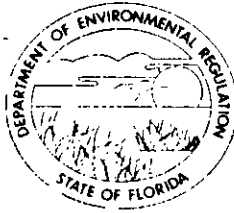


STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

June 22, 1982

Mr. Fred G. Mullins
Regulatory Compliance Manager
AMAX Phosphate, Inc.
402 South Kentucky Avenue
Suite 600
Lakeland, Florida 33801

Dear Mr. Mullins:

This is to acknowledge receipt of air construction permit applications for the AMAX Plant City - Coronet Operation. Your receipts for the processing fees are attached. Permit processing numbers have been assigned as follows:

- AC 29-57072 - Fluid Bed Reactor No. 1
- AC 29-57073 - Paragon Kiln No. 2
- AC 29-57074 - Fluid Bed Reactor No. 2

Please refer to these numbers on future correspondence. If we may be of further assistance, please feel free to call at (904) 488-1344.

Sincerely,

Patty Adams
Bureau of Air Quality
Management

Attachment

PA:ras

cc: Mr. J. J. Lewis

DER



AC 57072

D.E.R.

JUN 18 1982

JUN 15 1982

BAQM

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

SOUTHWEST DISTRICT
TAMPA

SOURCE TYPE: Point Source Air Pollution [] New [X] Existing¹

APPLICATION TYPE: [X] Construction [] Operation [] Modification

COMPANY NAME: AMAX Phosphate, Inc. COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Fluid Bed Reactor No. 1 (Defluorinating Unit)

SOURCE LOCATION: Street Coronet Road City Plant City
 UTM: East 17-393.8 North 3096.3
 Latitude ° ' " N Longitude ° ' " W

APPLICANT NAME AND TITLE: J. J. Lewis, Plant Manager

APPLICANT ADDRESS: P. O. Box 790, Plant City, FL 33566

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of AMAX Phosphate, Inc.

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

*Attach letter of authorization

Signed: [Signature]
J. J. Lewis, Plant Manager
 Name and Title (Please Type)

Date: 6/10/82 Telephone No. (813) 752-1161

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

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]
Anthony R. Lenkei
 Name (Please Type)

AMAX Phosphate, Inc.
 Company Name (Please Type)

P. O. Box 790, Plant City, FL 33566
 Mailing Address (Please Type)

Date: 6, 9, 82 Telephone No. (813) 752-1161

Florida Registration No. 8716

¹See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.
Fluid Bed Reactor No. 1 defluorinates prepared feed, with resulting gas stream
vented through a fluoride recovery unit, a tail gas (Tellerett packed cross flow
wet scrubber) and finally, a two stage ionizing wet scrubber before gases are vented
to the atmosphere.

B. Schedule of project covered in this application (Construction Permit Application Only)
 Start of Construction N/A Completion of Construction N/A

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)
Not Applicable: The pollution control systems are installed and in operation.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.
Fluid Bed Reactor No. 1 presently operates under FDER Permit No. A0 29-6778,
issued May 9, 1978 and expires May 31, 1983, a combined operating permit for
Fluid Bed Reactors No. 1 & 2 and Paragon Kiln 2.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24*; days/wk 7*; wks/yr 42*; if power plant, hrs/yr N/A;
 if seasonal, describe: *Operating time may be variable due to production problems and
market demand.

- G. If this is a new source or major modification, answer the following questions. (Yes or No)
- | | |
|---|--------------|
| 1. Is this source in a non-attainment area for a particular pollutant? | <u>No</u> |
| a. If yes, has "offset" been applied? | <u>N/A</u> |
| b. If yes, has "Lowest Achievable Emission Rate" been applied? | <u>N/A</u> |
| c. If yes, list non-attainment pollutants. | |
| 2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. | <u>No</u> |
| 3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. | <u>No **</u> |
| 4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? | <u>No</u> |
| 5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? | <u>No</u> |

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

FLUID BED REACTORS 1 & 2 AND PARAGON KILN #2

The separation of these three production units into individual operating permits and the requested increase in production rates will raise the permitted particulate emissions level from the present 20.03 lbs./hr. to a new combined emissions level for the three units of 41.07 lbs./hour. This new combined emissions rate can be calculated as follows:

Paragon Kiln #2:	(8 TPH)	0.62	3.59	=	13.03 lbs./hr. Allowable
Fluid Bed Reactor #1:	(9 TPH)	0.62	3.59	=	14.02 lbs./hr. Allowable
Fluid Bed Reactor #2:	(9 TPH)	0.62	3.59	=	14.02 lbs./hr. Allowable
					Total = 41.07 lbs./hr. Allowable

The 41 pounds per hour combined allowable emissions is an increase of 21 pounds per hour over the actual present emissions of approximately 20 lbs./hr. which is based on actual stack test data for the past 24 months. This hourly increase translates into an annual increase of 89.80 tons/year based on the following equations:

Paragon Kiln #2:	13.03 lbs./hr. Allowable	X	7,896 hrs./yr.	=	51.4 TPY
Fluid Bed Reactor #1:	14.02 lbs./hr. Allowable	X	7,056 hrs./yr.	=	49.5 TPY
Fluid Bed Reactor #2:	14.02 lbs./hr. Allowable	X	7,056 hrs./yr.	=	49.5 TPY
					Potential Annual Emissions = 150.4 TPY

Present Annual Emissions	20.00 pounds/hour	X	3,736 hours/year	=	87.36 TPY
					Potential Increase of: 63.04 TPY

Actual Annual Emissions Data for 1981	=	60.60 TPY
Actual Potential Increase of:	=	89.80 TPY

The increase is above significant emissions rate for particulate (25 tons per year) outlined in table 500-2 of part 17-2.500 of the Florida Administrative Code. This would subject this permit modification to the requirements of PSD (Prevention of Significant Deterioration); however, in accordance with Section 17-2.500 (2) (e) 1 of the F.A.C., AMAX is prepared to offer a contemporaneous and creditable emissions reduction. This emissions offset will amount to 100 TPY and meets all of the requirements set forth in Section 17-2.500 (2) (3) 3 and 4.

This emissions offset comes from a program voluntarily initiated by AMAX at the Plant City Facility in late 1980. The program was directed at the reduction of unconfined emissions at this facility. Using the criteria for the quantification of fugitive emissions established by EPA (Environmental Protection Agency) document, Technical Guidance For Control of Industrial Process Fugitive Particulate Emissions (EPA-450/3-77-010, March 1977), the completed environmental improvement projects were credited for their emissions reductions. These completed projects have a particulate reduction value well in excess of the 100 TPY offset offered by AMAX and the details of this unconfined emissions quantification can be found in a report prepared by Dr. John Koogler and marked as Attachment G to each of the three permit applications.

FLUID BED REACTORS 1 & 2 AND PARAGON KILN #2 (Continued)

The requested permit and production rate changes would not trigger a new source review due to the fact that it is not subject to PSD (by the available offsets) and that an increase in production does not constitute a "modification" as defined in Section 17-2.100 (102) (b). This is restated in a legal review by FDER staff concerning an AMAX request to separate the permits on the above referenced production facilities (memo from Steve Smallwood to Dan Williams, dated April 21, 1982 identified as Attachment H).

The production rate increase is not expected to release any additional amounts of ozone or volatile organic carbons to the atmosphere. The animal feed defluorination process is not known to generate any significant amounts of ozone, and volatile organic carbons are released from this process only during start-up periods. Fuel oil (a source of VOC) is used during the ignition and heat-up of the defluorination units; and as soon as the units reach a safe internal operating temperature, the fuel source is changed from fuel oil to natural gas. The increased production rates will have no direct correlation to the start-up frequency of the units and, therefore, should not increase the emission of volatile organic carbons.

The combined fluoride emissions from the fluid bed reactors 1 and 2 and the Paragon kiln at the increased production rates will not exceed the existing allowable fluoride emissions rate found in Operating Permit number AO29-6778. The new fluoride emission rate of 9.75 TPY is the best engineering estimation for the combined emissions of the three units at their maximum production rates. The distribution of the fluoride emissions for each operational unit is as follows: The fluid bed reactor #1 at a 9-ton per hour process input rate is 1.04 pounds per hour fluoride or 3.7 tons per year. The fluid bed reactor #2 at 9 tons per hour process input rate is 1.04 pounds per hour fluoride or 3.7 tons per year. The Paragon kiln #2 at a 8-ton per hour process input rate is 0.595 pounds per hour fluoride or 2.35 tons per year. (The combined allowable for the three units based on the existing source emission rate of 0.37 pounds of fluoride per ton of 100% P₂O₅ input is 3.68 pounds per hour or 13.42 tons per year.)

It is AMAX's understanding from recent discussions with the staff of the Southwest District of the Florida Department of Environmental Regulation that the new combined fluoride emissions rate of 9.75 tons per year will not trigger PSD. This is due to the new annual emission rate of 9.75 TPY being less than to the current annual allowable emissions rate of 9.8 tons per year.

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Prepared Feed	Particulate	100%	18,000	See Attachment E
	Fluoride	3.38%		

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

1. Total Process Input Rate (lbs/hr): 18,000
2. Product Weight (lbs/hr): 15,517

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Particulate	14	49	Ch. 17-2.05 (2)	14.0	900	3,175	Attachment E
Fluoride	1.04	3.7	Ch. 17-2.05 (6)	1.04	580	2,046	Attachment E

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)
Ceillcote Double Stage	Particulate	*98%+	Not Available	Attachment D-1
Ionizing Wet Scrubber (IWS 300), Tellerett	Fluoride	*99%+	Not Available	Attachment D-2
Packed Cross Flow				
Scrubber, Fluoride				
Recovery Unit				

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. - 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard

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

⁵If Applicable

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	.06 MMCF/Hr.	.07 MMCF/Hr.	72 MMBTU/Hr.
#5 Fuel Oil**	11.8 Barrel/Hr.	13.1 Barrel/Hr.	79 MMBTU/Hr.
#2 Diesel fuel oil***			

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr
 Fuel Analysis: 2.08
 Percent Sulfur: _____
 Density: 7.56 lbs/gal
 Heat Capacity: 19,015 BTU/lb
 Other Fuel Contaminants (which may cause air pollution): _____

*Primary Fuel
 **Alternate fuel for periods of gas curtailment
 ***Used for start-up of reactors
 Percent Ash: .033
 Typical Percent Nitrogen: N/A
143,810 BTU/gal

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N/A Maximum N/A

G. Indicate liquid or solid wastes generated and method of disposal.
All particulates and fluorides removed by the emissions control system are transported to a closed circuit, recycled process water system. A portion of the fluorides are removed from the water system and used for another manufacturing process.

H. * Emission Stack Geometry and Flow Characteristics (Provide data for each stack):
 Stack Height: 152 ft Stack Diameter: 5.79 ft
 Gas Flow Rate: 78,000** ACFM Gas Exit Temperature: 92 °F.
 Water Vapor Content: 6.0 % Velocity: 50 FPS

*This emissions stack is shared by this unit, fluid bed reactor #2, and the Paragon kiln.
 ** Contribution of fluid bed reactor No. 1 to total stack gas flow rate = 26,000 ACFM.

SECTION IV: INCINERATOR INFORMATION

Not Applicable

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

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

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

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

Brief description of operating characteristics of control devices: _____

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

- Total process input rate and product weight – show derivation. See Attachment A
- To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made. See Attachments B-1 & B-2
- Attach basis of potential discharge (e.g., emission factor, that is, AP42 test). See Attachments B-1 & B-2
- With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.). Attachment C
- With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency). Attachment D-1 & D-2
- An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained. Attachment E
- An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map). See Attachment F
- An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram. See Attachment F

9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The fee should be made payable to the Department of Environmental Regulation. Attached

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit. Not Applicable

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

Not Applicable

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) Yes No

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

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

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

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

1. Control Device/System:

2. Operating Principles:

3. Efficiency: *

5. Useful Life:

7. Energy:

9. Emissions:

4. Capital Costs:

6. Operating Costs:

8. Maintenance Cost:

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

*Explain method of determining D 3 above.

D.E.R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

10. Stack Parameters

- | | | | |
|---------------|------|-----------------|-----|
| a. Height: | ft. | b. Diameter: | ft. |
| c. Flow Rate: | ACFM | d. Temperature: | °F |
| e. Velocity: | FPS | | |

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

1.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy*:
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy**:
- h. Maintenance Costs:
- i. Availability of construction materials and process chemicals:

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power — KWH design rate.

3.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:

*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space and operate within proposed levels:

4.

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

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency*:
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

a.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:
- (5) Environmental Manager:
- (6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

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

ATTACHMENT A

Total Process Input Rate

18,000 Lbs./Hr. Prepared Feed

Product Weight

18,000 Lbs./Hr. Total Process Input Rate -

14 Lbs./Hr. Particulate Loss to Atmosphere -

1,077 Lbs./Hr. Particulate Removed by the Scrubber System -

1,392 Lbs./Hr. Moisture Loss to the Reactor =

15,517 Lbs./Hr. Product Weight

ATTACHMENT B-1

Particulate Emission Estimate (Actual)

Estimated Scrubber System Loading: 4.2 Grains/Ft³
100% - 98.44% (Scrubber System Efficiency) = 1.56% Discharge
4.2 Grains/Ft³ X 25,000 SCFM Airflow to Scrubber System =
105,000 Grains/Min. X 60 Min./Hour =
6,300,000 Grains/Hour + 7,000 Grains/Lbs. =
900 Lbs./Hour Loading X 1.56%
14.03 Lbs./Hour Emissions
14.03 Lbs./Hour Emissions X 7,056 Hours Annual Operating Time =
98,784 Lbs./Year Emissions ÷ 2,000 Lbs./Ton =
49 Tons/Year Emissions

Potential Emissions

900 Lbs./Hour Scrubber System Loading
900 Lbs./Hour X 7,056 Hours Annual Operating Time =
6,350,400 Lbs./Year ÷ 2,000 Lbs./Ton =
3,175 Tons/Year Potential Emission

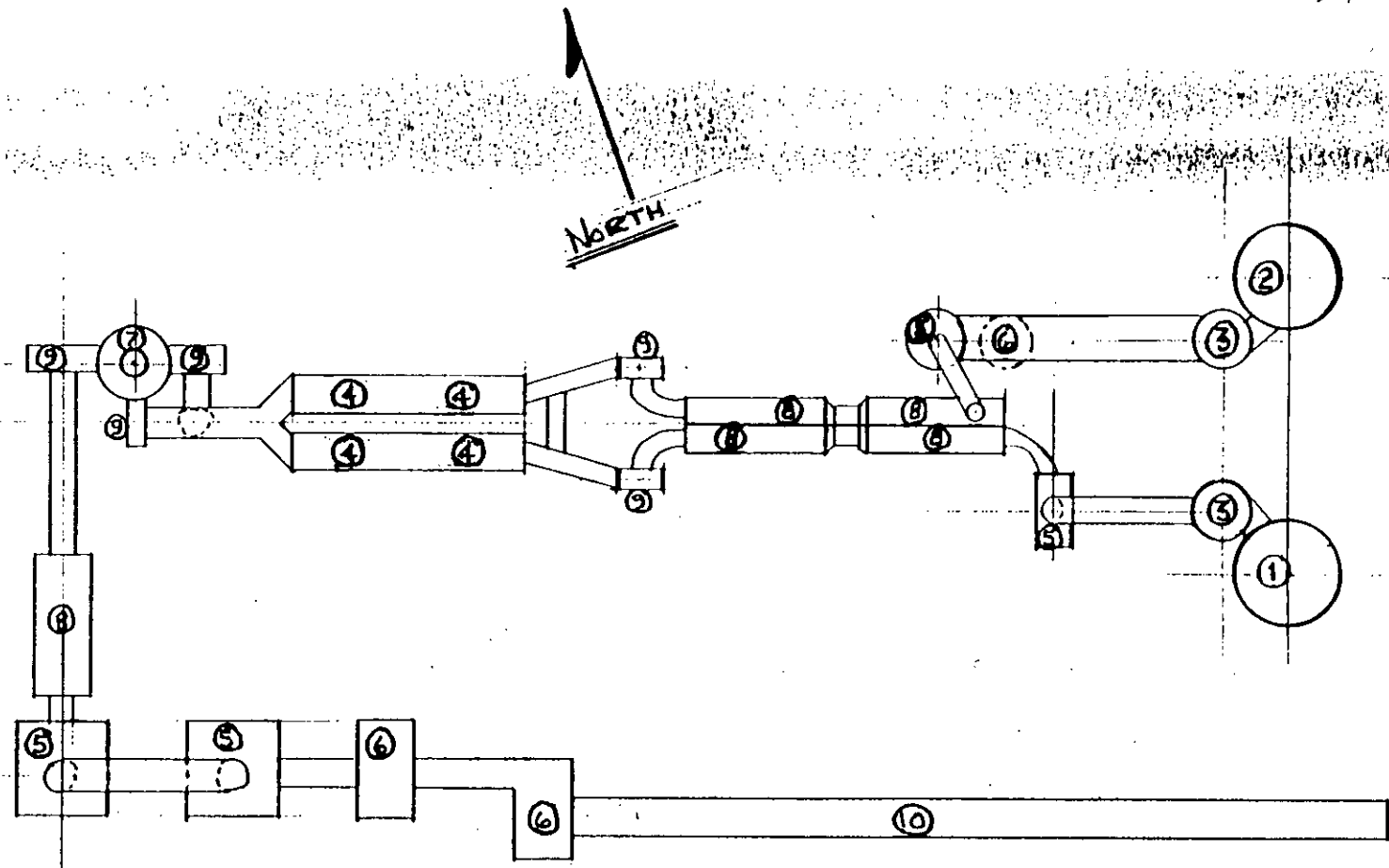
Attachment B-2

Fluoride Emissions Estimate

Estimated Scrubber System Loading: 580 lbs/hour
100% - 99.82% (Scrubber System Efficiency = 0.18%
580 lbs/hour loading x 0.179% = 1.04 lbs/hour emissions
1.04 lbs/hour x 7,056 hours annual operating time
7,400 lbs/year emission ÷ 2,000 lbs/ton
3.7 tons per year emissions

Potential Emissions

580 lbs/hour scrubber system loading
580 lbs/hour x 7,056 hours annual operating time =
4,092,480 lbs/year ÷ 2,000 lbs/ton =
2,046 tons/year potential emissions



AMAX PHOSPHATE INC.
GENERAL ARRANGEMENT - REACTOR/PARAGON AREA
5-8-82 RWB

LEGEND

- ① #1 FLUID BED REACTOR
- ② #2 FLUID BED REACTOR
- ③ DUST CYCLONE
- ④ WET ELECTROSTATIC PRECIPITATOR
- ⑤ SPRAY TOWER
- ⑥ DUST CHAMBER
- ⑦ STACK
- ⑧ HORIZONTAL SCRUBBER
- ⑨ FAN
- ⑩ #2 PARAGON KILN

ATTACHMENT D-1

Particulate Efficiency

Maximum

9.0 TPH Maximum Input Rate X 5% Product Loss as Particulate =

0.045 TPH Particulate X 2,000 Lbs./Ton =

900 Lbs./Hour Inlet Loading to the Scrubber System

14 Lbs./Hour Stack Emissions (Maximum)

14 Lbs./Hour Stack Emissions (Maximum) ÷ 900 Lbs./Hour Inlet =
0.0156 X 100 = 1.56%

100% - 1.56% = 98.44% System Efficiency

ATTACHMENT D- 2

Fluoride Loading to Scrubber

9.0 Tons/Hour Maximum Input Rate X 3.38% Fluoride by Weight
in Raw Materials =

0.3042 Tons/Hour of 100% Fluoride Input

0.3042 Tons/Hour F_2 Input X 2,000 Lbs./Hour = 608.4 Lbs./Hour
Fluoride Input

7.76 Tons/Hour Product X 0.18% Fluoride by Weight in Product =

0.01396 Tons/Hour of 100% Fluoride Out In Product

0.01396 Tons/Hour Fluoride Out X 2,000 Lbs./Ton = 27.92 Lbs./Hour

608.4 Lbs./Hour Total Fluoride Input - 27.92 Lbs./Hour =

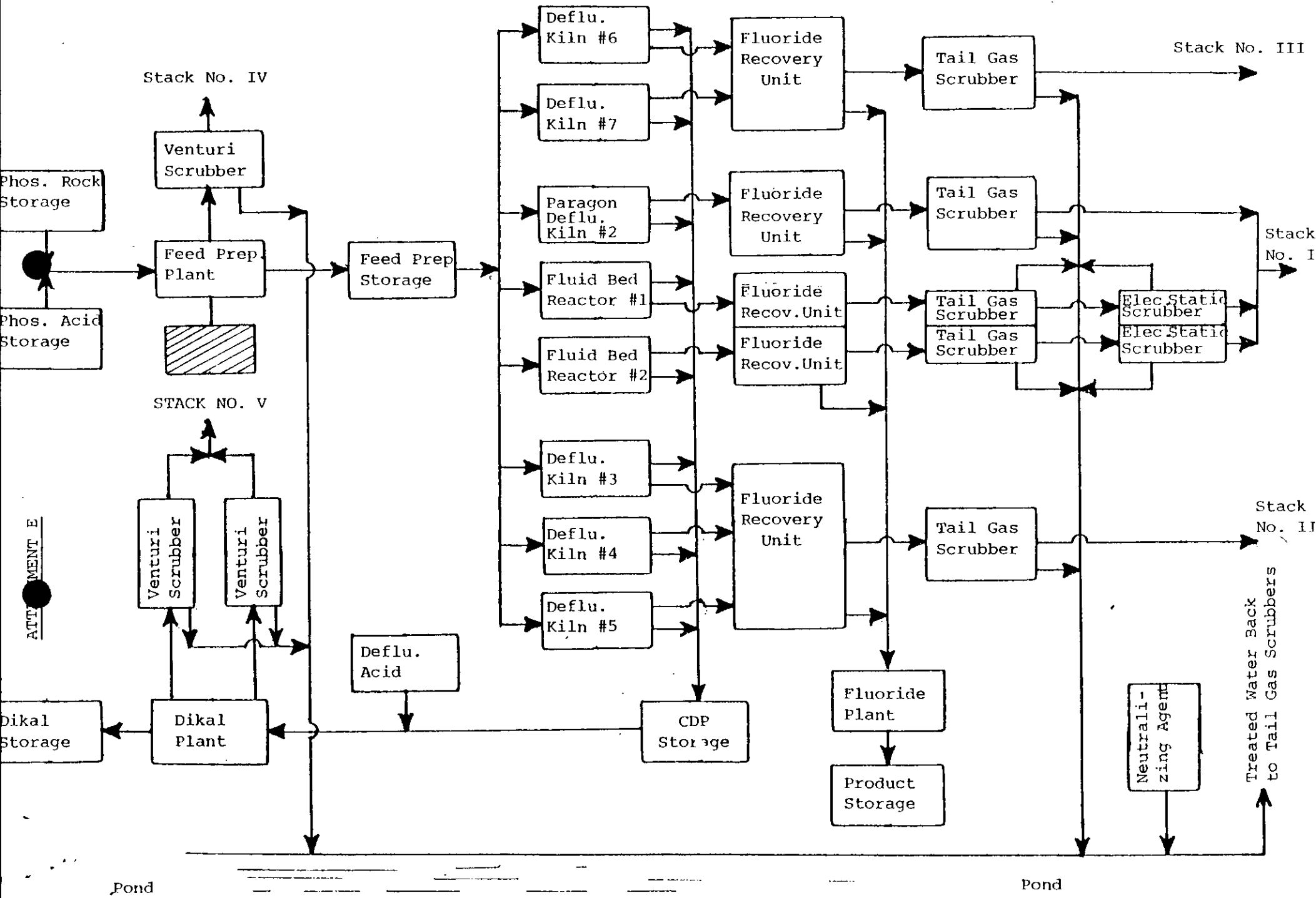
580.48 Lbs./Hour Fluoride Loading to Scrubber System

Estimated Efficiency

.104 Lbs./Hour Estimated Emissions ÷ 580 Lbs/Hour Scrubber System Loading =
Stack Discharge = 0.18% 100% - 0.18% = 99.82%

AMAX PLANT CITY OPERATION

FLOW DIAGRAM





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

RECEIVED
AMAX Phosphate

March 26, 1982

MAR 29 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

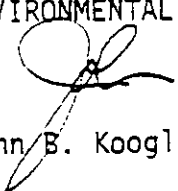
measures and the preparation of the report summarizing all fugitive emission estimates. I realize this cost is somewhat higher than I related to you by telephone recently but it more accurately reflects the effort that will be required.

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

B. 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:

$$\begin{aligned} P_u &= 86,750 \text{ tons/yr} \times 1/125 \text{ hr/ton} \times 60 \text{ min/hr} \\ &\quad \times 12,500 \text{ ft}^3/\text{min} \times 3.67 \text{ gr/ft}^3 \times 1/7,000 \text{ lb/gr} \\ &\quad \times 1/2,000 \text{ tons/hr} \\ &= 136.4 \text{ TPY} \end{aligned}$$

Particulate matter emitted from bag collector of modified system:

$$\begin{aligned} P_{S_m} &= 86,750 \text{ tons/yr} \times 1/125 \text{ hr/ton} \times 2.15 \text{ lb/hr} \times 1/2,000 \text{ tons/lb} \\ &= 0.7 \text{ TPY} \end{aligned}$$

Particulate matter captured by original system assuming 10 percent efficiency:

$$\begin{aligned} P_{C_x} &= 136.4 \times 0.10 \\ &= 13.6 \text{ TPY} \end{aligned}$$

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

$$\begin{aligned} P_{S_x} &= 86,750 \text{ tons/yr} \times 1/125 \text{ hr/ton} \times 60 \text{ min/hr} \times 8,600 \text{ ft}^3/\text{min} \\ &\quad \times 0.02 \text{ gr/ft}^3 \times 1/7,000 \text{ lb/gr} \times 1/2,000 \text{ tons/lb} \\ &= 0.5 \text{ TPY} \end{aligned}$$

Particulate matter emitted from original system:

$$\begin{aligned} P_x &= 136.4 \text{ tpy generated} \\ &\quad - 13.6 \text{ tpy captured} \\ &\quad + \underline{0.5 \text{ tpy emitted from bag collector}} \\ &= 123.3 \text{ tpy emitted to the atmosphere.} \end{aligned}$$

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

$$\begin{aligned} P_r &= 123.3 - 0.7 \\ &= 122.6 \text{ TPY} \end{aligned}$$

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:

$$P_u = 86,750 \text{ tons/year} \times 1.0 \text{ lb/ton} \times 1 \text{ transfer} \times 1/2,000 \text{ ton/lb} \\ = 43.4 \text{ TPY}$$

Controlled emission rate at 50 percent control:

$$P_p = 43.4 \times 0.5 \\ = 21.7 \text{ TPY}$$

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

$$P_r = 43.4 - 21.7 \\ = 21.7 \text{ TPY}$$

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.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee			
To:	<i>Dan Williams</i>	Distn.:	<i>Tampa</i>
To:		Locn.:	
To:		Locn.:	
From:		Date:	
Reply Optional	<input type="checkbox"/>	Reply Required	<input type="checkbox"/>
Date Due:		Date Due:	
		Info. Only	<input checked="" type="checkbox"/>

TO: Dan Williams
District Air Engineer, Tampa

THROUGH: Steve Smallwood
Chief, Air Quality Management

FROM: *BT* Bill Thomas, Bureau Air Quality Management
Martha Harrell Hall, Assistant General Counsel *TAMPA MHH*

DATE: April 21, 1982

SUBJECT: Amax Phosphate, Inc.

D.E.R.

APR 26 1982

SOUTHWEST DISTRICT

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

Amax
April 12, 1982
Page 2

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.

Amax
April 12, 1982
Page 3

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



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

RECEIVED
AMAX Phosphate

SKEC 144-81-06

February 3, 1982 **FEB 4 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

<u>Year</u>	<u>Particulate Matter Impacts (ug/m³)</u>	
	<u>Annual</u>	<u>24-Hour</u>
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

Class I Area

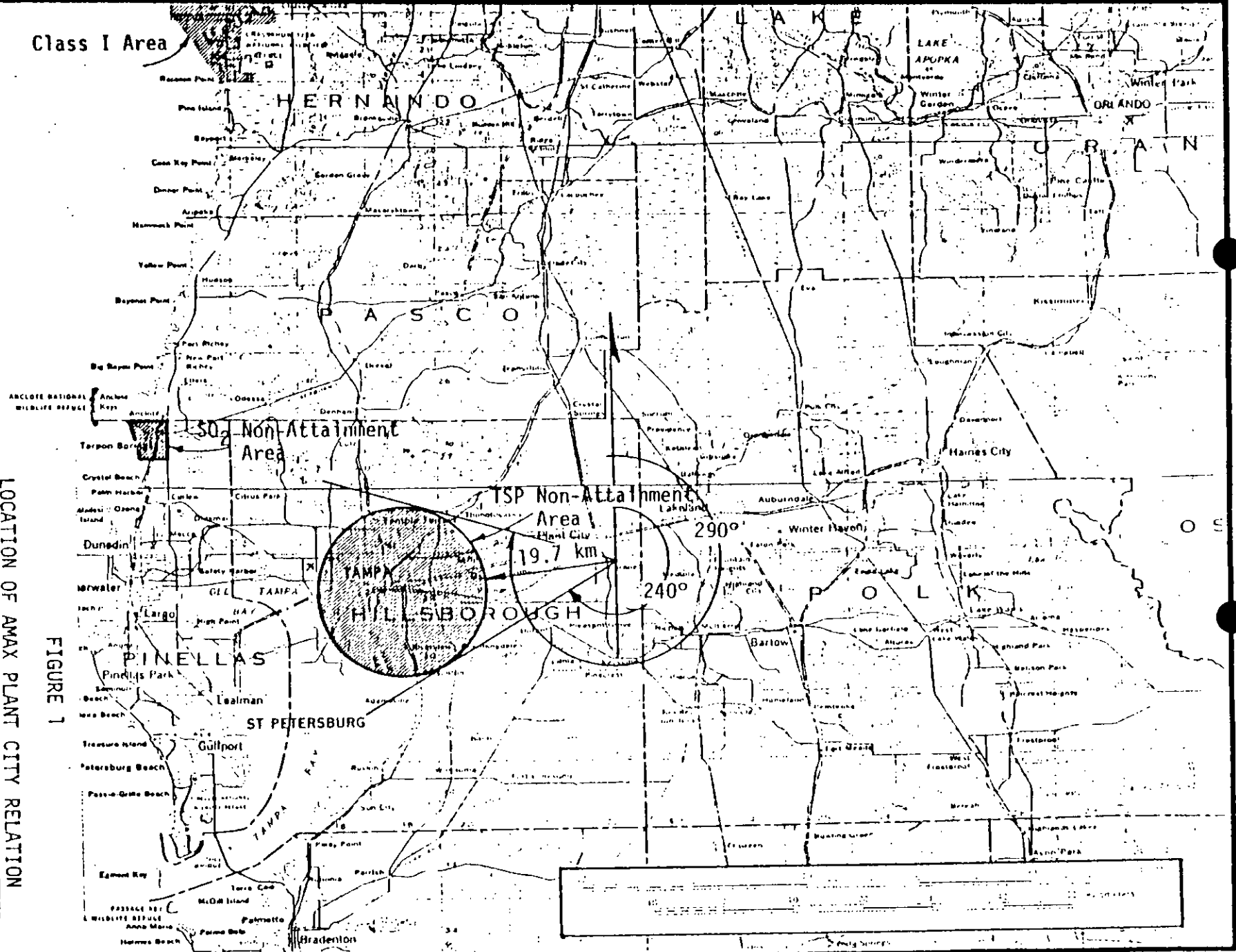
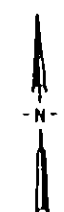


FIGURE 1

LOCATION OF AMAX PLANT CITY RELATION
TO HILLSBOROUGH COUNTY PARTICULATE MATTER
NON-ATTAINMENT AREA
AMAX PHOSPHATES, INC.
PLANT CITY, FLORIDA

PLUG DISTANCES (M) = 11.70 25.90 31.50 35.00 41.00

STACK # 1--FEED PREP 101
 STACK # 2--FEED PREP 111A, GAS USE TGA, TRUCK LOG
 STACK # 3--LINE BIN, COP BIN, DIKAL, BOOT BIN, BLK LOG
 STACK # 4--HILL ROOM 1 & 2
 STACK # 5--ORA TRAY
 STACK # 6--REACTOR PARALON & KIENS 3,4,5
 STACK # 7--KIENS 6 & 7
 STACK # 8--FEED PREP
 STACK # 9--DIKAL

STACK	MONTH	EMISSION RATE (G/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M ³ /SEC)
1	ALL	0.1200	29.50	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	7.4300	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	30.49	1.37	11.50	338.50	16.95
9	ALL	1.5800	24.39	1.68	8.56	318.50	18.98

PLANT NAME: ARAO - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

NARRATIVE REASON: 4.9345E-07 DIRECTION: 27 DISTANCE: 19.7 KM

WIND: 70

DIR	RANGE	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR				
		19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1		5.55527E-03	4.16714E-09	3.15130E-03	2.79164E-08	2.38225E-08
2		4.33249E-03	1.18237E-08	2.17790E-03	2.02897E-09	1.78440E-08
3		4.24863E-03	3.19625E-08	2.41101E-03	2.13862E-08	1.82920E-09
4		3.36633E-09	2.49931E-09	1.56691E-03	1.64462E-08	1.39312E-08
5		2.97636E-03	2.21799E-09	1.56310E-03	1.46729E-08	1.25011E-08
6		3.13035E-03	2.37761E-08	1.92059E-08	1.62420E-08	1.40073E-09
7		2.60747E-08	1.92207E-08	1.33124E-09	1.26055E-08	1.06805E-08
9		2.65700E-03	1.90904E-08	1.38830E-03	1.21529E-08	1.02202E-09
7		5.95975E-03	5.10517E-08	3.79536E-09	3.34598E-08	2.84083E-08
10		3.72423E-03	4.25217E-08	3.18997E-03	2.31590E-08	2.40144E-08
11		3.57563E-03	4.19717E-03	3.15107E-09	2.79335E-08	2.36481E-08
12		4.22107E-03	3.21225E-08	2.41395E-08	2.13289E-08	1.31384E-08
13		3.65881E-08	6.56230E-08	4.96205E-09	4.39180E-08	3.74134E-09
14		3.07854E-08	6.15261E-09	4.59859E-03	4.17345E-08	3.58322E-08
15		1.06435E-07	8.19971E-08	5.10361E-08	5.61999E-08	4.83310E-08
16		7.53650E-03	7.32150E-09	5.59871E-03	4.79131E-08	4.26864E-08
17		7.55150E-08	5.77711E-08	4.33102E-09	3.94621E-09	3.39001E-09
18		1.25852E-07	9.61367E-09	7.36551E-03	6.55489E-08	5.62578E-03
19		5.52924E-03	4.16930E-08	3.15114E-03	2.79174E-08	2.30312E-08
20		4.35960E-03	6.39801E-08	4.90018E-03	4.36645E-08	3.75557E-08
21		1.52075E-07	1.16605E-07	9.76165E-09	7.97058E-08	6.87529E-08
22		1.13901E-07	8.63749E-09	6.51367E-03	5.76941E-08	4.91721E-08
23		2.3222E-07	1.76077E-07	1.34661E-07	1.19510E-07	1.02795E-07
24		3.33431E-07	2.53271E-07	1.94565E-07	1.73421E-07	1.49151E-07
25		3.30933E-07	2.53495E-07	1.94391E-07	1.73100E-07	1.48691E-07
26		3.40842E-07	2.60592E-07	1.99541E-07	1.77583E-07	1.52342E-07
27		4.93458E-07	3.78907E-07	2.88861E-07	2.56690E-07	2.19905E-07
28		3.73122E-07	2.79820E-07	2.12279E-07	1.89254E-07	1.60960E-07
29		2.22193E-07	1.67137E-07	1.26255E-07	1.11774E-07	9.53985E-08
30		3.43731E-07	2.61977E-07	2.02003E-07	1.79760E-07	1.54272E-07
31		1.43659E-07	1.07903E-07	8.14252E-03	7.20646E-08	6.14265E-03
32		1.46623E-07	1.11933E-07	8.56299E-03	7.62559E-08	6.55252E-03
33		1.42712E-07	1.09201E-07	8.39346E-03	7.48134E-08	6.44092E-03
34		3.73522E-03	6.62219E-03	5.04129E-03	4.47799E-08	3.83461E-08
35		3.34341E-08	2.53044E-08	1.92612E-03	1.71148E-08	1.46647E-08
36		5.96394E-08	4.56113E-08	3.50219E-03	3.12192E-08	2.68612E-08

PLANT NAME: VAY - PLANT CITY

RELEVANT PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

PLANT NAME: VAY - PLANT CITY - RELEVANT PART DIRECTION: S DISTANCE: 19.7 KM DAY: 174

DATE: 75

RANGE	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR				
	19.7 KM	25.0 KM	31.5 KM	35.0 KM	40.0 KM
01	2.2397E-06 (228)	1.7980E-06 (228)	1.2051E-06 (223)	1.1462E-05 (223)	9.7376E-07 (228)
2	1.7334E-06 (131)	1.3235E-06 (131)	1.0142E-06 (101)	3.0293E-07 (131)	7.7492E-07 (101)
3	2.1316E-06 (112)	1.7293E-06 (119)	1.3913E-06 (119)	1.2616E-06 (119)	1.1083E-06 (119)
4	1.7792E-06 (192)	1.3193E-06 (112)	1.0227E-06 (192)	2.0505E-07 (192)	7.7261E-07 (192)
5	2.2305E-06 (24)	1.7977E-06 (29)	1.4332E-06 (28)	1.3005E-06 (29)	1.1379E-06 (28)
6	1.9607E-06 (24)	1.6356E-06 (249)	1.3049E-06 (249)	1.1384E-06 (249)	1.0498E-06 (249)
7	1.1291E-06 (346)	8.6603E-07 (346)	6.5964E-07 (346)	5.8202E-07 (346)	4.9368E-07 (346)
8	6.4524E-07 (115)	5.2978E-07 (115)	4.0456E-07 (115)	3.5869E-07 (115)	3.0558E-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)	1.7439E-06 (312)	1.5517E-06 (312)	1.4031E-06 (312)	1.2281E-06 (312)
11	2.2727E-06 (78)	1.7845E-06 (78)	1.3713E-06 (78)	1.2447E-06 (78)	1.0739E-06 (78)
12	1.1767E-06 (214)	9.5178E-07 (214)	7.6773E-07 (214)	7.0010E-07 (214)	6.1768E-07 (214)
13	1.4726E-06 (175)	1.1923E-06 (175)	9.5994E-07 (175)	9.7486E-07 (175)	7.7385E-07 (175)
14	2.4369E-06 (160)	1.9735E-06 (160)	1.5927E-06 (160)	1.4487E-06 (160)	1.2787E-06 (160)
15	3.0300E-06 (315)	2.4690E-06 (315)	1.7589E-06 (315)	1.7801E-06 (315)	1.5578E-06 (315)
16	1.5034E-06 (45)	1.2059E-06 (45)	9.5327E-07 (45)	9.6418E-07 (45)	7.5329E-07 (45)
17	2.0451E-06 (91)	2.4050E-06 (91)	1.9478E-06 (91)	1.7710E-06 (91)	1.5605E-06 (91)
18	3.0010E-06 (341)	2.4912E-06 (341)	1.9348E-06 (341)	1.7952E-06 (341)	1.5758E-06 (341)
19	1.4128E-06 (322)	1.1653E-06 (322)	9.5575E-07 (322)	8.7563E-07 (322)	7.7875E-07 (322)
20	3.6296E-06 (164)	2.8876E-06 (164)	2.3057E-06 (164)	2.0314E-06 (164)	1.8417E-06 (164)
21	1.7277E-06 (333)	1.3862E-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	2.9337E-06 (255)	2.3915E-06 (255)	1.9060E-06 (255)	1.7235E-06 (255)	1.5087E-06 (255)
24	4.8230E-06 (162)	3.8655E-06 (162)	3.0136E-06 (162)	2.8025E-06 (162)	2.4608E-06 (162)
25	4.7455E-06 (119)	3.8925E-06 (119)	3.1703E-06 (119)	2.8992E-06 (119)	2.5561E-06 (119)
26	4.2632E-06 (343)	3.5343E-06 (343)	2.8529E-06 (343)	2.6142E-06 (343)	2.3179E-06 (343)
27	4.0530E-06 (289)	3.2678E-06 (289)	2.6798E-06 (289)	2.4510E-06 (289)	2.1779E-06 (289)
28	2.6611E-06 (251)	2.0791E-06 (251)	1.6482E-06 (251)	1.4860E-06 (251)	1.2956E-06 (251)
29	2.3582E-06 (86)	1.8744E-06 (86)	1.5054E-06 (86)	1.3638E-06 (86)	1.1963E-06 (86)
30	3.6722E-06 (302)	2.9287E-06 (302)	2.3319E-06 (302)	2.1085E-06 (302)	1.8467E-06 (302)
31	1.7592E-06 (231)	1.3773E-06 (231)	1.0753E-06 (231)	9.6416E-07 (231)	8.3505E-07 (231)
32	6.1143E-06 (174)	5.2237E-06 (174)	4.1015E-06 (174)	3.7451E-06 (174)	3.3202E-06 (174)
33	3.2597E-06 (363)	2.6597E-06 (363)	2.1657E-06 (363)	1.9743E-06 (363)	1.7481E-06 (363)
34	2.5090E-06 (211)	1.9579E-06 (211)	1.5498E-06 (211)	1.3942E-06 (211)	1.2144E-06 (211)
35	1.4185E-06 (169)	1.1455E-06 (169)	9.1469E-07 (169)	8.3232E-07 (169)	7.3016E-07 (169)
36	2.4823E-06 (189)	1.9974E-06 (189)	1.5926E-06 (189)	1.4291E-06 (189)	1.2487E-06 (189)

PLANT NAME: ARAY - PLANT CITY POLLUTANT: O&T EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3
 YEARLY SECOND HIGHEST 24-HOUR CONCENTRATION 1.799E-06 DIRECTION: 27 DISTANCE= 19.7 KM DAY=289
 YEAR= 70

DIP	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	12.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	1.3258E-06 (25)	1.0821E-06 (25)	8.7579E-07 (25)	7.9742E-07 (25)	7.0297E-07 (25)	
2	1.2997E-07 (29)	7.4395E-07 (29)	5.9327E-07 (29)	5.3653E-07 (29)	4.6967E-07 (29)	
3	1.1419E-06 (225)	9.1261E-07 (225)	7.2129E-07 (225)	6.5308E-07 (225)	5.7095E-07 (225)	
4	1.0665E-07 (180)	6.9535E-07 (180)	5.1510E-07 (180)	4.5491E-07 (180)	3.8504E-07 (180)	
5	1.3559E-07 (219)	6.0644E-07 (219)	4.4091E-07 (219)	3.8351E-07 (219)	3.1934E-07 (219)	
6	1.3545E-06 (77)	1.1035E-05 (77)	9.0231E-07 (77)	8.2322E-07 (77)	7.2911E-07 (77)	
7	1.2241E-07 (324)	7.0616E-07 (324)	5.3431E-07 (324)	4.7092E-07 (324)	3.9784E-07 (324)	
8	1.1157E-07 (46)	4.7083E-07 (46)	3.6249E-07 (46)	3.2297E-07 (46)	2.7746E-07 (46)	
9	1.7022E-05 (325)	1.2770E-05 (325)	9.6146E-07 (325)	9.4947E-07 (325)	7.2192E-07 (325)	
10	1.4945E-06 (338)	1.2045E-06 (338)	9.7464E-07 (338)	8.8527E-07 (338)	7.8183E-07 (338)	
11	1.2060E-06 (97)	1.0236E-06 (97)	8.0145E-07 (97)	7.2721E-07 (97)	6.3194E-07 (97)	
12	1.1475E-06 (197)	9.1615E-07 (197)	7.2776E-07 (197)	6.5701E-07 (197)	5.7386E-07 (197)	
13	1.4501E-06 (175)	1.1515E-06 (175)	9.1226E-07 (175)	8.3146E-07 (175)	7.3551E-07 (175)	
14	1.9109E-06 (112)	1.5674E-06 (112)	1.2746E-06 (112)	1.1605E-06 (112)	1.0243E-06 (112)	
15	2.2241E-06 (27)	1.7934E-06 (27)	1.4363E-06 (27)	1.3001E-06 (27)	1.1397E-06 (27)	
16	1.3091E-06 (164)	1.1319E-06 (164)	9.1710E-07 (164)	8.3566E-07 (164)	7.3895E-07 (164)	
17	2.3427E-06 (138)	1.9990E-06 (138)	1.5281E-06 (138)	1.3849E-06 (138)	1.2152E-06 (138)	
18	2.5867E-06 (329)	2.0881E-06 (329)	1.6761E-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)	9.4990E-07 (31)	8.5237E-07 (31)	7.3918E-07 (31)	
21	1.6756E-06 (54)	1.3799E-06 (54)	1.1239E-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 (304)	1.3468E-06 (304)	1.1676E-06 (304)	
24	1.7744E-06 (114)	3.0612E-06 (114)	2.4525E-06 (114)	2.2321E-06 (114)	1.9594E-06 (114)	
25	2.1196E-06 (182)	1.7042E-06 (182)	1.3551E-06 (182)	1.2349E-06 (182)	1.0925E-06 (182)	
26	3.7934E-06 (115)	2.9449E-06 (115)	2.3242E-06 (115)	2.0702E-06 (115)	1.8157E-06 (115)	
27	3.9599E-06 (289)	3.1771E-06 (289)	2.4920E-06 (289)	2.2402E-06 (289)	1.9477E-06 (289)	
28	2.6067E-06 (251)	2.0626E-06 (251)	1.5375E-06 (251)	1.4113E-06 (251)	1.2072E-06 (251)	
29	2.3139E-06 (35)	1.7725E-06 (35)	1.3655E-06 (35)	1.2132E-06 (35)	1.0387E-06 (35)	
30	3.1131E-06 (355)	2.5272E-06 (355)	2.0492E-06 (355)	1.8546E-06 (355)	1.6348E-06 (355)	
31	1.3577E-06 (155)	1.0492E-06 (155)	8.3321E-07 (155)	7.5430E-07 (155)	6.6151E-07 (155)	
32	2.6541E-06 (154)	2.1296E-06 (154)	1.6937E-06 (154)	1.5355E-06 (154)	1.3433E-06 (154)	
33	2.5952E-06 (238)	2.0922E-06 (238)	1.6115E-06 (238)	1.5222E-06 (238)	1.3448E-06 (238)	
34	2.3634E-06 (26)	1.6791E-06 (26)	1.3537E-06 (26)	1.2280E-06 (26)	1.0792E-06 (26)	
35	1.0452E-06 (238)	8.2606E-07 (238)	6.5199E-07 (238)	5.9751E-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)	

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART
 IMPACT 2 HILLSBOROUGH CO. NON-ATTAINMENT AREA
 TAMPA MET DATA

EMISSION UNITS: GM/SEC

AIR QUALITY UNIT: GM/M³

MET FILE REQUESTED
 STN NO. YR 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--	0	1	1	1	0	1	1	1	0	1	1	1	1	1	0	1	1	0	0	0	1	0	1	1	0	1	1	0	1	1	0	0	1	1	1	1	1	0	1	1	0	0	1	1	0	0	1	1	1	1	1								
	0	0	0	1	1	0	1	0	1	0	0	0	0	1	1	0	0	1	1	1	1	1	0	1	0	0	1	1	0	0	1	1	0	1	1	0	1	1	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1	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	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	1	1	1	1	1	
	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	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	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	0	1	0	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	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

* * * * * 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)= 13.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NCS
 STACK # 2--FEED PREP SODA, DAG HSE ECM, TRUCK LDG
 STACK # 3--LINE BIN, COP BIN, DIKAL, BOOT BIN, BLK _DG
 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	0.64	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	333.50	16.95
9	ALL	1.6800	24.38	1.68	8.56	313.50	18.98

PLANT NAME: AMAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/4003

MAXIMUM MEAN CONC: 4.2770E-07 DIRECTION= 27 DISTANCE= 19.7 KM

YEAR= 71

DIR	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR					
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1		5.77414E-09	4.26669E-08	3.17048E-08	2.78871E-08	2.35779E-08
2		5.41195E-08	4.00271E-08	2.97622E-09	2.61833E-08	2.21388E-08
3		3.30865E-08	2.38069E-08	1.73351E-09	1.51446E-08	1.27047E-09
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-03	2.79912E-08	2.40425E-08
6		4.78426E-09	3.61441E-08	2.74818E-08	2.44138E-08	2.09148E-08
7		2.97035E-08	2.19037E-08	1.63704E-09	1.44611E-08	1.23107E-08
8		3.97655E-08	2.91091E-08	2.16436E-09	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-03	2.43297E-08	2.04757E-08
11		5.14823E-08	3.80910E-08	2.93919E-09	2.50210E-08	2.12172E-08
12		5.73099E-08	5.06142E-08	3.92229E-09	3.38377E-08	2.88478E-08
13		5.81124E-08	4.29028E-08	3.17712E-09	2.78828E-08	2.34933E-08
14		1.03246E-07	7.87802E-08	6.02219E-09	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-09
17		4.83233E-08	3.61158E-08	2.71508E-09	2.40030E-08	2.04410E-08
18		1.61695E-07	1.23936E-07	9.49873E-09	8.45166E-08	7.24947E-08
19		7.01406E-08	5.34836E-08	4.08388E-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-09	5.75887E-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	2.07819E-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-09	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

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR									
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.3 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)	9.3166E-07	(22)	7.3594E-07	(22)
3	5.8423E-07	(30)	4.1656E-07	(50)	3.0042E-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-05	(72)	2.2706E-06	(72)	1.9981E-06	(72)	1.7369E-06	(72)
6	1.7313E-06	(219)	1.3715E-06	(219)	1.0965E-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)	1.1377E-06	(99)	1.0516E-06	(99)
17	1.2970E-06	(29)	1.0672E-06	(29)	8.7255E-07	(29)	7.9728E-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	(111)	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)	1.2332E-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)

D.E.R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

PLANT NAME: AMAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

YEARLY SECOND MAXIMUM 24-HOUR CONC= 3.4003E-06 DIRECTION= 18 DISTANCE= 19.7 KM DAY=151

YEAR= 71

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	1.0973E-06 (84)	8.7341E-07 (295)	6.9904E-07 (295)	5.3288E-07 (295)	5.5470E-07 (295)	5.4764E-07 (24)
2	1.2701E-06 (24)	9.6659E-07 (24)	7.3130E-07 (24)	5.4589E-07 (24)	5.4764E-07 (24)	2.1913E-07 (50)
3	5.2642E-07 (361)	3.8841E-07 (116)	2.9618E-07 (116)	2.6186E-07 (50)	2.6186E-07 (50)	2.8778E-07 (69)
4	7.2922E-07 (69)	5.3438E-07 (69)	3.9252E-07 (69)	3.4326E-07 (69)	3.4326E-07 (69)	6.0268E-07 (216)
5	1.1893E-06 (216)	9.4515E-07 (216)	7.5468E-07 (216)	6.8143E-07 (216)	6.8143E-07 (216)	7.3913E-07 (178)
6	1.5178E-06 (178)	1.2021E-06 (178)	9.4648E-07 (178)	8.5099E-07 (178)	8.5099E-07 (178)	2.9769E-07 (4)
7	6.5422E-07 (4)	5.0921E-07 (4)	3.9216E-07 (4)	3.4850E-07 (4)	3.4850E-07 (4)	5.2998E-07 (178)
8	1.0241E-06 (178)	8.2529E-07 (178)	6.6290E-07 (178)	6.0193E-07 (178)	6.0193E-07 (178)	4.6750E-07 (214)
9	1.0100E-06 (214)	7.8190E-07 (214)	5.0537E-07 (214)	5.4144E-07 (214)	5.4144E-07 (214)	3.7004E-07 (351)
10	9.6540E-07 (351)	6.5862E-07 (351)	4.9591E-07 (351)	4.3788E-07 (351)	4.3788E-07 (351)	2.9844E-07 (115)
11	7.6222E-07 (115)	5.5692E-07 (115)	4.0801E-07 (115)	3.5645E-07 (115)	3.5645E-07 (115)	9.5821E-07 (55)
12	1.7605E-06 (55)	1.4527E-06 (55)	1.1973E-06 (55)	1.0930E-06 (55)	1.0930E-06 (55)	4.1602E-07 (107)
13	8.7718E-07 (107)	6.9378E-07 (107)	5.4186E-07 (107)	4.8395E-07 (107)	4.8395E-07 (107)	1.1186E-06 (55)
14	2.1129E-06 (55)	1.7215E-06 (55)	1.3335E-06 (55)	1.2679E-06 (55)	1.2679E-06 (55)	9.2557E-07 (70)
15	1.8841E-06 (70)	1.4921E-06 (70)	1.1785E-06 (70)	1.0519E-06 (70)	1.0519E-06 (70)	6.5790E-07 (217)
16	1.3798E-06 (217)	1.0814E-06 (217)	9.4559E-07 (217)	7.5882E-07 (217)	7.5882E-07 (217)	5.9077E-07 (77)
17	1.1647E-06 (330)	9.2897E-07 (330)	7.3698E-07 (330)	5.6755E-07 (77)	5.6755E-07 (77)	1.7592E-06 (258)
18	3.4803E-06 (151)	2.7717E-06 (151)	2.1398E-06 (258)	1.9985E-06 (258)	1.9985E-06 (258)	5.8848E-07 (332)
19	1.0964E-06 (332)	8.9651E-07 (332)	7.2897E-07 (332)	6.6479E-07 (332)	6.6479E-07 (332)	5.2201E-07 (90)
20	1.0001E-06 (90)	8.1156E-07 (90)	6.5406E-07 (90)	5.9364E-07 (90)	5.9364E-07 (90)	9.4657E-07 (131)
21	1.8038E-06 (225)	1.4282E-06 (131)	1.1675E-06 (131)	1.0668E-06 (131)	1.0668E-06 (131)	9.0451E-07 (272)
22	2.0584E-06 (272)	1.5611E-06 (272)	1.1990E-06 (272)	1.0561E-06 (272)	1.0561E-06 (272)	1.3923E-06 (268)
23	2.7859E-06 (268)	2.2167E-06 (268)	1.7608E-06 (268)	1.5910E-06 (268)	1.5910E-06 (268)	1.4091E-06 (276)
24	2.7473E-06 (276)	2.2069E-06 (276)	1.7677E-06 (276)	1.6029E-06 (276)	1.6029E-06 (276)	1.2671E-06 (107)
25	2.3915E-06 (107)	1.9488E-06 (107)	1.5779E-06 (107)	1.4359E-06 (107)	1.4359E-06 (107)	1.6688E-06 (248)
26	3.2259E-06 (248)	2.6025E-06 (248)	2.0904E-06 (248)	1.8971E-06 (248)	1.8971E-06 (248)	1.5244E-06 (241)
27	3.2107E-06 (241)	2.5110E-06 (241)	1.9607E-06 (241)	1.7587E-06 (241)	1.7587E-06 (241)	1.4760E-06 (306)
28	2.9354E-06 (306)	2.3434E-06 (306)	1.8664E-06 (306)	1.6868E-06 (306)	1.6868E-06 (306)	1.1419E-06 (240)
29	2.3865E-06 (145)	1.8645E-06 (145)	1.4524E-06 (145)	1.3010E-06 (240)	1.3010E-06 (240)	1.4920E-06 (289)
30	2.9397E-06 (289)	2.3549E-06 (289)	1.8302E-06 (289)	1.7018E-06 (289)	1.7018E-06 (289)	8.1833E-07 (259)
31	1.6293E-06 (345)	1.2919E-06 (289)	1.0311E-06 (289)	9.3327E-07 (259)	9.3327E-07 (259)	1.0025E-06 (201)
32	2.1242E-06 (234)	1.6986E-06 (234)	1.3376E-06 (201)	1.1659E-06 (201)	1.1659E-06 (201)	1.2094E-06 (252)
33	2.3498E-06 (252)	1.8804E-06 (252)	1.5094E-06 (252)	1.3712E-06 (252)	1.3712E-06 (252)	7.9158E-07 (332)
34	1.6650E-06 (332)	1.3058E-06 (332)	1.0203E-06 (332)	9.1467E-07 (332)	9.1467E-07 (332)	6.9290E-07 (72)
35	1.3169E-06 (72)	1.0725E-06 (72)	8.6558E-07 (72)	7.8722E-07 (72)	7.8722E-07 (72)	9.4657E-07 (116)
36	2.0052E-06 (8)	1.5322E-06 (8)	1.1830E-06 (25)	1.0669E-06 (116)	1.0669E-06 (116)	

HING DISTANCES(KM)= 19.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NGS
 STACK # 2--FEED PREP SODA, BAG HSE EGW, 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	29.90	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	319.50	18.98

PLANT NAME: A4AX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/4*3

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

YEAR= 72

DIR	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR					
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1		1.12385E-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	2.58303E-08	2.29981E-08	1.97651E-08
6		4.87701E-08	3.71590E-08	2.84979E-08	2.54073E-08	2.18703E-08
7		4.06553E-08	3.00237E-08	2.24061E-08	1.97732E-08	1.68068E-08
8		3.05057E-08	2.23747E-08	1.56538E-08	1.46898E-08	1.24857E-08
9		1.09167E-07	8.10127E-08	5.07070E-08	5.36550E-08	4.56838E-08
10		5.47329E-09	4.77094E-08	3.54992E-08	3.12773E-08	2.65193E-08
11		4.64150E-08	3.37117E-08	2.46559E-08	2.15519E-08	1.80772E-08
12		5.15439E-08	3.86077E-08	2.70872E-08	2.57398E-08	2.19415E-08
13		5.71885E-08	5.07021E-08	3.84719E-08	3.41328E-08	2.91932E-08
14		9.04352E-09	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	4.45126E-08	3.40601E-08	3.02679E-08	2.59229E-08
18		7.71753E-08	5.87729E-08	4.40685E-08	3.98935E-08	3.41956E-08
19		7.95332E-08	6.08735E-08	4.56484E-08	4.15265E-08	3.56501E-08
20		5.07897E-08	3.75539E-08	2.72012E-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	1.36711E-07	1.66153E-07	1.42602E-07
24		4.14844E-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	1.49382E-07	1.32935E-07	1.14095E-07
30		2.93228E-07	2.31753E-07	1.30307E-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	6.29370E-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		5.91098E-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: G4/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

DIRECTION	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR				
	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	1.6004E-06 (10)	1.2344E-06 (10)	9.4361E-07 (10)	8.4448E-07 (10)	7.2700E-07 (9)
2	2.0836E-06 (89)	1.5467E-06 (89)	1.1327E-06 (89)	1.0148E-06 (99)	8.5850E-07 (89)
3	2.7722E-06 (258)	2.2712E-06 (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)	8.7713E-07 (274)	7.5066E-07 (274)
5	2.5304E-06 (24)	2.0944E-06 (24)	1.7201E-06 (24)	1.5731E-06 (24)	1.3973E-06 (24)
6	2.0695E-06 (334)	1.6746E-06 (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-06 (219)	8.4544E-07 (219)	7.6103E-07 (219)	6.6245E-07 (219)
9	2.5583E-06 (334)	1.9546E-06 (334)	1.4981E-06 (334)	1.3190E-06 (334)	1.1451E-06 (67)
10	1.9754E-06 (24)	1.5767E-06 (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	1.8940E-06 (138)	1.4692E-06 (138)	1.1445E-06 (138)	1.0265E-06 (138)	8.9062E-07 (138)
13	2.7209E-06 (291)	2.2309E-06 (291)	1.8187E-06 (291)	1.6595E-06 (291)	1.4701E-06 (291)
14	1.5812E-06 (322)	1.2280E-06 (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-06 (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)	1.2093E-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	3.3616E-06 (78)	2.7226E-06 (78)	2.1974E-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-06 (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)	1.1923E-06 (345)	1.0503E-06 (345)
23	3.4929E-06 (289)	2.8418E-06 (289)	2.3055E-06 (289)	2.0982E-06 (289)	1.8530E-06 (289)
24	4.0126E-06 (244)	3.2369E-06 (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-06 (260)	1.6181E-06 (260)	1.4754E-06 (260)	1.2846E-06 (260)
30	3.3075E-06 (48)	2.7126E-06 (48)	2.2114E-06 (48)	2.0178E-06 (48)	1.7872E-06 (48)
31	1.9426E-06 (61)	1.5627E-06 (61)	1.2502E-06 (61)	1.1318E-06 (61)	9.9199E-07 (61)
32	1.5739E-06 (348)	1.1975E-06 (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)	1.8003E-06 (158)	1.5768E-06 (158)
34	1.5073E-06 (237)	1.1618E-06 (237)	9.0856E-07 (241)	8.2357E-07 (241)	7.2294E-07 (241)
35	2.4794E-06 (324)	1.9926E-06 (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

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	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)	8.9331E-07 (9)	8.2064E-07 (9)	7.2417E-07 (10)	
2	1.5641E-06 (10)	1.2099E-06 (10)	9.3888E-07 (195)	9.5503E-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)	8.8009E-07 (4)	7.9529E-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-06 (239)	1.1869E-06 (239)	1.0519E-06 (239)	8.9716E-07 (239)	
7	9.1493E-07 (50)	6.8466E-07 (58)	5.0302E-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-06 (57)	1.4665E-06 (67)	1.3180E-06 (67)	1.1245E-06 (334)	
10	1.8037E-06 (259)	1.4767E-06 (259)	1.2020E-06 (259)	1.0967E-06 (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)	8.5085E-07 (206)	7.5212E-07 (206)	
14	1.5436E-06 (231)	1.2272E-06 (231)	9.5119E-07 (322)	8.4997E-07 (322)	7.3263E-07 (322)	
15	1.9618E-06 (138)	1.5793E-06 (138)	1.2633E-06 (138)	1.1435E-06 (138)	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-06 (87)	9.9393E-07 (87)	8.8695E-07 (87)	7.6242E-07 (87)	
20	9.6961E-07 (322)	7.5060E-07 (322)	5.7910E-07 (322)	5.1603E-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-06 (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)	1.5658E-06 (323)	
24	2.5820E-06 (333)	2.0528E-06 (333)	1.6297E-06 (333)	1.4716E-06 (333)	1.2869E-06 (333)	
25	2.1394E-06 (227)	1.8383E-06 (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-06 (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-06 (224)	1.1762E-06 (224)	
30	3.1671E-06 (355)	2.5344E-06 (355)	2.0150E-06 (355)	1.8188E-06 (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)	9.2973E-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-06 (4)	1.1912E-06 (4)	
34	1.3986E-06 (241)	1.1313E-06 (241)	9.0009E-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-06 (359)	1.1940E-06 (359)	
36	1.3647E-06 (234)	1.0372E-06 (234)	7.8947E-07 (234)	5.9869E-07 (234)	5.9598E-07 (234)	

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART
 IMPACT @ HILLSBOROUGH CO. NON-ATTAINMENT AREA
 TAMPA MET DATA

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M**3

	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 1 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			

* * * * * 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 NCS
 STACK # 2--FEED PREP SODA, BAG HSE EDW, TRUCK LDG
 STACK # 3--LINE BIN, COP BIN, DIKAL, BOOT BIN, BLK LDG
 STACK # 4--MILLROOM 1 & 2
 STACK # 5--CRANEWAY
 STACK # 6--REACTOR PARAGON & KILNS 3,4,6,5
 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	2.01	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	339.50	16.95
9	ALL	1.6800	24.38	1.68	8.56	318.50	18.98

PLANT NAME: ANAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

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

YEAR= 73

DIR	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR					
	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	3.91203E-08	3.46353E-08	2.95315E-08
8		3.53419E-08	2.55690E-08	1.37502E-08	1.64329E-08	1.38472E-08
9		5.38368E-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	2.49993E-08	2.19703E-08	1.85495E-08
16		5.83768E-08	4.37072E-08	3.28036E-08	2.89487E-08	2.45688E-08
17		8.10234E-08	6.14232E-08	4.56900E-08	4.14381E-08	3.54434E-08
18		7.88858E-08	7.56621E-08	5.80473E-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	1.91531E-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: G4/4**

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

YEAR= 73

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR									
	RANGE	19.7 KM	25.3 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	(7)
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)	7.8948E-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)	9.6870E-07	(307)	9.6233E-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	(38)	7.1589E-07	(38)
11	1.8827E-06	(222)	1.4259E-06	(222)	1.0804E-06	(222)	9.5694E-07	(222)	8.1563E-07	(222)
12	5.0902E-06	(362)	3.9906E-06	(362)	3.1104E-06	(362)	2.7923E-06	(362)	2.4003E-06	(362)
13	3.3832E-06	(206)	2.6935E-06	(206)	2.1345E-06	(206)	1.9240E-05	(206)	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	(70)	1.7621E-06	(30)
23	2.1767E-06	(265)	1.7319E-06	(265)	1.3734E-06	(265)	1.2393E-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	(358)	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	(2)	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	(182)	1.5821E-06	(182)
32	1.2695E-06	(152)	1.0320E-06	(152)	8.3556E-07	(152)	7.6103E-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	(228)
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: ANAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/443
 YEARLY SECOND MAXIMUM 24-HOUR CONC= 2.6463E-06 DIRECTION= 24 DISTANCE= 19.7 KM DAY=205
 YEAR= 73

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	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-05 (59)	9.2308E-07 (69)	8.3869E-07 (69)	7.4199E-07 (69)	
5	7.8115E-07 (301)	5.6847E-07 (301)	4.1453E-07 (301)	3.6103E-07 (301)	3.0106E-07 (301)	
6	1.0757E-06 (178)	8.4768E-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-05 (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)	8.8662E-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)	7.9932E-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 (278)	
21	2.0984E-06 (221)	1.6807E-06 (221)	1.3446E-06 (221)	1.2122E-06 (280)	1.0508E-06 (280)	
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)	1.1731E-06 (239)	1.0807E-05 (239)	9.4846E-07 (239)	
24	2.6463E-06 (205)	2.1063E-06 (205)	1.6680E-06 (205)	1.5040E-05 (205)	1.3117E-06 (205)	
25	2.5885E-06 (237)	1.9967E-06 (205)	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	2.5171E-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)	

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A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046,002	12.35.21	AM	30	JAN	92	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

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART
 IMPACT 3 HILSBROUGH CO. NON-ATTAINMENT AREA
 TAMPA MET DATA

EMISSION UNITS: GW/SEC AIR QUALITY UNITS: GM/M³

	NET FILE	REQUESTED
	STN NO. YR	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

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

* * * * * N D 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

RING DISTANCES(KM)= 19.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NGS
 STACK # 2--FEED PREP SOJA, BAG HSE E&W, TRUCK LDG
 STACK # 3--LINE BIN, COP BIN, DIKAL, BUJT BIN, BLK LDG
 STACK # 4--MILLROOM 1 & 2
 STACK # 5--CRANEWAY
 STACK # 6--REACTOR PARAGON & KILNS 3,4,6,5
 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	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	1.68	8.56	319.50	18.98

PLANT NAME: ANAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/****

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

YEAR= 74

DIR	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR					
	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-09	2.82041E-08	2.37421E-09
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-09	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-09	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		9.34229E-08	6.50028E-08	5.05735E-08	4.52645E-08	3.91160E-08
14		9.49955E-08	7.36918E-08	5.70944E-09	5.09967E-08	4.39401E-08
15		7.49400E-08	5.71764E-08	4.35745E-08	3.86607E-08	3.30238E-08
16		7.46624E-09	5.71082E-08	4.36424E-08	3.87688E-08	3.31701E-08
17		9.36438E-08	6.34871E-08	4.82107E-08	4.27337E-08	3.64721E-08
18		1.13050E-07	8.61565E-08	6.56406E-08	5.82514E-08	4.97818E-08
19		4.77337E-08	3.58720E-08	2.70085E-08	2.38658E-08	2.02916E-08
20		1.23121E-07	9.42770E-08	7.21680E-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	1.58329E-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
28		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	9.97490E-08
32		1.61971E-07	1.22814E-07	9.30839E-08	8.24115E-08	7.02067E-08
33		1.53125E-07	1.16662E-07	8.98307E-08	7.87917E-08	6.72898E-08
34		9.94339E-08	7.51231E-08	5.57746E-08	5.02164E-08	4.27318E-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: ANAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

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

YEAR= 74

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	9.2000E-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 (130)	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	6.9943E-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	1.5635E-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)	2.2805E-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-06 (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-06 (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-06 (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)	1.1121E-06 (326)	8.8127E-07 (326)	8.9993E-07 (214)	7.7233E-07 (214)	
17	1.4343E-06 (334)	1.2255E-06 (182)	9.9180E-07 (182)	9.0069E-07 (182)	6.9207E-07 (260)	
18	1.4908E-06 (182)	1.6845E-06 (240)	7.9921E-07 (124)	7.3320E-07 (124)	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	1.9266E-06 (54)	1.5929E-06 (54)	1.3066E-06 (54)	1.1946E-06 (54)	1.0606E-06 (54)	
21	1.6264E-06 (172)	1.3456E-06 (172)	1.1058E-06 (172)	1.0119E-06 (172)	8.9955E-07 (172)	
22	2.0470E-06 (240)	1.6845E-06 (240)	1.4010E-06 (215)	1.2943E-06 (215)	1.1645E-06 (215)	
23	2.2291E-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 (182)	1.4940E-06 (182)	
25	3.6410E-06 (64)	3.0177E-06 (64)	2.4833E-06 (64)	2.2739E-06 (54)	2.0233E-06 (64)	
26	3.4780E-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-06 (353)	3.1311E-06 (358)	
28	2.5130E-06 (227)	2.0376E-06 (227)	1.6407E-06 (227)	1.4875E-06 (227)	1.3064E-06 (227)	
29	2.0046E-06 (248)	1.6144E-06 (224)	1.3045E-06 (224)	1.1847E-06 (224)	1.0424E-06 (224)	
30	2.3533E-06 (105)	1.9459E-06 (105)	1.6017E-06 (105)	1.4670E-06 (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	2.1111E-06 (232)	1.7217E-06 (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-06 (168)	9.4926E-07 (168)	
34	1.5407E-06 (216)	1.1590E-06 (216)	8.7262E-07 (216)	7.7041E-07 (216)	6.5518E-07 (133)	
35	1.1697E-06 (95)	8.8509E-07 (95)	6.8988E-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-06 (352)	8.8838E-07 (352)	

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/****
 YEARLY SECOND MAXIMUM 24-HOUR CONC= 2.9700E-06 DIRECTION= 27 DISTANCE= 19.7 KM DAY=J48
 YEAR= 74

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR									
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM				
1	7.9333E-07	(106)	6.3242E-07	(106)	5.0225E-07	(106)	4.5340E-07	(106)	3.9315E-07	(353)
2	7.7955E-07	(130)	6.0163E-07	(85)	4.4675E-07	(85)	4.0344E-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	(130)
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)	5.9789E-07	(245)	5.2520E-07	(245)
6	1.5376E-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	8.9430E-07	(48)	7.1941E-07	(48)	5.7503E-07	(48)	5.2003E-07	(48)	4.5516E-07	(48)
9	1.5179E-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)	7.0040E-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	(199)	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-06	(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-06	(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	(348)	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)	1.5708E-06	(248)	1.2261E-06	(248)	1.0980E-06	(248)	9.4898E-07	(248)
30	2.1954E-06	(248)	1.7875E-06	(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-06	(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)

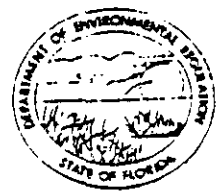
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SOUTHWEST DISTRICT
TAMPA

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SOUTHWEST DISTRICT
TAMPA

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
BAQM APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

SOURCE TYPE: Point Source Air Pollution New¹ Existing¹
APPLICATION TYPE: Construction Operation Modification
COMPANY NAME: AMAX Phosphate, Inc. COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Paragon Kiln No. 2 (Defluorinating Unit)

SOURCE LOCATION: Street Coronet Road City Plant City
UTM: East 17-393.8 North 3096.3
Latitude ° ' "N Longitude ° ' "W

APPLICANT NAME AND TITLE: J. J. Lewis, Plant Manager
APPLICANT ADDRESS: P. O. Box 790, Plant City, FL 33566

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of AMAX Phosphate, Inc.

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

*Attach letter of authorization

Signed: [Signature]
J. J. Lewis, Plant Manager
Name and Title (Please Type)
Date: 6/10/82 Telephone No. (813) 752-1161

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

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]
Anthony R. Lenkei
Name (Please Type)
AMAX Phosphate, Inc.
Company Name (Please Type)
P. O. Box 790, Plant City, FL 33566
Mailing Address (Please Type)
Date: 6, 9, 82 Telephone No. (813) 752-1161

(Affix Seal)

Florida Registration No. 8716

SECTION II: GENERAL PROJECT INFORMATION

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

Paragon Kiln No. 2 defluorinates prepared feed, with resulting gas stream vented through a fluoride recovery unit and a tail gas (Tellerett packed cross flow wet) scrubber before gases are vented to the atmosphere.

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

Start of Construction N/A Completion of Construction N/A

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

Not Applicable: The Pollution Control Systems are already in operation.

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

This unit is currently operating under a collective FDER operating permit number A029-6778 which was issued on June 16, 1978 and expires on May 31, 1983. This permit is shared with two other operating units, the Fluid Bed Reactors 1 and 2.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24*; days/wk 7*; wks/yr 47*; if power plant, hrs/yr N/A; if seasonal, describe: *Operating time may be variable due to production problems and market demands.

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

- | | |
|---|--------------|
| 1. Is this source in a non-attainment area for a particular pollutant? | <u>No</u> |
| a. If yes, has "offset" been applied? | <u>N/A</u> |
| b. If yes, has "Lowest Achievable Emission Rate" been applied? | <u>N/A</u> |
| c. If yes, list non-attainment pollutants. | |
| 2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. | <u>No</u> |
| 3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. | <u>No **</u> |
| 4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? | <u>No</u> |
| 5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? | <u>No</u> |

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

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FLUID BED REACTORS 1 & 2 AND PARAGON KILN #2

The separation of these three production units into individual operating permits and the requested increase in production rates will raise the permitted particulate emissions level from the present 20.03 lbs./hr. to a new combined emissions level for the three units of 41.07 lbs./hour. This new combined emissions rate can be calculated as follows:

Paragon Kiln #2:	(8 TPH)	0.62	3.59	=	13.03 lbs./hr. Allowable
Fluid Bed Reactor #1:	(9 TPH)	0.62	3.59	=	14.02 lbs./hr. Allowable
Fluid Bed Reactor #2:	(9 TPH)	0.62	3.59	=	14.02 lbs./hr. Allowable
					Total = <u>41.07</u> lbs./hr. Allowable

The 41 pounds per hour combined allowable emissions is an increase of 21 pounds per hour over the actual present emissions of approximately 20 lbs./hr. which is based on actual stack test data for the past 24 months. This hourly increase translates into an annual increase of 89.80 tons/year based on the following equations:

Paragon Kiln #2:	13.03 lbs./hr. Allowable	X	7,896 hrs./yr.	=	51.4 TPY
Fluid Bed Reactor #1:	14.02 lbs./hr. Allowable	X	7,056 hrs./yr.	=	49.5 TPY
Fluid Bed Reactor #2:	14.02 lbs./hr. Allowable	X	7,056 hrs./yr.	=	49.5 TPY
					Potential Annual Emissions = <u>150.4</u> TPY

Present Annual Emissions	20.00 pounds/hour	X	8,736 hours/year	=	87.36 TPY
					Potential Increase of: <u>63.04</u> TPY

Actual Annual Emissions Data for 1981	=	60.60 TPY
Actual Potential Increase of:	=	89.80 TPY

The increase is above significant emissions rate for particulate (25 tons per year) outlined in table 500-2 of part 17-2.500 of the Florida Administrative Code. This would subject this permit modification to the requirements of PSD (Prevention of Significant Deterioration); however, in accordance with Section 17-2.500 (2) (e) 1 of the F.A.C., AMAX is prepared to offer a contemporaneous and creditable emissions reduction. This emissions offset will amount to 100 TPY and meets all of the requirements set forth in Section 17-2.500 (2) (3) 3 and 4.

This emissions offset comes from a program voluntarily initiated by AMAX at the Plant City Facility in late 1980. The program was directed at the reduction of unconfined emissions at this facility. Using the criteria for the quantification of fugitive emissions established by EPA (Environmental Protection Agency) document, Technical Guidance For Control of Industrial Process Fugitive Particulate Emissions (EPA-450/3-77-010, March 1977), the completed environmental improvement projects were credited for their emissions reductions. These completed projects have a particulate reduction value well in excess of the 100 TPY offset offered by AMAX and the details of this unconfined emissions quantification can be found in a report prepared by Dr. John Koogler and marked as Attachment G to each of the three permit applications.

FLUID BED REACTORS 1 & 2 AND PARAGON KILN #2 (Continued)

The requested permit and production rate changes would not trigger a new source review due to the fact that it is not subject to PSD (by the available offsets) and that an increase in production does not constitute a "modification" as defined in Section 17-2.100 (102) (b). This is restated in a legal review by FDER staff concerning an AMAX request to separate the permits on the above referenced production facilities (memo from Steve Smallwood to Dan Williams, dated April 21, 1982 identified as Attachment H).

The production rate increase is not expected to release any additional amounts of ozone or volatile organic carbons to the atmosphere. The animal feed defluorination process is not known to generate any significant amounts of ozone, and volatile organic carbons are released from this process only during start-up periods. Fuel oil (a source of VOC) is used during the ignition and heat-up of the defluorination units; and as soon as the units reach a safe internal operating temperature, the fuel source is changed from fuel oil to natural gas. The increased production rates will have no direct correlation to the start-up frequency of the units and, therefore, should not increase the emission of volatile organic carbons.

The combined fluoride emissions from the fluid bed reactors 1 and 2 and the Paragon kiln at the increased production rates will not exceed the existing allowable fluoride emissions rate found in Operating Permit number AO29-6778. The new fluoride emission rate of 9.75 TPY is the best engineering estimation for the combined emissions of the three units at their maximum production rates. The distribution of the fluoride emissions for each operational unit is as follows: The fluid bed reactor #1 at a 9-ton per hour process input rate is 1.04 pounds per hour fluoride or 3.7 tons per year. The fluid bed reactor #2 at 9 tons per hour process input rate is 1.04 pounds per hour fluoride or 3.7 tons per year. The Paragon kiln #2 at a 8-ton per hour process input rate is 0.595 pounds per hour fluoride or 2.35 tons per year. (The combined allowable for the three units based on the existing source emission rate of 0.37 pounds of fluoride per ton of 100% P₂O₅ input is 3.68 pounds per hour or 13.42 tons per year.)

It is AMAX's understanding from recent discussions with the staff of the Southwest District of the Florida Department of Environmental Regulation that the new combined fluoride emissions rate of 9.75 tons per year will not trigger PSD. This is due to the new annual emission rate of 9.75 TPY being less than to the current annual allowable emissions rate of 9.8 tons per year.

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Prepared Feed	Particulate	100%	16,000	See Attachment E
	Fluoride	3.38%		

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

- Total Process Input Rate (lbs/hr): 16,000
- Product Weight (lbs/hr): 13,793

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Particulate	13	51	Ch. 17-2.05 (2)	13	800	3158	Attachment E
Fluoride	0.60	2.35	Ch. 17-2.05 (6)	0.60	516	2037	Attachment E

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)
Tellerett Packed	Particulate	*98%+	Not Available	Attachment D-1
Cross Flow Wet Scrubber, Fluoride	Fluoride	*.99%+	Not Available	Attachment D-2
Recovery Unit				

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. - 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard

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

⁵If Applicable

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas*	.045 MMCF/Hr.	.05 MMCF/Hr.	56 MMBTU/Hr.
No. 5 Fuel Oil**	9.2 Barrels/Hr.	10.2 Barrels/Hr.	62 MMBTU/Hr.

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

*Primary Fuel

**Alternate Fuel Only

Fuel Analysis:

Percent Sulfur: 2.08

Percent Ash: .033

Density: 7.56 lbs/gal

Typical Percent Nitrogen: N/A

Heat Capacity: 19,015 BTU/lb

143,810 BTU/gal

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

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N/A Maximum N/A

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

All particulates and fluorides removed by the emissions control system are transported to a closed circuit, recycled process waste system. A portion of the fluorides are recovered from the water system and used in another manufacturing process.

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

Stack Height: 152 ft. Stack Diameter: 5.79 ft.

Gas Flow Rate: 78,000** ACFM Gas Exit Temperature: 92 °F.

Water Vapor Content: 6.0 % Velocity: 50 FPS

*This emission stack is shared by this unit, fluid bed reactors #1 and #1.

**Contribution of Paragon kiln No. 2 to total stack gas flow rate = 26,000 ACFM.

SECTION IV: INCINERATOR INFORMATION

Not Applicable

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

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

Brief description of operating characteristics of control devices: _____

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation. See Attachment A
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made. See Attachments B-1 and B-2
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test). See Attachments B-1 and B-2
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.). See Attachment C
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency). See Attachments D-1 and D-2
6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained. See Attachment E
7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map). See Attachment F
8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram. See Attachment F

9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation. Attached
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit. Not Applicable

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

Not Applicable

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration

- B. Has EPA declared the best available control technology for this class of sources (if yes, attach copy) Yes No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

- | | |
|---------------------------|----------------------|
| 1. Control Device/System: | 4. Capital Costs: |
| 2. Operating Principles: | 6. Operating Costs: |
| 3. Efficiency:* | 8. Maintenance Cost: |
| 5. Useful Life: | |
| 7. Energy: | |
| 9. Emissions: | |

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

- | | | | |
|---------------|------|-----------------|-----|
| a. Height: | ft. | b. Diameter: | ft. |
| c. Flow Rate: | ACFM | d. Temperature: | °F |
| e. Velocity: | FPS | | |

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

1.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy*:
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy**:
- h. Maintenance Costs:
- i. Availability of construction materials and process chemicals:

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power — KWH design rate.

3.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:

*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space and operate within proposed levels:
- 4.
- a. Control Device
 - b. Operating Principles:
 - c. Efficiency*:
 - d. Capital Cost:
 - e. Life:
 - f. Operating Cost:
 - g. Energy:
 - h. Maintenance Cost:
 - i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency*:
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

a.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:
- (5) Environmental Manager:
- (6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

(8) Process Rate*:

b.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

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

D.E.R.

JUN 15 1982

SOUTHWEST DISTRICT.
TAMPA

ATTACHMENT A

Total Process Input Rate

16,000 Lbs./Hour Prepared Feed

Product Weight

16,000 Lbs./Hour Total Process Input Rate -

13 Lbs./Hour Particulate Loss to Atmosphere -

1,156 Lbs./Hour Particulate Removed by the Scrubber System -

1,031 Lbs./Hour Moisture Loss to the Kiln =

13,800 Lbs./Hour Product Weight

ATTACHMENT B-1

Particulate Emissions Estimate (Actual)

Estimated Scrubber System Loading = 3.73 Grains/Ft³
100% - 98.38% (Scrubber System Efficiency) = 1.625% Discharge
3.73 Grains/Ft³ X 25,000 SCFM Airflow =
93,333 Grains/Min. X 60 Min./Hour =
5,600,000 Grains/Hour ÷ 7,000 Grains/Lbs. =
800 Lbs./Hour Loading X 1.625% =
13 Lbs./Hour Emissions
13 Lbs./Hour Emissions X 7,896 Hours Annual Operating Time =
102,648 Lbs./Year Emissions ÷ 2,000 Lbs./Ton =
51.3 Tons/Year Emissions

Potential Emissions

800 Lbs./Hour Scrubber System Loading
800 Lbs./Hour X 7,896 Hours Annual Operating Time
6,316,800 Lbs./Year ÷ 2,000 Lbs./Ton =
3,158 Tons Per Year Potential Emission

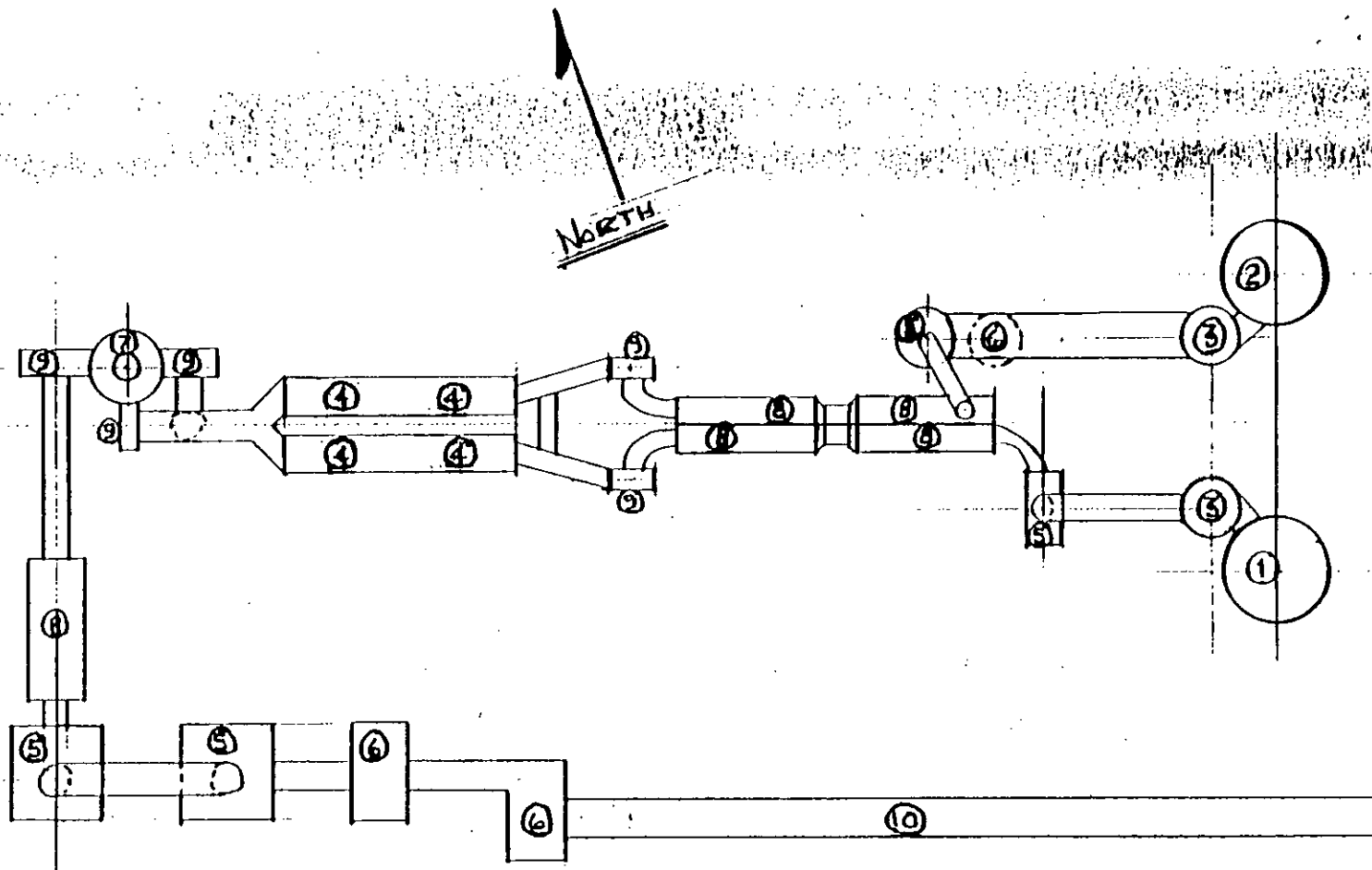
Attachment B-2

Fluoride Emissions Estimate

Estimated Scrubber System Loading: 516 lbs/hour
100% - 99.88% (scrubber system efficiency) = 0.115%
516 lbs/hour loading x 0.115% =
0.595 lbs/hour emissions
0.595 lbs/hour x 7,896 hours annual operating time =
4,700 lbs/year emissions ÷ 2,000 lbs/ton =
2.35 tons per year emissions

Potential Emissions

516 lbs/hour scrubber system loading
516 lbs/hour x 7,896 hours annual operating time =
4,074,336 lbs/year ÷ 2,000 lbs/ton =
2,037 tons per year potential emissions



AMAX PHOSPHATE INC.
GENERAL ARRANGEMENT - REACTOR/PARAGON AREA
5-8-82 RWT

LEGEND

- ① #1 FLUID BED REACTOR
- ② #2 FLUID BED REACTOR
- ③ DUST CYCLONE
- ④ WET ELECTROSTATIC PRECIPITATOR
- ⑤ SPRAY TOWER
- ⑥ DUST CHAMBER
- ⑦ STACK
- ⑧ HORIZONTAL SCRUBBER
- ⑨ FAN
- ⑩ #2 PARAGON KILN

ATTACHMENT D-1

Particulate Efficiency

Maximum

8.0 TPH Maximum Production Rate X 5% Product Loss as Particulate =

0.40 TPH Particulate X 2,000 Lbs./Ton =

800 Lbs./Hour Inlet Loading to the Scrubber System

13 Lbs./Hour Stack Emissions (maximum ÷ 800 Lbs./Hour Inlet
Loading = $0.01625 \times 100 = 1.625\%$

$100\% - 1.625\% = 98.38\%$ System Efficiency

ATTACHMENT D-2

Fluoride Loading to Scrubber

8.00 TPH Maximum Input Rate x 3.38% Fluoride by Weight in Raw Materials =

0.2704 TPH of 100% Fluoride Input

0.2704 TPH F₂ Input x 2,000 Lbs./Hour = 540.8 Lbs./Hour of 100% Fluoride Input

6.90 TPH Product x 0.18% Fluoride by Weight in the Product =

0.0124 TPH of 100% Fluoride Out In Product

0.0124 TPH Fluoride Out as Product x 2,000 Lbs./Ton =

24.8 Lbs./Hour Fluoride Out as Product

540.8 Lbs./Hour Total Fluoride Input - 24.8 Lbs./Hour Fluoride as Product =

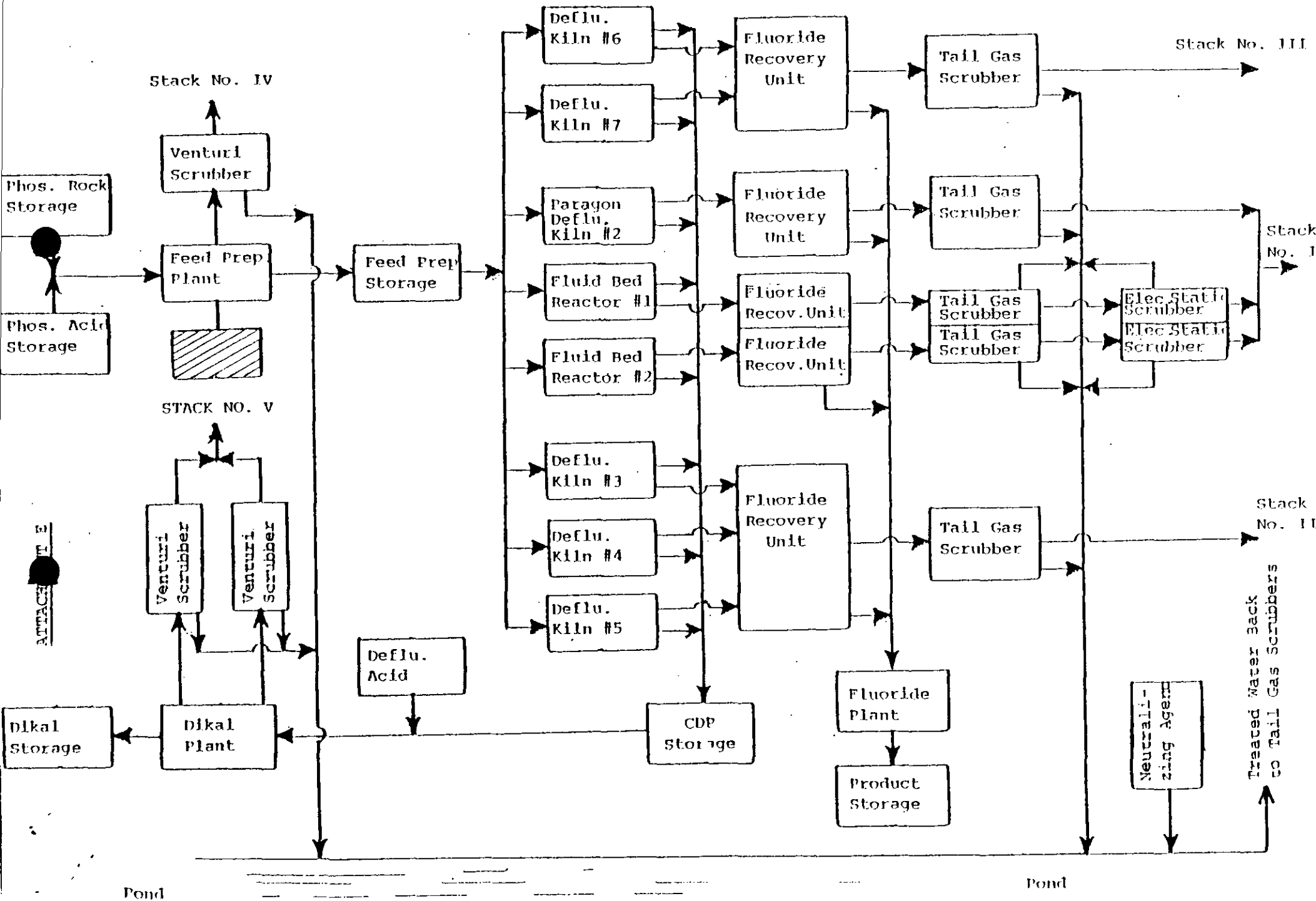
516 Lbs./Hour Fluoride Loading Inlet to the Scrubber System

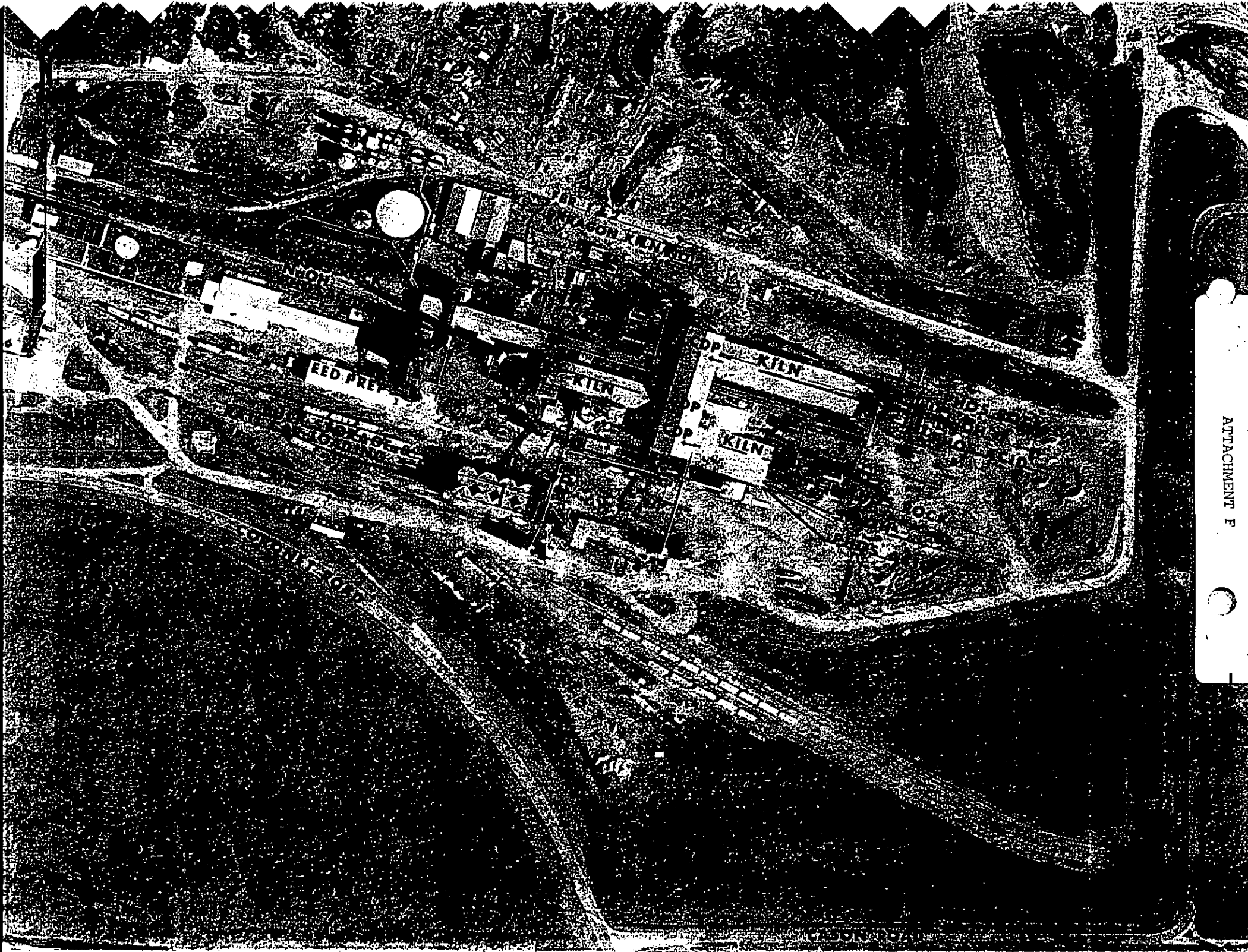
Estimated Efficiency

.595 Lbs./Hour Maximum Emissions ÷ 516 Lbs./Hour Scrubber Inlet Loading = 0.12% 100% - 0.12% = 99.88% Efficiency

AMAX PLANT CITY OPERATION

FLOW DIAGRAM





ATTACHMENT F



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

RECEIVED
AMAX Phosphate

March 26, 1982

MAR 29 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

D.E.R.

JUN 13 1962

SOUTHWEST DISTRICT
TAMPA.

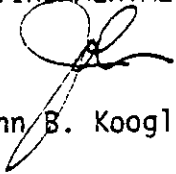
measures and the preparation of the report summarizing all fugitive emission estimates. I realize this cost is somewhat higher than I related to you by telephone recently but it more accurately reflects the effort that will be required.

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 & KOGLER
ENVIRONMENTAL CONSULTANTS



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

JBK:ls

B. 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/ft³
Permitted emission rate from bag collector 2.15 lb/hr

80,812 tpy

Uncontrolled fugitive emissions:

$$P_U = 86,750 \text{ tons/yr} \times 1/125 \text{ hr/ton} \times 60 \text{ min/hr} \\ \times 12,500 \text{ ft}^3/\text{min} \times 3.67 \text{ gr/ft}^3 \times 1/7,000 \text{ lb/gr} \\ \times 1/2,000 \text{ tons/hr} \\ = 136.4 \text{ TPY}$$

Particulate matter emitted from bag collector of modified system:

$$P_{S_m} = 86,750 \text{ tons/yr} \times 1/125 \text{ hr/ton} \times 2.15 \text{ lb/hr} \times 1/2,000 \text{ tons/lb} \\ = 0.7 \text{ TPY}$$

Particulate matter captured by original system assuming 10 percent efficiency:

$$P_{C_x} = 136.4 \times 0.10 \\ = 13.6 \text{ TPY}$$

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

$$P_{S_x} = 86,750 \text{ tons/yr} \times 1/125 \text{ hr/ton} \times 60 \text{ min/hr} \times 8,600 \text{ ft}^3/\text{min} \\ \times 0.02 \text{ gr/ft}^3 \times 1/7,000 \text{ lb/gr} \times 1/2,000 \text{ tons/lb} \\ = 0.5 \text{ TPY}$$

Particulate matter emitted from original system:

$$P_x = 136.4 \text{ tpy generated} \\ - 13.6 \text{ tpy captured} \\ + 0.5 \text{ tpy emitted from bag collector} \\ = 123.3 \text{ tpy emitted to the atmosphere.}$$

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

$$P_r = 123.3 - 0.7 \\ = 122.6 \text{ TPY}$$

← stack only after baghouse

assume 100% efficiency

D.E.R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

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:

$$P_u = 86,750 \text{ tons/year} \times 1.0 \text{ lb/ton} \times 1 \text{ transfer} \times 1/2,000 \text{ ton/lb} \\ = 43.4 \text{ TPY}$$

Controlled emission rate at 50 percent control:

$$P_p = 43.4 \times 0.5 \\ = 21.7 \text{ TPY}$$

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

$$P_r = 43.4 - 21.7 \\ = 21.7 \text{ TPY}$$

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.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Dan Williams
District Air Engineer, Tampa

THROUGH: Steve Smallwood
Chief, Air Quality Management

FROM: ^{BT} Bill Thomas, Bureau Air Quality Management
Martha Harrell Hall, Assistant General Counsel ^{TAMPA} *MHH*

DATE: April 21, 1982

SUBJECT: Amax Phosphate, Inc.

D.E.R.

APR 26 1982

SOUTHWEST DISTRICT

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.

Amax.
April 12, 1982
Page 3

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



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

RECEIVED
AMAX Phosphate

SKEC 144-81-06

February 3- 1982 **FEB** 4 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

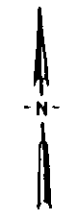
TABLE 2

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

<u>Year</u>	<u>Particulate Matter Impacts (ug/m³)</u>	
	<u>Annual</u>	<u>24-Hour</u>
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



Class I Area

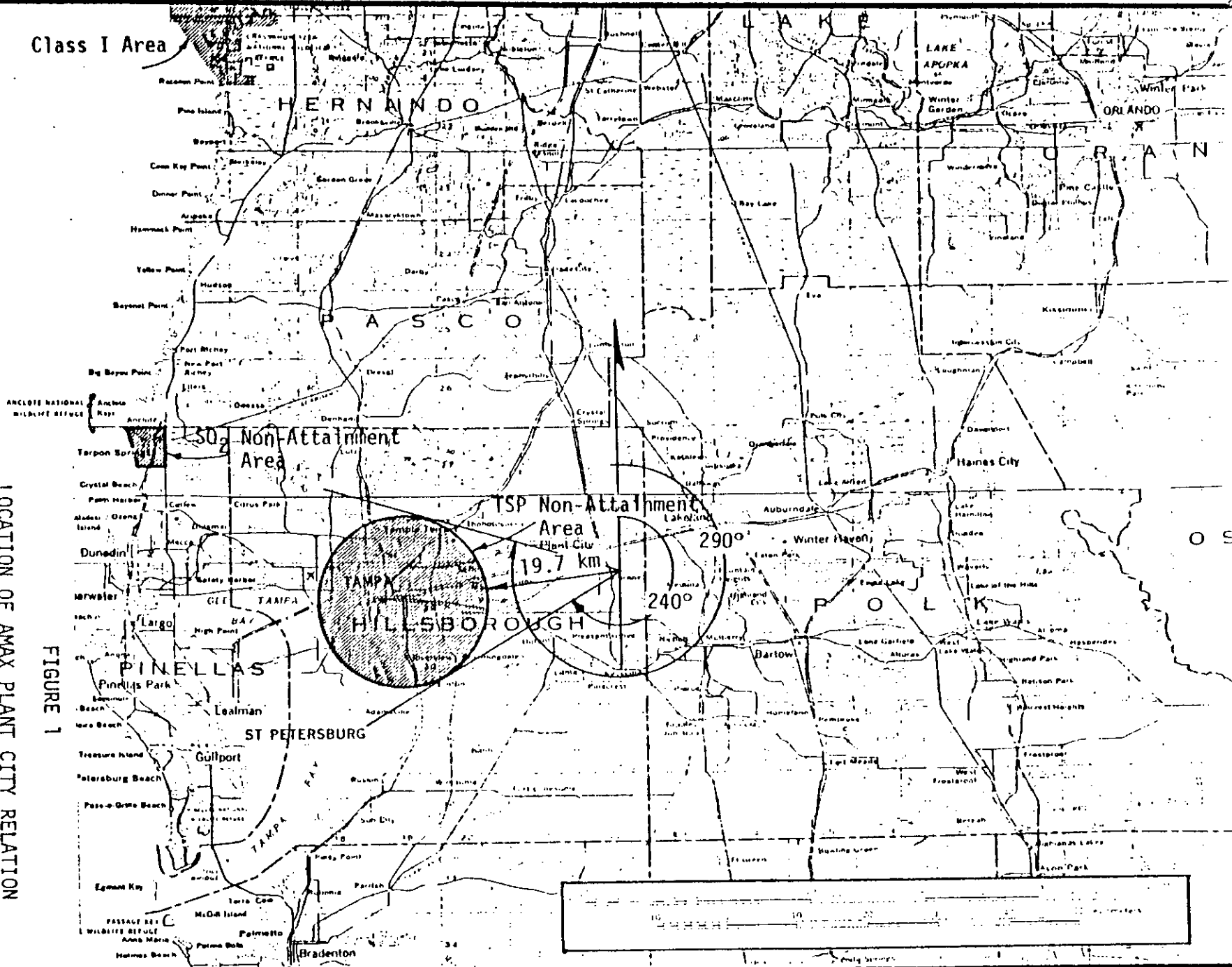


FIGURE 1

LOCATION OF AMAX PLANT CITY RELATION
TO HILLSBOROUGH COUNTY PARTICULATE MATTER
NON-ATTAINMENT AREA
AMAX PHOSPHATES, INC.
PLANT CITY, FLORIDA



```

AAAAAAAAAAAA III      III  AAAAAAAAAAAAA  AAAAAAAAAAAAA  77777777777  00000000
AAAAAAAAAAAAA III      III  AAAAAAAAAAAAAA  AAAAAAAAAAAAAA  77777777777  000000000
AA  III      III  AA  AA  AA  AA  AA  AA  AA  AA  77  00  00  00  00
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AA  III      III  AA  AA  AA  AA  AA  AA  AA  AA  77  0000000000  00
AA  III      III  AA  AA  AA  AA  AA  AA  AA  AA  77  00000000  00000000

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JJJJJJJJJJ      4444      333333333333      999999999999      555555555555      AAAAAAAAAAAAA
JJ      44 44      33      99      55      AA      AA
JJ      44 44      33      99      55      AA      AA
JJ      44 44      33      99      55      AA      AA
JJ      4444444444      3333      999999999999      5555555555      AAAAAAAAAAAAA
JJ      444444444444      3333      999999999999      5555555555      AAAAAAAAAAAAA
JJ      44      33      99      55      55      AA      AA
JJ      44      33      99      55      55      AA      AA
JJ      44      33      99      55      55      AA      AA
JJJJJJJJ      44      333333333333      999999999999      555555555555      AA      AA
JJJJJJ      44      33JJJJJJJJJJ      9999999999      555555555555

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A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001045,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001046,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001045,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	90001046,002	10.37.05	PM	01	FEB	92	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001046,002	10.37.05	PM	01	FEB	92	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001045,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001045,002	10.37.05	PM	01	FEB	92	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001046,002	10.37.05	PM	01	FEB	92	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001045,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001045,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001046,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001045,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001046,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	4395	ANAA70	0001	0001	NER	AMAX-PLANT	CITY	80001045,002	10.37.05	PM	01	FEB	82	PRINTER1	SYS	VER1	START	A

PLANT NAME: WPA - PLANT CITY POLLUTANT: PART EMISSION UNITS: GPM/SEC AIR QUALITY UNITS: GMZM**7
 IMPACT: MILLION PER DAY ATTACHMENT AREA
 TAPPA NET DATA

NET FILE REQUESTED
 STN NO. YR STN NO. YR
 SURFACE 12342 70 12342 70
 UPPER AIR 12342 70 12342 70
 PLANT LOCATION: RURAL
 OUTPUT TAPE TO BE WRITTEN
 NET DATA WILL NOT BE PRINTED

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

* * * * * 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

WIND DISTANCES (M) = 10.00 25.00 40.00 55.00 70.00

STACK # 1--FEED PREP 100
 STACK # 2--FEED PREP 100A, GAS, HF, DCA, TRUCK LDG
 STACK # 3--LIME BIN, COP BIN, DIKAL, HOBT BIN, BLK LDG
 STACK # 4--HILL ROOM 1 & 2
 STACK # 5--CRATEWAY
 STACK # 6--REACTOR PARALON & KILNS 3,4,5,6
 STACK # 7--KILNS 6 & 7
 STACK # 8--FEED PREP
 STACK # 9--DIKAL

STACK	MONTH	EMISSION RATE (GAS/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	0.4100	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	0.94	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	1.8200	60.96	1.77	17.56	316.30	43.21
8	ALL	2.3200	30.49	1.37	11.50	339.50	16.95
9	ALL	1.6800	24.39	1.68	8.56	318.50	18.98

D.E.R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

PLANT NAME: 4446 - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M**3

MAXIMUM READING: 4.934 E-07 DIRECTION: 27 DISTANCE: 19.7 KM

DATE: 70

CIT	RANGE	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR				
		19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	5.53527E-03	4.16714E-03	3.15139E-03	2.79164E-03	2.38225E-03	
2	1.30043E-03	3.13272E-03	2.37790E-03	2.09897E-03	1.78440E-03	
3	1.24853E-03	3.10625E-03	2.41101E-03	2.13862E-03	1.82720E-03	
4	3.36633E-03	2.47911E-03	1.56691E-03	1.64462E-03	1.39312E-03	
5	2.97696E-03	2.21709E-03	1.56310E-03	1.46729E-03	1.25011E-03	
6	3.11035E-03	2.37761E-03	1.92050E-03	1.62420E-03	1.40073E-03	
7	2.60747E-03	1.92207E-03	1.43121E-03	1.26055E-03	1.06805E-03	
8	2.65703E-03	1.90904E-03	1.38030E-03	1.21529E-03	1.02202E-03	
9	5.95075E-03	5.10317E-03	3.79536E-03	3.34598E-03	2.84080E-03	
10	5.72423E-03	4.25237E-03	3.18987E-03	2.31970E-03	2.40144E-03	
11	5.57563E-03	4.19717E-03	3.15107E-03	2.78335E-03	2.36481E-03	
12	1.29107E-03	3.21252E-03	2.41395E-03	2.13289E-03	1.81784E-03	
13	3.65881E-03	6.56290E-03	4.96205E-03	4.39180E-03	3.74134E-03	
14	3.07954E-03	6.15241E-03	4.59859E-03	4.17845E-03	3.58322E-03	
15	1.06435E-03	8.19971E-03	5.30361E-03	5.61999E-03	4.83310E-03	
16	0.53650E-03	7.32150E-03	5.59871E-03	4.79131E-03	4.26964E-03	
17	7.50150E-03	5.77751E-03	4.33102E-03	3.94621E-03	3.39001E-03	
18	1.25852E-03	9.61067E-03	7.16591E-03	6.55489E-03	5.62578E-03	
19	5.52924E-03	4.16530E-03	3.15114E-03	2.79174E-03	2.38112E-03	
20	3.35963E-03	6.38801E-03	4.70913E-03	4.36645E-03	3.75357E-03	
21	1.52075E-03	1.16605E-03	9.26165E-03	7.92058E-03	5.87522E-03	
22	1.11501E-03	8.61719E-03	6.51067E-03	5.75941E-03	4.91721E-03	
23	2.3222E-03	1.76077E-03	1.34661E-03	1.19810E-03	1.02795E-03	
24	0.37451E-03	2.51271E-03	1.94565E-03	1.73421E-03	1.49151E-03	
25	3.30933E-03	2.51495E-03	1.94381E-03	1.73100E-03	1.48691E-03	
26	3.40842E-03	2.60502E-03	1.99542E-03	1.77553E-03	1.52342E-03	
27	4.93458E-03	3.78907E-03	2.98861E-03	2.56690E-03	2.19905E-03	
28	3.70127E-03	2.79826E-03	2.12273E-03	1.89254E-03	1.60860E-03	
29	2.22193E-03	1.67137E-03	1.26255E-03	1.11774E-03	9.53085E-03	
30	3.95731E-03	2.61077E-03	2.02003E-03	1.79760E-03	1.54272E-03	
31	1.43659E-03	1.97903E-03	9.14252E-03	7.20646E-03	6.14265E-03	
32	1.46623E-03	1.11333E-03	9.56299E-03	7.62559E-03	6.55252E-03	
33	1.42732E-03	1.09291E-03	9.38346E-03	7.48134E-03	5.41092E-03	
34	3.73522E-03	6.62219E-03	5.04129E-03	4.47799E-03	3.83461E-03	
35	3.34041E-03	2.53044E-03	1.72612E-03	1.71148E-03	1.46647E-03	
36	5.06394E-03	4.56113E-03	3.00218E-03	3.12192E-03	2.68612E-03	

EARLY START: 06:00 END: 18:00 DIRECTION: J2 DISTANCE: 19.7 KM DAY: 174

TABLE 25

RAINF	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM	
01						
1	2.2397E-06 (228)	1.7080E-06 (228)	1.2951E-06 (228)	1.1462E-05 (223)	9.7376E-07 (228)	
2	1.7334E-06 (191)	1.3235E-06 (191)	1.0142E-06 (191)	9.0293E-07 (191)	7.7492E-07 (191)	
3	2.1316E-06 (119)	1.7293E-06 (119)	1.3910E-06 (119)	1.2616E-06 (119)	1.1083E-06 (119)	
4	1.7792E-06 (192)	1.3193E-06 (192)	1.0227E-06 (192)	9.0505E-07 (192)	7.7261E-07 (192)	
5	2.2305E-06 (249)	1.7977E-06 (249)	1.4332E-06 (249)	1.3005E-06 (249)	1.1379E-06 (249)	
6	1.9607E-06 (249)	1.6356E-06 (249)	1.3049E-06 (249)	1.1384E-06 (249)	1.0498E-06 (249)	
7	1.1291E-06 (346)	3.6803E-07 (346)	6.5864E-07 (346)	5.0202E-07 (346)	4.9368E-07 (346)	
8	6.3524E-07 (115)	5.2978E-07 (115)	4.0456E-07 (115)	3.5868E-07 (115)	3.0558E-07 (115)	
9	2.1095E-06 (65)	1.6935E-06 (65)	1.3593E-06 (65)	1.2313E-06 (65)	1.0907E-06 (65)	
10	2.4344E-06 (312)	1.9439E-06 (312)	1.5517E-06 (312)	1.4031E-06 (312)	1.2281E-06 (312)	
11	2.2727E-06 (78)	1.7845E-06 (78)	1.3913E-06 (78)	1.2447E-06 (78)	1.0739E-06 (78)	
12	1.1767E-06 (214)	9.5375E-07 (214)	7.6973E-07 (214)	7.0010E-07 (214)	6.1768E-07 (214)	
13	1.4726E-06 (175)	1.1923E-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)	1.4487E-06 (160)	1.2787E-06 (160)	
15	3.0300E-06 (315)	2.4690E-06 (315)	1.9589E-06 (315)	1.7831E-06 (315)	1.5578E-06 (315)	
16	1.5054E-06 (45)	1.2759E-06 (45)	9.5927E-07 (45)	9.6418E-07 (45)	7.5329E-07 (45)	
17	2.9451E-06 (91)	2.4050E-06 (91)	1.9478E-06 (91)	1.7710E-06 (91)	1.5605E-06 (91)	
18	3.0710E-06 (341)	2.4817E-06 (341)	1.9446E-06 (341)	1.7953E-06 (341)	1.5758E-06 (341)	
19	1.4128E-06 (322)	1.1653E-06 (322)	9.5575E-07 (322)	8.7563E-07 (322)	7.7875E-07 (322)	
20	3.6296E-06 (164)	2.9876E-06 (164)	2.3957E-06 (164)	2.0914E-06 (164)	1.9417E-06 (164)	
21	1.7237E-06 (333)	1.3463E-06 (333)	1.1380E-06 (333)	1.0414E-06 (333)	9.2596E-07 (333)	
22	2.2566E-06 (39)	1.7936E-06 (39)	1.4755E-06 (39)	1.2867E-06 (39)	1.1231E-06 (39)	
23	2.9357E-06 (255)	2.3915E-06 (255)	1.9060E-06 (255)	1.7235E-06 (255)	1.5087E-06 (255)	
24	4.8233E-06 (162)	3.8655E-06 (162)	3.0936E-06 (162)	2.8925E-06 (162)	2.4608E-06 (162)	
25	4.7455E-06 (119)	3.8925E-06 (119)	3.1703E-06 (119)	2.8902E-06 (119)	2.5561E-06 (119)	
26	4.2632E-06 (343)	3.5343E-06 (343)	2.8329E-06 (343)	2.6142E-06 (343)	2.3179E-06 (343)	
27	4.0530E-06 (289)	3.2674E-06 (289)	2.6798E-06 (289)	2.4510E-06 (289)	2.1779E-06 (289)	
28	2.6611E-06 (251)	2.0741E-06 (251)	1.6482E-06 (251)	1.4860E-06 (251)	1.2956E-06 (251)	
29	2.3582E-06 (86)	1.8744E-06 (86)	1.5054E-06 (86)	1.3638E-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	1.7592E-06 (231)	1.3773E-06 (231)	1.0753E-06 (231)	9.6416E-07 (231)	8.3505E-07 (231)	
32	5.1143E-06 (174)	5.2237E-06 (174)	4.1015E-06 (174)	3.7451E-06 (174)	3.3202E-06 (174)	
33	3.2597E-06 (363)	2.6597E-06 (363)	2.1657E-06 (363)	1.9743E-06 (363)	1.7481E-06 (363)	
34	2.5090E-06 (211)	1.9574E-06 (211)	1.5498E-06 (211)	1.3942E-06 (211)	1.2144E-06 (211)	
35	1.4195E-06 (169)	1.1455E-06 (169)	9.1969E-07 (169)	8.3235E-07 (169)	7.3016E-07 (169)	
36	2.4823E-06 (189)	1.9974E-06 (189)	1.5926E-06 (189)	1.4291E-06 (189)	1.2487E-06 (189)	

PLANT NAME: MAX - PLANT CITY RECEPTORS: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3
 YEARLY SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR 1.700E-06 PERCENTAGE 27 DISTANCE= 19.7 KM DAY=189
 YEAR= 70

ID#	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR			
	19.7 KM	25.0 KM	31.6 KM	40.0 KM
1	1.3255E-06 (251)	1.0921E-06 (25)	8.7579E-07 (25)	7.9742E-07 (25)
2	3.2997E-07 (29)	7.4395E-07 (29)	5.9327E-07 (29)	5.3653E-07 (29)
3	1.1438E-06 (225)	9.1261E-07 (225)	7.2329E-07 (225)	6.5308E-07 (225)
4	2.0651E-07 (180)	6.9535E-07 (180)	5.1510E-07 (180)	4.5491E-07 (180)
5	3.3559E-07 (219)	6.7649E-07 (219)	4.4091E-07 (219)	3.8351E-07 (219)
6	1.3543E-06 (77)	1.1095E-06 (77)	2.0231E-07 (77)	8.2322E-07 (77)
7	2.2241E-07 (324)	7.0616E-07 (324)	5.3431E-07 (324)	4.7092E-07 (324)
8	6.1157E-07 (46)	4.7083E-07 (46)	3.6748E-07 (46)	3.2297E-07 (46)
9	1.7022E-06 (325)	1.2770E-06 (325)	2.6146E-07 (325)	9.4947E-07 (325)
10	1.4942E-06 (338)	1.2045E-06 (338)	2.7664E-07 (338)	8.8627E-07 (338)
11	1.2060E-06 (97)	1.0236E-06 (97)	8.0495E-07 (97)	7.2721E-07 (97)
12	1.1475E-06 (197)	9.1615E-07 (197)	7.2776E-07 (197)	6.5701E-07 (197)
13	1.4501E-06 (175)	1.1515E-06 (175)	9.1226E-07 (175)	8.3146E-07 (175)
14	1.9198E-06 (112)	1.5674E-06 (112)	1.2746E-06 (112)	1.1505E-06 (112)
15	2.2241E-06 (27)	1.7934E-06 (27)	1.4163E-06 (27)	1.3001E-06 (27)
16	1.3881E-06 (164)	1.1319E-06 (164)	2.1718E-07 (164)	8.3566E-07 (164)
17	2.3427E-06 (138)	1.3999E-06 (138)	1.5281E-06 (138)	1.3849E-06 (138)
18	2.5867E-06 (329)	2.0893E-06 (329)	1.6761E-06 (329)	1.5189E-06 (329)
19	1.3465E-06 (106)	1.0939E-06 (106)	8.8190E-07 (106)	9.0050E-07 (106)
20	1.5599E-06 (31)	1.2141E-06 (31)	2.4980E-07 (31)	8.5237E-07 (31)
21	1.6756E-06 (333)	1.3799E-06 (333)	1.1239E-06 (333)	1.0327E-06 (333)
22	1.5161E-06 (256)	1.1737E-06 (256)	2.0740E-07 (256)	8.1006E-07 (256)
23	2.4672E-06 (304)	1.7133E-06 (304)	1.5096E-06 (304)	1.3468E-06 (304)
24	2.7744E-06 (114)	3.0612E-06 (114)	2.4529E-06 (114)	2.2321E-06 (114)
25	2.1196E-06 (182)	1.7042E-06 (182)	1.3351E-06 (182)	1.2349E-06 (182)
26	3.7934E-06 (115)	2.9449E-06 (115)	2.3242E-06 (115)	2.0902E-06 (115)
27	3.9579E-06 (289)	3.1771E-06 (289)	2.4970E-06 (289)	2.2402E-06 (289)
28	2.6067E-06 (251)	2.0626E-06 (251)	1.5375E-06 (251)	1.4113E-06 (251)
29	2.3139E-06 (153)	1.7925E-06 (153)	1.3655E-06 (153)	1.2132E-06 (153)
30	3.1131E-06 (355)	2.5272E-06 (355)	2.0402E-06 (355)	1.8546E-06 (355)
31	1.3577E-06 (135)	1.0492E-06 (135)	8.3321E-07 (135)	7.5430E-07 (135)
32	2.6541E-06 (154)	2.1296E-06 (154)	1.6947E-06 (154)	1.5355E-06 (154)
33	2.5963E-06 (238)	2.0922E-06 (238)	1.6119E-06 (238)	1.5270E-06 (238)
34	2.0684E-06 (26)	1.6799E-06 (26)	1.3537E-06 (26)	1.2280E-06 (26)
35	1.0452E-06 (238)	8.2606E-07 (238)	6.5192E-07 (238)	5.9751E-07 (238)
36	1.7002E-06 (155)	1.3341E-06 (155)	1.0489E-06 (155)	9.4390E-07 (155)
37				7.0297E-07 (25)
38				4.6967E-07 (29)
39				5.7095E-07 (225)
40				3.8504E-07 (180)
41				3.1934E-07 (219)
42				7.2911E-07 (77)
43				3.9784E-07 (324)
44				2.7746E-07 (46)
45				7.2192E-07 (325)
46				7.8183E-07 (338)
47				6.3194E-07 (97)
48				5.7386E-07 (197)
49				7.3551E-07 (175)
50				1.0243E-06 (112)
51				1.1397E-06 (27)
52				7.3895E-07 (164)
53				1.2152E-06 (138)
54				1.3333E-06 (329)
55				7.0389E-07 (106)
56				7.3918E-07 (31)
57				9.1698E-07 (333)
58				6.9759E-07 (256)
59				1.1676E-06 (171)
60				1.2594E-06 (114)
61				1.0925E-06 (182)
62				1.8157E-06 (115)
63				1.9477E-06 (241)
64				1.2072E-06 (102)
65				1.0387E-06 (153)
66				1.6348E-06 (355)
67				6.6151E-07 (172)
68				1.3433E-06 (154)
69				1.3448E-06 (238)
70				1.0792E-06 (26)
71				5.1212E-07 (238)
72				8.2192E-07 (155)

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART
 IMPACT 2 HILLSBOROUGH CO. NON-ATTAINMENT AREA
 TAMPA MET DATA

EMISSION UNITS: GM/SEC

AIR QUALITY UNIT: GM/M³

NET FILE REQUESTED
 STN NO. YR STN NO. YR
 SURFACE 12842 71 12842 71
 UPPER AIR 12842 71 12842 71
 PLANT LOCATION: RURAL
 OUTPUT TAPE TO BE WRITTEN
 NET DATA WILL NOT BE PRINTED

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

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)= 17.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NCS
 STACK # 2--FEED PREP SODA, BAG HSE EGW, TRUCK LDG
 STACK # 3--LINE BIN, COP BIN, DIKAL, BOOT BIN, DLK LDG
 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	63.96	1.77	17.56	316.30	43.21
8	ALL	2.5200	37.48	1.37	11.50	333.50	16.95
9	ALL	1.6800	21.38	1.68	8.56	313.50	18.98

PLANT NAME: ANAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/4**3

MAXIMUM MEAN CONC: 4.2770E-07 DIRECTION= 27 DISTANCE= 19.7 KM

YEAR= 71

DIR	RANGE	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR				
		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	1.73354E-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	1.53704E-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	2.78828E-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-08	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	4.08388E-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	5.75887E-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	1.43910E-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	1.61762E-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	2.07819E-07	1.59421E-07	1.41980E-07	1.21962E-07	
30	3.70031E-07	2.83579E-07	2.17680E-07	1.93920E-07	1.66525E-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	3.66309E-08	7.39421E-08	5.67307E-08	5.05468E-08	4.34511E-08	

PLANT NAME: ANAX - 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

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR				
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 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)	9.3166E-07 (22)	7.3594E-07 (22)
3	5.8423E-07 (30)	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-05 (72)	2.2706E-06 (72)	1.9981E-06 (72)	1.7369E-06 (72)
6	1.7313E-06 (219)	1.3715E-06 (219)	1.0965E-06 (219)	9.8120E-07 (219)	8.5923E-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)	8.3550E-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)	1.3499E-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)	7.9728E-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 (189)	1.8514E-06 (189)	1.4957E-06 (189)	1.3457E-06 (189)	1.1802E-06 (189)
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	4.3979E-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)	1.2332E-06 (340)	1.1227E-05 (340)	9.9189E-07 (340)
32	2.2087E-06 (201)	1.6995E-06 (201)	1.3504E-06 (201)	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)

D.E.R.

JUN 15 1962

SOUTHWEST DISTRICT
TAMPA

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M³

YEARLY SECOND MAXIMUM 24-HOUR CONC= 3.4303E-06 DIRECTION= 18 DISTANCE= 19.7 KM DAY=151

YEAR= 71

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	13.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	1.0973E-06 (94)	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)	5.3430E-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)	1.2021E-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	9.6540E-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)	1.0530E-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)	1.3335E-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)	5.6755E-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 (259)	1.3923E-06 (268)	
24	2.7472E-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	2.1865E-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)	1.6985E-06 (234)	1.3376E-06 (201)	1.1659E-06 (201)	1.0025E-06 (201)	
33	2.3498E-06 (252)	1.8804E-06 (252)	1.5094E-06 (252)	1.3712E-06 (252)	1.2094E-06 (252)	
34	1.6650E-06 (332)	1.3050E-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)	1.0669E-06 (116)	9.4657E-07 (116)	

D.E.R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

RING DISTANCES(KM)= 17.70 25.00 31.50 35.00 40.00

STACK # 1--FEED PREP NCS
 STACK # 2--FEED PREP SODA, BAG HSE EDW, TRUCK LDG
 STACK # 3--LIME BIN, COP BIN, DIKAL, BUJT BIN, BLK LDG
 STACK # 4--MILLROOM 1 & 2
 STACK # 5--CRANEWAY
 STACK # 6--REACTOR PARAGON & KILNS 3,4,6,5
 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	0.4100	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: 44AX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/4**3

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

YEAR: 72

DIR	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR					
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1		1.12385E-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	2.93007E-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	2.58303E-08	2.29981E-08	1.97651E-08
6		4.87701E-08	3.71590E-08	2.94979E-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	1.56538E-08	1.46898E-08	1.24857E-08
9		1.09167E-07	8.10127E-08	5.07070E-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		5.15439E-08	3.86077E-08	2.70872E-08	2.57398E-08	2.19415E-08
13		5.71885E-08	5.07021E-08	3.94719E-08	3.41328E-08	2.91932E-08
14		3.04352E-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	4.45126E-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	4.56484E-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	1.36711E-07	1.66153E-07	1.42602E-07
24		4.14844E-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	2.16530E-07	1.93018E-07	1.66023E-07
29		2.55950E-07	1.95272E-07	1.49382E-07	1.32935E-07	1.14095E-07
30		2.93228E-07	2.31753E-07	1.30307E-07	1.61553E-07	1.39871E-07
31		1.50927E-07	1.14489E-07	8.73141E-08	7.76520E-08	6.66283E-08
32		8.41634E-08	6.29370E-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: PARI

EMISSION UNITS: G/SEC

AIR QUALITY UNITS: G/M**3

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

YEAR= 72

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	17.7 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)	2.0944E-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)	9.4544E-07 (219)	7.6103E-07 (219)	6.6245E-07 (219)	
9	2.5583E-06 (334)	1.9546E-06 (334)	1.4981E-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	1.8940E-06 (138)	1.4692E-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)	1.2092E-06 (81)	1.0641E-06 (81)	
19	1.6100E-06 (48)	1.2561E-06 (48)	9.8394E-07 (48)	8.8616E-07 (333)	7.7281E-07 (333)	
19	3.3616E-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 (250)	1.6181E-06 (260)	1.4754E-06 (250)	1.2846E-06 (250)	
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-06 (61)	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)	1.5768E-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

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	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)	1.2093E-06 (10)	9.3888E-07 (195)	9.5503E-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)	8.8009E-07 (4)	7.9523E-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-06 (239)	1.1869E-06 (239)	1.0519E-06 (239)	8.9716E-07 (239)	
7	9.1493E-07 (58)	6.8466E-07 (58)	5.0302E-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-06 (67)	1.4665E-06 (67)	1.3180E-06 (67)	1.1245E-06 (334)	
10	1.8037E-06 (259)	1.4767E-06 (259)	1.2020E-06 (259)	1.0967E-06 (259)	9.7127E-07 (259)	
11	6.8322E-07 (290)	5.1917E-07 (290)	3.9785E-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)	8.5085E-07 (206)	7.5212E-07 (206)	
14	1.5436E-06 (231)	1.2272E-06 (231)	9.5119E-07 (322)	8.4997E-07 (322)	7.3263E-07 (322)	
15	1.9618E-06 (138)	1.5793E-06 (138)	1.2633E-06 (138)	1.1435E-06 (138)	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-06 (87)	9.9393E-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-06 (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)	1.5658E-06 (323)	
24	2.5820E-06 (333)	2.0529E-06 (333)	1.6297E-06 (333)	1.4716E-06 (333)	1.2869E-06 (333)	
25	2.3940E-06 (227)	1.8383E-06 (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-06 (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-06 (224)	1.1762E-06 (224)	
30	3.1671E-06 (355)	2.5344E-06 (355)	2.0150E-06 (355)	1.8188E-06 (355)	1.5881E-06 (355)	
31	1.5414E-06 (238)	1.2146E-06 (238)	9.7685E-07 (317)	8.8703E-07 (317)	7.8109E-07 (317)	
32	1.1431E-06 (162)	9.2973E-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-06 (4)	1.1912E-06 (4)	
34	1.3986E-06 (241)	1.1313E-06 (241)	9.0009E-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-06 (359)	1.1940E-06 (359)	
36	1.3647E-06 (234)	1.0372E-06 (234)	7.8947E-07 (234)	5.9869E-07 (234)	5.9598E-07 (234)	

RING DISTANCES(KM)= 19.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NCS
STACK # 2--FEED PREP SODA, BAG HSE ECW, TRUCK LOG
STACK # 3--LIME BIN, CDP BIN, DIKAL, BOOT BIN, BLK LOG
STACK # 4--MILLROOM 1 & 2
STACK # 5--CRANEWAY
STACK # 6--REACTOR PARAGON & KILNS 3,4,6,5
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	30.48	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/M³

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

YEAR= 73

DIR	RANGE	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR				
		19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	3.77035E-08	2.73215E-08	1.99602E-09	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	1.51417E-08	2.63644E-08	1.99309E-09	1.76719E-08	1.51042E-08	
5	2.42527E-08	1.78129E-08	1.32296E-09	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-09	1.64329E-08	1.38472E-08	
9	5.38368E-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	2.49999E-08	2.19703E-08	1.85495E-08	
16	5.83768E-08	4.37072E-08	3.28036E-08	2.89487E-08	2.45688E-08	
17	8.10234E-08	6.14232E-08	4.56900E-08	4.14381E-08	3.54434E-08	
18	9.88858E-08	7.56621E-08	5.80473E-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	9.40350E-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/4000
 YEARLY MAXIMUM 24-HOUR CONC= 3.0902E-06 DIRECTION= 12 DISTANCE= 19.7 KM DAY=362
 YEAR= 73

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR									
	RANGE	19.7 KM	25.3 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	(7)
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)	7.8948E-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)	9.6233E-07	(307)	7.3875E-07	(307)
6	1.3961E-06	(181)	1.1146E-06	(181)	8.8907E-07	(181)	9.0531E-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	(38)	7.1589E-07	(38)
11	1.8827E-06	(222)	1.4259E-06	(222)	1.0904E-06	(222)	9.5694E-07	(222)	8.1563E-07	(222)
12	5.0902E-06	(362)	3.9906E-06	(362)	3.1104E-06	(362)	2.7523E-06	(362)	2.4003E-06	(362)
13	3.3832E-06	(206)	2.6935E-06	(206)	2.1345E-06	(206)	1.9240E-05	(206)	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)	8.2942E-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	(21)	1.4796E-06	(21)	1.3368E-06	(21)	1.1693E-06	(21)
31	2.9619E-06	(182)	2.4184E-06	(182)	1.9641E-06	(182)	1.7894E-06	(182)	1.5821E-06	(182)
32	1.2695E-06	(152)	1.0320E-06	(152)	8.3556E-07	(152)	7.6103E-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	(228)
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: ANAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M³
 YEARLY SECOND MAXIMUM 24-HOUR CONC= 2.6463E-06 DIRECTION= 24 DISTANCE= 19.7 KM DAY=205
 YEAR= 73

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	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-05 (59)	9.2308E-07 (69)	8.3869E-07 (69)	7.4199E-07 (69)	
5	7.8115E-07 (301)	5.6847E-07 (301)	4.1453E-07 (301)	3.6103E-07 (301)	3.0106E-07 (301)	
6	1.0757E-06 (178)	8.4768E-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)	8.8662E-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)	
19	1.3881E-06 (326)	1.1051E-06 (326)	8.7778E-07 (326)	7.9932E-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 (278)	
21	2.0984E-06 (221)	1.6807E-06 (221)	1.3446E-06 (221)	1.2122E-06 (280)	1.0508E-06 (280)	
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)	1.1731E-06 (239)	1.0807E-06 (239)	9.4846E-07 (239)	
24	2.6463E-06 (205)	2.1063E-06 (205)	1.6680E-06 (205)	1.5040E-06 (205)	1.3117E-06 (205)	
25	2.5885E-06 (237)	1.9967E-06 (205)	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)	

D.E.R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNIT.: GM/4443
 142ACT @ HILSBROUGH CO. NON-ATTAINMENT AREA
 TAMPA MET DATA

NET FILE REQUESTED
 STN NO. YR 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

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

* * * * * 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 NCS
STACK # 2--FEED PREP SOJA, BAG HSE E&W, TRUCK LDG
STACK # 3--LINE BIN, CDP BIN, DIKAL, BUJT BIN, BLK LDG
STACK # 4--MILLROOM 1 & 2
STACK # 5--CRANEWAY
STACK # 6--REACTOR PARAGON & KILNS 3,4,6,5
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	16.10	0.46	15.20	317.00	2.53
4	ALL	1.1100	11.30	0.54	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	315.30	43.21
8	ALL	2.5200	30.48	1.37	11.50	338.50	16.95
9	ALL	1.6800	24.38	1.68	8.56	319.50	18.98

PLANT NAME: ANAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

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

YEAR= 74

D14	RANGE	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR				
		19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	5.87382E-08	4.34353E-08	3.21527E-09	2.82041E-08	2.37421E-09	
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-09	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	2.31966E-08	
9	1.59320E-07	1.20711E-07	9.15303E-09	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-09	3.58930E-08	3.06003E-08	
13	9.34229E-08	6.50028E-08	5.05735E-09	4.52645E-08	3.91160E-08	
14	9.48955E-08	7.36918E-08	5.70944E-09	5.09967E-08	4.39401E-08	
15	7.49400E-08	5.71764E-08	4.35745E-08	3.86607E-08	3.30238E-08	
16	7.46624E-09	5.71082E-08	4.36424E-08	3.87688E-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	7.21680E-08	6.41703E-08	5.49828E-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	3.44554E-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	3.20929E-07	2.54622E-07	2.27330E-07	1.95766E-07	
28	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	9.37490E-08	
32	1.61971E-07	1.22814E-07	9.30839E-08	8.24115E-08	7.02067E-08	
33	1.53125E-07	1.16662E-07	8.98307E-08	7.87917E-08	6.72898E-08	
34	9.94339E-08	7.51231E-08	5.57746E-08	5.02164E-08	4.27318E-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: ANAX - 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=350
 YEAR= 74

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR				
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM
1	9.2090E-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 (130)	3.9195E-07 (130)
3	1.6040E-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	3.3300E-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	1.9876E-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-06 (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-06 (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-06 (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	1.4345E-06 (326)	1.1121E-06 (326)	8.8127E-07 (326)	7.9383E-07 (326)	6.9207E-07 (326)
18	1.4990E-06 (182)	1.2255E-06 (182)	9.9180E-07 (182)	9.0069E-07 (182)	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-06 (54)	1.0606E-06 (54)
21	1.6204E-06 (172)	1.3456E-06 (172)	1.1058E-06 (172)	1.0119E-06 (172)	8.9955E-07 (172)
22	2.0470E-06 (240)	1.6845E-06 (240)	1.4010E-06 (215)	1.2943E-06 (215)	1.1645E-06 (215)
23	2.2205E-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 (182)	1.4940E-06 (182)
25	3.6410E-06 (64)	3.0177E-06 (64)	2.4833E-06 (64)	2.2739E-06 (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-06 (358)	3.1311E-06 (358)
28	2.5130E-06 (227)	2.0376E-06 (227)	1.6407E-06 (227)	1.4875E-06 (227)	1.3064E-06 (227)
29	2.0040E-06 (248)	1.6144E-06 (224)	1.3045E-06 (224)	1.1847E-06 (224)	1.0424E-06 (224)
30	2.3931E-06 (105)	1.9459E-06 (105)	1.6017E-06 (105)	1.4670E-06 (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-06 (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-06 (168)	9.4926E-07 (168)
34	1.5407E-06 (216)	1.1590E-06 (216)	8.7262E-07 (216)	7.7041E-07 (216)	6.5518E-07 (133)
35	1.1697E-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-06 (352)	8.8838E-07 (352)

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: G4/SEC AIR QUALITY UNITS: G4/M**3
 YEARLY SECOND MAXIMUM 24-HOUR CONC= 2.9900E-06 DIRECTION= 27 DISTANCE= 19.7 KM DAY=J48
 YEAR= 74

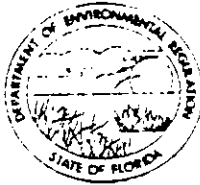
DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR									
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM				
1	7.9333E-07	(106)	6.3242E-07	(105)	5.0225E-07	(106)	4.5348E-07	(106)	3.9315E-07	(353)
2	7.7955E-07	(130)	6.0163E-07	(85)	4.4675E-07	(85)	4.0344E-07	(14)	3.5398E-07	(14)
3	1.3117E-06	(130)	1.0720E-06	(130)	8.6935E-07	(130)	7.9052E-07	(130)	6.9673E-07	(130)
4	6.8425E-07	(172)	5.3980E-07	(200)	4.2518E-07	(162)	3.8053E-07	(152)	3.2868E-07	(162)
5	1.0066E-06	(245)	8.1793E-07	(245)	6.5917E-07	(245)	5.9789E-07	(245)	5.2520E-07	(245)
6	1.5396E-06	(203)	1.2586E-06	(203)	1.0234E-06	(203)	9.1097E-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	(49)	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)	7.0040E-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	(199)	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)	1.1955E-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-06	(301)	1.0267E-06	(301)
24	2.1464E-06	(254)	1.7309E-06	(254)	1.3714E-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-06	(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	(348)	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)	1.5708E-06	(248)	1.2261E-06	(248)	1.0980E-06	(248)	9.4898E-07	(248)
30	2.1954E-06	(248)	1.7875E-06	(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-06	(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)

D.E.R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

AC 9-57074



DER

D.E.R.

JUN 18 1982

JUN 15 1982

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
TAMPA

BAQM

APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

SOURCE TYPE: Point Source Air Pollution [] New¹ [X] Existing¹

APPLICATION TYPE: [X] Construction [] Operation [] Modification

COMPANY NAME: AMAX Phosphate, Inc. COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Fluid Bed Reactor No. 2 (Defluorinating Unit)

SOURCE LOCATION: Street Coronet Road City Plant City

UTM: East 17-393.8 North 3096.3

Latitude 0 "N Longitude 0 "W

APPLICANT NAME AND TITLE: J. J. Lewis, Plant Manager

APPLICANT ADDRESS: P. O. Box 790, Plant City, Florida 33566

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of AMAX Phosphate, Inc.

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

*Attach letter of authorization

Signed: [Signature]

J. J. Lewis, Plant Manager
Name and Title (Please Type)

Date: 6/10/82 Telephone No. (813) 752-1161

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

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]

Anthony R. Lenkei
Name (Please Type)

AMAX Phosphate, Inc.
Company Name (Please Type)

P. O. Box 790, Plant City, FL 33566
Mailing Address (Please Type)

Florida Registration No. 8716 Date: 6, 9, 82. Telephone No. (813) 752-1161

(Affix Seal)

¹See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

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

Fluid Bed Reactor No. 2 defluorinates prepared feed with resulting gas stream vented through a fluoride recovery unit, a tail gas (Tellerett packed cross flow wet scrubber) and finally a two stage ionizing wet scrubber before gases are vented to atmosphere.

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

Start of Construction N/A Completion of Construction N/A

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

Not Applicable: The emissions control system are existing and in operation.

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

Fluid Bed Reactor No. 2 presently operates under FDER Permit No. A0-29-6778, issued May 9, 1978 and expires May 31, 1983, a combined operating permit for Fluid Bed Reactors No. 1 & 2 and Paragon Kiln 2.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24*; days/wk 7*; wks/yr 42*; if power plant, hrs/yr N/A; if seasonal, describe: *Operating time may be variable due to production problems and market demand.

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

- | | |
|---|--------------|
| 1. Is this source in a non-attainment area for a particular pollutant? | <u>No</u> |
| a. If yes, has "offset" been applied? | <u>N/A</u> |
| b. If yes, has "Lowest Achievable Emission Rate" been applied? | <u>N/A</u> |
| c. If yes, list non-attainment pollutants. | |
| <hr/> | |
| 2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. | <u>No</u> |
| 3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. | <u>No **</u> |
| 4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? | <u>No</u> |
| 5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? | <u>No</u> |

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

**See Pages 2A and 2B

FLUID BED REACTORS 1 & 2 AND PARAGON KILN #2

The separation of these three production units into individual operating permits and the requested increase in production rates will raise the permitted particulate emissions level from the present 20.03 lbs./hr. to a new combined emissions level for the three units of 41.07 lbs./hour. This new combined emissions rate can be calculated as follows:

Paragon Kiln #2:	(8 TPH)	0.62	3.59	=	13.03 lbs./hr. Allowable
Fluid Bed Reactor #1:	(9 TPH)	0.62	3.59	=	14.02 lbs./hr. Allowable
Fluid Bed Reactor #2:	(9 TPH)	0.62	3.59	=	14.02 lbs./hr. Allowable
					Total = 41.07 lbs./hr. Allowable

The 41 pounds per hour combined allowable emissions is an increase of 21 pounds per hour over the actual present emissions of approximately 20 lbs./hr. which is based on actual stack test data for the past 24 months. This hourly increase translates into an annual increase of 89.80 tons/year based on the following equations:

Paragon Kiln #2:	13.03 lbs./hr. Allowable	X	7,896 hrs./yr.	=	51.4 TPY
Fluid Bed Reactor #1:	14.02 lbs./hr. Allowable	X	7,056 hrs./yr.	=	49.5 TPY
Fluid Bed Reactor #2:	14.02 lbs./hr. Allowable	X	7,056 hrs./yr.	=	49.5 TPY
					Potential Annual Emissions = 150.4 TPY

Present Annual Emissions	20.00 pounds/hour	X	3,736 hours/year	=	87.36 TPY
					Potential Increase of: 63.04 TPY

Actual Annual Emissions Data for 1981	=	60.60 TPY
Actual Potential Increase of:	=	89.80 TPY

The increase is above significant emissions rate for particulate (25 tons per year) outlined in table 500-2 of part 17-2.500 of the Florida Administrative Code. This would subject this permit modification to the requirements of PSD (Prevention of Significant Deterioration); however, in accordance with Section 17-2.500 (2) (e) 1 of the F.A.C., AMAX is prepared to offer a contemporaneous and creditable emissions reduction. This emissions offset will amount to 100 TPY and meets all of the requirements set forth in Section 17-2.500 (2) (3) 3 and 4.

This emissions offset comes from a program voluntarily initiated by AMAX at the Plant City Facility in late 1980. The program was directed at the reduction of unconfined emissions at this facility. Using the criteria for the quantification of fugitive emissions established by EPA (Environmental Protection Agency) document, Technical Guidance For Control of Industrial Process Fugitive Particulate Emissions (EPA-450/3-77-010, March 1977), the completed environmental improvement projects were credited for their emissions reductions. These completed projects have a particulate reduction value well in excess of the 100 TPY offset offered by AMAX and the details of this unconfined emissions quantification can be found in a report prepared by Dr. John Koogler and marked as Attachment G to each of the three permit applications.

FLUID BED REACTORS 1 & 2 AND PARAGON KILN #2 (Continued)

The requested permit and production rate changes would not trigger a new source review due to the fact that it is not subject to PSD (by the available offsets) and that an increase in production does not constitute a "modification" as defined in Section 17-2.100 (102) (b). This is restated in a legal review by FDER staff concerning an AMAX request to separate the permits on the above referenced production facilities (memo from Steve Smallwood to Dan Williams, dated April 21, 1982 identified as Attachment H).

The production rate increase is not expected to release any additional amounts of ozone or volatile organic carbons to the atmosphere. The animal feed defluorination process is not known to generate any significant amounts of ozone, and volatile organic carbons are released from this process only during start-up periods. Fuel oil (a source of VOC) is used during the ignition and heat-up of the defluorination units; and as soon as the units reach a safe internal operating temperature, the fuel source is changed from fuel oil to natural gas. The increased production rates will have no direct correlation to the start-up frequency of the units and, therefore, should not increase the emission of volatile organic carbons.

The combined fluoride emissions from the fluid bed reactors 1 and 2 and the Paragon kiln at the increased production rates will not exceed the existing allowable fluoride emissions rate found in Operating Permit number A029-6778. The new fluoride emission rate of 9.75 TPY is the best engineering estimation for the combined emissions of the three units at their maximum production rates. The distribution of the fluoride emissions for each operational unit is as follows: The fluid bed reactor #1 at a 9-ton per hour process input rate is 1.04 pounds per hour fluoride or 3.7 tons per year. The fluid bed reactor #2 at 9 tons per hour process input rate is 1.04 pounds per hour fluoride or 3.7 tons per year. The Paragon kiln #2 at a 8-ton per hour process input rate is 0.595 pounds per hour fluoride or 2.35 tons per year. (The combined allowable for the three units based on the existing source emission rate of 0.37 pounds of fluoride per ton of 100% P₂O₅ input is 3.68 pounds per hour or 13.42 tons per year.)

It is AMAX's understanding from recent discussions with the staff of the Southwest District of the Florida Department of Environmental Regulation that the new combined fluoride emissions rate of 9.75 tons per year will not trigger PSD. This is due to the new annual emission rate of 9.75 TPY being less than to the current annual allowable emissions rate of 9.8 tons per year.

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Prepared Feed	Particulate	100%	18,000	See Attachment E
	Fluoride	3.38%		

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

1. Total Process Input Rate (lbs/hr): 18,000

2. Product Weight (lbs/hr): 15,517

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Particulate	14	49	Ch. 17-2.05 (2)	14.0	900	3,175	Attachment E
Fluoride	1.04	3.7	Ch. 17-2.05 (6)	1.04	580	2,046	Attachment E

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, h ⁵)
Ceilmote 2-State	Particulate	*98%+	Not Available	Attachment D-1
Ionizing Wet Scrubber	Fluoride	*99%+	Not Available	Attachment D-2
IWS 300, Tellerett				
Packed Cross Flow Wet Scrubber, Fluoride				
Recovery Unit				

¹ See Section V, Item 2.

² Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. - 0.1 pounds per million BTU heat input)

³ Calculated from operating rate and applicable standard

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

⁵ If Applicable

5. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max/hr	
Natural Gas*	.06 MMCF/Hr.	.07 MMCF/Hr.	72 MMBTU/Hr.
#5 Fuel Oil**	11.8 Barrel/Hr.	13.1 Barrel/Hr.	79 MMBTU/Hr.
#2 Diesel fuel oil***			

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

*Primary Fuel

**Alternate fuel for periods of gas curtailment

***Used for start-up of reactors

Fuel Analysis:

Percent Sulfur: 2.08

Percent Ash: .033

Density: 7.56 lbs/gal

Typical Percent Nitrogen: N/A

Heat Capacity: 19,015 BTU/lb

143,810 BTU/gal

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

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N/A Maximum N/A

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

All particulates and fluorides removed by the emissions control system are transported to a closed circuit, recycled process water system. A portion of the fluorides are removed from the water system and used for another manufacturing process.

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

Stack Height: 152 ft Stack Diameter: 5.79 ft

Gas Flow Rate: 78,000** ACFM Gas Exit Temperature: 92 °F

Water Vapor Content: 6.0 % Velocity: 50 FPS

*This emissions stack is shared by this unit, fluid bed reactor #2, and the Paragon kiln.

** Contribution of fluid bed reactor No. 1 to total stack gas flow rate = 26,000 ACFM.

SECTION IV: INCINERATOR INFORMATION

Not Applicable

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

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

Brief description of operating characteristics of control devices: _____

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation. See Attachment A
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made. See Attachments B-1 and B-2
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test). See Attachments B-1 and B-2
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.). See Attachment C
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency). See Attachments D-1 and D-2
6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained. See Attachment E
7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map). See Attachment F
8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram. See Attachment F

9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation. Attached
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit. Not Applicable

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

Not Applicable

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) Yes No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

- | | |
|---------------------------|----------------------|
| 1. Control Device/System: | 4. Capital Costs: |
| 2. Operating Principles: | 6. Operating Costs: |
| 3. Efficiency: * | 8. Maintenance Cost: |
| 5. Useful Life: | |
| 7. Energy: | |
| 9. Emissions: | |

Contaminant	Rate or Concentration

* Explain method of determining D 3 above.

10. Stack Parameters

- a. Height: ft. b. Diameter: ft.
- c. Flow Rate: ACFM d. Temperature: °F
- e. Velocity: FPS

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

1.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy*:
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy**:
- h. Maintenance Costs:
- i. Availability of construction materials and process chemicals:

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power — KWH design rate.

3.

- a. Control Device:
- b. Operating Principles:

- c. Efficiency*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:

*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space and operate within proposed levels:

4.

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

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency*:
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

a.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:
- (5) Environmental Manager:
- (6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

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

ATTACHMENT A

Total Process Input Rate

18,000 Lbs./Hr. Prepared Feed

Product Weight

18,000 Lbs./Hr. Total Process Input Rate -

14 Lbs./Hr. Particulate Loss to Atmosphere -

1,077 Lbs./Hr. Particulate Removed by the Scrubber System -

1,392 Lbs./Hr. Moisture Loss to the Reactor =

15,517 Lbs./Hr. Product Weight

ATTACHMENT B-1

Particulate Emission Estimate (Actual)

Estimated Scrubber System Loading: 4.2 Grains/Ft³
100% - 98.44% (Scrubber System Efficiency) = 1.56% Discharge
4.2 Grains/Ft³ X 25,000 SCFM Airflow to Scrubber System =
105,000 Grains/Min. X 60 Min./Hour =
6,300,000 Grains/Hour ÷ 7,000 Grains/Lbs. =
900 Lbs./Hour Loading X 1.56%
14.03 Lbs./Hour Emissions
14.03 Lbs./Hour Emissions X 7,056 Hours Annual Operating Time =
98,784 Lbs./Year Emissions ÷ 2,000 Lbs./Ton =
49 Tons/Year Emissions

Potential Emissions

900 Lbs./Hour Scrubber System Loading
900 Lbs./Hour X 7,056 Hours Annual Operating Time =
6,350,400 Lbs./Year ÷ 2,000 Lbs./Ton =
3,175 Tons/Year Potential Emission

D.E.R.

JUN 15 1982
SOUTHWEST DISTRICT
TAMPA

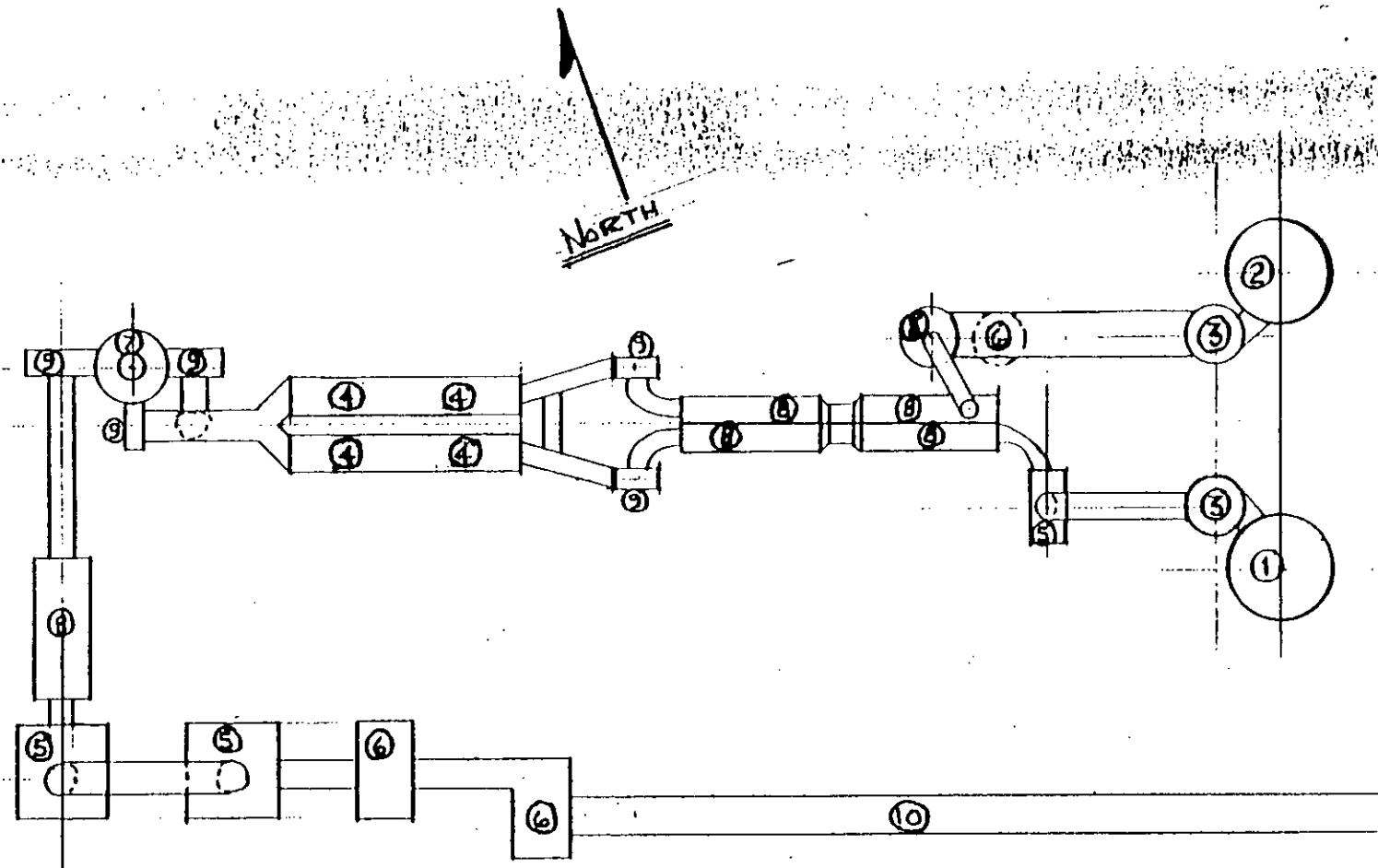
Attachment B-2

Fluoride Emissions Estimate

Estimated Scrubber System Loading: 580 lbs/hour
100% - 99.82% (Scrubber System Efficiency = 0.18%
580 lbs/hour loading x 0.179% = 1.04 lbs/hour emissions
1.04 lbs/hour x 7,056 hours annual operating time
7,400 lbs/year emission ÷ 2,000 lbs/ton
3.7 tons per year emissions

Potential Emissions

580 lbs/hour scrubber system loading
580 lbs/hour x 7,056 hours annual operating time =
4,092,480 lbs/year ÷ 2,000 lbs/ton =
2,046 tons/year potential emissions



AMAX PHOSPHATE INC.
GENERAL ARRANGEMENT - REACTOR/PARAGON AREA
5-8-82 RWT

LEGEND

- ① #1 FLUID BED REACTOR
- ② #2 FLUID BED REACTOR
- ③ DUST CYCLONE
- ④ WET ELECTROSTATIC PRECIPITATOR
- ⑤ SPRAY TOWER
- ⑥ DUST CHAMBER
- ⑦ STACK
- ⑧ HORIZONTAL SCRUBBER
- ⑨ FAN
- ⑩ #2 PARAGON KILN

ATTACHMENT D-1

Particulate Efficiency

Maximum

9.0 TPH Maximum Input Rate X .5% Product Loss as Particulate =

0.045 TPH Particulate X 2,000 Lbs./Ton =

900 Lbs./Hour Inlet Loading to the Scrubber System

14 Lbs./Hour Stack Emissions (Maximum)

14 Lbs./Hour Stack Emissions (Maximum) ÷ 900 Lbs./Hour Inlet =
0.0156 X 100 = 1.56%

100% - 1.56% = 98.44% System Efficiency

ATTACHMENT D-2

Fluoride Loading to Scrubber

9.0 Tons/Hour Maximum Input Rate X 3.38% Fluoride by Weight
in Raw Materials =

0.3042 Tons/Hour of 100% Fluoride Input

0.3042 Tons/Hour F_2 Input X 2,000 Lbs./Hour = 608.4 Lbs./Hour
Fluoride Input

7.76 Tons/Hour Product X 0.18% Fluoride by Weight in Product =

0.01396 Tons/Hour of 100% Fluoride Out In Product

0.01396 Tons/Hour Fluoride Out X 2,000 Lbs./Ton = 27.92 Lbs./Hour

608.4 Lbs./Hour Total Fluoride Input - 27.92 Lbs./Hour =

580.48 Lbs./Hour Fluoride Loading to Scrubber System

Estimated Efficiency

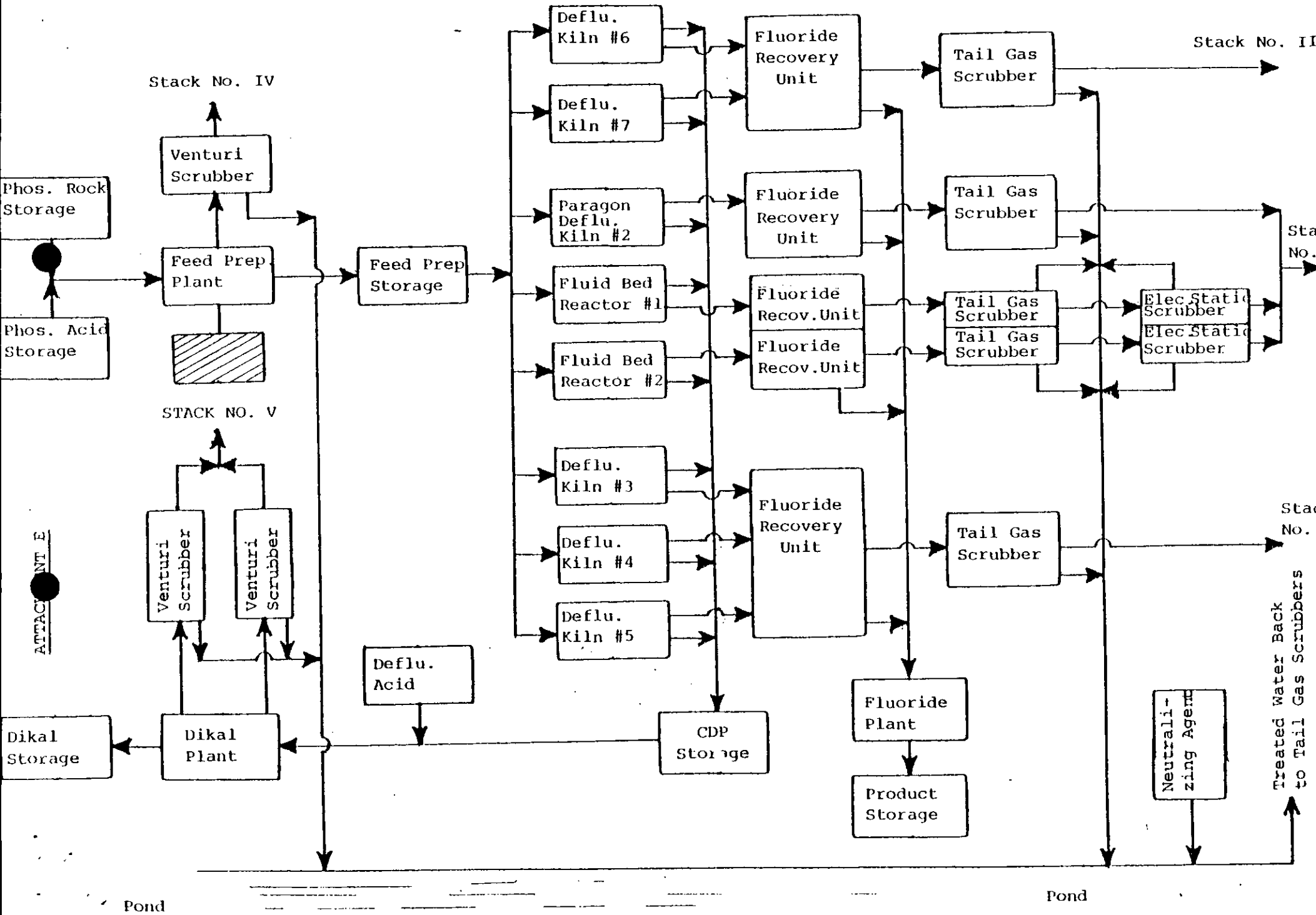
1.04 Lbs./Hour Estimated Emissions ÷ 580 Lbs./Hour Scrubber System Loading =
Stack Discharge = 0.18% 100% - 0.18% = 99.82%

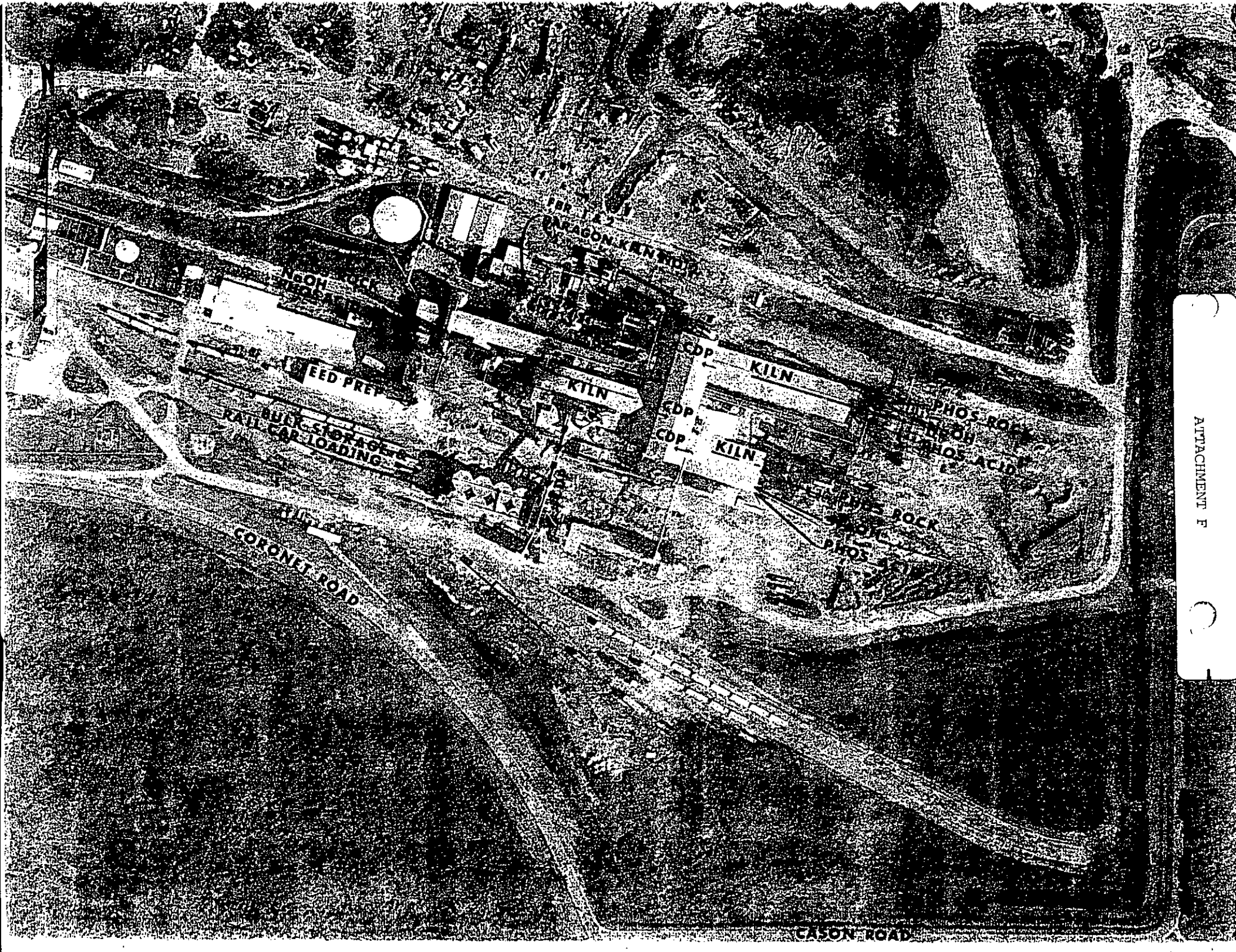
D.E.R.

JUN 15 1962
SOUTHWEST DISTRICT
TAMPA

AMAX PLANT CITY OPERATION

FLOW DIAGRAM





ATTACHMENT F



SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
 1213 N.W. 8th Street Gainesville, Florida 32601 (904) 377-5822

RECEIVED
 AMAX Phosphate

March 25, 1982

MAR 29 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

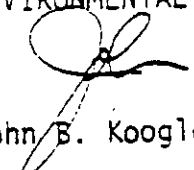
measures and the preparation of the report summarizing all fugitive emission estimates. I realize this cost is somewhat higher than I related to you by telephone recently but it more accurately reflects the effort that will be required.

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

B. 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:

$$\begin{aligned} P_u &= 86,750 \text{ tons/yr} \times 1/125 \text{ hr/ton} \times 60 \text{ min/hr} \\ &\quad \times 12,500 \text{ ft}^3/\text{min} \times 3.67 \text{ gr/ft}^3 \times 1/7,000 \text{ lb/gr} \\ &\quad \times 1/2,000 \text{ tons/hr} \\ &= 136.4 \text{ TPY} \end{aligned}$$

Particulate matter emitted from bag collector of modified system:

$$\begin{aligned} P_{sm} &= 86,750 \text{ tons/yr} \times 1/125 \text{ hr/ton} \times 2.15 \text{ lb/hr} \times 1/2,000 \text{ tons/lb} \\ &= 0.7 \text{ TPY} \end{aligned}$$

Particulate matter captured by original system assuming 10 percent efficiency:

$$\begin{aligned} P_{cx} &= 136.4 \times 0.10 \\ &= 13.6 \text{ TPY} \end{aligned}$$

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

$$\begin{aligned} P_{sx} &= 86,750 \text{ tons/yr} \times 1/125 \text{ hr/ton} \times 60 \text{ min/hr} \times 8,600 \text{ ft}^3/\text{min} \\ &\quad \times 0.02 \text{ gr/ft}^3 \times 1/7,000 \text{ lb/gr} \times 1/2,000 \text{ tons/lb} \\ &= 0.5 \text{ TPY} \end{aligned}$$

Particulate matter emitted from original system:

$$\begin{aligned} P_x &= 136.4 \text{ tpy generated} \\ &\quad - 13.6 \text{ tpy captured} \\ &\quad + \underline{0.5 \text{ tpy emitted from bag collector}} \\ &= 123.3 \text{ tpy emitted to the atmosphere.} \end{aligned}$$

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

$$\begin{aligned} P_r &= 123.3 - 0.7 \\ &= 122.6 \text{ TPY} \end{aligned}$$

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:

$$\begin{aligned} P_U &= 86,750 \text{ tons/year} \times 1.0 \text{ lb/ton} \times 1 \text{ transfer} \times 1/2,000 \text{ ton/lb} \\ &= 43.4 \text{ TPY} \end{aligned}$$

Controlled emission rate at 50 percent control:

$$\begin{aligned} P_D &= 43.4 \times 0.5 \\ &= 21.7 \text{ TPY} \end{aligned}$$

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

$$\begin{aligned} P_r &= 43.4 - 21.7 \\ &= 21.7 \text{ TPY} \end{aligned}$$

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.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee			
To:	<i>Dan Williams</i>	Section:	<i>Tampa</i>
To:		Locn.:	
To:		Locn.:	
From:		Date:	
Reply Optional:	<input type="checkbox"/>	Reply Required:	<input type="checkbox"/>
Date Due:		Date Due:	
		Info. Only <input type="checkbox"/>	

TO: Dan Williams
District Air Engineer, Tampa

THROUGH: Steve Smallwood
Chief, Air Quality Management

FROM: *BT* Bill Thomas, Bureau Air Quality Management
Martha Harrell Hall, Assistant General Counsel *TAMPA MTH*

DATE: April 21, 1982

SUBJECT: Amax Phosphate, Inc.

D.E.R.

APR 26 1982

SOUTHWEST DISTRICT

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

Amax
April 12, 1982
Page 2

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.

Amax
April 12, 1982
Page 3

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



SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 8th Street Gainesville, Florida 32601 (904) 377-5822

RECEIVED
AMAX Phosphate

SKEC 144-81-06

February 3, 1982 FEB 4 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.

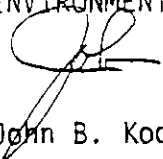
The results of the air quality modeling are summarized in Table 2. These results show that the maximum annual impact of particulate matter emissions from your Plant City facility on the non-attainment area will be 0.6 micrograms per cubic meter. A significant impact for the annual period is defined to 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

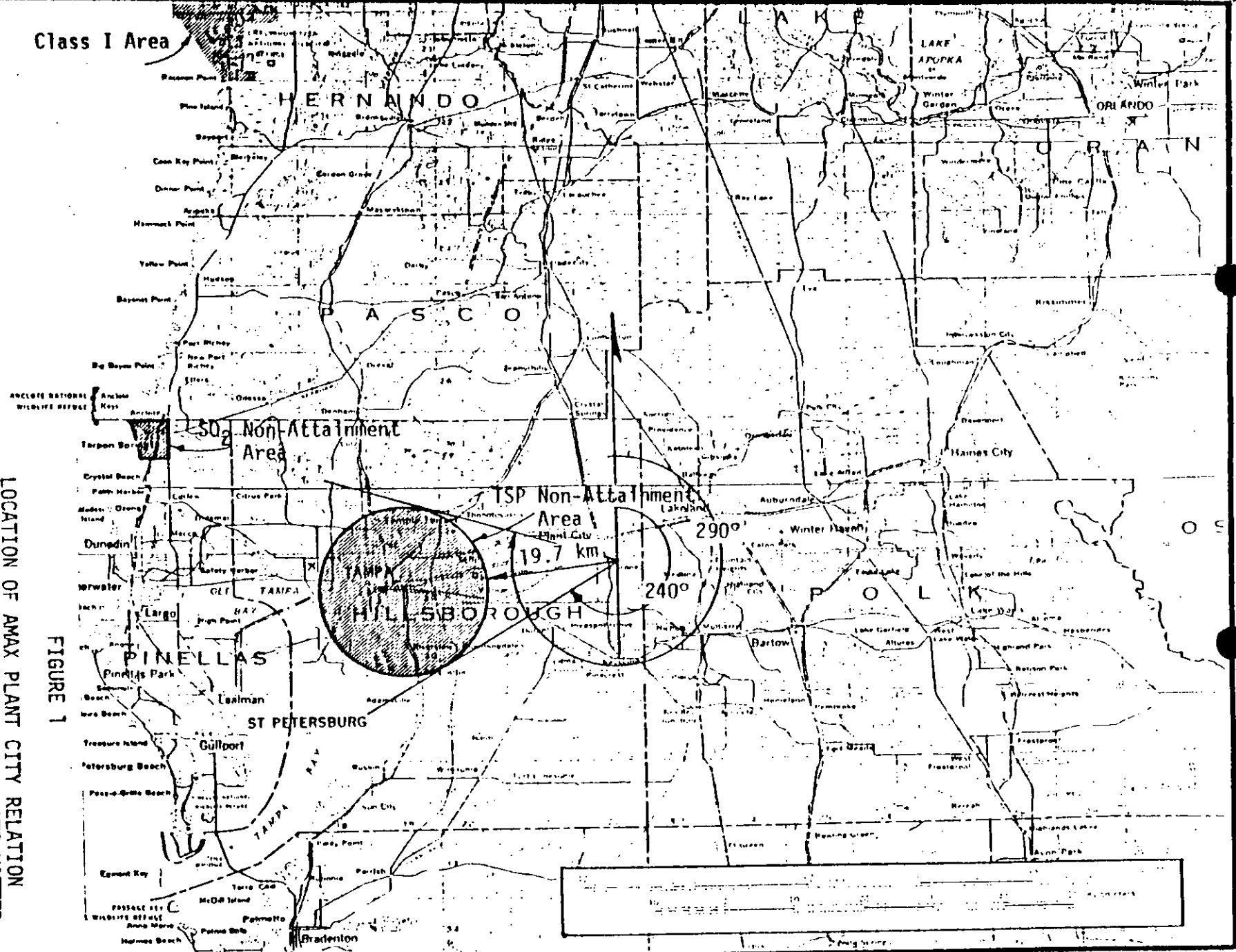
SUMMARY OF IMPACTS OF AMAX -PLANT CITY
PARTICULATE MATTER EMISSIONS* ON THE
HILLSBOROUGH COUNTY PARTICULATE MATTER
NON-ATTAINMENT AREA

<u>Year</u>	<u>Particulate Matter Impacts (ug/m³)</u>	
	<u>Annual</u>	<u>24-Hour</u>
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

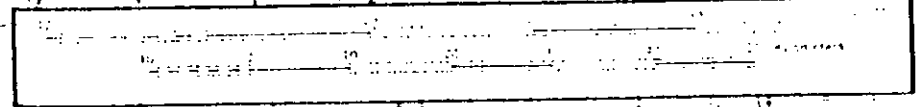
Class I Area



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

AMAX PHOSPHATES, INC.
PLANT CITY, FLORIDA

FIGURE 1



PLUG DISTANCE (M) = 11.30 25.00 31.00 35.00 40.00

STACK # 1--FEED PREP 103
 STACK # 2--FEED PREP 519A, GAS USE 16A, TRUCK LOG
 STACK # 3--LIME BIN, COP JEN, DIKAL, HOOT MEN, BLK LOG
 STACK # 4--HILL ROOM 1 & 2
 STACK # 5--DRANEWAY
 STACK # 6--REACTOR PARAGON & KILNS 6, 4, 5
 STACK # 7--KILNS 6 & 7
 STACK # 8--FEED PREP
 STACK # 9--DIKAL

STACK	MONTH	EMISSION RATE (GAS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M ³ /SEC)
1	ALL	0.1200	27.60	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	2.5700	30.49	1.37	11.50	338.50	16.95
9	ALL	1.6800	24.39	1.68	8.56	318.50	18.98

PLANT NAME: AMAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

WIND DIRECTION: 4.914 E-07 DIRECTION: 17 DISTANCE: 19.7 KM

WIND VELOCITY

DIR	RANGE	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR				
		19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	5.55527E-03	4.16714E-03	3.15133E-03	2.79164E-03	2.38225E-03	
2	1.30034E-03	1.19227E-03	2.17790E-04	2.09997E-03	1.78440E-03	
3	3.24863E-03	3.19625E-03	2.41101E-03	2.13862E-03	1.82720E-03	
4	3.36531E-03	2.49931E-03	1.56691E-03	1.64462E-03	1.39312E-03	
5	2.77696E-03	2.21709E-03	1.56319E-03	1.46929E-03	1.25011E-03	
6	3.11035E-03	2.37761E-03	1.92059E-03	1.62420E-03	1.40073E-03	
7	2.60747E-03	1.92207E-03	1.33124E-03	1.26055E-03	1.06805E-03	
8	2.65703E-03	1.90904E-03	1.38830E-03	1.21529E-03	1.02202E-03	
9	5.95275E-03	5.10517E-03	3.79536E-03	3.34598E-03	2.84987E-03	
10	5.72423E-03	4.25217E-03	3.19997E-03	2.91990E-03	2.40144E-03	
11	3.57563E-03	4.19717E-03	3.15107E-03	2.79335E-03	2.36481E-03	
12	4.22137E-03	3.21235E-03	2.41395E-03	2.13289E-03	1.81384E-03	
13	3.55881E-03	6.55230E-03	4.96205E-03	4.39180E-03	3.74134E-03	
14	3.27353E-03	5.15251E-03	4.59853E-03	4.17845E-03	3.58322E-03	
15	1.35435E-03	0.19971E-03	5.30361E-03	5.61929E-03	4.83310E-03	
16	7.53650E-03	7.32150E-03	5.59871E-03	4.97913E-03	4.26964E-03	
17	7.57150E-03	5.77711E-03	4.13102E-03	3.94621E-03	3.39001E-03	
18	1.25852E-07	9.61267E-04	7.16551E-03	6.55489E-03	5.62570E-03	
19	5.32924E-03	4.16530E-03	3.15114E-03	2.79174E-03	2.38312E-03	
20	3.35960E-03	6.39801E-03	4.70013E-03	4.36645E-03	3.75557E-03	
21	1.52075E-07	1.16605E-07	9.76165E-03	7.99958E-03	5.97529E-03	
22	1.11701E-07	8.63749E-03	6.51067E-03	5.75941E-03	4.91721E-03	
23	2.37222E-07	1.76077E-07	1.34663E-07	1.19910E-07	1.02795E-07	
24	3.37431E-07	2.53271E-07	1.74565E-07	1.71421E-07	1.49151E-07	
25	3.30333E-07	2.51405E-07	1.74391E-07	1.73108E-07	1.49691E-07	
26	3.42842E-07	2.60532E-07	1.79542E-07	1.77558E-07	1.52342E-07	
27	4.23158E-07	3.79997E-07	2.98861E-07	2.56690E-07	2.19905E-07	
28	3.70122E-07	2.79526E-07	2.12273E-07	1.89254E-07	1.60960E-07	
29	2.22193E-07	1.67137E-07	1.26255E-07	1.11774E-07	9.53095E-08	
30	3.43731E-07	2.63977E-07	2.02003E-07	1.79760E-07	1.54272E-07	
31	1.43659E-07	1.07907E-07	8.14252E-08	7.20646E-08	6.14265E-08	
32	1.46623E-07	1.11933E-07	8.56209E-08	7.62559E-08	6.55252E-08	
33	1.42732E-07	1.09291E-07	8.33346E-08	7.48134E-08	6.44092E-08	
34	3.73522E-03	6.62219E-03	5.04123E-03	4.47799E-03	3.83461E-03	
35	3.34341E-03	2.53044E-03	1.92612E-03	1.71148E-03	1.46647E-03	
36	5.26394E-03	4.56113E-03	3.50218E-03	3.12192E-03	2.68612E-03	

PLANT NAME: FAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/KM³
 CLAY MAXIMUM 24-HOUR CONC: 5.11E-06 DIRECTION: 32 DISTANCE: 17.7 KM DAY: 174
 CASE: 75

RANGE	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR				
	17.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
01	2.2397E-06 (228)	1.7280E-06 (228)	1.2251E-06 (228)	1.1462E-06 (228)	9.7376E-07 (228)
2	1.7334E-06 (191)	1.3235E-06 (191)	1.0142E-06 (191)	9.0283E-07 (191)	7.7492E-07 (191)
3	2.1310E-06 (192)	1.7230E-06 (192)	1.3710E-06 (192)	1.2616E-06 (192)	1.1083E-06 (192)
4	1.7790E-06 (192)	1.3193E-06 (192)	1.0227E-06 (192)	9.0503E-07 (192)	7.7261E-07 (192)
5	2.2305E-06 (249)	1.7977E-06 (249)	1.4132E-06 (249)	1.3005E-06 (249)	1.1379E-06 (249)
6	1.9607E-06 (249)	1.6356E-06 (249)	1.3349E-06 (249)	1.1984E-06 (249)	1.0494E-06 (249)
7	1.1291E-06 (316)	8.5603E-07 (316)	6.5964E-07 (316)	5.8202E-07 (316)	4.9368E-07 (316)
8	6.0524E-07 (115)	5.2378E-07 (115)	4.0456E-07 (115)	3.5868E-07 (115)	3.0550E-07 (115)
9	2.1035E-06 (65)	1.6935E-06 (65)	1.3593E-06 (65)	1.2313E-06 (65)	1.0907E-06 (65)
10	2.4144E-06 (312)	1.9439E-06 (312)	1.5517E-06 (312)	1.4071E-06 (312)	1.2281E-06 (312)
11	2.2727E-06 (78)	1.7845E-06 (78)	1.3713E-06 (78)	1.2447E-06 (78)	1.0739E-06 (78)
12	1.1767E-06 (214)	9.5375E-07 (214)	7.6773E-07 (214)	7.0010E-07 (214)	6.1768E-07 (214)
13	1.4726E-06 (175)	1.1823E-06 (175)	9.5794E-07 (175)	8.7486E-07 (175)	7.7385E-07 (175)
14	2.4369E-06 (160)	1.9735E-06 (160)	1.5927E-06 (160)	1.4487E-06 (160)	1.2787E-06 (160)
15	3.0900E-06 (315)	2.4690E-06 (315)	1.9599E-06 (315)	1.7801E-06 (315)	1.5578E-06 (315)
16	1.5034E-06 (45)	1.2359E-06 (45)	9.5327E-07 (45)	9.6418E-07 (45)	7.5329E-07 (45)
17	2.9451E-06 (91)	2.4050E-06 (91)	1.9478E-06 (91)	1.7710E-06 (91)	1.5605E-06 (91)
18	3.0710E-06 (341)	2.4919E-06 (341)	1.9446E-06 (341)	1.7959E-06 (341)	1.5758E-06 (341)
19	1.4128E-06 (322)	1.1659E-06 (322)	9.5575E-07 (322)	8.7563E-07 (322)	7.7075E-07 (322)
20	3.6296E-06 (164)	2.8876E-06 (164)	2.3357E-06 (164)	2.0714E-06 (164)	1.9417E-06 (164)
21	1.7219E-06 (333)	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)	1.4755E-06 (39)	1.2867E-06 (39)	1.1231E-06 (39)
23	2.3337E-06 (255)	2.3915E-06 (255)	1.9760E-06 (255)	1.7235E-06 (255)	1.5087E-06 (255)
24	4.8230E-06 (162)	3.8655E-06 (162)	3.0736E-06 (162)	2.8025E-06 (162)	2.4500E-06 (162)
25	4.7455E-06 (119)	3.8925E-06 (119)	3.1703E-06 (119)	2.8907E-06 (119)	2.5561E-06 (119)
26	4.2432E-06 (343)	3.5040E-06 (343)	2.8529E-06 (343)	2.6142E-06 (343)	2.3179E-06 (343)
27	4.0530E-06 (241)	3.2679E-06 (241)	2.6798E-06 (241)	2.4519E-06 (241)	2.1779E-06 (241)
28	2.6611E-06 (102)	2.3781E-06 (102)	1.8482E-06 (102)	1.4860E-06 (102)	1.2956E-06 (102)
29	2.3582E-06 (153)	1.8744E-06 (153)	1.5354E-06 (153)	1.3638E-06 (153)	1.1963E-06 (153)
30	3.6722E-06 (302)	2.9287E-06 (302)	2.3319E-06 (302)	2.1085E-06 (302)	1.9467E-06 (302)
31	1.7590E-06 (231)	1.3773E-06 (231)	1.0753E-06 (231)	9.6416E-07 (231)	8.3505E-07 (231)
32	6.1143E-06 (174)	5.2237E-06 (174)	4.1015E-06 (174)	3.7451E-06 (174)	3.3202E-06 (174)
33	3.2507E-06 (363)	2.6597E-06 (363)	2.1657E-06 (363)	1.9749E-06 (363)	1.7481E-06 (363)
34	2.5090E-06 (211)	1.9676E-06 (211)	1.5489E-06 (211)	1.3942E-06 (211)	1.2144E-06 (211)
35	1.4195E-06 (189)	1.1455E-06 (189)	9.1369E-07 (189)	8.3233E-07 (189)	7.3016E-07 (189)
36	2.4823E-06 (189)	1.9874E-06 (189)	1.5926E-06 (189)	1.4291E-06 (189)	1.2487E-06 (189)

PLANT NAME: MAN - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3
 YEARLY SECOND MAXIMUM 24-HOUR CONCENTRATION: 1.00E-06 DEFLECTION: 27 DISTANCE: 19.7 KM DAY: 289
 YEAR: 70

DIP	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR				
	RANGE	19.7 KM	25.0 KM	31.6 KM	40.0 KM
1	1.3258E-06 (25)	1.3921E-06 (25)	8.7579E-07 (25)	7.9742E-07 (25)	7.0297E-07 (25)
2	7.2997E-07 (29)	7.4595E-07 (29)	5.7327E-07 (29)	5.3653E-07 (27)	4.6967E-07 (29)
3	1.1418E-06 (225)	7.1261E-07 (225)	7.2129E-07 (225)	6.5308E-07 (225)	5.7095E-07 (225)
4	7.0651E-07 (180)	6.9535E-07 (180)	5.1510E-07 (180)	4.5491E-07 (180)	3.8504E-07 (180)
5	9.3569E-07 (219)	6.7646E-07 (219)	4.4081E-07 (219)	3.8351E-07 (219)	3.1934E-07 (219)
6	1.3543E-06 (77)	1.1095E-05 (77)	9.9231E-07 (77)	8.2322E-07 (77)	7.2911E-07 (77)
7	7.2241E-07 (324)	7.0616E-07 (324)	5.3431E-07 (324)	4.7092E-07 (324)	3.9784E-07 (324)
8	6.1157E-07 (45)	4.7083E-07 (45)	3.6243E-07 (45)	3.2297E-07 (45)	2.7746E-07 (45)
9	1.7022E-06 (325)	1.2770E-06 (325)	7.6146E-07 (325)	9.4247E-07 (325)	7.2192E-07 (325)
10	1.4745E-06 (338)	1.2095E-06 (338)	7.7464E-07 (338)	8.8627E-07 (338)	7.8183E-07 (338)
11	1.2060E-06 (77)	1.0736E-06 (77)	8.0445E-07 (97)	7.2721E-07 (97)	6.3194E-07 (97)
12	1.1475E-06 (197)	7.1615E-07 (197)	7.2776E-07 (197)	6.5701E-07 (197)	5.7386E-07 (197)
13	1.4501E-06 (175)	1.1519E-06 (175)	7.1226E-07 (102)	6.3146E-07 (172)	7.3551E-07 (102)
14	1.9194E-06 (112)	1.5674E-06 (112)	1.2746E-06 (112)	1.1605E-06 (112)	1.0243E-06 (112)
15	2.2207E-06 (27)	1.7934E-06 (27)	1.4363E-06 (27)	1.3001E-06 (27)	1.1397E-06 (27)
16	1.3881E-06 (154)	1.1310E-06 (154)	7.1718E-07 (164)	8.3566E-07 (164)	7.3895E-07 (164)
17	2.3427E-06 (138)	1.3992E-06 (138)	1.5281E-06 (138)	1.3849E-06 (138)	1.2152E-06 (138)
18	2.5067E-06 (329)	2.0881E-06 (329)	1.6751E-06 (329)	1.5189E-06 (329)	1.3333E-06 (329)
19	1.3455E-06 (106)	1.0239E-06 (106)	9.8190E-07 (106)	9.0050E-07 (106)	7.0389E-07 (106)
20	1.5599E-06 (31)	1.2141E-06 (31)	7.4780E-07 (31)	6.5232E-07 (31)	7.3918E-07 (31)
21	1.6756E-06 (333)	1.3799E-06 (333)	1.1229E-06 (54)	1.0327E-06 (54)	9.1698E-07 (54)
22	1.5161E-06 (255)	1.1737E-06 (255)	9.0740E-07 (255)	8.1006E-07 (255)	6.9759E-07 (255)
23	2.4672E-06 (334)	1.7133E-06 (334)	1.5026E-06 (171)	1.3468E-06 (171)	1.1676E-06 (171)
24	2.7744E-06 (114)	3.0612E-06 (114)	2.1529E-06 (114)	2.2324E-06 (114)	1.9594E-06 (114)
25	2.1196E-06 (182)	1.7042E-06 (182)	1.3551E-06 (143)	1.2349E-06 (143)	1.0925E-06 (143)
26	3.7934E-06 (115)	2.9441E-06 (115)	2.3242E-06 (115)	2.0702E-06 (115)	1.8157E-06 (115)
27	3.9999E-06 (269)	3.1771E-06 (241)	2.4920E-06 (241)	2.2102E-06 (241)	1.9477E-06 (241)
28	2.6067E-06 (251)	2.0626E-06 (102)	1.5175E-06 (102)	1.4113E-06 (102)	1.2072E-06 (102)
29	2.3132E-06 (153)	1.7225E-06 (153)	1.3655E-06 (153)	1.2132E-06 (153)	1.0387E-06 (153)
30	3.1111E-06 (155)	2.5272E-06 (155)	2.0492E-06 (155)	1.8546E-06 (155)	1.6348E-06 (155)
31	1.3577E-06 (135)	1.0492E-06 (135)	8.3121E-07 (172)	7.5430E-07 (172)	6.6151E-07 (172)
32	2.6541E-06 (154)	2.1296E-06 (154)	1.6937E-06 (154)	1.5355E-06 (154)	1.3433E-06 (154)
33	2.5962E-06 (238)	2.0922E-06 (238)	1.6116E-06 (238)	1.5270E-06 (238)	1.3448E-06 (238)
34	2.0694E-06 (26)	1.6791E-06 (26)	1.3537E-06 (26)	1.2280E-06 (26)	1.0792E-06 (26)
35	1.9452E-06 (238)	8.2606E-07 (238)	6.5197E-07 (238)	5.8751E-07 (238)	5.1212E-07 (238)
36	1.7002E-06 (155)	1.3341E-06 (155)	1.0489E-06 (155)	9.4390E-07 (155)	8.2192E-07 (155)

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART
 IMPACT @ HILLSBOROUGH CO. NON-ATTAINMENT AREA
 TAMPA MET DATA

EMISSION UNITS: GM/SEC AIR QUALITY UNIT: GM/H**3

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

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

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

* * * * * 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)= 17.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NCS
 STACK # 2--FEED PREP SODA, BAG HSE E&W, TRUCK LDG
 STACK # 3--LINE 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	63.96	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	21.38	1.68	8.56	313.50	18.98

PLANT NAME: AMAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

MAXIMUM MEAN CONC: 4.2770E-07 DIRECTION= 27 DISTANCE= 19.7 KM

YEAR= 71

DIR	RANGE	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR				
		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		2.64737E-08	1.93818E-08	1.43493E-08	1.26142E-08	1.06645E-08
5		5.41983E-08	4.11405E-08	3.14194E-08	2.79212E-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	1.53704E-08	1.44611E-08	1.23107E-08
8		3.97655E-08	2.91071E-08	2.16436E-08	1.90704E-08	1.62261E-08
9		1.01944E-07	7.43570E-08	5.48603E-08	4.82037E-08	4.07457E-08
10		5.23669E-08	3.79210E-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	2.78828E-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-08	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	7.24347E-08
19		7.01406E-08	5.34836E-08	4.08388E-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	1.36874E-07	1.05327E-07	9.39538E-08	8.08732E-08
22		1.16846E-07	8.71851E-08	6.53611E-08	5.75887E-08	4.89784E-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	1.43910E-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	2.07819E-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		3.66309E-08	2.73942E-08	2.06730E-08	1.85468E-08	1.58311E-08

PLANT NAME: ANAY - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M³
 YEARLY MAXIMUM 24-HOUR CONC= 4.9071E-06 DIRECTION= 11 DISTANCE= 19.7 KM DAY=224
 YEAR= 71

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR									
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.3 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)	9.3166E-07	(22)	7.3594E-07	(22)
3	5.8423E-07	(50)	4.1656E-07	(50)	3.0742E-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-05	(72)	2.2706E-06	(72)	1.9981E-06	(72)	1.7369E-06	(72)
6	1.7311E-06	(219)	1.3715E-06	(219)	1.0965E-06	(219)	9.8120E-07	(219)	8.5923E-07	(219)
7	9.9032E-07	(161)	7.5389E-07	(161)	5.7418E-07	(161)	3.0929E-07	(161)	4.3495E-07	(161)
8	1.3529E-06	(239)	1.0644E-06	(239)	8.3550E-07	(239)	7.5120E-07	(239)	6.5294E-07	(239)
9	1.9449E-06	(155)	1.4812E-06	(155)	1.1307E-06	(155)	1.0052E-06	(155)	8.6148E-07	(155)
10	1.5308E-06	(253)	1.2233E-06	(253)	9.7180E-07	(253)	8.7709E-07	(253)	7.6500E-07	(253)
11	4.9071E-06	(224)	3.8838E-06	(224)	3.0653E-06	(224)	2.7600E-06	(224)	2.4036E-06	(224)
12	2.2883E-06	(351)	1.8413E-06	(351)	1.4725E-06	(351)	1.3317E-06	(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)	1.3499E-06	(70)	1.1891E-06	(70)
15	3.4775E-06	(115)	2.7909E-06	(115)	2.2284E-06	(115)	2.0159E-06	(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)	7.9728E-07	(29)	7.0749E-07	(29)
18	3.9553E-06	(257)	3.1444E-06	(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	8.0797E-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-06	(12)	1.2712E-06	(12)
26	4.3970E-06	(152)	3.6336E-06	(152)	2.9971E-06	(152)	2.7341E-06	(152)	2.4325E-06	(152)
27	4.5346E-06	(265)	3.5800E-06	(265)	2.8246E-06	(265)	2.5450E-06	(265)	2.2190E-06	(265)
28	4.4589E-06	(247)	3.5497E-06	(247)	2.8229E-06	(247)	2.5522E-06	(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-06	(348)	1.5201E-06	(348)
31	1.8778E-06	(340)	1.5242E-06	(340)	1.2332E-06	(340)	1.1227E-06	(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)	2.3358E-06	(332)	2.1027E-06	(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)	1.0001E-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/****
 YEARLY SECOND MAXIMUM 24-HOUR CONC= 3.4903E-06 DIRECTION= 18 DISTANCE= 19.7 KM DAY=151
 YEAR= 71

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR				
	RANGE	17.7 KM	25.0 KM	31.6 KM	35.0 KM
1	1.0973E-06 (84)	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)	2.9610E-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)	7.5460E-07 (216)	6.8443E-07 (216)	6.0268E-07 (216)
6	1.5178E-06 (178)	1.2021E-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)	7.8199E-07 (214)	5.0537E-07 (214)	5.4144E-07 (214)	4.6750E-07 (214)
10	5.6540E-07 (351)	6.5862E-07 (351)	4.9591E-07 (351)	4.3788E-07 (351)	3.7004E-07 (351)
11	7.6222E-07 (115)	5.5692E-07 (115)	4.0001E-07 (115)	3.5645E-07 (115)	2.9844E-07 (115)
12	1.7605E-06 (55)	1.4527E-06 (55)	1.1873E-06 (55)	1.0930E-05 (55)	9.5021E-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)	1.3335E-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-05 (70)	9.2557E-07 (70)
16	1.3798E-06 (217)	1.0811E-05 (217)	5.4559E-07 (217)	7.5882E-07 (217)	6.5790E-07 (217)
17	1.1647E-06 (330)	9.2897E-07 (330)	7.3698E-07 (330)	5.6755E-07 (77)	5.9077E-07 (77)
18	3.4803E-06 (151)	2.7717E-05 (151)	2.1398E-06 (258)	1.9985E-05 (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-05 (131)	1.1675E-06 (131)	1.0668E-05 (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-05 (268)	1.7608E-06 (268)	1.5910E-05 (259)	1.3923E-06 (268)
24	2.7473E-06 (276)	2.2069E-05 (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-05 (107)	1.2671E-06 (107)
26	3.2259E-06 (248)	2.6025E-06 (248)	2.0904E-06 (248)	1.8971E-05 (248)	1.6688E-06 (248)
27	3.2107E-06 (241)	2.5110E-05 (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-05 (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)	1.6985E-05 (234)	1.3376E-06 (201)	1.1659E-06 (201)	1.0025E-06 (201)
33	2.3498E-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)	7.9153E-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)

D.R.R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

RING DISTANCES(KM)= 17.70 25.00 31.50 35.00 40.00

STACK # 1--FEED PREP NCS
 STACK # 2--FEED PREP SODA, HAG HSE EDW, TRUCK LDG
 STACK # 3--LIME BIN, COP BIN, DIKAL, DOUT 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	0.4100	27.90	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	37.48	1.37	11.50	338.50	16.98
9	ALL	1.6800	21.38	1.68	8.56	313.50	18.98

PLANT NAME: AXAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

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

YEAR= 72

DIR	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR					
	RANGE	19.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1		1.12385E-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	2.93007E-08
3		4.85251E-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		4.41584E-08	3.37787E-08	2.58305E-08	2.29981E-08	1.97651E-08
6		4.87701E-08	3.71570E-08	2.84979E-08	2.54073E-08	2.18703E-08
7		4.06553E-08	3.00237E-08	2.24061E-08	1.97732E-08	1.68068E-08
8		3.05057E-08	2.23747E-08	1.56530E-08	1.46898E-08	1.24857E-08
9		1.09167E-07	8.10127E-08	5.07070E-08	5.36550E-08	4.56830E-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	2.70872E-08	2.57398E-08	2.19415E-08
13		5.71885E-08	5.07021E-08	3.84719E-08	3.41328E-08	2.91732E-08
14		2.04352E-08	6.87966E-08	5.23871E-08	4.65044E-08	3.97707E-08
15		6.63103E-08	5.04398E-08	3.84831E-08	3.42040E-08	2.93117E-08
16		7.75294E-08	5.96385E-08	4.59732E-08	4.10371E-08	3.53601E-08
17		5.85557E-08	4.45126E-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	4.56484E-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	1.36711E-07	1.66153E-07	1.42602E-07
24		4.14844E-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	1.93010E-07	1.66023E-07
29		2.55950E-07	1.95272E-07	1.49382E-07	1.32935E-07	1.14095E-07
30		2.98228E-07	2.31753E-07	1.30307E-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	6.29370E-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		8.91098E-08	5.27513E-08	4.03475E-08	3.58864E-08	3.07740E-08
36		5.42549E-08	4.08589E-08	3.19589E-08	2.74656E-08	2.34933E-08

PLANT NAME: AMAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GY/SEC

AIR QUALITY UNITS: G/M³

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

YEAR= 72

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	19.7 KM	25.7 KM	31.6 KM	35.0 KM	40.0 KM
1	1.6004E-06 (10)	1.2344E-05 (10)	9.4361E-07 (10)	8.4440E-07 (10)	7.2700E-07 (9)	
2	2.0836E-06 (89)	1.5467E-05 (99)	1.1327E-06 (89)	1.0143E-05 (99)	8.5850E-07 (89)	
3	2.7722E-06 (258)	2.2712E-05 (258)	1.8406E-06 (258)	1.6856E-06 (258)	1.4917E-06 (258)	
4	1.6523E-06 (274)	1.2810E-06 (274)	9.8615E-07 (274)	8.7713E-07 (274)	7.5066E-07 (274)	
5	2.5304E-06 (24)	2.0744E-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)	9.4544E-07 (219)	7.6103E-07 (219)	6.6245E-07 (219)	
9	2.5581E-06 (334)	1.9546E-06 (334)	1.4981E-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	1.8940E-06 (138)	1.4692E-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)	1.2097E-06 (81)	1.0641E-06 (81)	
19	1.6100E-06 (48)	1.2561E-06 (48)	9.8394E-07 (48)	8.8616E-07 (333)	7.7281E-07 (333)	
19	3.3616E-06 (78)	2.7226E-06 (78)	2.1974E-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)	1.1927E-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)	1.6101E-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 (61)	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)	1.8007E-05 (158)	1.5768E-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: ANAX - 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

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	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)	8.9331E-07 (9)	8.2064E-07 (9)	7.2417E-07 (10)	
2	1.5641E-06 (10)	1.2099E-06 (10)	9.3888E-07 (195)	9.5503E-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)	8.8009E-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-06 (239)	1.1869E-06 (239)	1.0519E-06 (239)	8.9716E-07 (239)	
7	9.1493E-07 (58)	6.8466E-07 (58)	5.0302E-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-06 (67)	1.4665E-06 (67)	1.3180E-06 (67)	1.1245E-06 (334)	
10	1.8037E-06 (259)	1.4767E-06 (259)	1.2020E-06 (259)	1.0967E-06 (259)	9.7127E-07 (259)	
11	6.8322E-07 (290)	5.1917E-07 (290)	3.9785E-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)	8.5085E-07 (205)	7.5212E-07 (206)	
14	1.5436E-06 (231)	1.2272E-06 (231)	9.5119E-07 (322)	8.4997E-07 (322)	7.3263E-07 (322)	
15	1.9618E-06 (138)	1.5793E-06 (138)	1.2633E-06 (138)	1.1435E-06 (139)	1.0020E-06 (138)	
16	1.6766E-06 (112)	1.3420E-06 (112)	1.0582E-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-06 (87)	9.9393E-07 (87)	8.8695E-07 (87)	7.6242E-07 (87)	
20	9.6961E-07 (322)	7.5060E-07 (322)	5.7910E-07 (322)	5.1509E-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-06 (204)	1.1792E-06 (204)	1.0769E-06 (204)	9.5502E-07 (204)	
23	1.0242E-06 (323)	2.4408E-06 (323)	1.9519E-06 (323)	1.7802E-06 (323)	1.5658E-06 (323)	
24	2.5820E-06 (333)	2.0520E-06 (333)	1.6297E-06 (333)	1.4716E-06 (333)	1.2869E-06 (333)	
25	2.3940E-06 (227)	1.8383E-06 (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-06 (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-06 (224)	1.1762E-06 (224)	
30	3.1671E-06 (355)	2.5344E-06 (355)	2.0150E-06 (355)	1.8188E-06 (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)	9.2973E-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-06 (4)	1.1912E-06 (4)	
34	1.3986E-06 (241)	1.1313E-06 (241)	9.0009E-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-06 (359)	1.1940E-06 (359)	
36	1.3647E-06 (234)	1.0372E-06 (234)	7.8947E-07 (234)	5.9869E-07 (234)	5.9598E-07 (234)	

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AAAAAAAAAA NN      VN  AAAAAAAAAA  AAAAAAAAAA  7777777777  3333333333
AAAAAAAAAAAA NNN  NN  AAAAAAAAAA  AAAAAAAAAA  7777777777  3333333333
AA      AA  NNNN  NN  AA  AA  AA  AA  77  77  33  33
AA      AA  NN  NN  NN  AA  AA  AA  AA  77  77  33  33
AA      AA  NN  NN  NN  AA  AA  AA  AA  77  77  33  33
AAAAAAAAAAAA NN  NN  NN  AAAAAAAAAA  AAAAAAAAAA  77  77  3333
AAAAAAAAAAAA VN  NN  NN  AAAAAAAAAA  AAAAAAAAAA  77  77  3333
AA      AA  NV  NN  NN  AA  AA  AA  AA  77  77  33  33
AA      AA  NN  NNNN  AA  AA  AA  AA  77  77  33  33
AA      AA  NN  NNV  AA  AA  AA  AA  77  77  33  33
AA      AA  NN  NN  AA  AA  AA  AA  77  77  3333333333
AA      AA  NN  NN  AA  AA  AA  AA  77  77  3333333333

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JJJJJJJJJJ  9999999999  3333333333  6666666666  5555555555  AAAAAAAAAA
JJJJJJJJJJ  9999999999  3333333333  6666666666  5555555555  AAAAAAAAAA
JJ      JJ  99      99  33      JJ  66      65  55      AA      AA
JJ      JJ  99      99  33      JJ  66      66  55      AA      AA
JJ      JJ  99      99  33      JJ  66      66  55      AA      AA
JJ      JJ  9999999999  3333  6666666666  55555555  AAAAAAAAAA
JJ      JJ  9999999999  3333  6666666666  55555555  AAAAAAAAAA
JJ      JJ  99      99  33      JJ  66      66  55      AA      AA
JJ      JJ  99      99  33      JJ  66      65  55      AA      AA
JJ      JJ  99      99  33      JJ  66      66  55      AA      AA
JJJJJJJJ  9999999999  3333333333  6666666666  5555555555  AA      AA
JJJJJJJJ  9999999999  3333333333  6666666666  5555555555  AA      AA

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A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001045.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001045.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001045.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001045.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A
A	START	JOB	9365	ANAA73	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.34.20	AM	30	JAN	82	PRINTER1	SYS	NER1	START	A

RING DISTANCES(KM)= 19.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP H&S
 STACK # 2--FEED PREP SODA, BAG HSE EDW, TRUCK LDG
 STACK # 3--LINE 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	30.48	1.37	11.50	338.50	16.95
9	ALL	1.6800	24.38	1.68	8.56	318.50	18.98

D. E. R.

JUN 15 1982

SOUTHWEST DISTRICT
TAMPA

PLANT NAME: AMAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

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

YEAR= 73

DIR	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR					
	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	8.93183E-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	9.06767E-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	1.37302E-08	1.64329E-08	1.38472E-08
9		5.38368E-08	3.90574E-08	2.96950E-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	3.54402E-08
15		4.54843E-08	3.36640E-08	2.19993E-08	2.17703E-08	1.95495E-08
16		5.83768E-08	4.37072E-08	3.28036E-08	2.89407E-08	2.45688E-08
17		8.10234E-08	6.14232E-08	4.56900E-08	4.14381E-08	3.54434E-08
18		9.88858E-08	7.56621E-08	5.80473E-08	5.17161E-08	4.44554E-08
19		9.86546E-08	6.74301E-08	3.14077E-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	1.91531E-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/M³

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

YEAR= 73

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR									
	RANGE	19.7 KM	25.3 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	(318)	3.4829E-07	(338)
3	1.2111E-06	(186)	9.7911E-07	(186)	7.8940E-07	(186)	7.1797E-07	(185)	6.3339E-07	(186)
4	2.1574E-06	(56)	1.6066E-05	(36)	1.1990E-06	(56)	1.0575E-06	(56)	8.9610E-07	(56)
5	1.6147E-06	(307)	1.2552E-06	(307)	9.6878E-07	(307)	9.6233E-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)	1.5260E-06	(20)	1.3584E-05	(23)	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)	5.0252E-07	(27)
10	1.3184E-06	(30)	1.0829E-06	(30)	8.8402E-07	(30)	8.0731E-07	(39)	7.1589E-07	(30)
11	1.8827E-06	(222)	1.4259E-06	(222)	1.0904E-06	(222)	9.5694E-07	(222)	8.1563E-07	(222)
12	5.0902E-06	(362)	3.9906E-06	(362)	3.1104E-06	(362)	2.7923E-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)	1.2910E-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)	2.1910E-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-05	(217)	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	(2)	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	(182)	1.5821E-06	(182)
32	1.2695E-06	(152)	1.0320E-06	(152)	8.3556E-07	(152)	7.6103E-07	(152)	6.7265E-07	(152)
33	2.8911E-06	(228)	2.3533E-06	(228)	1.9043E-06	(228)	1.7326E-05	(228)	1.5288E-06	(228)
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

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR									
	RANGE	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	1.3877E-06	(69)	1.1330E-05	(59)	9.2008E-07	(69)	8.3869E-07	(59)	7.4199E-07	(69)
5	7.8115E-07	(301)	5.6847E-07	(301)	4.1153E-07	(301)	3.6103E-07	(301)	3.0106E-07	(301)
6	1.0757E-06	(178)	8.4768E-07	(178)	6.6444E-07	(178)	5.9541E-07	(178)	5.1702E-07	(178)
7	1.9711E-06	(114)	1.5185E-06	(325)	1.1744E-06	(325)	1.0467E-05	(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)	8.8662E-07	(319)	7.0696E-07	(319)	6.3717E-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	(346)
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)	9.2269E-07	(103)
19	1.3881E-06	(326)	1.1051E-06	(326)	8.7778E-07	(326)	7.9832E-07	(25)	7.0841E-07	(25)
17	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	(278)
21	2.0984E-06	(221)	1.6807E-05	(221)	1.3446E-06	(221)	1.2122E-05	(250)	1.0508E-06	(280)
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)	1.1731E-06	(239)	1.0807E-05	(239)	9.4846E-07	(239)
24	2.6463E-06	(205)	2.1063E-06	(205)	1.6680E-06	(205)	1.5040E-05	(205)	1.3117E-06	(205)
25	2.5885E-06	(205)	1.9967E-06	(205)	1.5715E-06	(205)	1.4201E-06	(205)	1.2429E-06	(205)
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)
29	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	(62)
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)

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          AAAAAAAAAA NN      NN      AAAAAAAAAA AAAAAAAAAA 777777777777 999
          AAAAAAAAAA NNN     NN      AAAAAAAAAA AAAAAAAAAA 7777777777 4414
          AA      AA      VNNN   NN      AA      AA      AA      AA      AA      AA      AA      AA      AA      AA
          AA      AA      NN NN   NN      AA      AA      AA      AA      AA      AA      AA      AA      AA      AA
          AAAAAAAAAA NN     NN     NN      AAAAAAAAAA AAAAAAAAAA 77 44 44 44
          AAAAAAAAAA YN     NN     NN      AAAAAAAAAA AAAAAAAAAA 77 44 44 44 44
          AA      AA      NY     NN     NN      AA      AA      AA      AA      AA      AA      AA      AA      AA
          AA      AA      YN     NN     NN      NN     NN      AA      AA      AA      AA      AA      AA      AA
          AA      AA      NN     NNN     AA      AA      AA      AA      AA      AA      AA      AA      AA      AA
          AA      AA      NN     NN     AA      AA      AA      AA      AA      AA      AA      AA      AA      AA
          AA      AA      NN     N     AA      AA      AA      AA      AA      AA      AA      AA      AA      AA
  
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JJJJJJJJJJ 9999999999 3333333333 777777777777 8888888888 777777777777
JJJJJJJJJJ 999999999999 333333333333 777777777777 888888888888 777777777777
JJ      99      99      33      77      77      88      88
JJ      99      99      33      77      77      88      88
JJ      99      99      33      77      77      88      88
JJ      999999999999 3333      77      77      88888888
JJ      999999999999 3333      77      77      88888888
JJ      99      99      33      77      77      88      88
JJ      JJ      JJ      99      33      77      77      88      88
JJ      JJ      JJ      99      33      77      77      88      88
JJJJJJJJJJ 999999999999 333333333333 777777777777 888888888888 777777777777
JJJJJJJJJJ 999999999999 333333333333 777777777777 888888888888 777777777777
  
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A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	92	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-P ANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	92	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A
A	START	JOB	9378	ANAA74	0001	0001	NER	AMAX-PLANT	CITY	80001046.002	12.35.21	AM	30	JAN	82	PRINTER1	SYS	VER1	START	A

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART
 142ACT 3 HILLSBOROUGH CO. NON-ATTAINMENT AREA
 TAMPA MET DATA

EMISSION UNITS: GM/SEC

AIR QUALITY UNIT: GM/M³

	MET FILE		REQUESTED	
	STN NO.	YR	STN NO.	YR
SURFACE	12842	74	12842	74
UPPER AIR	12942	74	12842	74

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

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

* * * * * 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

RING DISTANCES(KM)= 19.70 25.00 31.60 35.00 40.00

STACK # 1--FEED PREP NCS
 STACK # 2--FEED PREP SOJA, BAG HSE E&W, TRUCK LDG
 STACK # 3--LIME BIN, CDP BIN, DIKAL, BUJT 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	29.90	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	1.68	8.56	319.50	18.98

PLANT NAME: AMAX - PLANT CITY

POLLUTANT: PART

EMISSION UNITS: GM/SEC

AIR QUALITY UNITS: GM/M³

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

YEAR= 74

DIR	ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR				
	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-09	2.82041E-08	2.37421E-08
2	4.86164E-08	3.62694E-08	2.70941E-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	2.91766E-08
9	1.59320E-07	1.20711E-07	9.15303E-09	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	9.34229E-08	6.50028E-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	3.30238E-08
16	7.46624E-08	5.71082E-08	4.36424E-08	3.87688E-08	3.31701E-08
17	8.36438E-08	6.34871E-08	4.82107E-08	4.27337E-08	3.64721E-08
18	1.13058E-07	8.61565E-08	5.56406E-08	5.02514E-08	4.97818E-08
19	4.77337E-08	3.58720E-08	2.70085E-08	2.38658E-08	2.02916E-08
20	1.23121E-07	9.42770E-08	7.21689E-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	2.44654E-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
28	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	9.97490E-08
32	1.61971E-07	1.22814E-07	9.30839E-08	8.24115E-08	7.02067E-08
33	1.53125E-07	1.16662E-07	8.98307E-08	7.87917E-08	6.72898E-08
34	9.94339E-08	7.51231E-08	5.57746E-08	5.02164E-08	4.27318E-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: ANAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M³

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

YEAR= 74

DIR	HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	13.7 KM	25.0 KM	31.6 KM	35.0 KM	40.0 KM
1	9.2000E-07 (363)	6.9728E-07 (363)	5.2484E-07 (363)	4.6349E-07 (353)	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)	4.3567E-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	3.3300E-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-06 (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-06 (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-06 (192)	1.3625E-06 (192)	
14	2.1901E-06 (210)	1.7891E-06 (210)	1.4492E-06 (210)	1.3164E-06 (210)	1.1505E-06 (210)	
15	1.4320E-06 (151)	1.1541E-06 (151)	9.2650E-07 (151)	8.4022E-07 (151)	7.3844E-07 (151)	
16	1.6596E-06 (214)	1.2997E-06 (214)	1.0093E-06 (214)	8.9993E-07 (214)	7.7233E-07 (214)	
17	1.4145E-06 (326)	1.1121E-06 (326)	8.8127E-07 (326)	7.9383E-07 (326)	6.9207E-07 (260)	
18	1.4990E-06 (182)	1.2255E-06 (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	1.9266E-06 (54)	1.5929E-06 (54)	1.3066E-06 (54)	1.1946E-06 (54)	1.0606E-06 (54)	
21	1.6264E-06 (172)	1.3456E-06 (172)	1.1058E-06 (172)	1.0119E-06 (172)	8.9955E-07 (172)	
22	2.0470E-06 (240)	1.6845E-06 (240)	1.4010E-06 (215)	1.2943E-06 (215)	1.1645E-06 (215)	
23	2.2205E-06 (57)	1.8119E-06 (57)	1.4637E-06 (57)	1.3299E-06 (57)	1.1714E-06 (57)	
24	2.6600E-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)	2.4033E-06 (64)	2.2739E-06 (54)	2.0233E-06 (64)	
26	3.4700E-06 (308)	2.7894E-06 (308)	2.2250E-06 (308)	2.0107E-06 (309)	1.7582E-06 (308)	
27	5.6328E-06 (358)	4.6847E-06 (358)	3.8571E-06 (358)	3.5272E-06 (353)	3.1311E-06 (358)	
28	2.5150E-06 (227)	2.0376E-06 (227)	1.6407E-06 (227)	1.4875E-06 (227)	1.3064E-06 (227)	
29	2.0040E-06 (224)	1.6144E-06 (224)	1.3045E-06 (224)	1.1847E-06 (224)	1.0424E-06 (224)	
30	2.3533E-06 (105)	1.9459E-06 (105)	1.6017E-06 (105)	1.4670E-06 (105)	1.3062E-06 (105)	
31	1.9762E-06 (139)	1.5191E-06 (139)	1.2233E-06 (9)	1.1100E-06 (9)	9.7573E-07 (9)	
32	2.1161E-06 (232)	1.7217E-06 (232)	1.3870E-06 (232)	1.2575E-06 (232)	1.1039E-06 (232)	
33	2.1161E-06 (168)	1.4349E-06 (168)	1.1741E-06 (168)	1.0717E-06 (168)	9.4926E-07 (168)	
34	1.7410E-06 (216)	1.1590E-06 (216)	8.7262E-07 (216)	7.7041E-07 (216)	6.5518E-07 (133)	
35	1.5407E-06 (95)	8.8509E-07 (95)	6.8988E-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-06 (352)	8.8838E-07 (352)	

PLANT NAME: AMAX - PLANT CITY POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/HR

YEARLY SECOND MAXIMUM 24-HOUR CONC= 2.9700E-06 DIRECTION= 27 DISTANCE= 19.7 KM DAY=JAN

YEAR= 74

DIR	SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR					
	RANGE	17.7 KM	25.0 KM	31.6 KM	35.3 KM	40.0 KM
1	7.9333E-07 (106)	6.3242E-07 (106)	5.0225E-07 (106)	4.5340E-07 (106)	3.9315E-07 (106)	3.5390E-07 (106)
2	7.7955E-07 (130)	6.0163E-07 (130)	4.4675E-07 (130)	4.0344E-07 (130)	3.5390E-07 (130)	3.2673E-07 (130)
3	1.3117E-06 (130)	1.0720E-06 (130)	0.6935E-07 (130)	7.9052E-07 (130)	6.9052E-07 (130)	6.2868E-07 (130)
4	6.8425E-07 (172)	5.3980E-07 (200)	4.2510E-07 (162)	3.8053E-07 (162)	3.2868E-07 (162)	3.2868E-07 (162)
5	1.0066E-06 (245)	8.1793E-07 (245)	6.5917E-07 (245)	5.9789E-07 (245)	5.2520E-07 (245)	5.2520E-07 (245)
6	1.5376E-06 (203)	1.2586E-06 (203)	1.0234E-06 (203)	9.3097E-07 (248)	8.1849E-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)	5.5443E-07 (19)
8	8.9430E-07 (48)	7.1941E-07 (48)	5.7503E-07 (48)	5.2003E-07 (48)	4.5516E-07 (48)	4.5516E-07 (48)
9	1.5179E-06 (26)	1.2392E-06 (26)	1.0077E-06 (26)	9.1967E-07 (26)	8.1260E-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 (214)	6.9143E-07 (214)
11	1.4381E-06 (272)	1.2080E-06 (272)	1.0058E-06 (272)	9.2512E-07 (272)	8.2772E-07 (272)	8.2772E-07 (272)
12	1.1822E-06 (125)	9.3498E-07 (151)	7.6686E-07 (151)	7.0042E-07 (151)	6.2069E-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)	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)	7.3652E-07 (193)
15	1.2338E-06 (199)	9.9434E-07 (199)	7.9721E-07 (199)	7.2225E-07 (199)	6.3398E-07 (199)	6.3398E-07 (199)
16	1.1747E-06 (199)	9.7584E-07 (199)	8.0481E-07 (199)	7.3763E-07 (199)	6.5722E-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)	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)	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)	5.4228E-07 (309)
20	1.7505E-06 (207)	1.4471E-06 (207)	1.1955E-06 (207)	1.0819E-06 (207)	9.5791E-07 (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)	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)	1.1081E-06 (240)
23	2.1681E-06 (301)	1.7012E-06 (301)	1.3270E-06 (301)	1.1883E-06 (301)	1.0267E-06 (301)	1.0267E-06 (301)
24	2.1464E-06 (254)	1.7307E-06 (254)	1.3914E-06 (254)	1.2623E-06 (254)	1.1103E-06 (254)	1.1103E-06 (254)
25	2.8232E-06 (286)	2.2043E-06 (286)	1.7170E-06 (286)	1.5380E-06 (286)	1.3293E-06 (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)	1.1796E-06 (266)
27	2.9900E-06 (348)	2.4041E-06 (348)	1.9252E-06 (348)	1.7437E-06 (348)	1.5299E-06 (348)	1.5299E-06 (348)
28	1.9459E-06 (245)	1.5929E-06 (245)	1.3066E-06 (245)	1.1946E-06 (245)	1.0606E-06 (245)	1.0606E-06 (245)
29	1.9826E-06 (248)	1.5708E-06 (248)	1.2261E-06 (248)	1.0989E-06 (248)	9.4898E-07 (248)	9.4898E-07 (248)
30	2.1954E-06 (248)	1.7875E-06 (248)	1.4462E-06 (248)	1.3136E-06 (248)	1.1564E-06 (248)	1.1564E-06 (248)
31	1.8681E-06 (9)	1.5174E-06 (9)	1.1675E-06 (139)	1.0399E-06 (139)	8.9704E-07 (49)	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)	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)	7.4685E-07 (13)
34	1.3317E-06 (133)	1.0573E-06 (133)	8.3586E-07 (133)	7.5263E-07 (133)	6.5404E-07 (133)	6.5404E-07 (133)
35	1.0875E-06 (190)	8.6747E-07 (190)	6.6397E-07 (95)	5.9117E-07 (95)	5.0225E-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)	8.2767E-07 (214)

D. E. R.

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SOUTHWEST DISTRICT
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