



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

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

KA 124-97-01

May 21, 1997

RECEIVED
MAY 22 1997
D E P

Mr. Bill Proses
Florida Department of
Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, FL 33619-8318

Subject: Polk County-AP
IMC-Agrico Company (New Wales)
DAP 2 Plant Performance Testing

Dear Mr. Proses:

IMC-Agrico has completed performance testing of the DAP 2 Plant, authorized by FDEP's letter dated January 27, 1997.

Enclosed are two copies of the performance test report along with an analysis of the test results.

A request for permit amendment, to allow operations at the higher rates, is being submitted to Mr. William C. Thomas.

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

Very truly yours,

KOOGLER & ASSOCIATES

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

JBK:par
Enc.

c: C. Dave Turley, IMC-Agrico
Bill Thomas, FDEP Tampa



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

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

KA 124-97-01

May 21, 1997

RECEIVED
MAY 22 1997
Department of Environmental Protection
BY SOUTHWEST DISTRICT

Mr. William C. Thomas
Florida Department of
Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, FL 33619-8318

Subject: Polk County-AP
IMC-Agrico Company (New Wales)
Minor Permit Modification Request
Permit 1050059-015-AC, PSD-FL-114

AC 53-118671
PSD-FL-114-A

Dear Mr. Thomas:

This is a follow up to your letter dated January 27, 1997 authorizing performance testing on the DAP 2 Plant.

The performance testing (results enclosed) demonstrated that there will be no increase in the actual emissions of either particulate matter or fluorides as a result of the higher operation rates. Accordingly, IMC-Agrico requests a minor amendment to the above referenced permit to allow an increase in the production rate of the DAP 2 Plant from 280 to 360 tons per hour DAP, maximum (2,692,800 tons per year DAP or equivalent).

We appreciate the willingness on the part of the Department, reflected in Mr. Howard Rhodes' comments to industry representatives, to allow increases in operation rates so long as actual emissions are not exceeded. As FDEP already has the Long Form application for the DAP 2 Plant, only the supporting information is provided herein with a \$250 processing fee.

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

Very truly yours,


KOOGLER & ASSOCIATES

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

JBK:par
Enc.

c: C.D. Turley, IMC-Agrico

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: E.M. Newberg, Vice President and General Manager, Concentrated Phosphate Operations - Florida
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: IMC-Agrico Company Street Address: P.O. Box 2000 City: Mulberry State: FL Zip Code: 33860
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (941) 428-2500 Fax: ()-
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative* of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>  Signature _____ Date <u>5/15/97</u>

* Attach letter of authorization if not currently on file.

Purpose of Application and Category

Check one (except as otherwise indicated):

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain:

Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed: _____

Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit to be revised: _____

Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. Also check Category III.

Operation permit to be revised/corrected: _____

Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit to be revised: _____

Reason for revision: _____

Category II: All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain:

- Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s):

- Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed: _____

- Air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit to be revised: _____

Reason for revision: _____

Category III: All Air Construction Permit Applications for All Facilities and Emissions Units

This Application for Air Permit is submitted to obtain:

- Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any: **See Title V Application**

- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s): _____

- Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one:

Attached - Amount: \$250

Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

IMC-Agrico proposes to increase the allowable production rate of the DAP 2 Plant at the existing New Wales facility. The DAP 2 Plant may produce DAP as well as MAP. No major equipment changes are proposed. Additional information is provided in the attached Report. It is requested that a single permit be issued for this emissions unit.

2. Projected or Actual Date of Commencement of Construction: NA

3. Projected Date of Completion of Construction: NA

Professional Engineer Certification

1. Professional Engineer Name: : **John B. Koogler, Ph.D., P.E.**
Registration Number: **12925**

2. Professional Engineer Mailing Address:

Organization/Firm: **Koogler & Associates**
Street Address: **4014 NW 13th Street**
City: **Gainesville** State: **FL** Zip Code: **32609**

3. Professional Engineer Telephone Numbers:

Telephone: **(352) 377 - 5822** Fax: **(352) 377 - 7158**

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

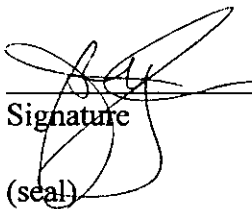
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.



Signature
(seal)

5/21/97

Date

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact: Pradeep Raval
2. Application Contact Mailing Address: Organization/Firm: Koogler & Associates Street Address: 4014 NW 13th Street City: Gainesville State: FL Zip Code: 32609
3. Application Contact Telephone Numbers: Telephone: (352) 377 - 5822 Fax: (352) 377 - 7158

Application Comment

<p>The east train, west train, east cooler and west cooler (which are currently identified as separate emissions units) are all one emissions unit pursuant to the definition under NSPS. IMC-Agrico is requesting an increase in the allowable operation of the DAP 2 Plant with no increase in actual emissions (see attached student's t test results).</p> <p>As this request does not constitute a modification, in accordance with FDEP rules, it is requested that a construction permit letter amendment be issued.</p>

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

NA

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
PM/PM10	A
SO2	A
NOX	A
SAM	A
FL	A

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Detail Information: Pollutant _____ of _____

1. Pollutant Emitted: NA
2. Requested Emissions Cap: _____ (lb/hour) _____ (tons/year)
3. Basis for Emissions Cap Code:
4. Facility Pollutant Comment (limit to 400 characters):

Facility Pollutant Detail Information: Pollutant _____ of _____

1. Pollutant Emitted:
2. Requested Emissions Cap: _____ (lb/hour) _____ (tons/year)
3. Basis for Emissions Cap Code:
4. Facility Pollutant Comment (limit to 400 characters):

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
2. Facility Plot Plan: <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
3. Process Flow Diagram(s): <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
6. Supplemental Information for Construction Permit Application: <input checked="" type="checkbox"/> Attached, Document ID: Report <input type="checkbox"/> Not Applicable

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities: <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
8. List of Equipment/Activities Regulated under Title VI: <input type="checkbox"/> Attached, Document ID:_____
<input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed
<input checked="" type="checkbox"/> Not Applicable
9. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
10. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable

11. Identification of Additional Applicable Requirements:

Attached, Document ID:_____ Not Applicable

12. Compliance Assurance Monitoring Plan:

Attached, Document ID:_____ Not Applicable

13. Risk Management Plan Verification:

Plan Submitted to Implementing Agency - Verification Attached,
Document ID:_____

Plan to be Submitted to Implementing Agency by Required Date

Not Applicable

14. Compliance Report and Plan:

Attached, Document ID:_____ Not Applicable

15. Compliance Certification (Hard-copy Required):

Attached, Document ID:_____ Not Applicable

SUPPLEMENTAL INFORMATION

IMC-Agrico requests an increase in the permitted diammonium phosphate (DAP) production rate of the existing DAP 2 Plant, located at the New Wales facility, from 280 to 360 tons per hour (tph) DAP, maximum (2,692,800 tons per year DAP or equivalent). The plant is also capable of producing monoammonium phosphate (MAP).

Recent performance testing (results enclosed) demonstrated that there will be no increase in the actual emissions of either particulate matter or fluorides as a result of the higher operation rates. Measurements for ammonia were conducted only on the West Train. The ammonia measurements on the East Train were waived by Mr. William Schroeder, in view of very low emissions from the West Train, as conveyed by Mr. C.D. Turley on April 18, 1997. The supporting performance test results, along with an evaluation based on the Student's t test, are enclosed.

The requested operation rate is, appropriately, within ten percent of the rate at which the performance testing was conducted. Please note that the existing plant is capable of the higher operation rate under the present configuration; and, no capital expenditure was required to operate at the higher rate. Consequently, this request does not constitute a modification pursuant to Rule 62-210, FAC.

The East and West trains are capable of interchangeable material flow to the two coolers. Indeed the original permit was issued for a common cooler. Therefore, the DAP 2 Plant is one emissions unit, pursuant to the definition of the affected emissions unit in 40 CFR 60, Subpart V. It is requested that a single air permit be issued for this emissions unit.

Although not part of the performance testing, measurements of sulfur dioxide emissions and nitrogen oxides emissions are included in the report pursuant to current permit requirements pertaining to fuel oil usage.

The facility information pages of the FDEP Long Form application are enclosed with the necessary certifications.

IMC-AGRICO DAP 2 PERFORMANCE TEST DATA COMPARISON USING STUDENT'S T TEST (4-97)															
west	imc fluoride					east	imc fluoride					total	imc fluoride		
	test 1	test 2					test 1	test 2					test 1	test 2	
run1	3.05	2.83				run1	2.78	2.35				run1	5.83	5.18	
run2	3.18	1.44				run2	2.64	2.67				run2	5.82	4.11	
run3	3.38	1.24				run3	2.21	2.85				run3	5.59	4.09	
avg	3.20	1.84				avg	2.54	2.62				avg	5.75	4.46	
sa2	run1-avg1 sq + run2-avg1 sq + run3-avg1 sq / 3-1		0.0			sa2	run1-avg1 sq + run2-avg1 sq + run3-avg1 sq / 3-1		0.1			sa2	run1-avg1 sq + run2-avg1 sq + run3-avg1 sq / 3-1		0.0
sb2	run1-avg2 sq + run2-avg2 sq + run3-avg2 sq / 3-1		0.8			sb2	run1-avg2 sq + run2-avg2 sq + run3-avg2 sq / 3-1		0.1			sb2	run1-avg2 sq + run2-avg2 sq + run3-avg2 sq / 3-1		0.4
sp	3-1 x sa2 + 3-1 x sb2 / 3+3-2 sqrt		0.624			sp	3-1 x sa2 + 3-1 x sb2 / 3+3-2 sqrt		0.278			sp	3-1 x sa2 + 3-1 x sb2 / 3+3-2 sqrt		0.451
t	avg2-avg1/ sp x sqrt(1/3+1/3)		-2.68			t	avg2-avg1/ sp x sqrt(1/3+1/3)		0.35			t	avg2-avg1/ sp x sqrt(1/3+1/3)		-3.49
freedom	3+3-2		4			freedom	3+3-2		4			freedom	3+3-2		4
t' conf. lv	2.132		2.132			t' conf. lv	2.132		2.132			t' conf. lv	2.132		2.132
sig ?	t		-4.82			sig ?	t		-1.78			sig ?	t		-5.62
west	imc particulate					east	imc particulate					total	imc particulate		
	test 1	test 2					test 1	test 2					test 1	test 2	
run1	1.79	2.49				run1	0.85	1.87				run1	2.64	4.38	
run2	2.64	1.95				run2	1.08	2.69				run2	3.72	4.64	
run3	3.58	2.22				run3	2.02	4.45				run3	5.6	6.67	
avg	2.67	2.22				avg	1.32	3.00				avg	3.99	5.22	
sa2	run1-avg1 sq + run2-avg1 sq + run3-avg1 sq / 3-1		0.8			sa2	run1-avg1 sq + run2-avg1 sq + run3-avg1 sq / 3-1		0.4			sa2	run1-avg1 sq + run2-avg1 sq + run3-avg1 sq / 3-1		2.2
sb2	run1-avg2 sq + run2-avg2 sq + run3-avg2 sq / 3-1		0.1			sb2	run1-avg2 sq + run2-avg2 sq + run3-avg2 sq / 3-1		1.7			sb2	run1-avg2 sq + run2-avg2 sq + run3-avg2 sq / 3-1		1.6
sp	3-1 x sa2 + 3-1 x sb2 / 3+3-2 sqrt		0.661			sp	3-1 x sa2 + 3-1 x sb2 / 3+3-2 sqrt		1.030			sp	3-1 x sa2 + 3-1 x sb2 / 3+3-2 sqrt		1.384
t	avg2-avg1/ sp x sqrt(1/3+1/3)		-0.83			t	avg2-avg1/ sp x sqrt(1/3+1/3)		2.01			t	avg2-avg1/ sp x sqrt(1/3+1/3)		1.09
freedom	3+3-2		4			freedom	3+3-2		4			freedom	3+3-2		4
t' conf. lv	2.132		2.132			t' conf. lv	2.132		2.132			t' conf. lv	2.132		2.132
sig ?	t		-2.97			sig ?	t		-0.13			sig ?	t		-1.04

NOTE: Test 1 - performance test at 140 tph DAP per train; Test 2 - performance test at 165 tph DAP per train.



bcc: A. L. Girardin
J. B. Upton

Certified Mail
Return Receipt Requested

April 8, 1997

Mr. W. C. Thomas, P. E.
Florida Department of
Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

RE: DAP II Plant, West Train
Permit ID No. AO53-215387
AIRS ID No. 1050059
Unit ID No. 046
New Wales Plant

Dear Mr. Thomas:

Enclosed are the results of the compliance test for the above-referenced permit.

If you have any questions, please contact me at 941-428-7106.

Sincerely,

P. A. Steadham
Chief Environmental
Services - Concentrates

Enclosures

cwk
087-1032

Introduction:

This report details the compliance sampling results for the following source:

Project: DAP II Plant, West Train
 Facility: New Wales Operations
 Point ID: 46
 AIRS: 1050059
 Permit Number: AO53-215387
 Test Date: March 6 & March 7, 1997

Summary of Results

The source was found to be in compliance with the permits and regulations of the Florida Department of Environmental Protection. The process data and emissions testing results are summarized below:

Process Data:

Total P2O5 Feed **66.09** **TPH**
DAP Production Rate **139** **TPH**
Fuel Firing Rate **15.2** **mmBTU/hr**

Fuel Natural Gas

Scubber Operating Data

Dryer	Delta P in H2O	pH SU	R/G	Delta P in H2O	pH SU	
Venturi	15.5	2.6		Venturi	11	2.6
Tailgas	2.2	1.3		Tailgas	5.4	1.3

Emissions:

Allowables by Permit Condition Number 5.

		Actual	Allowable
Fluorides:	lb/hr	3.2	3.5
	lb/ton P2O5	0.048	0.06
Particulate:	lb/hr	2.67	14.1
	lb/ton P2O5	0.040	0.5
Nitrogen Oxides:	lb/hr	2.67	12.6
	lb/mmBTU	0.176	0.6
Visible Emissions:	% Opacity	4.0	20

Emissions Testing Methods:

Methods in accordance with Specific Condition Number 14.

Fluorides: Method 5 & 13B Combined with modifications as allowed by Department for analysis.

Particulate: Method 5 & 13B Combined.

Nitrogen Oxides: Method 7E

Visible Emissions: Method 9

Source Sampling Summary Sheet							
		Facility:	NEW WALES				
		Plant:	DAP 2 WEST TRAIN				
		Company ID:	1032				
		FDEP AIRS & Pt. ID:	1050059-16				
		Test Team:	BARNES,LENNARD				
		Parameter	Unit	Run 1	Run 2	Run 3	Average
		Date:		3/6/97	3/6/97	3/6/97	
		Time Start:		1330	1510	1636	
		Time End:		1438	1615	1746	
		Barometric Pressure:	Inch Hg	30.13	30.13	30.13	
		Static Pressure:	Inch H2O	0.70	0.70	0.70	
		Stack Pressure:	Inch Hg	30.181	30.181	30.181	
		Average Sqrt Delta P:	Inch HOH 1/2	1.072	1.119	1.109	
		Average Delta H:	Inch HOH	1.346	1.462	1.445	1.418
		Average Meter Temp:	Degrees F	89.5	93.5	92.4	
		Average Stack Temp:	Degrees F	117.3	118.9	117.1	117.8
		Metered Sample Volume:	Cubic Feet	41.21	43.14	42.21	
		Standard Meter Volume:	Cubic Feet	40.27	41.87	41.04	
		Moisture Measured:	%	0.0679	0.0695	0.0736	
		Moisture Saturation:	%	0.1058	0.1108	0.1053	
		Moisture Used for Calculations:	%	0.0679	0.0695	0.0736	0.0703
		Pitot Coefficient:	Unity	0.84	0.84	0.84	
		Nozzle Diameter:	Inch	0.196	0.196	0.196	
		Stack Area:	Square Feet	28.26	28.26	28.26	
		Traverse Points:	Unity	12	12	12	
		Sampling Time:	Minutes	60	60	60	
		Stack Gas Molecular Weight:	lb/lb-mol	28.224	28.207	28.161	
		Actual Stack Velocity:	Feet/sec	63.385	66.288	65.596	65.090
		Actual Stack Gas Flow:	ACFM	107476	112397	111225	110366
		Dry Standard Stack Gas Flow:	DSCFM	92430	96220	95091	94580
		Isokinetic Rate:	%	98.03	97.90	97.10	
		Fluoride Emission:	lb/day	73.12	76.39	81.21	76.91
		Fluoride Emission:	lb/hr	3.05	3.18	3.38	3.20
		Particulate Emission:	lb/day	42.95	63.42	85.99	64.12
		Particulate Emission:	lb/hr	1.79	2.64	3.58	2.67

Source Sampling Summary Sheet						
	Facility:	NEW WALES				
	Plant:	NOX DAP 2 WEST				
	Company ID:	1032				
	FDEP AIRS & Pt. ID:	1050059-46				
	Test Team:	BARNES,LENNARD				
	Parameter	Unit	Run 1	Run 2	Run 3	Average
	Date:		3/7/97	3/7/97	3/7/97	
	Time Start:		1100	1220	1350	
	Time End:		1214	1320	1450	
	Barometric Pressure:	Inch Hg	30.13			
	Static Pressure:	Inch H2O	0.60			
	Stack Pressure:	Inch Hg	30.174			
	Average Sqrt Delta P:	Inch HOH 1/2	1.078			
	Average Delta H:	Inch HOH	1.000			
	Average Meter Temp:	Degrees F	76.4			
	Average Stack Temp:	Degrees F	103.0			
	Metered Sample Volume:	Cubic Feet	34.40			
	Standard Meter Volume:	Cubic Feet	34.41			
	Moisture Measured:	%	0.0471			
	Moisture Saturation:	%	0.0701			
	Moisture Used for Calculations:	%	0.0471			
	Pitot Coefficient:	Unity	0.84			
	Nozzle Diameter:	Inch	0			
	Stack Area:	Square Feet	28.26			
	Traverse Points:	Unity	12			
	Sampling Time:	Minutes	60			
	Stack Gas Molecular Weight:	lb/lb-mol	28.453			
	Actual Stack Velocity:	Feet/sec	62.688			
	Actual Stack Gas Flow:	ACFM	106293			
	Dry Standard Stack Gas Flow:	DSCFM	95796			
	Isokinetic Rate:	%	N/A			
	Nitrogen Oxides:	lb/hr	2.67	2.81	2.54	2.67



bcc: A. L. Girardin
J. B. Upton

Certified Mail
Return Receipt Requested

April 8, 1997

Mr. W. C. Thomas, P. E.
Florida Department of
Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

RE: DAP II Plant, East Train
Permit ID No. AO53-215386
AIRS ID No. 1050059
Unit ID No. 045
New Wales Plant

Dear Mr. Thomas:

Enclosed are the results of the compliance test for the above-referenced permit.

If you have any questions, please contact me at 941-428-7106.

Sincerely,

A handwritten signature in cursive script that reads "Phillip A. Steadham".

P. A. Steadham
Chief Environmental
Services - Concentrates

Enclosures

cwk
497-1030

Introduction:

This report details the compliance sampling results for the following source:

Project: DAP II Plant, East Train
 Facility: New Wales Operations
 Point ID: 45
 AIRS: 1050059
 Permit Number: AO53-215386
 Test Date: March 10 & March 12, 1997

Summary of Results

The source was found to be in compliance with the permits and regulations of the Florida Department of Environmental Protection. The process data and emissions testing results are summarized below:

Process Data:

Total P2O5 Feed	67.76	TPH
DAP Production Rate	140	TPH
Fuel Firing Rate	4	mmBTU/hr
Fuel	Natural Gas	

Scubber Operating Data

Dryer	Delta P in H2O	pH SU	R/G	Delta P in H2O	pH SU
Venturi	19	4.15		Venturi	16.5
Tailgas	2.7	1.3		Tailgas	3.4

Emissions:

Allowables by Permit Condition Number 5.

		Actual	Allowable
Fluorides:	lb/hr	2.55	3.5
	lb/ton P2O5	0.038	0.06
Particulate:	lb/hr	1.31	14.1
	lb/ton P2O5	0.019	0.5
Nitrogen Oxides:	lb/hr	0.760	12.6
	lb/mmBTU	0.190	0.6
Visible Emissions:	% Opacity	0.0	20

Emissions Testing Methods:

Methods in accordance with Specific Condition Number 14.

Fluorides: Method 5 & 13B Combined with modifications as allowed by Department for analysis.

Particulate: Method 5 & 13B Combined.

Nitrogen Oxides: Method 7E

Visible Emissions: Method 9

Source Sampling Summary Sheet						
	Facility:	New Wales				
	Plant:	DAP II East				
	Company ID:	1030				
	FDEP AIRS & Pt. ID:	1050059 & 45				
	Test Team:	ML / RS				
Parameter	Unit	Run 1	Run 2	Run 3	Average	
Date:		3/12/97	3/12/97	3/12/97		
Time Start:		1122	1322	1450		
Time End:		1230	1430	1555		
Barometric Pressure:	Inch Hg	31.05	31.05	31.05		
Static Pressure:	Inch H2O	0.52	0.52	0.52		
Stack Pressure:	Inch Hg	31.088	31.088	31.088		
Average Sqrt Delta P:	Inch HOH 1/2	1.010	0.998	1.027		
Average Delta H:	Inch HOH	1.223	1.202	1.242	1.222	
Average Meter Temp:	Degrees F	80.0	84.8	85.8		
Average Stack Temp:	Degrees F	115.8	117.7	118.8	117.4	
Metered Sample Volume:	Cubic Feet	37.54	37.83	38.08		
Standard Meter Volume:	Cubic Feet	38.46	38.41	38.59		
Moisture Measured:	%	0.0733	0.0742	0.0737		
Moisture Saturation:	%	0.0987	0.1039	0.1073		
Moisture Used for Calculations:	%	0.0733	0.0742	0.0737	0.0737	
Pitot Coefficient:	Unity	0.84	0.84	0.84		
Nozzle Diameter:	Inch	0.196	0.196	0.196		
Stack Area:	Square Feet	28.26	28.26	28.26		
Traverse Points:	Unity	12	12	12		
Sampling Time:	Minutes	60	60	60		
Stack Gas Molecular Weight:	lb/lb-mol	28.165	28.155	28.161		
Actual Stack Velocity:	Feet/sec	58.841	58.242	59.993	59.025	
Actual Stack Gas Flow:	ACFM	99770	98755	101724	100083	
Dry Standard Stack Gas Flow:	DSCFM	88085	86825	89307	88072	
Isokinetic Rate:	%	98.23	99.52	97.23		
Fluoride Emission:	lb/day	66.83	63.39	53.13	61.12	
Fluoride Emission:	lb/hr	2.78	2.64	2.21	2.55	
Particulate Emission:	lb/day	20.34	25.81	48.44	31.53	
Particulate Emission:	lb/hr	0.85	1.08	2.02	1.31	

Source Sampling Summary Sheet							
		Facility:	New Wales				
		Plant:	DAP II East (NOX test)				
		Company ID:	1030				
		FDEP AIRS & Pt. ID:	1050059 & 45				
		Test Team:	ML,RS,DC				
		Parameter	Unit	Run 1	Run 2	Run 3	Average
		Date:		3/10/97	3/10/97	3/10/97	
		Time Start:		1210	1320	1515	
		Time End:		1310	1427	1615	
		Barometric Pressure:	Inch Hg		30.10		
		Static Pressure:	Inch H2O		0.20		
		Stack Pressure:	Inch Hg		30.115		
		Average Sqrt Delta P:	Inch HOH 1/2		1.036		
		Average Delta H:	Inch HOH		1.276		
		Maximum Run Vacuum:	Inch Hg		9.000		
		Meter Box Number:	Unity		3188		
		Average Meter Temp:	Degrees F		89.0		
		Average Stack Temp:	Degrees F		116.6		
		Metered Sample Volume:	Cubic Feet		39.94		
		Standard Meter Volume:	Cubic Feet		39.02		
		Moisture Measured:	%		0.0739		
		Moisture Saturation:	%		0.1040		
		Moisture Used for Calculations:	%		0.0739		
		Pitot Coefficient:	Unity		0.84		
		Nozzle Diameter:	Inch		0.196		
		Stack Area:	Square Feet		28.26		
		Traverse Points:	Unity		12		
		Sampling Time:	Minutes		60		
		Stack Gas Molecular Weight:	lb/lb-mol		28.159		
		Actual Stack Velocity:	Feet/sec		61.345		
		Actual Stack Gas Flow:	ACFM		104017		
		Dry Standard Stack Gas Flow:	DSCFM		88789		
		Isokinetic Rate:	%		N/A		
		Nitrogen Oxides:	lb/hr	0.57	0.64	1.08	0.76

Report of Performance Sampling

IMC-Agrico Company

Project: DAP II Plant, West Train

Facility: New Wales Operations

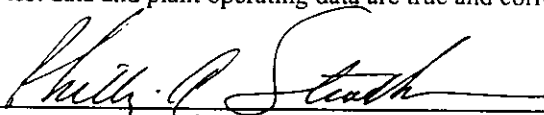
Point ID: 46

AIRS: 1050059

Permit Number: AO53-215387

Test Date: April 8, 9 & 10, 1997

To the best of my knowledge, all applicable field and analytical procedures comply with Florida Department of Environmental Protection requirements and all test data and plant operating data are true and correct.



Signature, Owner or Authorized Representative

P. A. Steadham, Chief Environmental Services - Concentrates

IMC-Agrico Company

P.O. Box 2000

Mulberry, FL 33860

(941) 428-2500

Company ID #: 1032

5/19/97

Introduction:

This report details the compliance sampling results for the following source:

Project: DAP II Plant, West Train
Facility: New Wales Operations
Point ID: 46
AIRS: 1050059
Permit Number: AO53-215387
Test Date: April 8, 9 & 10, 1997

Summary of Results

The source was found to be in compliance with the permits and regulations of the Florida Department of Environmental Protection. The process data and emissions testing results are summarized below:

Process Data:

Total P2O5 Feed	77.59	TPH
DAP Production Rate	166	TPH
Fuel Firing Rate	9.71	mmBTU/hr
Fuel % Sulfur	Fuel Oil 2.26	

Scubber Operating Data

Dryer	Delta P in H2O	pH SU	R/G	Delta P in H2O	pH SU	
Venturi	19.5	3.1		Venturi	16	3.1
Tailgas	2.1	1.5		Tailgas	4.6	1.5

Emissions:

Allowables by Permit Condition Number 5.

		Actual	Allowable
Fluorides:	lb/hr	1.84	3.5
	lb/ton P2O5	0.024	0.06
Particulate:	lb/hr	2.22	14.1
	lb/ton P2O5	0.029	0.5
Nitrogen Oxides:	lb/hr	5.54	12.6
	lb/mmBTU	0.571	0.6
Sulfur Dioxides:	lb/hr	3.62	22.0
	lb/ton P2O5	0.047	0.7
Ammonia:	lb/hr	0.180	N/A
Visible Emissions:	% Opacity	5.0	20

Emissions Testing Methods:

Methods in accordance with Specific Condition Number 14.

Fluorides: Method 5 & 13B Combined with modifications as allowed by Department for analysis.

Particulate: Method 5 & 13B Combined.

Nitrogen Oxides: Method 7E

Sulfur Dioxides: Method 6

Ammonia: Method Attached

Visible Emissions: Method 9

Source Sampling Summary Sheet						
	Facility:	NEW WALES				
	Plant:	DAP 2 WEST				
	Company ID:	1032				
	FDEP AIRS & Pt. ID:	1050059-46				
	Test Team:	BARNES,SELLERS				
	Parameter	Unit	Run 1	Run 2	Run 3	Average
	Date:		4/10/97	4/10/97	4/10/97	
	Time Start:		1100	1300	1430	
	Time End:		1205	1407	1536	
	Barometric Pressure:	Inch Hg	30.18	30.18	30.18	
	Static Pressure:	Inch H2O	0.55	0.55	0.55	
	Stack Pressure:	Inch Hg	30.220	30.220	30.220	
	Average Sqrt Delta P:	Inch HOH 1/2	1.065	1.089	1.066	
	Average Delta H:	Inch HOH	1.135	1.176	1.057	1.123
	Maximum Run Vacuum:	Inch Hg	3.500	3.000	3.000	3.500
	Meter Box Number:	Unity	3188	3188	3188	
	Average Meter Temp:	Degrees F	82.8	81.4	83.7	
	Average Stack Temp:	Degrees F	109.3	109.8	111.7	110.3
	Metered Sample Volume:	Cubic Feet	37.62	38.08	36.52	
	Standard Meter Volume:	Cubic Feet	37.26	37.81	36.10	
	Moisture Measured:	%	0.0225	0.0308	0.0403	
	Moisture Saturation:	%	0.0843	0.0855	0.0901	
	Moisture Used for Calculations:	%	0.0225	0.0308	0.0403	0.0312
	Pitot Coefficient:	Unity	0.84	0.84	0.84	
	Nozzle Diameter:	Inch	0.186	0.186	0.186	
	Stack Area:	Square Feet	28.26	28.26	28.26	
	Traverse Points:	Unity	12	12	12	
	Sampling Time:	Minutes	60	60	60	
	Stack Gas Molecular Weight:	lb/lb-mol	28.722	28.631	28.527	
	Actual Stack Velocity:	Feet/sec	61.956	63.487	62.313	62.586
	Actual Stack Gas Flow:	ACFM	105053	107649	105658	106120
	Dry Standard Stack Gas Flow:	DSCFM	96188	97644	94592	96141
	Isokinetic Rate:	%	96.79	96.75	95.36	
	Fluoride Emission:	lb/day	67.99	34.61	29.67	44.09
	Fluoride Emission:	lb/hr	2.83	1.44	1.24	1.84
	Particulate Emission:	lb/day	59.65	46.76	53.27	53.23
	Particulate Emission:	lb/hr	2.49	1.95	2.22	2.22

Source Sampling Summary Sheet						
	Facility:	NEW WALES				
	Plant:	DAP 2 WEST AMMONIA				
	Company ID:	1032				
	FDEP AIRS & Pt. ID:	105059 & 046				
	Test Team:	BARNES,SELLERS,CARROLL				
Parameter	Unit	Run 1	Run 2	Run 3	Average	
Date:		4/9/97	4/9/97	4/9/97		
Time Start:		915	1050	1210		
Time End:		1022	1200	1315		
Barometric Pressure:	Inch Hg	30.10	30.10	30.10		
Static Pressure:	Inch H2O	0.60	0.60	0.60		
Stack Pressure:	Inch Hg	30.144	30.144	30.144		
Average Sqrt Delta P:	Inch HOH 1/2	1.086	1.080	1.051		
Average Delta H:	Inch HOH	1.106	1.088	1.026	1.073	
Maximum Run Vacuum:	Inch Hg	5.0	7.0	6.0	7.0	
Meter Box Number:	Unity	3188	3188	3188		
Average Meter Temp:	Degrees F	79.3	84.8	82.0		
Average Stack Temp:	Degrees F	111.3	111.5	111.3	111.4	
Metered Sample Volume:	Cubic Feet	37.49	37.95	36.37		
Standard Meter Volume:	Cubic Feet	37.28	37.34	35.97		
Moisture Measured:	%	0.0637	0.0667	0.0582		
Moisture Saturation:	%	0.0895	0.0899	0.0895		
Moisture Used for Calculations:	%	0.0637	0.0667	0.0582	0.0629	
Pitot Coefficient:	Unity	0.84	0.84	0.84		
Nozzle Diameter:	Inch	0.186	0.186	0.186		
Stack Area:	Square Feet	28.26	28.26	28.26		
Traverse Points:	Unity	12	12	12		
Sampling Time:	Minutes	60	60	60		
Stack Gas Molecular Weight:	lb/lb-mol	28.271	28.237	28.331		
Actual Stack Velocity:	Feet/sec	63.862	63.533	61.728	63.041	
Actual Stack Gas Flow:	ACFM	108284	107727	104666	106892	
Dry Standard Stack Gas Flow:	DSCFM	94398	93581	91779	93253	
Isokinetic Rate:	%	98.66	99.69	97.91		
Ammonia Emission:	lb/day	1.08	8.16	3.76	4.33	
Ammonia Emission:	lb/hr	0.04	0.34	0.16	0.18	

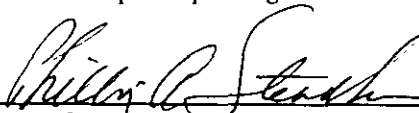
Source Sampling Summary Sheet							
		Facility:	New Wales				
		Plant:	DAP II West (NOX & SO2 test)				
		Company ID:	1032				
		FDEP AIRS & Pt. ID:	1050059 & 46				
		Test Team:	Barnes, Sellers				
				SO2			
		Parameter	Unit	NOx Run 1	NOx Run 2	NOx Run 3	
		Date:		4/8/97	4/9/97	4/9/97	
		Time Start:		1350	915	1050	
		Time End:		1505	1022	1200	
		Barometric Pressure:	Inch Hg	30.12	30.10	30.10	
		Static Pressure:	Inch H2O	0.55	0.60	0.60	
		Stack Pressure:	Inch Hg	30.160	30.144	30.144	
		Average Sqrt Delta P:	Inch HOH 1/2	1.081	1.086	1.080	
		Average Delta H:	Inch HOH	1.000	1.134	1.130	1.09
		Maximum Run Vacuum:	Inch Hg	3.000	5.000	7.000	7.000
		Meter Box Number:	Unity	3188	3188	3188	
		Average Meter Temp:	Degrees F	83.3	79.3	84.8	
		Average Stack Temp:	Degrees F	111.8	111.3	111.5	
		Metered Sample Volume:	Cubic Feet	41.01	37.49	37.96	
		Standard Meter Volume:	Cubic Feet	40.49	37.28	37.35	
		Moisture Measured:	%	0.0491	0.0524	0.0667	
		Moisture Saturation:	%	0.0908	0.0895	0.0899	
		Moisture Used for Calculations:	%	0.0491	0.0524	0.0667	0.0561
		Pitot Coefficient:	Unity	0.84	0.84	0.84	
		Nozzle Diameter:	Inch	0	0.186	0.186	
		Stack Area:	Square Feet	28.26	28.26	28.26	
		Traverse Points:	Unity	12	12	12	
		Sampling Time:	Minutes	60	60	60	
		Stack Gas Molecular Weight:	lb/lb-mol	28.430	28.394	28.237	
		Actual Stack Velocity:	Feet/sec	63.376	63.723	63.533	63.54
		Actual Stack Gas Flow:	ACFM	107461	108048	107727	107745
		Dry Standard Stack Gas Flow:	DSCFM	95107	95325	93582	94671
		Isokinetic Rate:	%	N/A	NA	N/A	
				Run 1	Run 2	Run 3	Average
		Nitrogen Oxides:	Date:	4/8/97	4/9/97	4/9/97	
			Time Start:	1300	940	1100	
			Time End:	1510	1040	1200	
			lb/hr	5.85	5.93	4.82	5.54
		Sulfur Dioxides:	Date:	4/8/97	4/8/97	4/8/97	
			Time Start:	1307	1337	1411	
			Time End:	1330	1357	1520	
			lb/hr	3.616	3.665	3.594	3.62

Report of Performance Sampling

IMC-Agrico Company

Project: DAP II Plant, East Train
Facility: New Wales Operations
Point ID: 45
AIRS: 1050059
Permit Number: AO53-215386
Test Date: April 3, 1997

To the best of my knowledge, all applicable field and analytical procedures comply with Florida Department of Environmental Protection requirements and all test data and plant operating data are true and correct.



Signature, Owner or Authorized Representative

P. A. Steadham, Chief Environmental Services - Concentrates

IMC-Agrico Company

P.O. Box 2000
Mulberry, FL 33860

(941) 428-2500

Company ID #: 1030

5/19/97

Introduction:

This report details the compliance sampling results for the following source:

Project: DAP II Plant, East Train
Facility: New Wales Operations
Point ID: 45
AIRS: 1050059
Permit Number: AO53-215386
Test Date: April 3, 1997

Summary of Results

The source was found to be in compliance with the permits and regulations of the Florida Department of Environmental Protection. The process data and emissions testing results are summarized below:

Process Data:

Total P2O5 Feed	79.32	TPH
DAP Production Rate	167	TPH
Fuel Firing Rate	17.3	mmBTU/hr
Fuel % Sulfur	Fuel Oil 2.12	

Scubber Operating Data

Dryer	Delta P in H2O	pH SU	R/G	Delta P in H2O	pH SU	
Venturi	20	2.9		Venturi	16	2.9
Tailgas	2.2	1.8		Tailgas	5.1	1.8

Emissions:

Allowables by Permit Condition Number 5.

		Actual	Allowable
Fluorides:	lb/hr	2.62	3.5
	lb/ton P2O5	0.033	0.06
Particulate:	lb/hr	3.00	14.1
	lb/ton P2O5	0.038	0.5
Nitrogen Oxides:	lb/hr	6.04	12.6
	lb/mmBTU	0.349	0.6
Sulfur Dioxides:	lb/hr	7.66	22.0
	lb/ton P2O5	0.097	0.7
Visible Emissions:	% Opacity	12.5	20

Emissions Testing Methods:

Methods in accordance with Specific Condition Number 14.

Fluorides: Method 5 & 13B Combined with modifications as allowed by Department for analysis.

Particulate: Method 5 & 13B Combined.

Nitrogen Oxides: Method 7E

Sulfur Dioxides: Method 6

Visible Emissions: Method 9

Source Sampling Summary Sheet						
	Facility:	New Wales				
	Plant:	DAP II East				
	Company ID:	1030				
	FDEP AIRS & Pt. ID:	1050059 & 45				
	Test Team:	ML,FB				
Parameter	Unit	Run 1	Run 2	Run 3	Average	
Date:		4/3/97	4/3/97	4/3/97		
Time Start:		1735	1955	2145		
Time End:		1843	2110	2248		
Barometric Pressure:	Inch Hg	30.31	30.31	30.31		
Static Pressure:	Inch H2O	0.79	0.79	0.79		
Stack Pressure:	Inch Hg	30.368	30.368	30.368		
Average Sqrt Delta P:	Inch HOH 1/2	1.031	1.175	1.199		
Average Delta H:	Inch HOH	1.030	1.300	1.358	1.229	
Maximum Run Vacuum:	Inch Hg	7.000	7.000	7.000	7.000	
Meter Box Number:	Unity	3188	3188	3188		
Average Meter Temp:	Degrees F	81.3	81.8	83.1		
Average Stack Temp:	Degrees F	116.2	114.3	114.3	114.9	
Metered Sample Volume:	Cubic Feet	35.08	40.16	41.08		
Standard Meter Volume:	Cubic Feet	34.98	40.04	40.86		
Moisture Measured:	%	0.0636	0.0465	0.0462		
Moisture Saturation:	%	0.1020	0.0966	0.0968		
Moisture Used for Calculations:	%	0.0636	0.0465	0.0462	0.0521	
Pitot Coefficient:	Unity	0.84	0.84	0.84		
Nozzle Diameter:	Inch	0.186	0.186	0.186		
Stack Area:	Square Feet	28.26	28.26	28.26		
Traverse Points:	Unity	12	12	12		
Sampling Time:	Minutes	60	60	60		
Stack Gas Molecular Weight:	lb/lb-mol	28.271	28.459	28.463		
Actual Stack Velocity:	Feet/sec	60.666	68.776	70.165	66.536	
Actual Stack Gas Flow:	ACFM	102866	116617	118971	112818	
Dry Standard Stack Gas Flow:	DSCFM	89586	103762	105883	99744	
Isokinetic Rate:	%	97.55	96.39	96.41		
Fluoride Emission:	lb/day	56.29	64.12	68.38	62.93	
Fluoride Emission:	lb/hr	2.35	2.67	2.85	2.62	
Particulate Emission:	lb/day	44.77	64.47	106.74	71.99	
Particulate Emission:	lb/hr	1.87	2.69	4.45	3.00	

Source Sampling Summary Sheet						
		Facility:	New Wales			
		Plant:	DAP II East (NOX & SO2 test)			
		Company ID:	1030			
		FDEP AIRS & Pt. ID:	1050059 & 45			
		Test Team:	ML, FB			
		Parameter	Unit		Moisture Run	
		Date:			4/3/97	
		Time Start:			1420	
		Time End:			1527	
		Barometric Pressure:	Inch Hg		30.31	
		Static Pressure:	Inch H2O		0.50	
		Stack Pressure:	Inch Hg		30.347	
		Average Sqrt Delta P:	Inch HOH 1/2		1.135	
		Average Delta H:	Inch HOH		0.000	
		Maximum Run Vacuum:	Inch Hg		4.000	
		Meter Box Number:	Unity		3188	
		Average Meter Temp:	Degrees F		80.6	
		Average Stack Temp:	Degrees F		112.1	
		Metered Sample Volume:	Cubic Feet		34.66	
		Standard Meter Volume:	Cubic Feet		34.52	
		Moisture Measured:	%		0.0496	
		Moisture Saturation:	%		0.0908	
		Moisture Used for Calculations:	%		0.0496	
		Pitot Coefficient:	Unity		0.84	
		Nozzle Diameter:	Inch		0	
		Stack Area:	Square Feet		28.26	
		Traverse Points:	Unity		12	
		Sampling Time:	Minutes		60	
		Stack Gas Molecular Weight:	lb/lb-mol		28.424	
		Actual Stack Velocity:	Feet/sec		66.383	
		Actual Stack Gas Flow:	ACFM		112558	
		Dry Standard Stack Gas Flow:	DSCFM		100133	
		Isokinetic Rate:	%		N/A	
				Run 1	Run 2	Run 3
		Nitrogen Oxides:	Date:	4/3/97	4/3/97	4/3/97
			Time Start:	1414	1532	1654
			Time End:	1514	1632	1802
			lb/hr	6.95	6.02	5.16
						6.04
		Sulfur Dioxides:	Date:	4/3/97	4/3/97	4/3/97
			Time Start:	1416	1445	1534
			Time End:	1436	1505	1554
			lb/hr	11.477	5.769	5.729
						7.66