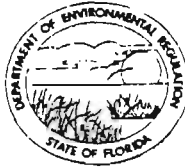


ACS3-75926  
PAID SEP 26 1983



D.E.R.

SEP 26 1983

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

SOUTHWEST DISTRICT  
TAMPA

SOURCE TYPE: Air Pollution [ ] New<sup>1</sup> [x] Existing<sup>1</sup>

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

COMPANY NAME: IMC, New Wales Operations COUNTY: Polk

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) AFI Granulation Plant Stack with Crossflow Scrubbers

SOURCE LOCATION: Street Highway 640 @ County Line Rd. City Mulberry

UTM: East 396.7 North 3079.4

Latitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "N Longitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "W

APPLICANT NAME AND TITLE: T. H. Traylor, Vice President & General Manager

APPLICANT ADDRESS: P.O. Box 1035, Mulberry, FL. 33860

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of IMC, New Wales Operations

I certify that the statements made in this application for a construction, modification 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: T. H. Traylor

T. H. Traylor, Vice President & General Mgr.  
Name and Title (Please Type)

Date: 9/20/83 Telephone No. (813) 428-2531

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: Craig A. Pflaum PE

Craig A. Pflaum, P.E.  
Name (Please Type)

IMC, New Wales Operations  
Company Name (Please Type)

P.O. Box 1035, Mulberry, FL. 33860  
Mailing Address (Please Type)

Date: 9/20/83 Telephone No. (813) 428-2531



(Affix Seal)



Florida Registration No. 18595

<sup>1</sup>See 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.

IMC plans to use the existing Animal Feed Ingredient Plant to produce DAP in addition to AFI products. This will require permitting of this facility as a fluoride emitter. Stack tests performed during a test run show full compliance with NSPS for DAP Plants.

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

Start of Construction NA Completion of Construction NA

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.)

System for emission control exists as originally installed at a cost of \$2,500,000.

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

AC53-5043 issued 6/7/76, expiration on 12/30/78.

A053-7025 issued 8/22/78, expiration on 8/15/83.

A053-68867 issued 6/21/80, expiration on 5/30/88.

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 6.6 ; wks/yr 50 ; if power plant, hrs/yr \_\_\_\_\_ ;

if seasonal, describe: DAP production will only occur for 15 weeks of each year with fluoride emissions of less than 3 TPY.

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? No

a. If yes, has "offset" been applied? \_\_\_\_\_

b. If yes, has "Lowest Achievable Emission Rate" been applied? \_\_\_\_\_

c. If yes, list non-attainment pollutants. \_\_\_\_\_

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

3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. No

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

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

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

**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		
P <sub>2</sub> O <sub>5</sub> & CaCO <sub>3</sub>	-----	-----	100 TPH	Granulator
P <sub>2</sub> O <sub>5</sub> & NH <sub>3</sub>	-----	-----	80 TPH	Granulator
* P <sub>2</sub> O <sub>5</sub> & NH <sub>3</sub>	F <sup>-</sup>	1.0	80 TPH	Granulator

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

1. Total Process Input Rate (lbs/hr): 200,000 & 160,000

2. Product Weight (lbs/hr): 200,000 & 160,000

**C. Airborne Contaminants Emitted:**

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission <sup>2</sup> Rate per Ch. 17-2, F.A.C.	Allowable <sup>3</sup> Emission lbs/hr	Potential Emission <sup>4</sup>		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
* Fluorides	2.23	2.81	0.06 lbs/ton P <sub>2</sub> O <sub>5</sub>	2.23	NA		Stack
Particulates	36.1	142.0	Process Wt.	36.1	NA		Stack

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup> )
Davy Powergas	Part.	99	3-5	Design
Venturi/Cross flow Scrubbers	*F <sup>-</sup>			Meets NSPS

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>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)

<sup>3</sup>Calculated from operating rate and applicable standard

<sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

<sup>5</sup>If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
#6 Fuel Oil	.5600 PPH	7200 PPH	135

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

Fuel Analysis:

Percent Sulfur: 2.5 Percent Ash: \_\_\_\_\_  
 Density: 8 lbs/gal Typical Percent Nitrogen: \_\_\_\_\_  
 Heat Capacity: \_\_\_\_\_ BTU/lb 149,600 BTU/gal  
 Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

F. If applicable, indicate the percent of fuel used for space heating. Annual Average \_\_\_\_\_ Maximum \_\_\_\_\_

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

Liquid waste to cooling pond.

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

Stack Height: 172 ft. Stack Diameter: 8 ft.  
 Gas Flow Rate: 130,000 ACFM Gas Exit Temperature: 120° °F.  
 Water Vapor Content: 5-10 % Velocity: 50 FPS

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) <sup>3</sup>	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: \_\_\_\_\_

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

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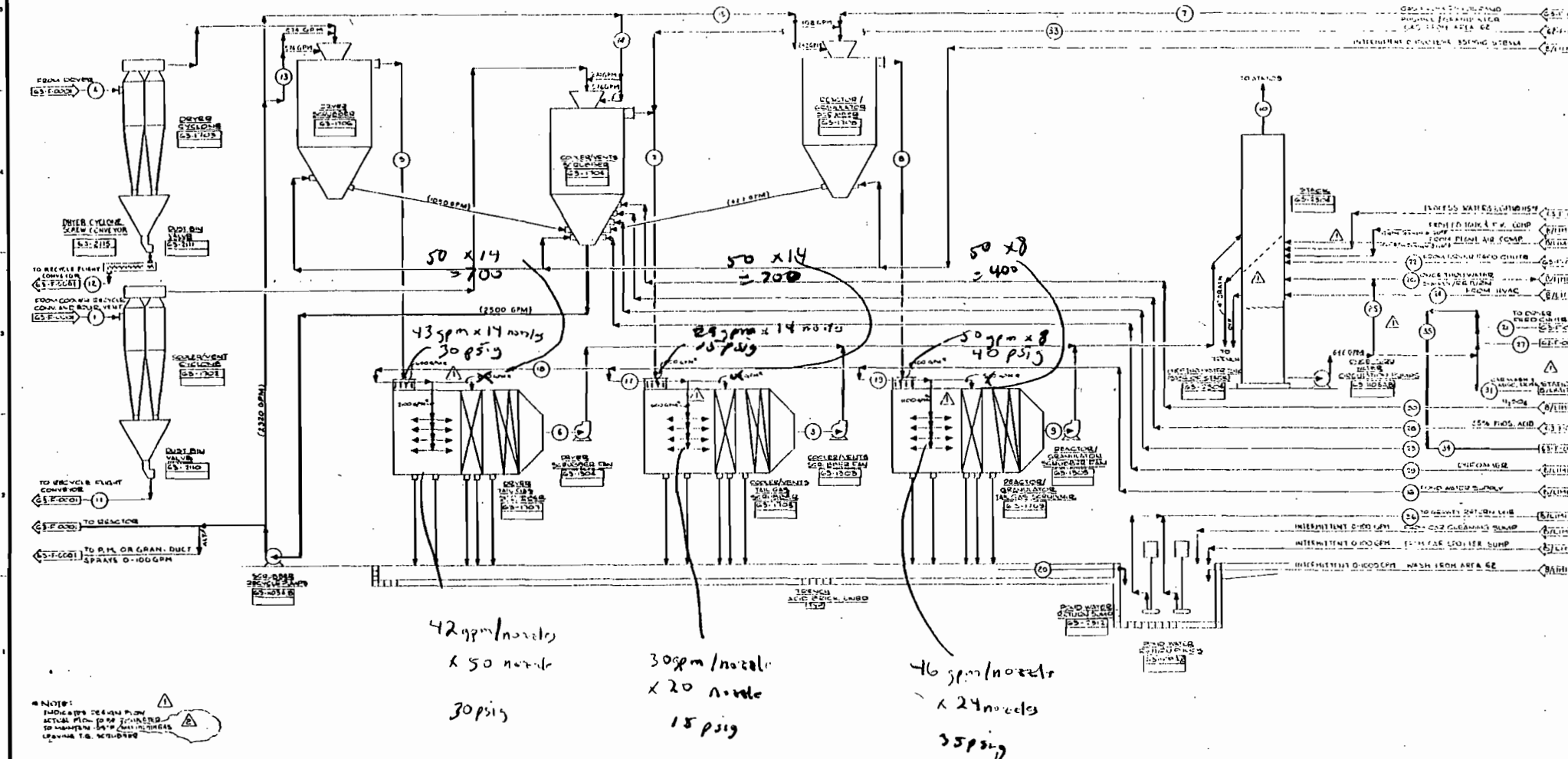
### SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 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.
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).
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.



STREAM NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	33	34	35
DESCRIPTION	GAS TO COOLING COILS	GAS FROM COOLING COILS	GAS FROM COOLING COILS	GAS TO DRYER	GAS FROM DRYER	GAS FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	25% FROM DRYER	
DESIGN FLOW	71,500	77,000	75,000	87,000	74,800	51,100	27,300	25,800	71,600	111,600	111,600	181	797	850	850	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10



NO.	TITLE	NO.	DESCRIPTION	ZONE	DATE	NO.	DESCRIPTION	ZONE	DATE	NO.	DESCRIPTION	ZONE	DATE
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NO.	DATE	DESCRIPTION	BY	CHKD
1	...	...	...	...

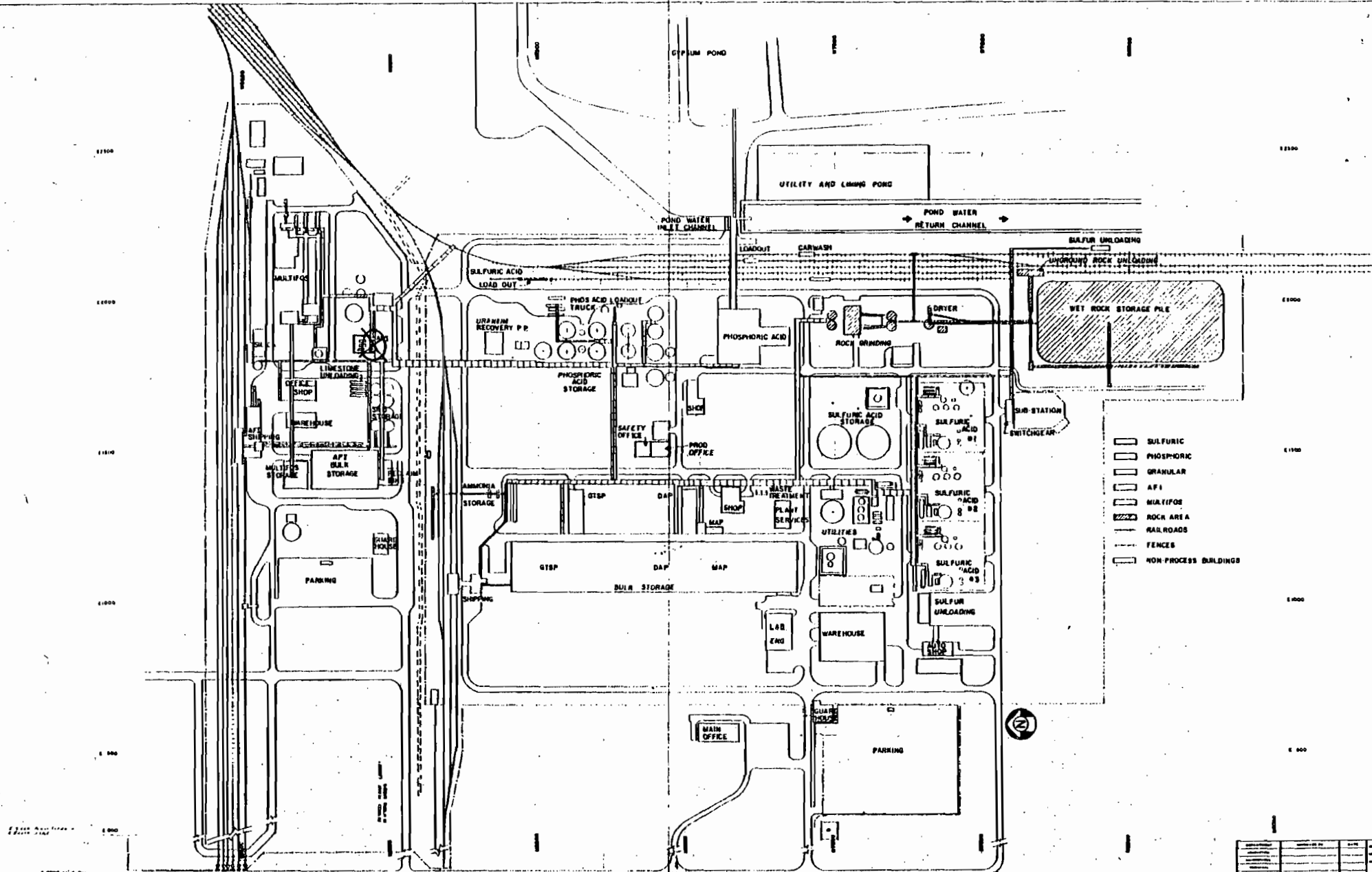
  

NO.	DATE	DESCRIPTION	BY	CHKD
1	...	...	...	...

**Davy Powergas, Inc.**  
 INTERNATIONAL MINERALS & CHEMICAL CORP.  
 ANIMAL FEED INGREDIENTS FACILITY - NEW WALES, I.  
 ETHANOL & ETHANOL DERIVATIVES  
 PROCESS FLOW DIAGRAM

4241 63-F-0002

BEST AVAILABLE COPY



Scale: 1" = 100'

Site Plan										Site Data		Legend	
NO.	DESCRIPTION	DATE	BY	CHECKED	APPROVED	REVISION	DATE	BY	CHECKED	NO.	DESCRIPTION	NO.	DESCRIPTION
1	Initial Design	1968	J. H. Smith	M. J. Jones	A. B. White					1	Sulfuric Acid Storage	2	Phosphoric Acid Storage
2	Final Design	1969	J. H. Smith	M. J. Jones	A. B. White					3	Granular Storage	4	AFI Storage
3	Construction	1970	J. H. Smith	M. J. Jones	A. B. White					5	Multifose Storage	6	Rock Area
4	Operation	1971	J. H. Smith	M. J. Jones	A. B. White					7	Railroads	8	Fences
5	Maintenance	1972	J. H. Smith	M. J. Jones	A. B. White					9	Non-Process Buildings		

Site Name: Wet Rock Chemical, Inc. Plot No. 68



C. A. CAMPBELL •

Vice President, Phosphate Operations



INTERNATIONAL MINERALS & CHEMICAL CORPORATION

February 22, 1982

Mr. T. H. Traylor  
Vice President and General Manager  
New Wales Operations  
Post Office Box 1035  
Mulberry, FL 33860

Dear Mr. Traylor:

This letter is your authorization to sign, on behalf of New Wales Operations, various applications for permits from the Florida Department of Environmental Regulations, the U.S. Environmental Protection Agency and other applicable agencies.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'C. A. Campbell', is written over the typed name.

C. A. Campbell

t

D.E.R.  
SEP 26 1983  
SOUTHWEST DISTRICT  
TAMPA

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION



SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610-9544

BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

WILLIAM K. HENNESSEY  
DISTRICT MANAGER

September 28, 1983

DER  
SEP 30 1983  
BAQM

Mr. J. M. Baretincic  
International Minerals &  
Chemicals Corporation  
Post Office Box 1035  
Mulberry, FL 33860

Re: DAP Production in AFI Plant, IMCC Letter 9/21/83

Dear Mr. Baretincic:

This is to authorize IMCC-New Wales to produce DAP in the AFI plant during the period October 10-30, 1983, as requested in the above subject letter. During the run, IMCC must comply with applicable DER rules.

Fluoride emissions shall not exceed .06 lbs. of F per ton of P<sub>2</sub>O<sub>5</sub> input or 2.23 lbs. of F per hour. Particulate emissions shall not exceed 36.1 lbs. per hour. Visible emissions shall not exceed 20% opacity. One compliance test is required for fluorides, particulates and opacity.

Your application for a construction modification permit to produce DAP in the AFI plant is being forwarded to CAPS in Tallahassee for processing.

Please contact me if you have any questions.

Sincerely,

W. C. Thomas, P.E.  
District Engineer  
Air Programs

WCT/scm

cc: CAPS

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO.

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

CAPS - DER

INITIAL

DATE

2.

Tallahassee

INITIAL

DATE

3.

INITIAL

DATE

4.

INITIAL

DATE

REMARKS:

INFORMATION

REVIEW & RETURN

REVIEW & FILE

INITIAL & FORWARD

DISPOSITION

REVIEW & RESPOND

PREPARE RESPONSE

FOR MY SIGNATURE

FOR YOUR SIGNATURE

LET'S DISCUSS

SET UP MEETING

INVESTIGATE & REPT

INITIAL & FORWARD

DISTRIBUTE

CONCURRENCE

FOR PROCESSING

INITIAL & RETURN

FROM:

Bill Thompson

DATE

9/28/83

PHONE

BEST AVAILABLE COPY

NEW WALES OPERATIONS  
P.O. Box 1035 • Mulberry, Florida 33860  
Telephone: (813) 428-2531

D.E.R.

SEP 26 1983

SOUTHWEST DISTRICT  
TAMPA



INTERNATIONAL MINERALS & CHEMICAL CORPORATION

September 21, 1983

Mr. W. C. Thomas, P.E.  
Florida Department of Environmental Regulation  
7601 Highway 301 North  
Tampa, Florida 33610

Dear Mr. Thomas:

Enclosed is a request for a construction/modification permit to allow IMC, New Wales Operations, to produce diammonium phosphate fertilizer in the existing Animal Feed Ingredient Granulation Plant, A053-68867.

As you are aware, IMC, as well as the other phosphate producers in the area, is experiencing severe marketing difficulties at the present time. The major difficulty continues to be the inability to generate additional product sales. This has led to the continued shutdown of new facilities which represent 50% of our present production level.

In light of these conditions, permission was obtained from your department to make a trial run producing DAP in the AFI facility, and a production run was made in August. As a result of this test run, we are now asking that AFI be permitted to operate as a normal feed ingredient plant and also be allowed to produce DAP using undefluorinated acid for a maximum of 15 weeks per year.

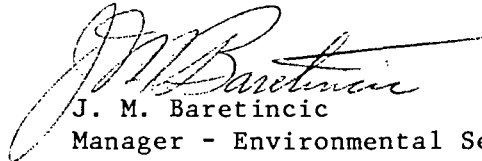
The production of DAP in the AFI Plant will result in the emission of fluoride. Stack tests during the production run in August show that the plant can remain well within the NSPS of 0.06 lbs. of fluoride per ton of input  $P_2O_5$  as required for our primary DAP plants. Tests of particulate emissions are also well within the existing permitted levels. Operation of the plant at the requested level of 80 TPH for the 15 weeks with calculated emissions for fluoride based on the 0.06 rule will insure that the annual emissions of fluoride will be less than three tons per year, which is below the de minimus level.

In the meantime, while this application is being considered, IMC is requesting permission to produce DAP in the AFI facility beginning October 10 and ending October 30.

Mr. W. C. Thomas  
Page 2  
September 21, 1983

Thank you for your consideration in this matter and we will look forward to hearing from you regarding these requests.

Sincerely,

  
J. M. Baretincic  
Manager - Environmental Services  
& Quality Control

JMB/bs

cc: A. L. Girardin - w/att

CERTIFIED MAIL  
NO. P251-748-419