 1   1 1 1 1 0 1 1 0 0 1 1   1 1 1 1 1 1 1 1 0 1 0   0 1 1 1 1 1 0 1 1 1
       1 1 1 0 1 1 0 1 1 1   1 0 1 1 0 0
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* NOTE *

ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN "ANNUAL" IN THE HEADING ARE BASED ONLY ON THOSE DAYS MARKED BY "1" IN THE ABOVE TABLE

RING DISTANCES(KM)= 19.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NOS
STACK # 2--FEED PREP SODA, BAG HSE E&W, TRUCK LOG
STACK # 3--LIME BIN, CDP BIN, DIKAL, ADJT BIN, BLK LOG
STACK # 4--MILLROOM 1 & 2
STACK # 5--CRANEWAY
STACK # 6--REACTOR PARAGON & KILNS 3,4,&5
STACK # 7--KILNS 6 & 7
STACK # 8--FEED PREP
STACK # 9--DIKAL

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M**3/SEC)
1	ALL	0.1200	29.60	0.32	15.20	317.00	1.22
2	ALL	0.4400	23.90	0.43	15.20	317.00	2.21
3	ALL	0.6400	16.10	0.46	15.20	317.00	2.53
4	ALL	1.1100	11.30	0.84	15.20	317.00	8.42
5	ALL	4.3200	53.40	2.81	15.20	317.00	94.26
6	ALL	7.4000	45.72	1.77	16.01	316.30	39.39
7	ALL	1.8900	60.96	1.77	17.56	316.30	43.21
8	ALL	2.5200	30.48	1.37	11.50	338.50	16.95
9	ALL	1.6800	24.38	1.60	8.56	318.50	18.98

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 4.2391E-07 DIRECTION= 27 DISTANCE= 19.7 KM

YEAR= 74

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	5.87382E-08	4.34353E-08	3.21527E-08	2.82041E-08	2.37421E-08
2	4.86164E-08	3.62694E-08	2.70944E-08	2.38597E-08	2.01906E-08
3	4.83481E-08	3.67200E-08	2.79107E-08	2.47496E-08	2.11344E-08
4	4.61781E-08	3.46333E-08	2.59959E-08	2.29264E-08	1.94366E-08
5	7.02871E-08	5.37456E-08	4.10963E-08	3.65224E-08	3.12733E-08
6	7.76076E-08	5.95256E-08	4.56838E-08	4.06778E-08	3.49257E-08
7	8.25782E-08	6.27061E-08	4.76032E-08	4.21677E-08	3.59500E-08
8	7.07380E-08	5.26658E-08	3.92699E-08	3.45476E-08	2.91966E-08
9	1.59320E-07	1.20711E-07	9.15303E-08	8.10822E-08	6.91419E-08
10	9.95873E-08	7.53907E-08	5.71458E-08	5.06183E-08	4.31641E-08
11	6.09405E-08	4.59631E-08	3.46903E-08	3.06667E-08	2.60806E-08
12	7.02477E-08	5.33652E-08	4.05158E-08	3.58930E-08	3.06003E-08
13	8.34229E-08	6.50020E-08	5.05735E-08	4.52645E-08	3.91160E-08
14	9.48955E-08	7.36918E-08	5.70944E-08	5.09967E-08	4.39401E-08
15	7.49400E-08	5.71764E-08	4.35745E-08	3.86607E-08	3.30230E-08
16	7.46624E-08	5.71082E-08	4.36424E-08	3.87680E-08	3.31701E-08
17	9.36438E-08	6.34871E-08	4.82107E-08	4.27337E-08	3.64721E-08
18	1.13058E-07	8.61565E-08	5.56406E-08	5.82514E-08	4.97810E-08
19	4.77337E-08	3.58720E-08	2.70085E-08	2.38658E-08	2.02916E-08
20	1.23121E-07	9.42770E-08	7.21683E-08	6.41703E-08	5.49823E-08
21	1.90745E-07	1.46023E-07	1.11708E-07	9.92870E-08	8.50193E-08
22	2.52266E-07	1.94081E-07	1.49216E-07	1.32912E-07	1.14140E-07
23	2.28198E-07	1.74437E-07	1.33196E-07	1.18277E-07	1.01148E-07
24	3.44654E-07	2.66964E-07	2.06497E-07	1.84378E-07	1.58929E-07
25	3.85728E-07	2.97841E-07	2.29576E-07	2.04646E-07	1.75886E-07
26	2.82879E-07	2.19563E-07	1.70121E-07	1.51983E-07	1.31006E-07
27	4.23914E-07	3.28929E-07	2.54622E-07	2.27330E-07	1.95766E-07
29	3.21258E-07	2.46756E-07	1.89290E-07	1.68394E-07	1.44356E-07
29	2.50165E-07	1.92355E-07	1.47642E-07	1.31354E-07	1.12598E-07
30	2.55971E-07	1.97227E-07	1.51655E-07	1.35008E-07	1.15823E-07
31	2.21140E-07	1.69394E-07	1.29665E-07	1.15280E-07	9.87490E-08
32	1.61971E-07	1.22814E-07	9.30839E-08	8.24115E-08	7.02067E-08
33	1.53125E-07	1.16662E-07	8.88307E-08	7.87917E-08	6.72898E-08
34	9.94339E-08	7.51231E-08	5.57746E-08	5.02164E-08	4.27310E-08
35	7.66796E-08	5.80141E-08	4.38974E-08	3.88425E-08	3.30700E-08
36	9.17065E-08	7.05789E-08	5.43796E-08	4.85140E-08	4.17670E-08

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY MAXIMUM 24-HOUR CONC= 5.6328E-06 DIRECTION= 27 DISTANCE= 19.7 KM DAY=358

YEAR= 74

HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	9.2099E-07 (363)	6.9728E-07 (363)	5.2484E-07 (363)	4.6349E-07 (363)	3.9621E-07 (106)
2	8.1471E-07 (85)	6.2418E-07 (130)	4.9588E-07 (130)	4.4867E-07 (133)	3.9195E-07 (130)
3	1.6049E-06 (94)	1.2765E-06 (94)	1.0129E-06 (94)	9.1404E-07 (94)	7.9843E-07 (94)
4	6.9945E-07 (162)	5.4597E-07 (162)	4.3569E-07 (200)	3.9565E-07 (200)	3.4810E-07 (200)
5	1.1079E-06 (22)	9.0551E-07 (22)	7.3511E-07 (22)	6.6939E-07 (22)	5.9133E-07 (22)
6	1.5655E-06 (248)	1.2716E-06 (248)	1.0258E-06 (248)	9.3266E-07 (203)	8.2487E-07 (203)
7	3.3306E-06 (87)	2.7697E-06 (87)	2.2905E-06 (87)	2.0853E-06 (87)	1.8508E-06 (87)
8	1.1290E-06 (353)	9.3510E-07 (353)	7.6592E-07 (353)	7.0045E-07 (353)	6.2073E-07 (353)
9	1.9870E-06 (9)	1.6333E-06 (9)	1.3310E-06 (9)	1.2123E-06 (9)	1.0706E-06 (9)
10	2.1697E-06 (17)	1.8224E-05 (17)	1.5182E-06 (17)	1.3962E-06 (17)	1.2491E-06 (17)
11	1.6400E-06 (133)	1.3488E-06 (133)	1.1012E-06 (133)	1.0051E-05 (133)	8.9037E-07 (133)
12	1.3724E-06 (292)	1.0790E-06 (292)	8.4532E-07 (292)	7.5839E-07 (292)	6.5696E-07 (292)
13	2.4111E-06 (192)	2.0111E-06 (192)	1.6651E-06 (192)	1.5276E-05 (192)	1.3625E-06 (192)
14	2.1901E-06 (210)	1.7891E-06 (210)	1.4492E-06 (210)	1.3164E-06 (210)	1.1585E-06 (210)
15	1.4320E-06 (151)	1.1541E-06 (151)	9.2658E-07 (151)	8.4022E-07 (151)	7.3844E-07 (151)
16	1.6590E-06 (214)	1.2999E-06 (214)	1.0093E-06 (214)	8.9993E-07 (214)	7.7233E-07 (214)
17	1.4343E-06 (334)	1.1121E-06 (326)	8.8127E-07 (326)	7.9383E-07 (325)	6.9207E-07 (260)
18	1.4908E-06 (182)	1.2255E-05 (182)	9.9180E-07 (182)	9.0069E-07 (192)	7.9220E-07 (182)
19	1.1600E-06 (124)	9.6668E-07 (124)	7.9921E-07 (124)	7.3320E-07 (124)	6.5390E-07 (124)
20	1.9200E-06 (54)	1.5929E-06 (54)	1.3066E-06 (54)	1.1946E-05 (54)	1.0606E-06 (54)
21	1.6764E-06 (172)	1.3456E-06 (172)	1.1058E-06 (172)	1.0119E-05 (172)	8.9955E-07 (172)
22	2.0470E-06 (240)	1.6845E-06 (240)	1.4010E-06 (215)	1.2943E-05 (215)	1.1645E-06 (215)
23	2.2293E-06 (57)	1.8119E-06 (57)	1.4637E-06 (57)	1.3299E-06 (57)	1.1714E-06 (57)
24	2.6609E-06 (182)	2.2216E-06 (182)	1.8151E-06 (182)	1.6804E-06 (192)	1.4940E-06 (182)
25	3.6410E-06 (64)	3.0177E-06 (64)	2.4833E-06 (64)	2.2739E-05 (54)	2.0233E-06 (64)
26	3.4700E-06 (308)	2.7894E-06 (308)	2.2250E-06 (308)	2.0107E-06 (308)	1.7582E-06 (308)
27	5.6328E-06 (358)	4.6847E-06 (358)	3.8571E-06 (358)	3.5272E-05 (358)	3.1311E-06 (358)
28	2.5150E-06 (227)	2.0376E-06 (227)	1.6407E-06 (227)	1.4875E-05 (227)	1.3064E-06 (227)
29	2.0044E-06 (248)	1.6144E-06 (224)	1.3045E-06 (224)	1.1847E-06 (224)	1.0424E-06 (224)
30	2.3933E-06 (105)	1.9459E-06 (105)	1.6017E-06 (105)	1.4670E-05 (105)	1.3062E-06 (105)
31	1.9702E-06 (139)	1.5191E-06 (139)	1.2233E-06 (9)	1.1100E-06 (9)	9.7573E-07 (9)
32	2.1181E-06 (232)	1.7217E-05 (232)	1.3870E-06 (232)	1.2575E-06 (232)	1.1039E-06 (232)
33	1.7410E-06 (168)	1.4349E-06 (168)	1.1741E-06 (168)	1.0717E-05 (169)	9.4926E-07 (158)
34	1.5407E-06 (216)	1.1590E-05 (216)	8.7262E-07 (216)	7.7041E-07 (216)	6.5518E-07 (133)
35	1.1691E-06 (95)	8.8509E-07 (95)	6.8388E-07 (190)	6.2157E-07 (190)	5.4253E-07 (190)
36	1.7734E-06 (352)	1.4071E-06 (352)	1.1193E-06 (352)	1.0127E-05 (352)	8.8838E-07 (352)

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 2.9900E-06 DIRECTION= 27 DISTANCE= 19.7 KM DAY=348

YEAR= 74

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 19.7 KM	25.0 KM	31.6 KM	35.3 KM	40.0 KM
1	7.9333E-07 (106)	6.3242E-07 (105)	5.0225E-07 (106)	4.5340E-07 (106)	3.9315E-07 (363)
2	7.7955E-07 (130)	6.0163E-07 (85)	4.4675E-07 (85)	4.0144E-07 (14)	3.5398E-07 (14)
3	1.3117E-06 (130)	1.0720E-06 (130)	8.6935E-07 (130)	7.9052E-07 (130)	6.9673E-07 (139)
4	6.8425E-07 (172)	5.3980E-07 (200)	4.2518E-07 (162)	3.8053E-07 (162)	3.2868E-07 (162)
5	1.0066E-06 (245)	8.1793E-07 (245)	6.5917E-07 (245)	5.9780E-07 (245)	5.2520E-07 (245)
6	1.5396E-06 (203)	1.2586E-06 (203)	1.0234E-06 (203)	9.3097E-07 (248)	8.1849E-07 (248)
7	1.1305E-06 (19)	8.9991E-07 (19)	7.1041E-07 (19)	6.3867E-07 (19)	5.5443E-07 (19)
8	8.9438E-07 (48)	7.1941E-07 (48)	5.7503E-07 (48)	5.2003E-07 (48)	4.5516E-07 (48)
9	1.5109E-06 (26)	1.2382E-06 (26)	1.0077E-06 (26)	9.1867E-07 (26)	8.1260E-07 (26)
10	1.5511E-06 (214)	1.1906E-06 (214)	9.1345E-07 (214)	8.0824E-07 (214)	6.9143E-07 (223)
11	1.4381E-06 (272)	1.2080E-06 (272)	1.0058E-06 (272)	9.2512E-07 (272)	8.2772E-07 (272)
12	1.1822E-06 (125)	9.3498E-07 (151)	7.6686E-07 (151)	7.0049E-07 (151)	6.2069E-07 (151)
13	2.0592E-06 (276)	1.6609E-06 (276)	1.3326E-06 (276)	1.2076E-06 (276)	1.0602E-06 (276)
14	1.6121E-06 (110)	1.2338E-06 (110)	9.3991E-07 (110)	8.3507E-07 (193)	7.3652E-07 (193)
15	1.2338E-06 (199)	9.9434E-07 (199)	7.9721E-07 (199)	7.2225E-07 (193)	6.3398E-07 (199)
16	1.1747E-06 (199)	9.7584E-07 (199)	8.0481E-07 (199)	7.3769E-07 (199)	6.5722E-07 (199)
17	1.3946E-06 (326)	1.1072E-06 (334)	8.5430E-07 (260)	7.8021E-07 (260)	6.9118E-07 (326)
18	1.2316E-06 (317)	9.8581E-07 (347)	8.1171E-07 (347)	7.4352E-07 (347)	6.6189E-07 (347)
19	9.7647E-07 (309)	8.0904E-07 (309)	6.6550E-07 (309)	6.0943E-07 (309)	5.4228E-07 (309)
20	1.7505E-06 (207)	1.4471E-06 (207)	1.1855E-06 (207)	1.0819E-06 (207)	9.5791E-07 (207)
21	1.4622E-06 (310)	1.1762E-06 (310)	9.3751E-07 (310)	8.4596E-07 (310)	7.3788E-07 (310)
22	2.0000E-06 (300)	1.6620E-06 (215)	1.3751E-06 (240)	1.2534E-06 (240)	1.1081E-06 (240)
23	2.1681E-06 (301)	1.7012E-06 (301)	1.3278E-06 (301)	1.1883E-05 (301)	1.0267E-06 (301)
24	2.1464E-06 (254)	1.7309E-06 (254)	1.3914E-06 (254)	1.2623E-06 (254)	1.1103E-06 (254)
25	2.8232E-06 (286)	2.2043E-06 (286)	1.7178E-06 (286)	1.5380E-05 (286)	1.3293E-06 (286)
26	2.4212E-06 (266)	1.9211E-06 (266)	1.5138E-06 (266)	1.3600E-06 (266)	1.1796E-06 (266)
27	2.9900E-06 (348)	2.4041E-06 (348)	1.9252E-06 (348)	1.7437E-06 (349)	1.5299E-06 (348)
28	1.9459E-06 (202)	1.5929E-06 (245)	1.3066E-06 (245)	1.1946E-06 (245)	1.0606E-06 (245)
29	1.9826E-06 (224)	1.5700E-06 (248)	1.2261E-06 (248)	1.0980E-05 (248)	9.4898E-07 (248)
30	2.1954E-06 (248)	1.7875E-05 (248)	1.4462E-06 (248)	1.3136E-06 (248)	1.1564E-06 (248)
31	1.8681E-06 (9)	1.5174E-06 (9)	1.1675E-06 (139)	1.0398E-05 (139)	8.9704E-07 (49)
32	1.9317E-06 (29)	1.5115E-06 (29)	1.1798E-06 (29)	1.0570E-06 (29)	9.1430E-07 (29)
33	1.4576E-06 (13)	1.1751E-06 (13)	9.4179E-07 (13)	8.5236E-07 (13)	7.4685E-07 (13)
34	1.3317E-06 (133)	1.0573E-06 (133)	8.3586E-07 (133)	7.5263E-07 (133)	6.5404E-07 (216)
35	1.0875E-06 (190)	8.6747E-07 (190)	6.6397E-07 (95)	5.9117E-07 (95)	5.0225E-07 (95)
36	1.4377E-06 (214)	1.2078E-06 (214)	1.0057E-06 (214)	9.2504E-07 (214)	8.2767E-07 (214)

AMAX Phosphate, Inc.
A SUBSIDIARY OF AMAX INC
402 SOUTH KENTUCKY AVENUE · SUITE 600 · LAKELAND, FLORIDA 33801 · (813) 687-2561

July 7, 1982

Mr. Willard Hanks
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

RE: AC29-57072, AC29-57073
and AC29-57074

Dear Mr. Hanks:

As agreed in our telephone conversation of July 7th, I am enclosing the requested correspondence between the Florida Department of Environmental Regulation on AMAX Phosphate, Inc. Included in the enclosed material is a letter from Ms. Rhea Law specifically addressing the permit changes for the Fluid Bed Reactors 1 and 2 and the Paragon Kiln #2. You will find enclosed, the responses to Ms. Law's letter by various members of the FDER staff.

This material should help resolve your questions concerning the referenced permit applications. However, if you should find that you need additional information, please let me know.

Sincerely,

Fred G. Mullins
Manager of Regulatory Compliance

FGM/rit

Enclosure

cc: Ms. R. F. Law/With Enclosures

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee
To: Dan Williams Loctn.: Tampa
To: _____ Loctn.: _____
To: _____ Loctn.: _____
From: _____ Date: _____
Reply Optional [ ] Reply Required [ ] Info. Only [X]
Date Due: _____ Date Due: _____

D.E.R.
APR 26 1982
SOUTHWEST DISTRICT
TAMPA

TO: Dan Williams
District Air Engineer, Tampa

THROUGH: Steve Smallwood
Chief, Air Quality Management

FROM: Bill Thomas, Bureau Air Quality Management
Martha Harrell Hall, Assistant General Counsel

DATE: April 21, 1982

SUBJECT: Amax Phosphate, Inc.

In your memorandum of February 19, 1982, you describe various changes underway and planned at the Amax facility in Plant City. The questions you ask will be addressed in the order set out in your memorandum.

1. Amax currently holds an operating permit for two reactors and a kiln with a total allowable emission rate of 20.03 pounds per hour of particulates. This emission rate was calculated by applying the Process Weight Table to the sum of the emissions from the reactors and kiln. DER cannot hold Amax to this emission rate if they request a permit modification since the Process Weight Table is to be applied to each source separately.

2. If Amax does request a modification of its permit and increases production to an emission rate of 41.07 pounds per hour, this could trigger PSD. PSD applicability would depend upon several factors, including: (1) the current actual emissions of the facility; (2) the potential emissions resulting from the increased production; and (3) the availability of any contemporaneous, creditable emissions decreases.

It should be noted that an increase in production is considered a modification only if formally prohibited by a federally enforceable permit condition -- that is, prohibited by a State construction permit.

3. The reduced emissions from other sources might offset the proposed increase in emissions from the reactors. However, reductions in emissions can not be credited unless

they meet the requirements of Florida Administrative Code Rule 17-2.500(2)(e)3 and 4. These provisions require:

(1) that there be decreases in actual emissions;

(2) that the decreases have occurred no earlier than five years before the modification application is filed and no later than the date the modification is to begin operation;

(3) that the decrease hasn't already been relied upon by the Department in issuing a permit;

(4) that the old level of actual emissions exceeds the actual emissions after the modification is completed and operating;

(5) that the decrease is federally enforceable; and

(6) that the emissions which decrease have approximately the same public health and welfare impacts as the emissions proposed to increase.

4. You describe efforts by Amax to control unconfined particulates but relate a fear on their part that such clean-up efforts will make them subject to nonattainment requirements. Chapter 17-2 now differentiates between unconfined emissions and fugitive emissions. Fugitive emissions are defined in Rule 17-2.100(72) to include those emissions which cannot be passed through a stack while unconfined emissions are defined merely as those emissions which escape from unenclosed operations or do not pass through a stack. While some fugitive emissions (those which cannot be quantified) need not be considered when determining the impact of facilities in the area of influence upon the nonattainment area, all unconfined emissions which are not fugitive and all quantifiable fugitive emissions must be considered. Therefore, in adding control devices to reduce unconfined particulate emissions, Amax is not increasing the emissions utilized in calculating its impact upon the nonattainment area. Those particulate emissions should have been considered all along.

5. You state that Amax has verbally agreed to a 0.02 grains per dry standard cubic foot emission limit. If the facility is not subject to PSD, no BACT determination would be made. However, the use of baghouses with the ability to limit emissions to 0.02 gr/dscf could be required of the facility pursuant to Rule 17-2.610(3)(c) which relates to the use of reasonable precautions to control unconfined particulate emissions. If Amax wanted a higher emission rate in the future, it would have to prove that the 0.02 gr/dscf was no longer a reasonable limit.

6. The answer to your final question is discussed above. Basically, emissions which can be controlled but presently are not, are unconfined emissions -- not fugitive emissions. If, through the addition of control devices, Amax decreases its overall particulate emissions, it may be able to escape PSD and NSR permitting.

SS:MHH:jy

cc: Marshall Mott-Smith
Jack Preece
Tom Moody
Johnny Cole
J. Ketteringham
Chuck Collins
Dan Williams
Dave Knowles
Jim Williams

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices
And/Or To Other Than The Addressee

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To: _____ Loctn.: _____
From: _____ Date: _____

Reply Optional [ ] Reply Required [ ] Info. Only [ ]
Date Due: _____ Date Due: _____

TO: Martha Hall, Office of General Counsel
Steve Smallwood, Chief, BAQM

FROM: Dan A. Williams DAW

DATE: February 19, 1982

SUBJECT: Hillsborough County AP
AMAX Phosphate, Inc.

Attached are two letters concerning the AMAX Phosphate facility in Plant City. Several legal and/or policy questions have been brought up which need answering.

The first letter is from Ms. Rhea Law, Attorney for AMAX, discussing a request for a revision to an existing operating permit. As detailed in her letter, Operating Permit AO29-6778 is for Fluid Bed Reactors #1 and #2 and Paragon Kiln #2. Each source has its own separate control system with a common stack containing the emissions from all three sources. The allowable emission rate on the operating permit is 20.03 lbs/hr of particulates and was calculated by summing the input weight rates to each process (4 + 4 + 8 = 16 T/Hr.) and then applying the process rate formula $E = 3.59 (16)^{0.62} = 20.03$ lb/hour.

AMAX is requesting two things. One is that individual permits be issued for each source with the allowable emission rate being calculated by separating the input process rate for each source. Using this method the allowable emission rates would be 8.48 lbs/hour for each reactor and 13.03 lbs/hour for the kiln. The total emission rate from the common stack would be 30 lbs/hour. Second is that AMAX is requesting the input process rates for the two reactors be increased to 9 tons/hour each. The allowable emission rate, using the process rate formula, would then be 14.02 lbs/hour for each reactor or a total of 41.07 lbs/hour from the common stack.

The increase over current allowable emissions with the increased production rates would be 92 tons per year. The increase over allowable emissions using separate input rates and the increased production would be 48 tons/year. AMAX has offered internal offsets from two other sources resulting in a net overall reduction of emissions.

My question on the above request are several:

1. Can DER hold them to the existing emission rate of 20.03 lbs/hour?

2. If not, would the increase in allowable emissions for the increased production trigger a PSD review and new source permitting since the increased emission rate would be 48 tons/year of particulates? The question of increased fluoride emissions has not been considered.

Can we accept the offer of reduced emissions from other sources as a method to offset increased emissions thereby negating the PSD and NSR requirements?

The second letter is from Fred Mullins of AMAX Phosphates. They have undertaken a major voluntary effort to reduce fugitive particulate emissions at the Plant City facility. The entire program will require an expenditure of several million dollars before completion. Their concern is that each time a new baghouse or other control device is added the facility comes closer to being a significant impactor on the Hillsborough County nonattainment area. The current modelling work doesn't include anything for fugitive emissions. They don't want the facility to come under the RACT rules.

My questions on the second letter are:

1. If additional point sources are added at the facility to reduce fugitive dust emissions and through these additions they cause the facility to have a significant impact on a nonattainment area; does the facility then have to comply with RACT?

2. AMAX has verbally agreed to a BACT determination of 0.02 grains/dscf for each new control device installed to reduce fugitive emissions. Under what condition could BACT be applied in this case? If BACT can't be applied but if AMAX agrees to 0.02 grains/dscf as the emission standard for these sources, can it be made legally enforceable by permit proviso? Also, at some future date, if AMAX came back and ask for a higher allowable emission rate, what rule would apply?

3. If AMAX can quantify the fugitive emissions and verify a net reduction in emissions after control devices are added would PSD, NSR, BACT, LAER, or RACT be applicable?

AMAX has requested an answer as soon as possible because some of the answers may impact their further actions.

If my questions are unclear or if you need any additional information, please let me know.

DAW/rkt

cc: Hillsborough County EPC
Fred Mullins

FOWLER, WHITE, GILLEN, BOGGS, VILLAREAL AND BANKER, P. A.

ATTORNEYS AT LAW

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(813) 688-8517

CABLE ADDRESS
"FOWHITE"
TELEX 052776

PLEASE REPLY TO:
P. O. BOX 1438
TAMPA, FLORIDA 33601

February 10, 1982

Mr. Dan Williams
Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610

D.E.R.
FEB 16 1982
SOUTHWEST DISTRICT
TAMPA

Re: Revision of Permit #AO29-6778
for operation of Defluorinating Units,
Reactors #1 & #2 and Paragon Kiln #2.

Dear Dan:

This letter is being sent as a followup to our meeting of February 4, 1982, wherein we discussed the subject permit. Primarily, this revision is requested as a result of Amax's commitment to critically review and revise all permits previously procured and held by Borden, Inc. The purpose of these revisions is to secure a permit which more accurately reflects the actual operating conditions of the facilities. As I mentioned, this program is ongoing and hopefully will be completed as expeditiously and painlessly as possible to the benefit of both the regulatory agencies and Amax.

As for the subject permit, Amax is requesting a revision which would recognize the independent nature of the equipment. Reactors #1 and #2 and the Kiln are in actuality three separate and distinct facilities. Each has its own scrubber and each is capable of independent operation. The only point of commonality is the single stack. It is on this basis that Amax is requesting that the conglomerate permit for these facilities be broken down to provide a separate permit for each facility.

There are several reasons for this request. The first, the recognition of each facilities' independent character, is fundamental permitting policy. In fact, the original inclusion

of these three facilities under a common permit was probably an oversight. Secondly, this revision would serve to resolve collateral difficulties with the current permit.

Originally, the permit was issued for the operation of Reactor #1 at an input rate of four tons/hour, Reactor #2 at an input rate of four tons/hour, and the Kiln at an input rate of 8 tons/hour. These permitted input figures , however, are not reflective of the actual input rates utilized for the facilities. In fact, Reactor #1 is currently operating at an input rate of 8 tons/hour and Reactor #2 is operating at 8 tons/hour. The Paragon Kiln is currently not operating, having been shut down since February, 1981.

This is not to say, however, that these departures from the permitted input rates constitute violation of the permit. This is true because the facilities were grouped together under the terms of the current permit, thereby allowing, under Condition #9, a total input of 16 tons/hour. Therefore, because the Kiln is shut down, the total current input of 16 tons/hour into the reactors is within the permitted allowable.

Needless to say, this temporary condition is totally fortuitous, and therefore requires that steps be taken now to accomodate the future startup of the Kiln. It is on this basis that Amax requests a further revision of the individual permit input rates to maximum operating capacity;i.e.,

Reactor #1 9 tons/hour

Reactor #2 9 tons/hour

and Paragon Kiln 8 tons/hour.

There are other effects resulting from a revision of this nature. The most obvious being the recalculation of emission rates. As we discussed, the input rates are currently summed for all three facilities and then subjected to the Process Weight Table. The result of this method is a lower emission rate than would be possible under separate consideration for each facility. In this particular instance, this method of calculation results in a cummulative emission rate of 20.03 pounds/hour.

If the facilities were permitted separately, the maximum allowable emission rate for the common stack would be the sum of the individual maximum allowable emission rates for

each source. In this case, the total allowable rate would be 41.05 pounds/hour.

While this rate is, in fact, higher than that previously permitted, it is comparable with that originally imposed by EPA in the Consent Order of May 9, 1977. That Order fixed an emission rate of no greater than 37 pounds/hour for the joint facilities at a total input rate of 16 tons/hour.

Further, in recognition of the increased emission rate, Amax is prepared to offer internal offsets as follows:

Permit No.	Facility	Permitted Emission Rate	Proposed Emission Rate	Total Reductio
A029-6315	Phosphate Feed Preparation Plant	34.57 lbs/hour	20 lbs/hour	14.57
A029-6316	#6 and #7 Defluorinating Kilns	25.00 lbs/hour	15 lbs/hour	10.00
			TOTAL	24.57

These changes would result in a net reduction of 3.55 lbs/hour. (41.05 - 20.03= 21.02 increase for Reactors #1 and #2 and Paragon Kiln; 24.57(offset) - 21.02(increase) = 3.55 net reduction in emissions.)

Thank you for your consideration of these requests. If I can provide any additional information, please let me know.

Sincerely yours,

RHEA F. LAW

RFL/wr

cc: Mr. Fred Mullins

AMAX Phosphate, Inc.
A SUBSIDIARY OF AMAX INC.
402 SOUTH KENTUCKY AVENUE · SUITE 600 · LAKELAND, FLORIDA 33801 · (813) 687-2561

February 17, 1982

Mr. Dan Williams
Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610

Dear Dan:

In response to your question regarding RACT applicability raised at our meeting of February 4, 1982, we are submitting a report by Sholtes and Koogler wherein an air quality model was conducted to determine the impact of our current (including the proposed changes discussed at our meeting) particulate matter emitting sources on the Hillsborough County non-attainment area. Their report, attached as Exhibit A, indicates an insignificant impact of 0.6 ug/cu. m, annual average and 4.2 ug/cu. m, 24-hour average. These figures are well below those specified for a significant impact thereby exempting this facility under Rule 17-2.650(2)(b)2., F.A.C. from the imposition of RACT.

As you are aware, however, Amax is undertaking a massive voluntary "clean-up" program at its Plant City - Coronet Facility. Specifically, the program calls for the installation of baghouses and wet scrubbers to reduce and/or alleviate fugitive dust emissions. Each of these changes are being made solely for the purposes of enhancing air quality and efficiency.

The purpose for this letter, therefore, is to define our position relative to specific emission standards which may be imposed as a result of this "clean-up" effort. Obviously, Amax is not interested in becoming liable for compliance with an economically prohibitive requirement.

According to Rule 17-4.23(1)(c) "New control devices installed on existing process equipment for the purpose of decreasing air pollutant mass emission rates shall comply with the existing source limitations pursuant to Chapter 17-2, F.A.C."

Under 17-2, General and Specific Air Quality Standards are enumerated in Parts II and III. Part IV contains Specific Emission Limiting and Performance Standards. The installation of the new control devices will not negatively impact any of these standards.

Other limitations contained in 17-2 include:

1) 17-2.500 PSD
2) 17-2.510 New Source Review
3) 17.2-630 BACT
4) 17-2.640 LAER
5) 17-2.650 RACT

As mentioned previously, RACT is inapplicable to our facility. Further, because the changes envisioned do not fall within the definition of "modification" in that the net result will be a decrease in emissions for the facility, and the changes do not rise to the level of a "New Source," the New Source Review and LAER criteria appears inapplicable. Similarly, because the facility is not located in an area of attainment or unclassifiable area, PSD criteria should not be applied.

A BACT determination, however, may be required at the time of each application for construction. If the Department determines that there is the necessity for a BACT determination, Amax would request that they be so notified as expeditiously as possible in order to avoid any delay in the "clean-up" effort.

If I can provide any additional information to assist in this determination, please do not hesitate to call.

Sincerely yours,

Fred G. Mullins
Manager
Regulatory Compliance

/kaw

cc: Rhea F. Law
Hillsborough County EPC

Bill,

I don't see any reason why AMAX could not revise their operating permits. We already said this in our 4/21/82 memo to Dan.

Larry

TO: Clair Fancy
Larry George
Bill Thomas

FROM: Willard Hanks

DATE: July 1, 1982

SUBJECT: AMAX Phosphate Inc.
AC 29-57072, 57073 and 57074

BACKGROUND

AMAX operates three animal feed ingredients (AFI) kilns at their Plant City facility that discharge their emissions through a common stack. An additional scrubber was added to the control system for these three sources under AC 29-2494, dated March 29, 1977. The application for the new scrubber listed production and emission limits of 14.15 TPH feed, 2.11 lb F/hr and 18.56 lb PM/hr emissions and a sulfur content in the no. 5 fuel oil of 1.75 to 1.9 percent. AC 29-2494 did not list any limits. The three kilns are presently operating under state permit AO 53-6778 which list the process weight as 16 TPH and the allowable emissions as 20 lb PM/hr.

PROJECT

Applications to change the operation of these three kilns were received by DER on June 15, 1982. The Company requested DER issue separate permits for each source and use the process wieght table to increase the allowable emission for each kiln. Two of the kilns will also increase production from 4 to 9 TPH. These changes will result in the present allowable (and actual) PM emissions increasing from 20 lb PM/hr to 41 lb PM/hr, and increase of 89.8 TPY. No physical changes to the process or control equipment is included in this request.

The application list reductions in unconfined PM emission of over 100 TPY (122.6 TPY* from bulk truck loading plus 21.7 TPY from transfer and conveying) as PM emission offset. The Company concluded there is no significant increase in PM emission and, thus, PSD is not applicable.

These changes should not increase the emission of VOC, F and SO_2 by a significant amount over the present unspecified actual emissions.

APPLICABILITY

My opinion:

The proposed project, administrative changes to an existing state permit that will allow increased production and emissions for three existing AFI kilns, is not subject to preconstruction review under provisions of Chapter 403,FS, and Chapter 17-2, FAC. because → (over)

The plant is in a nonattainment area for ozone (17-2.410(1)) unclassified area for SO_2 (17-2.430(2)), attainment for the other criteria pollutants (17-2.420) and in the area of influence (17-2.100(14)) of the Hillsborough County PM nonattainment area.

The potential emission, in TPY, from the control equipment after the proposed change is as follows:

Source	PM	SO_2	F
Paragon kiln No. 2	51.4	536	2.37
Fluid Bed Reactor No. 1	49.5	610	3.67
Fluid Bed Reactor No. 2	49.5	610	3.67
Total	150.4	1,756	9.71

The plant is a major source for PM and SO_2 as defined in Chapter 17-2.100(96) because the potential emissions of each of these criteria pollutants exceed 100 TPY.

The reduction in PM emission from unconfined sources achieved by the Company can not be used as offset, 17-2.500(e)3, because the unconfined

PM emissions from the uncontrolled source were in violation of 17-2.610(3) and the unconfined PM emissions do not have the same qualitative significance for public health and welfare as those emitted from the scrubbers for the kilns (17-2.500(e)4.c.).

The changes requested by AMAX do not meet the definition of "modification", 17-2.100(102), because the current state permit for these sources does not limit the production rates of the kilns.

The facility is subject to 17-2.650, RACT, for ozone and PM. As VOC emissions are not changed by AMAX proposal, 17-2.650(1), VOC RACT, and 17-2.41 are not applicable to the Company's proposed action. The sources are exempt from 17-2.650(2), PM RACT, because the PM impact is below the limits stated in 17-2.650(2)(b) of 1 ug/m^3 annual and 5 ug/m^3 daily.

Therefore, the applications will be reviewed under the rules in Section 17-2.600, Specific Source Emission Limiting Standards. Allowable PM emissions will be based on 17-2.610(1), process weight table. The current allowable F emission will not be changed so as to avoid a significant net emission increase that could trigger PSD review for this pollutant. Sulfur content of the fuel will be listed in the permit to aid in evaluating future increases of SO_2 from this facility.

Note: If this is a modification, PSD would be triggered by a 3 TPY increase in actual emi.

ALTERNATE APPLICABILITY

Depending on the policy decisions made by BAQM, other possible applicability for these applications are:

1. Proposed changes will result in a net emission increase of PM. Offsets are not available from the control of unconfined PM. Therefore, PSD applies and the Company

needs to submit a BACT recommendation, preconstruction monitoring, modeling, etc.

2. Proposed changes will result in a net significant increase or PM which can be offset by the reduction in unconfined PM. Therefore, Company is exempt from PSD. It will be permitted under existing allowable emission standards (this was the Company's proposal).

ISSUES

1. Can reduction of unconfined emissions be used for offsets? Probably not, but irrelevant if not a modification
2. When limits are not specified in the permit document are the limits in the application enforceable? Seems like we went through this on hours of operation and decided (no)
3. What are guidelines for changing permit conditions that have existed for years? case-by-case

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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JUN 25 1982
BAQM

TO: Clair Fancy
THROUGH: Dan Williams
FROM: Bob Garrett
DATE: June 21, 1982
SUBJECT: AMAX applications for increase in production and emissions for 3 of their AFI Reactors

On June 15, 1982 a conference was held at the District office with representatives from AMAX, HCEPC, ourselves, and Dr. John Koogler, consultant for AMAX, to discuss the technicalities of expanding productivity and emissions to Paragon Kiln No.2, Fluid Bed Reactors No. 1, and No.2 at the Plant City complex.

The description of these applications is described in detail by letter to Dan Williams, DER, from Fred Mullins, AMAX. The request is to split out each reactor on separate permits from an existing permit, AO53-6778, covering these 3 reactors to a single stack. The total increase in emissions of 90 tons/year TSP may be offset by their truck loadout controls estimated as 121 TPY improvement over the previously unconfined emissions.

Several questions were discussed:

1. What is the method of quantifying the uncontrolled emissions?

   A letter to Mullins, March 26, 1982,from Koogler references an EPA document as a detailed forerunner of AP 42's summary for fugitive particulate matter control. This is used as the numerical basis.

2. How are present emissions quantified?

   Stack tests and a visible determination of capture efficiency. The Truck L/O operation was witnessed by Koogler, qualified plant V.E. readers, and the Local Program as 0% opacity. There was no uncaptured dust visible as a result of a L/O operation.

3. Are there other sources of offsets?

   Yes, a pile of scrap AFI has been reduced to 50% its original size with resulting decreases in fugitive emissions. The crane-way turbine bag collector could be used and is within the time frame limitations. Also, there are other projected improvements.

4. When did all these recent improvements occur?

   Since March 1981, except for paving access roads which was in December of 1980.

The Southwest District recognizes the vast efforts resulting in the change of ownership from Borden to AMAX to deal with inherited uncontrolled emissions and favors this conservative use of this offset. We have reservations in the following areas, however:

1. Are AFI unsintered (some sintered) particulates similar enough to stack emissions from their reactors to justify tradeoff?

2. AMAX has installed a quadrant of ambient air monitors around the Plant City plant. We would like to see comparative "before" and "after" data.

3. As pointed out in Bill Thomas' memo of April 21, 1982 to Dan Williams, paragraph 4, perhaps the small increment of emissions from newly affected controls should be considered for RACT modeling since the "unconfined emissions" evidently were not previously incorporated.

RRG/jk

AMAX Phosphate, Inc.
A SUBSIDIARY OF AMAX INC.
402 SOUTH KENTUCKY AVENUE • SUITE 600 • LAKELAND, FLORIDA 33801 • (813) 687-2561

DER

JUN 18 1982

BAQM

June 14, 1982

D.E.R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

Mr. Dan Williams
Air Permitting
Southwest District
Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610

Dear Mr. Williams:

In February of this year, AMAX presented the Southwest District of the Florida Department of Environmental Regulation with a request to amend Operation Permit No. A029-6778 covering Defluorinating Units, Reactors No. 1 and No. 2 and the Paragon Kiln No. 2 at the AMAX Plant City - Coronet Operation. Specifically, AMAX requested that the conglomerate permit referenced above be broken down to allow for individual permitting of each source. This separation would allow the application of the Process Weight Table for particulate emissions (Table 610-1, Section 17.2-610 F.A.C.) to each source based on its process input rate. This change would result in an increase in the combined allowable emissions over the present level.

The AMAX request also addressed an increase in the production rate of two of the three sources. The process input rates of the two fluid bed reactors would be increased from the present 4 tons/hour for each facility to 9 tons/hour. The process input rate for the Paragon kiln will remain at the presently permitted rate of 8 tons/hour. Because the requested increase in production rate is not prohibited by a federally enforceable permit condition, this amendment does not qualify as a modification.

The result of the permit separation and higher production rates will increase the total allowable emissions for particulates for the three sources from 20.03 lbs/hour to a new level of 41.07 lbs/hour. This amounts to an actual increase of 90 tons/year. AMAX, however, is offering 100 tons of unconfined particulate reductions as a creditable and contemporaneous offset for the particulate emissions increase. (See Permit Application, pages 2A, 2B, and Attachment G for details.)

The combined increase in fluoride emissions from the elevated production rates will not exceed the present allowable rate of 9.8 tons per year and by a decision of the Southwest District of the Florida Department of Environmental Regulation will not trigger a PSD review for fluorides.

The increased particulate emission will not result in the AMAX Plant City Facility becoming a "significant impactor" on the Hillsborough non-attainment area. In the original permit change request, AMAX agreed to reduce the allowable emissions from two point sources to offset the increased point source emissions. The offsets offered are as follows:

Permit Number	Facility	Permitted Emission Rate	Proposed Emission Rate	Total Reduction
AO29-6315	Phosphate Feed Preparation Plant	34.57 lbs/hour	20.00 lbs/hour	14.57
A029-6316	#6 and #7 Defluorinating kilns	25.00 lbs/hour	15.00 lbs/hour	10.00
			TOTAL	24.57

These changes would result in a net decrease in permitted allowable emissions (41.07 - 20.03 = 21.04 incrase for reactors #1 and #2 and the Paragon kiln; 24.57 (offset) - 21.01 increase = 3.55 net reduction in emissions), and when applied to the CRSTER air model produced impacts on the Hillsborough non-attainment zone of 4.2 g/m^3 for the 24-hour impact (5.0 g/m^3 is defined as significant) and 0.6 g/m^3 for the annual impact (1.0 g/m^3 is defined as significant). See permit Attachment I for the model results.

Please find attached, construction/modification permit applications for the fluid bed reactor #1, the fluid bed reactor #2 and the Paragon kiln. These applications include the increased

production rates and all above-referenced attachments. If after reviewing these applications, you find that you have questions or need additional information, please let me know.

Sincerely,

Fred G. Mullins
Regulatory Compliance Manager

FGM:la

Enclosures: As stated above

cc: (with enclosures)
Messrs. Ivan Coreneko
J. J. Lewis
G. Townsend
(without enclosures)
Ms. R. F. Law