Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

October 4, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. M. A. Daigle, General Manager
IMC Phosphates Company
P.O. Box 2000
Muiberry, FL 33860-1100

Re: Extension Request/DEP File No. 1050059-024-AC (PSD-FL-244)

Dear Mr. Daigle:

The Department reviewed your request dated July 21, 2000 to extend the expiration date of the construction permit from September 30, 2000 to September 30, 2001. We also reviewed the additional information in your letter dated August 28 and the compliance test information dated September 11 and September 14.

Per Rule 62-4.080(3), F.A.C., an extension for a construction permit shall be granted if the applicant can demonstrate reasonable assurances that upon completion, the extended permit will comply with the standards and conditions required by applicable regulation.

We understand that fluoride emissions were in excess of permitted limits during initial testing and that the company is investigating the causes. We also understand that Kiln C is not operating continuously, largely due to market conditions and that IMC will resume testing in December depending on kiln operation.

The expiration date of the permit is hereby extended through March 31, 2001 for the purposes of completing the improvements mentioned in the August 28 letter and to demonstrate compliance with the permit conditions. This extension is not an authorization to operate Kiln C in a manner that does not comply with the Department's rules, regulations, or permit conditions.

A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permitting decision is issued pursuant to Chapter 403, Florida Statutes.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above

at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This permitting decision is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this order will not be effective until further order of the Department.

Any party to this permitting decision (order) has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

for Howard L. Rhodes, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this PERMIT MODIFICATION was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 10/5/00 to the person(s) listed:

M. A. Daigle, IMC Phosphates Company*
Jeff Spence, Polk County ESD
Bill Thomas, DEP SWD
Gregg Worley, EPA
John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Charlotte J. Hayes (Clerk) 10/5/00 (Date)

SENDER: *COMPLETE THIS SECTION*

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

1. Article Addressed to:

Mr. M. A. Daigle, Gen. Mgr.
IMC Phosphates Company
P. O.. Box 2000
Mulberry, FL 33860-1100

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* | B. Date of Delivery 10-12-00

C. Signature
X [signature] ☐ Agent ☐ Addressee

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

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

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 2399

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:
Mr. M. A. Daigle, Gen. Mgr.

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

IMC Phosphates
Postmark Here

Name (Please Print Clearly) (to be completed by mailer)
Mr. M. A. Daigle
Street, Apt. No., or PO Box No.
P. O. Box 2000
City, State, ZIP+4
Mulberry, FL 33860-1100

PS Form 3800, July 1999 See Reverse for Instructions

7099 3400 0000 1453 2399

IMC

FILE

xc: Stack Team – UR Bldg.
A. A. Linero

Certified Mail 7099 3400 0005 0929 3262
Return Receipt Requested

September 14, 2000

RECEIVED
SEP 18 2000
BUREAU OF AIR REGULATION

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

RE: Multifos C-Kiln
Permit ID No. 1050059-024-AC
Unit ID No. 074
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 863-428-7106.

Sincerely,

P. A. Steadham, Manager
Environmental Services
Concentrates - Florida

PAS:oan

Enclosures

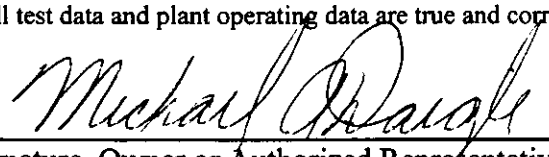
a:\t_1108

Report of Compliance Sampling

IMC-Phosphates Company

Project: Multifos C-Kiln
Facility: New Wales Operations
Point ID: 74
AIRS: 1050059
Permit Number: 1050059-014-AV (1050059-024-AC)
Test Date: August 4 & 8 , 2000

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
Michael A. Daigle, General Manager, New Wales

IMC-Phosphates Company
P.O. Box 2000
Mulberry, FL 33860

(863) 428-2500

Company ID #: 1108

09/12/2000

Introduction:

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

Project: Multifos C-Kiln
Facility: New Wales Operations
Point ID: 74
AIRS: 1050059
Permit Number: 1050059-014-AV (1050059-024-AC)
Test Date: August 4 & 8 2000

Summary of Results

The source was found to be in compliance with the conditions of the above-referenced permit with the exception of fluoride and particulate matter emission limitations. Compliance issues with these two pollutants are being addressed by staff of the Florida Department of Environmental Protection Bureau of Air Quality Management in Tallahassee, who issued the PSD constuction permit in September, 1998. The process data and emissions testing results are summarized below:

Process Data:

Date	Kiln Feed Rate TPH	P2O5 Feed Rate TPH	Emission Type Tested
08/04/2000	7.5	2.59	Particulate, Fluoride & Visible Emissions
08/08/2000	7.5	2.58	Sulfur Dioxide

Fuel Firing Information

Date	Kiln Fuel	Kiln Fuel Rate	
08/04/2000	Natural Gas	40.0	MMBtu/hr
08/08/2000	Natural Gas	39.1	MMBtu/hr

Emissions:

Allowables by Permit Condition Number P.5, P.6 , P.8, & P.9

		Actual	Allowable	
Fluorides:	lb/hr	0.58	0.10	based on P2O5 input rate
	lb/ton P2O5	0.224	0.038	on 8/4/2000
Particulates:	lb/hr	4.50	3.88	based on P2O5 input rate
	lb/ton P2O5	1.739	1.5	on 8/4/2000
Sulfur Dioxide:	lb/hr	4.06	8.70	
Visible Emissions:	%	7.3	15	

Emissions Testing Methods:

Methods in accordance with Specific Condition Number P.15

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

Particulate: Method 5 & 13B Combined.

Sulfur Dioxide: Method 8 without analysis for Acid Mist

Visible Emissions: Method 9

IMC-Phosphates Company

Process Information

Project: Multifos C-Kiln
Facility: New Wales Operations
Point ID: 74
AIRS: 1050059
Permit Number: 1050059-014-AV (1050059-024-AC)
Test Date: August 4 & 8 , 2000
Test Time: 1224-1700, 0840-1220

Process Rate Data & Calculations

Kiln Feed Rate

Date	Time of Test Run	Kiln	Kiln Feed Rate	Kiln Feed Moisture	% P	/.43646 %P2O5/%P	= P2O5 TPH
8/4/00	1224-1330	C Kiln	7.5	6.46	16.1	0.43646	2.59
8/4/00	1430-1537	C Kiln	7.5	6.46	16.1	0.43646	2.59
8/4/00	1555-1700	C Kiln	7.5	6.46	16.1	0.43646	2.59
	Average Kiln Feed Rate		**7.5**			**Average P2O5 TPH**	**2.59**
8/8/00	0840-0945	C Kiln	7.5	6.6	16.1	0.43646	2.58
8/8/00	1000-1105	C Kiln	7.5	6.6	16.1	0.43646	2.58
8/8/00	1114-1220	C Kiln	7.5	6.6	16.1	0.43646	2.58
	Average Kiln Feed Rate		**7.5**			**Average P2O5 TPH**	**2.58**

Scrubber Data Collected During Test Periods

			Caustic Scrubber		**Cross flow Scrubber**		
Date	Time	Sulfite Sump ph	50 % Caustic Flow gph	Recirc Flow gpm	Total Liquid gpm	Delta p inches H20	Fan Amps
8/4/00	12:00	9.3	26	201	1985	0.82	105
	13:00	9.5	26	201	1968	0.81	104
	14:00	9.4	26	201	1951	0.82	106
	15:00	7.8	25	202	1933	0.88	110
	16:00	6.4	26	201	1903	0.84	110
	17:00	6.5	23	201	1880	0.84	109
Test Day Average			**25**	**201**	**1937**	**0.84**	**107**
8/8/00	8:00	7.8	10	202	1809	0.58	87
	9:00	8.3	11	202	1782	0.60	88
	10:00	7.2	14	203	1835	0.67	92
	11:00	6.5	24	203	1936	0.68	93
	12:00	6.5	25	202	1935	0.67	94
Test Day Average			**17**	**202**	**1859**	**0.64**	**91**

Fuel Usage Information

Date	Time	Fuel Type	C Kiln Fuel Rate mmBTU/hr	Date	Time	Fuel Type	C Kiln Fuel Rate mmBTU/hr
8/4/00	1224-1330	Natural Gas	39.6	8/8/00	0840-0945	Natural Gas	39.0
8/4/00	1430-1537	Natural Gas	40.2	8/8/00	1000-1105	Natural Gas	39.1
8/4/00	1555-1700	Natural Gas	40.2	8/8/00	1114-1220	Natural Gas	39.1
Average Fuel Firing Rates			**40.0**	**Average Fuel Firing Rates**			**39.1**

Process Statement:

I certify that the above statements are true and correct to the best of my knowledge.

Signature: Peter Green FOR JOHN CLEMENTS

Title: SUPERINTENDENT FOR JOHN CLEMENTS

Date: 9/13/00

Source Sampling Summary Sheet

Facility:	New Wales
Plant:	Multifos C-Kiln
Company ID:	1108
FDEP AIRS & Pt. ID:	1050059 & 074
Test Team:	FB,DC,RS

Parameter	Unit	Run 1	Run 2	Run 3	Average
Date:		8/8/00	8/8/00	8/8/00	
Time Start:		840	1000	1114	
Time End:		945	1105	1220	
Barometric Pressure:	Inch Hg	30.15	30.15	30.15	
Static Pressure:	Inch H2O	0.32	0.32	0.32	
Stack Pressure:	Inch Hg	30.174	30.174	30.174	
Average Sqrt Delta P:	Inch HOH 1/2	0.583	0.589	0.602	
Average Delta H:	Inch HOH	1.767	1.813	1.858	1.813
Maximum Run Vacuum:	Inch Hg	10.0	9.0	12.0	
Meter Box Number:	Unity	3187	3187	3187	
Average Meter Temp:	Degrees F	84.0	89.3	85.7	
Average Stack Temp:	Degrees F	111.6	112.6	113.5	112.6
Metered Sample Volume:	Cubic Feet	46.67	46.66	47.04	
Standard Meter Volume:	Cubic Feet	45.69	45.24	45.91	
Moisture Measured:	%	0.0906	0.0891	0.0894	
Moisture Saturation:	%	0.0902	0.0928	0.0953	
Moisture Used for Calculations:	%	0.0902	0.0891	0.0894	0.0895
Pitot Coefficient:	Unity	0.84	0.84	0.84	
Nozzle Diameter:	Inch	0.28	0.28	0.28	
Stack Area:	Square Feet	7.07	7.07	7.07	
Traverse Points:	Unity	24	24	24	
Sampling Time:	Minutes	60	60	60	
Stack Gas Molecular Weight:	lb/lb-mol	27.980	27.992	27.989	
Actual Stack Velocity:	Feet/sec	34.452	34.826	35.628	34.969
Actual Stack Gas Flow:	ACFM	14604	14763	15103	14823
Dry Standard Stack Gas Flow:	DSCFM	12377	12504	12768	12550
Isokinetic Rate:	%	101.78	99.71	99.11	
Sulfur Dioxide Emission:	lb/day	64.71	75.66	151.71	97.36
Sulfur Dioxide Emission:	lb/hr	2.70	3.15	6.32	4.06

Source Sampling Summary Sheet

Facility:	NEW WALES
Plant:	MULTIFOS C- KILN
Company ID:	1108
FDEP AIRS & Pt. ID:	1050059 & 074
Test Team:	RS/FB

Parameter	Unit	Run 1	Run 2	Run 3	Average
Date:		08/04/00	08/04/00	08/04/00	
Time Start:		1224	1430	1555	
Time End:		1330	1537	1700	
Barometric Pressure:	Inch Hg	30.11	30.11	30.11	
Static Pressure:	Inch H2O	0.31	0.31	0.31	
Stack Pressure:	Inch Hg	30.133	30.133	30.133	
Average Sqrt Delta P:	Inch HOH 1/2	0.646	0.682	0.690	
Average Delta H:	Inch HOH	1.363	1.517	1.533	1.471
Maximum Run Vacuum:	Inch Hg	15.0	12.0	10.0	
Meter Box Number:	Unity	3187	3187	3187	
Average Meter Temp:	Degrees F	82.9	83.8	82.2	
Average Stack Temp:	Degrees F	111.8	112.0	112.7	112.2
Metered Sample Volume:	Cubic Feet	40.02	42.61	43.30	
Standard Meter Volume:	Cubic Feet	39.16	41.65	42.44	
Moisture Measured:	%	0.0886	0.0824	0.0808	
Moisture Saturation:	%	0.0908	0.0912	0.0931	
Moisture Used for Calculations:	%	0.0886	0.0824	0.0808	0.0839
Pitot Coefficient:	Unity	0.84	0.84	0.84	
Nozzle Diameter:	Inch	0.250	0.250	0.250	
Stack Area:	Square Feet	7.07	7.07	7.07	
Traverse Points:	Unity	24	24	24	
Sampling Time:	Minutes	60	60	60	
Stack Gas Molecular Weight:	lb/lb-mol	27.997	28.066	28.083	
Actual Stack Velocity:	Feet/sec	38.220	40.275	40.786	39.760
Actual Stack Gas Flow:	ACFM	16201	17072	17289	16854
Dry Standard Stack Gas Flow:	DSCFM	13730	14565	14756	14350
Isokinetic Rate:	%	98.61	98.87	99.44	
Fluoride Emission:	lb/day	17.54	15.14	8.90	13.86
Fluoride Emission:	lb/hr	0.73	0.63	0.37	0.58
Particulate Emission:	lb/day	156.02	101.93	65.73	107.89
Particulate Emission:	lb/hr	6.50	4.25	2.74	4.50

VISIBLE EMISSION OBSERVATION FORM

SOURCE NAME: IMC PHOSPHATES

ADDRESS: NEW WALES PLANT

P.O. BOX 2000 3095 C.R. 640

CITY: MULBERRY | STATE: FL | ZIP: 33860

PHONE: 863-428-7383 | SOURCE ID NUMBER: 074

PROCESS EQUIPMENT: MULTI-PHOS C-KILN | OPERATING MODE: 7.5 TPH

CONTROL EQUIPMENT: WET SCRUBBER | OPERATING MODE: NORMAL

DESCRIBE EMISSION POINT

START: CIRCULAR STACK STOP: SAME

HEIGHT ABOVE GROUND LEVEL START: ≈125' STOP: SAME

HEIGHT RELATIVE TO OBSERVER START: ≈125 STOP: SAME

DISTANCE FROM OBSERVER START: ≈350 STOP: SAME

DIRECTION FROM OBSERVER START: NNE STOP: NNE

DESCRIBE EMISSIONS

START: LOFTING PLUME STOP: SAME

EMISSION COLOR START: WHITE STOP: WHITE

PLUME TYPE: CONTINUOUS ☑ FUGITIVE ☐ INTERMITTENT ☐

WATER DROPLETS PRESENT: NO ☑ YES ☐

IS WATER DROPLET PLUME: ATTACHED ☐ N/A DETACHED

POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED

START: ≈20 ABOVE STACK EXIT STOP: SAME

DESCRIBE BACKGROUND

START: SKY STOP: SKY

BACKGROUND COLOR START: BLUE WHITE STOP: SAME

SKY CONDITIONS START: SCATT STOP: SAME

WIND SPEED mph START: 3-6 STOP: SAME

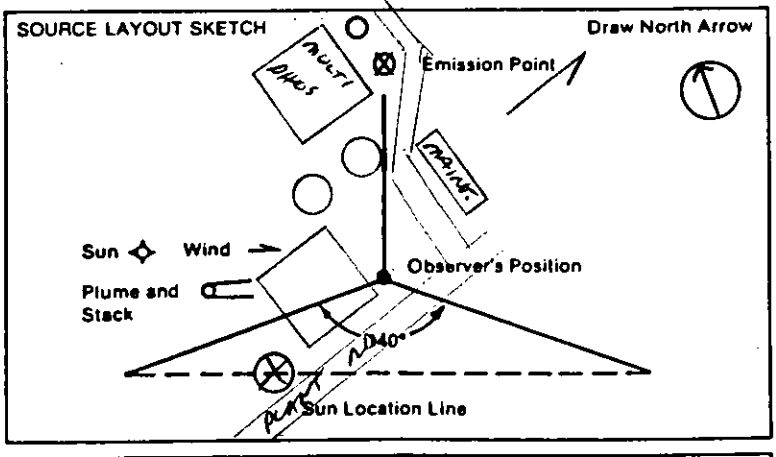
WIND DIRECTION START: W STOP: W

AMBIENT TEMP START: 95 STOP: 95

WET BULB TEMP: 83

RH, percent: 60%

SOURCE LAYOUT SKETCH



COMMENTS

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS

SIGNATURE

TITLE

DATE

OBSERVATION DATE: 8-4-00 | START TIME: 14:30 | STOP TIME: 15:30

SEC / MIN	0	15	30	45	SEC / MIN	0	15	30	45
1	5	5	5	5	31	5	10	10	10
2	5	5	5	5	32	10	10	5	5
3	5	5	5	5	33	5	5	5	5
4	10	5	5	5	34	5	5	5	5
5	5	5	5	5	35	5	5	5	10
6	5	5	5	5	36	10	5	5	10
7	5	5	5	5	37	10	10	5	5
8	5	5	10	10	38	5	5	5	5
9	5	5	5	5	39	5	5	10	10
10	5	5	5	5	40	10	5	5	5
11	5	5	5	5	41	10	10	10	5
12	5	10	5	5	42	5	5	5	5
13	5	5	5	5	43	5	5	5	5
14	5	5	5	5	44	5	5	5	5
15	10	10	10	5	45	5	5	10	10
16	5	5	5	5	46	5	5	5	5
17	5	5	5	5	47	5	5	5	5
18	5	5	10	10	48	5	5	5	5
19	5	5	5	5	49	5	10	5	5
20	5	5	5	5	50	10	10	5	5
21	5	5	5	5	51	5	5	5	5
22	5	5	5	5	52	5	5	5	5
23	5	5	5	5	53	5	5	5	5
24	5	5	5	5	54	5	5	10	10
25	5	5	5	10	55	5	5	5	5
26	10	10	5	5	56	5	5	5	5
27	5	5	5	5	57	5	5	5	5
28	5	5	5	5	58	5	5	5	10
29	5	5	5	5	59	10	10	10	5
30	5	5	5	5	60	5	5	5	5

AVERAGE OPACITY FOR HIGHEST PERIOD: 7.3%

NUMBER OF READINGS ABOVE: 15 % WERE 0

RANGE OF OPACITY READINGS MINIMUM: 5% MAXIMUM: 10%

OBSERVER'S NAME (PRINT): JEFFREY J. KENT

OBSERVER'S SIGNATURE: Jeffrey J. Kent | DATE: 8/4/00

ORGANIZATION: IMC PHOSPHATES

CERTIFIED BY: ETA TAMPA - FDEP | DATE: 2/22/00

VERIFIED BY | DATE

Test Participants

Conducted the Field Testing

1 F. Barnes

2 R. Sellers

3 D.Carroll

Performed the Laboratory Analysis

1 F. Barnes

2 R. Sellers

3 D.Carroll

Provided the Process Data

1 J. Clements

Prepared the Test Report

1 R. Sellers

2 F.Barnes

Field Data

&

Run Calculations

Run 1 Calculations and Results

Facility: NEW WALES
Plant: MULTIFOS C- KILN
Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074
Test Team: RS/FB

Date: 08/04/00
Start Time: 1224 End Time: 1330

Standard Meter Volume Vms:	39.16 dscf
Average Stack Velocity:	38.22 fps
Stack Gas Volume:	16201 ACFM
Stack Gas Dry Volume:	13730 DSCFM
Isokinetic Variation:	98.61 %
Isokinetics Adjusted For Bws>Saturation:	NA %
Vlc calculated for Saturated Conditions:	NA ml H2O

Emission Calculations

Particulate	Total mg:	140.3 mg
		6.50 lb/hr
		156.02 lb/day
Fluoride	Total mg:	15.78 mg
		0.73 lb/hr
		17.54 lb/day

Run 1 Data

Facility:	NEW WALES			
Plant:	MULTIFOS C- KILN			
Company ID:	1108			
FDEP AIRS & Pt. ID:	1050059 & 074			
Test Team:	RS/FB			
Date:	08/04/00			
Start Time:	1224		End Time:	1330
Number ot Traverse Points:	24			
Dwell Time/Point:	2.5	min.		
Total Test Time:	60	min.		
Stack Diameter:	36	inches		
Stack Area:	7.07	sq. ft.		
Molecular Weight Dry Md:	28.969			
Volume of Water Vapor Condensed:	70	ml		
Weight of Water Collected in Silica Gel:	10.9	gram		
Moisture Volume Fraction Bwo:	0.0886			
Moisture Volume Saturated Bwo:	0.0908			
Moisture Percent Saturation:	98			
Moisture Used for Calculations:	0.0886			
Stack Molecular Weight Ms:	27.997			
Barometric Pressure Pb:	30.11	in Hg		
Stack Static Pressure Pv:	0.31	in H2O		
Stack Pressure Ps:	30.133	in Hg		
Average Meter Delta H:	1.363	in H2O		
Meter Pressure Pm:	30.210	in Hg		
Console Number:	3187			
Meter Delta Ha:	1.742			
Meter Correction Factor:	0.9969			
Average Meter Temperature:	82.9	deg. F		
Average Stack Temperature:	111.8	deg. F	44.4	deg C
Average Square Root Delta P:	0.646			
Meter Volume Vm:	40.02	cu. ft.		
Probe Length/Liner:	3' SS			
Cp:	0.84			
Nozzle Ident.:	0.250			
Nozzle Diameter Dn:	0.250	in.		
Impinger Set Number:	P-2			
Average Computer K:	3.3473			

Run 1 Data Sheet

Facility: NEW WALES
Plant: MULTIFOS C- KILN
Team (CB/PR): RS/FB

Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074

Date	08/04/00		Meter Box Number	3187	
Dwell Time	2.5	min.	Meter Delta Ha (in. H2O)	1.742	Pitot Check
Traverse Points	24		Meter Correction Factor	0.9969	pos 4.0 in H2O
Stack Diameter	36	inches	Nozzle Ident.:	0.250	neg 4.0 in H2O
Est % Saturation	90	%	Nozzle Diameter Dn:	0.250	Leak Check
Stack Static Pressure	0.31	in H2O	Impinger Set Number:	P-2	cfm 0.010 cfm
Barometric Pressure	30.11	in Hg	Probe length/Liner:	3' SS	vac 15 in Hg
Dry Molecular Weight	28.969		Filter Set Number	4	

Time Start: 1224

Point	Time	Meter Volume	Delta P	Calc'd Delta H	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0.0	530.577	0.48	1.612	1.6	111	224	255	82	82	66	10
2	2.5	532.32	0.5	1.679	1.6	111	250	225	82	82	65	12
3	5.0	534.08	0.46	1.545	1.5	111	256	227	84	82	63	12
4	7.5	535.86	0.48	1.615	1.6	111	254	260	82	82	63	13
5	10.0	537.65	0.5	1.679	1.6	111	234	260	83	82	63	13
6	12.5	539.42	0.51	1.714	1.7	111	227	251	83	82	62	13
7	15.0	541.22	0.47	1.580	1.5	112	226	232	83	82	62	14
8	17.5	542.97	0.47	1.570	1.5	112	226	231	83	82	60	14
9	20.0	544.75	0.43	1.437	1.4	112	226	233	83	82	60	14
10	22.5	546.5	0.43	1.437	1.4	112	225	237	83	82	63	14
11	25.0	548.28	0.43	1.437	1.4	112	225	240	83	82	64	15
12	27.5	550.01	0.46	1.537	1.5	112	225	243	83	82	65	15
13	30.0	551.777	0.34	1.136	1.1	112	225	237	83	82	65	10
14	32.5	553.28	0.33	1.103	1.1	112	226	240	83	82	63	10
15	35.0	554.79	0.35	1.169	1.1	112	225	240	84	82	62	11
16	37.5	556.34	0.34	1.137	1.1	112	225	240	84	82	61	11
17	40.0	557.88	0.33	1.104	1.1	112	225	239	84	82	62	11
18	42.5	559.42	0.32	1.070	1	112	225	236	85	82	62	10
19	45.0	560.88	0.32	1.071	1	112	225	236	86	82	63	10
20	47.5	562.33	0.37	1.240	1.2	112	225	240	86	82	63	11
21	50.0	563.88	0.4	1.340	1.3	112	225	240	86	82	64	13
22	52.5	565.5	0.44	1.474	1.4	113	225	241	87	82	65	14
23	55.0	567.17	0.46	1.533	1.5	113	225	239	86	82	65	15
24	57.5	568.9	0.47	1.565	1.5	112	225	237	85	82	66	15
End	60.0	570.599										
				Average		111.8			82.9		63.2	
			0.51	Max			256	260			66	15
				Min			224	225			60	
				Range			223-273	223-273			32-68	

Time End: 1330

Pitot Check		Min Value
pos	4.3	0.51 in H2O
neg	4.5	0.51 in H2O
Leak Check		
cfm	0.010	<0.020 cfm
vac	15	15 in Hg

Field Data Sheet

Run Number: 1

Facility: New Wales

Plant: Multifos C-Kiln

Company ID: 1108

Test Team: RS/EB

FDEP AIRS & Pt. ID: 1050054 E074

Date	8-4-00		Meter Box Number	3187	
Traverse Points	24		Meter Delta Ha (in. H2O)	1.742	Pitot Check
Stack Diameter	36	inches	Meter Correction Factor	.9969	pos 4.0 in H2O
Dwell Time	2.5	min.	Nozzle Identification:	.250	neg 4.0 in H2O
Est % Saturation	90	%	Nozzle Diameter Dn:	.250	Leak Check
Stack Static Pressure	.31	in H2O	Impinger Set Number:	D-2	cfm .010
Barometric Pressure	30.11	in Hg	Probe length/Liner:	3'55	vac 15 in Hg
Dry Molecular Weight	28.969		Filter Set Number:	4	

Time Start 1224

Point	Time	Meter Volume	Delta P	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0	530.577	.48	1.6	111	224	255	82	82	66	10
2	2.5	532.32	.50	1.6	111	250	225	82	82	65	12
3	5	534.08	.46	1.5	111	256	227	84	82	63	12
4	7.5	535.86	.48	1.6	111	254	260	82	82	63	13
5	10	537.65	.50	1.6	111	234	260	83	82	63	13
6	12.5	539.42	.51	1.7	111	227	251	83	82	62	13
7	15	541.22	.47	1.5	112	226	232	83	82	62	14
8	17.5	542.97	.47	1.5	112	226	231	83	82	60	14
9	20	544.75	.43	1.4	112	226	233	83	82	60	14
10	22.5	546.50	.43	1.4	112	225	237	83	82	63	14
11	25	548.28	.43	1.4	112	225	240	83	82	64	15
12	27.5	550.01	.46	1.5	112	225	243	83	82	65	15
13	30	551.777	.34	1.1	112	225	237	83	82	65	10
14	32.5	553.28	.33	1.1	112	226	240	83	82	63	10
15	35	554.79	.35	1.1	112	225	240	84	82	62	11
16	37.5	556.34	.34	1.1	112	225	240	84	82	61	11
17	40	557.88	.33	1.1	112	225	239	84	82	62	11
18	42.5	559.42	.32	1.0	112	225	236	85	82	62	10
19	45	560.88	.32	1.0	112	225	236	86	82	63	10
20	47.5	562.33	.37	1.2	112	225	240	86	82	63	11
21	50	563.88	.40	1.3	112	225	240	86	82	64	13
22	52.5	565.50	.44	1.4	113	225	241	87	82	65	14
23	55	567.17	.46	1.5	113	225	239	86	82	65	15
24	57.5	568.90	.47	1.5	112	225	237	85	82	66	15
25	60	570.589									
End											

Time End 1330

Pitot Check			Leak Check	
pos	4.3	in H2O	cfm	.010
neg	4.5	in H2O	vac	15 in Hg

Run 2 **Calculations and Results**

Facility: NEW WALES
Plant: MULTIFOS C- KILN
Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074
Test Team: RS/FB

Date: 08/04/00
Start Time: 1430 End Time: 1537

Standard Meter Volume Vms:	41.65	dscf
Average Stack Velocity:	40.27	fps
Stack Gas Volume:	17072	ACFM
Stack Gas Dry Volume:	14565	DSCFM
Isokinetic Variation:	98.87	%
Isokinetics Adjusted For Bws>Saturation:	NA	%
Vlc calculated for Saturated Conditions:	NA	ml H2O

Emission Calculations

Particulate	Total mg:	91.9	mg
		4.25	lb/hr
		101.93	lb/day
Fluoride	Total mg:	13.65	mg
		0.63	lb/hr
		15.14	lb/day

Run 2 Data

Facility:	NEW WALES		
Plant:	MULTIFOS C- KILN		
Company ID:	1108		
FDEP AIRS & Pt. ID:	1050059 & 074		
Test Team:	RS/FB		
Date:	08/04/00		
Start Time:	1430	End Time:	1537
Number ot Traverse Points:	24		
Dwell Time/Point:	2.5 min.		
Total Test Time:	60 min.		
Stack Diameter:	36 inches		
Stack Area:	7.07 sq. ft.		
Molecular Weight Dry Md:	28.969		
Volume of Water Vapor Condensed:	70 ml		
Weight of Water Collected in Silica Gel:	9.4 gram		
Moisture Volume Fraction Bwo:	0.0824		
Moisture Volume Saturated Bwo:	0.0912		
Moisture Percent Saturation:	90		
Moisture Used for Calculations:	0.0824		
Stack Molecular Weight Ms:	28.066		
Barometric Pressure Pb:	30.11 in Hg		
Stack Static Pressure Pv:	0.31 in H2O		
Stack Pressure Ps:	30.133 in Hg		
Average Meter Delta H:	1.517 in H2O		
Meter Pressure Pm:	30.222 in Hg		
Console Number:	3187		
Meter Delta Ha:	1.742		
Meter Correction Factor:	0.9969		
Average Meter Temperature:	83.8 deg. F		
Average Stack Temperature:	112.0 deg. F	44.4 deg C	
Average Square Root Delta P:	0.682		
Meter Volume Vm:	42.61 cu. ft.		
Probe Length/Liner:	5'SS		
Cp:	0.84		
Nozzle Ident.:	0.250		
Nozzle Diameter Dn:	0.250 in.		
Impinger Set Number:	F-3		
Average Computer K:	3.3499		

Run 2 Data Sheet

Facility: NEW WALES
Plant: MULTIFOS C- KILN
Team (CB/PR): RS/FB

Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074

Date	08/04/00			
Dwell Time	2.5	min.	Meter Box Number	3187
Traverse Points	24		Meter Delta Ha (in. H2O)	1.742
Stack Diameter	36	inches	Meter Correction Factor	0.9969
Est % Saturation	90	%	Nozzle Ident.:	0.250
Stack Static Pressure	0.31	in H2O	Nozzle Diameter Dn:	0.250
Barometric Pressure	30.11	in Hg	Impinger Set Number:	F-3
Dry Molecular Weight	28.969		Probe length/Liner:	5'SS
			Filter Set Number	5

Pitot Check
pos 4.6 in H2O
neg 4.7 in H2O
Leak Check
cfm 0.000 cfm
vac 15 in Hg

Time Start 1430

Point	Time	Meter Volume	Delta P	Calc'd Delta H	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0.0	571.839	0.5	1.682	1.6	111	255	242	83	83	67	6
2	2.5	573.63	0.51	1.716	1.7	111	246	242	82	82	58	7
3	5.0	575.48	0.53	1.780	1.7	112	247	242	83	82	56	8
4	7.5	577.33	0.55	1.838	1.8	112	245	242	83	82	55	10
5	10.0	579.25	0.55	1.838	1.8	112	246	242	84	82	55	10
6	12.5	581.15	0.47	1.572	1.5	112	247	242	84	83	56	9
7	15.0	582.95	0.46	1.540	1.5	113	245	242	85	83	56	9
8	17.5	584.72	0.47	1.565	1.5	112	244	242	85	83	57	9
9	20.0	586.48	0.48	1.608	1.6	112	242	245	85	82	58	10
10	22.5	588.28	0.48	1.607	1.6	112	245	242	86	83	58	10
11	25.0	590.08	0.47	1.576	1.5	112	245	243	86	83	60	10
12	27.5	591.87	0.4	1.341	1.3	112	247	243	86	83	62	9
13	30.0	593.602	0.44	1.475	1.4	112	252	245	84	82	66	9
14	32.5	595.31	0.47	1.572	1.5	112	248	245	84	83	63	9
15	35.0	597.04	0.52	1.740	1.7	112	246	236	85	83	60	11
16	37.5	598.9	0.54	1.809	1.8	112	247	235	85	83	57	12
17	40.0	600.82	0.53	1.776	1.7	112	246	238	85	83	53	12
18	42.5	602.73	0.45	1.508	1.5	112	245	241	85	82	51	10
19	45.0	604.55	0.42	1.406	1.4	112	246	242	85	83	51	10
20	47.5	606.3	0.38	1.273	1.2	112	246	241	85	83	51	9
21	50.0	607.95	0.37	1.240	1.2	112	246	241	86	83	52	8
22	52.5	609.55	0.4	1.341	1.3	112	246	239	86	83	53	9
23	55.0	611.19	0.41	1.375	1.3	112	247	250	87	83	55	9
24	57.5	612.82	0.4	1.343	1.3	112	246	250	87	83	55	9
End	60.0	614.454										
				Average		112.0			83.8		56.9	
			0.55	Max			255	250			67	12
				Min			242	235			51	
				Range			223-273	223-273			32-68	

Time End 1537

Pitot Check — Min Value
pos 5.0 — 0.55 in H2O
neg 4.5 — 0.55 in H2O
Leak Check
cfm 0.000 — <0.020 cfm
vac 13 — 12 in Hg

Field Data Sheet

Run Number: 2

Facility: New Wales

Plant: Multifos C-Kiln

Company ID: 1108

Test Team: RS/FB

FDEP AIRS & Pt. ID: 1050059 5074

Date	8-4-00	Meter Box Number	3187	Pitot Check	
Traverse Points	24	Meter Delta Ha (in. H2O)	1.742	pos 4.6	in H2O
Stack Diameter	36 inches	Meter Correction Factor	.9969	neg 4.7	in H2O
Dwell Time	2.5 min.	Nozzle Identification:	.250	Leak Check	
Est % Saturation	90 %	Nozzle Diameter Dn:	.250	cfm .00	
Stack Static Pressure	-.31 in H2O	Impinger Set Number:	F-3	vac 15	in Hg
Barometric Pressure	30.11 in Hg	Probe length/Liner:	5'SS		
Dry Molecular Weight	28.969	Filter Set Number:	5		

Time Start 1430

Point	Time	Meter Volume	Delta P	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0	571.839	.50	1.6	111	255	242	83	83	67	6
2	2.5	573.63	.51	1.7	111	246	242	82	82	58	7
3	5	575.48	.53	1.7	112	247	242	83	82	56	8
4	7.5	577.33	.55	1.8	112	245	242	83	82	55	10
5	10	579.25	.55	1.8	112	246	242	84	82	55	10
6	12.5	581.15	.47	1.5	112	247	242	84	83	56	9
7	15	582.95	.46	1.5	113	245	242	85	83	56	9
8	17.5	584.72	.47	1.5	112	244	242	85	83	57	9
9	20	586.48	.48	1.6	112	242	245	85	82	58	10
10	22.5	588.28	.48	1.6	112	245	242	86	83	58	10
11	25	590.08	.47	1.5	112	245	243	86	83	60	10
12	27.5	591.87	.40	1.3	112	247	243	86	83	62	9
13	30	593.602	.44	1.4	112	252	245	84	82	66	9
14	32.5	595.31	.47	1.5	112	248	245	84	83	63	9
15	35	597.04	.52	1.7	112	246	236	85	83	60	11
16	37.5	598.90	.54	1.8	112	247	235	85	83	57	12
17	40	600.82	.53	1.7	112	246	238	85	83	53	12
18	42.5	602.73	.45	1.5	112	245	241	85	82	51	10
19	45	604.55	.42	1.4	112	246	242	85	83	51	10
20	47.5	606.30	.38	1.2	112	246	241	85	83	51	9
21	50	607.45	.37	1.2	112	246	241	86	83	52	8
22	52.5	609.55	.40	1.3	112	246	239	86	83	53	9
23	55	611.19	.41	1.3	112	247	250	87	83	55	9
24	57.5	612.82	.40	1.3	112	246	250	87	83	55	9
25	60	614.454									
End											

Time End 1537

Pitot Check			Leak Check	
pos	5.0	in H2O	cfm	.00
neg	4.5	in H2O	vac	13 in Hg

Run 3 **Calculations and Results**

Facility: NEW WALES
Plant: MULTIFOS C- KILN
Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074
Test Team: RS/FB

Date: 08/04/00
Start Time: 1555 End Time: 1700

Standard Meter Volume Vms:	42.44	dscf
Average Stack Velocity:	40.79	fps
Stack Gas Volume:	17289	ACFM
Stack Gas Dry Volume:	14756	DSCFM
Isokinetic Variation:	99.44	%
Isokinetics Adjusted For Bws>Saturation:	NA	%
Vlc calculated for Saturated Conditions:	NA	ml H2O

Emission Calculations

Particulate	Total mg:	59.6	mg
		2.74	lb/hr
		65.73	lb/day
Fluoride	Total mg:	8.07	mg
		0.37	lb/hr
		8.90	lb/day

Run 3 Data

Facility:	NEW WALES		
Plant:	MULTIFOS C- KILN		
Company ID:	1108		
FDEP AIRS & Pt. ID:	1050059 & 074		
Test Team:	RS/FB		
Date:	08/04/00		
Start Time:	1555	End Time:	1700
Number ot Traverse Points:	24		
Dwell Time/Point:	2.5 min.		
Total Test Time:	60 min.		
Stack Diameter:	36 inches		
Stack Area:	7.07 sq. ft.		
Molecular Weight Dry Md:	28.969		
Volume of Water Vapor Condensed:	70 ml		
Weight of Water Collected in Silica Gel:	9.2 gram		
Moisture Volume Fraction Bwo:	0.0808		
Moisture Volume Saturated Bwo:	0.0931		
Moisture Percent Saturation:	87		
Moisture Used for Calculations:	0.0808		
Stack Molecular Weight Ms:	28.083		
Barometric Pressure Pb:	30.11 in Hg		
Stack Static Pressure Pv:	0.31 in H2O		
Stack Pressure Ps:	30.133 in Hg		
Average Meter Delta H:	1.533 in H2O		
Meter Pressure Pm:	30.223 in Hg		
Console Number:	3187		
Meter Delta Ha:	1.742		
Meter Correction Factor:	0.9969		
Average Meter Temperature:	82.2 deg. F		
Average Stack Temperature:	112.7 deg. F	44.8 deg C	
Average Square Root Delta P:	0.690		
Meter Volume Vm:	43.30 cu. ft.		
Probe Length/Liner:	3' SS		
Cp:	0.84		
Nozzle Ident.:	0.250		
Nozzle Diameter Dn:	0.250 in.		
Impinger Set Number:	P-3		
Average Computer K:	3.3240		

Run 3 Data Sheet

Facility: NEW WALES
Plant: MULTIFOS C- KILN
Team (CB/PR): RS/FB

Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074

Date	08/04/00	Meter Box Number	3187	
Dwell Time	2.5 min.	Meter Delta Ha (in. H2O)	1.742	Pitot Check
Traverse Points	24	Meter Correction Factor	0.9969	pos 4.6 in H2O
Stack Diameter	36 inches	Nozzle Ident.:	0.250	neg 4.5 in H2O
Est % Saturation	90 %	Nozzle Diameter Dn:	0.250	Leak Check
Stack Static Pressure	0.31 in H2O	Impinger Set Number:	P-3	cfm 0.010 cfm
Barometric Pressure	30.11 in Hg	Probe length/Liner:	3' SS	vac 15 in Hg
Dry Molecular Weight	28.969	Filter Set Number	6	

Time Start 1555

Point	Time	Meter Volume	Delta P	Calc'd Delta H	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0.0	614.702	0.47	1.559	1.5	113	228	225	82	82	67	5
2	2.5	616.49	0.5	1.659	1.6	113	248	254	81	82	56	6
3	5.0	618.3	0.52	1.724	1.7	112	247	251	82	82	50	7
4	7.5	620.17	0.55	1.836	1.8	113	246	241	82	81	49	8
5	10.0	622.1	0.57	1.889	1.8	113	245	238	83	82	50	8
6	12.5	624.04	0.55	1.826	1.8	113	244	239	83	81	51	8
7	15.0	625.97	0.54	1.792	1.7	113	245	242	83	81	53	8
8	17.5	627.87	0.5	1.659	1.6	113	244	241	83	82	54	8
9	20.0	629.73	0.48	1.594	1.5	113	247	241	83	81	54	8
10	22.5	631.54	0.48	1.593	1.5	113	247	241	84	81	55	8
11	25.0	633.34	0.46	1.528	1.5	113	246	242	84	81	56	8
12	27.5	635.14	0.41	1.362	1.3	113	245	243	84	81	56	7
13	30.0	636.846	0.37	1.229	1.2	113	248	244	83	81	63	7
14	32.5	638.49	0.36	1.194	1.1	113	246	244	83	81	58	6
15	35.0	640.04	0.38	1.261	1.2	113	248	243	84	81	56	7
16	37.5	641.62	0.42	1.395	1.2	112	248	243	84	81	56	7
17	40.0	643.22	0.45	1.503	1.5	112	247	243	84	81	56	7
18	42.5	645.03	0.46	1.537	1.5	112	247	244	84	81	57	8
19	45.0	646.84	0.48	1.604	1.6	112	246	244	84	81	59	9
20	47.5	648.66	0.5	1.670	1.6	113	245	244	83	81	59	9
21	50.0	650.49	0.52	1.725	1.7	113	246	244	83	81	60	10
22	52.5	652.39	0.52	1.725	1.7	113	247	244	83	81	61	10
23	55.0	654.28	0.51	1.692	1.6	112	247	244	84	81	62	9
24	57.5	656.14	0.48	1.604	1.6	112	247	244	84	81	63	9
End	60.0	657.999										
				Average		112.7			82.2		56.7	
			0.57	Max			248	254			67	10
				Min			228	225			49	
				Range			223-273	223-273			32-68	

Time End 1700

Pitot Check		Min Value
pos	4.1	0.57 in H2O
neg	4.2	0.57 in H2O
Leak Check		
cfm	0.010	<0.020 cfm
vac	11	10 in Hg

Field Data Sheet

Run Number: 3

Facility: New Wales

Plant: Multifos C-K.I.N.

Company ID: 1108

Test Team: RS/FB

FDEP AIRS & Pt. ID: 1050059 5074

Date	8-4-00	Meter Box Number	3187		
Traverse Points	24	Meter Delta Ha (in. H2O)	1.742	Pitot Check	
Stack Diameter	36 inches	Meter Correction Factor	.9969	pos	4.6 in H2O
Dwell Time	2.5 min.	Nozzle Identification:	.250	neg	4.5 in H2O
Est % Saturation	90 %	Nozzle Diameter Dn:	.250	Leak Check	
Stack Static Pressure	.31 in H2O	Impinger Set Number:	P-3	cfm	.010
Barometric Pressure	30.11 in Hg	Probe length/Liner:	5'SS	vac	15 in Hg
Dry Molecular Weight	28.969	Filter Set Number:	6		

Time Start 1555

Point	Time	Meter Volume	Delta P	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0	614.702	.47	1.5	113	228	225	82	82	67	5
2	2.5	616.49	.50	1.6	113	248	254	81	82	56	6
3	5	618.30	.52	1.7	112	247	251	82	82	50	7
4	7.5	620.17	.55	1.8	113	246	241	82	81	49	8
5	10	622.10	.57	1.8	113	245	238	83	82	50	8
6	12.5	624.04	.55	1.8	113	244	239	83	81	51	8
7	15	625.97	.54	1.7	113	245	242	83	81	53	8
8	17.5	627.87	.50	1.6	113	244	241	83	82	54	8
9	20	629.73	.48	1.5	113	247	241	83	81	54	8
10	22.5	631.54	.48	1.5	113	247	241	84	81	55	8
11	25	633.34	.46	1.5	113	246	242	84	81	56	8
12	27.5	635.14	.41	1.3	113	245	243	84	81	56	7
13	30	636.846	.37	1.2	113	248	244	84	81	63	7
14	32.5	638.49	.36	1.1	113	246	244	83	81	58	6
15	35	640.04	.38	1.2	113	248	243	84	81	56	7
16	37.5	641.62	.42	1.2	112	248	243	84	81	56	7
17	40	643.22	.45	1.5	112	247	243	84	81	56	7
18	42.5	645.03	.46	1.5	112	247	244	84	81	57	8
19	45	646.84	.48	1.6	112	246	244	84	81	59	9
20	47.5	648.66	.50	1.6	113	245	244	83	81	59	9
21	50	650.49	.52	1.7	113	246	244	83	81	60	10
22	52.5	652.39	.52	1.7	113	247	244	83	81	61	10
23	55	654.28	.51	1.6	112	247	244	84	81	62	9
24	57.5	656.14	.48	1.6	112	247	244	84	81	63	9
25	60	657.995									
End											

Time End 1700

Pitot Check		Leak Check	
pos	4.1 in H2O	cfm	.010
neg	4.2 in H2O	vac	11 in Hg

Run 1 **Calculations and Results**

Facility: New Wales
Plant: Multifos C-Kiln
Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074
Test Team: FB,DC,RS

Date: 8/8/00
Start Time: 840 End Time: 945

Standard Meter Volume Vms:	45.69	dscf
Average Stack Velocity:	34.45	fps
Stack Gas Volume:	14604	ACFM
Stack Gas Dry Volume:	12377	DSCFM
Isokinetic Variation:	101.78	%
Isokinetics Adjusted For Bws>Saturation:	NA	%
Vlc calculated for Saturated Conditions:	NA	ml H2O

Emission Calculations

Sulfur Dioxide	Total mg:	75.3	mg
		2.70	lb/hr
		64.71	lb/day

Run 1 Data

Facility:	New Wales		
Plant:	Multifos C-Kiln		
Company ID:	1108		
FDEP AIRS & Pt. ID:	1050059 & 074		
Test Team:	FB,DC,RS		
Date:	8/8/00		
Start Time:	840	End Time:	945
Number ot Traverse Points:	24		
Dwell Time/Point:	2.5 min.		
Total Test Time:	60 min.		
Stack Diameter:	36 inches		
Stack Area:	7.07 sq. ft.		
Molecular Weight Dry Md:	28.969		
Volume of Water Vapor Condensed:	82 ml		
Weight of Water Collected in Silica Gel:	14.7 gram		
Moisture Volume Fraction Bwo:	0.0906		
Moisture Volume Saturated Bwo:	0.0902		
Moisture Percent Saturation:	101		
Moisture Used for Calculations:	0.0902		
Stack Molecular Weight Ms:	27.980		
Barometric Pressure Pb:	30.15 in Hg		
Stack Static Pressure Pv:	0.32 in H2O		
Stack Pressure Ps:	30.174 in Hg		
Average Meter Delta H:	1.767 in H2O		
Meter Pressure Pm:	30.280 in Hg		
Console Number:	3187		
Meter Delta Ha:	1.742		
Meter Correction Factor:	0.9969		
Average Meter Temperature:	84.0 deg. F		
Average Stack Temperature:	111.6 deg. F		44.2 deg C
Average Square Root Delta P:	0.583		
Meter Volume Vm:	46.67 cu. ft.		
Probe Length/Liner:	3' Glass		
Cp:	0.84		
Nozzle Ident.:	0.280		
Nozzle Diameter Dn:	0.280 in.		
Impinger Set Number:	S-1		
Average Computer K:	5.2849		

Run 1 Data Sheet

Facility: New Wales
Plant: Multifos C-Kiln
Team (CB/PR): FB,DC,RS

Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074

Date	8/8/00		Meter Box Number	3187	
Dwell Time	2.5	min.	Meter Delta Ha (in. H2O)	1.742	
Traverse Points	24		Meter Correction Factor	0.9969	
Stack Diameter	36	inches	Nozzle Ident.:	0.280	
Est % Saturation	90	%	Nozzle Diameter Dn:	0.280	
Stack Static Pressure	0.32	in H2O	Impinger Set Number:	S-1	
Barometric Pressure	30.15	in Hg	Probe length/Liner:	3' Glass	
Dry Molecular Weight	28.969		Filter Set Number	1	

Pitot Check
pos 4.2 in H2O
neg 4.4 in H2O
Leak Check
cfm 0.000 cfm
vac 15 in Hg

Time Start 840

Point	Time	Meter Volume	Delta P	Calc'd Delta H	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0.0	662.61	0.3	1.598	1.5	109			79	81	60	7
2	2.5	664.36	0.4	2.130	2.1	110			79	79	55	8
3	5.0	666.48	0.4	2.114	2.1	111			82	81	55	9
4	7.5	668.6	0.4	2.112	2.1	112			83	81	55	10
5	10.0	670.67	0.4	2.101	2.1	112			83	81	55	10
6	12.5	672.71	0.37	1.944	1.9	112			84	81	55	10
7	15.0	674.71	0.37	1.946	1.9	112			85	81	55	10
8	17.5	676.85	0.33	1.737	1.7	111			86	81	56	9
9	20.0	678.88	0.3	1.590	1.5	111			87	81	57	7
10	22.5	680.71	0.25	1.326	1.3	113			88	81	57	6
11	25.0	682.41	0.22	1.154	1.1	112			88	81	57	5
12	27.5	684.01	0.2	1.056	1	112			88	81	58	5
13	30.0	685.51	0.35	1.847	1.8	111			86	79	62	7
14	32.5	687.45	0.4	2.116	2.1	112			88	80	58	10
15	35.0	689.48	0.35	1.845	1.8	112			88	80	55	9
16	37.5	691.41	0.39	2.056	2	111			90	80	55	9
17	40.0	693.55	0.35	1.860	1.8	112			90	80	57	9
18	42.5	695.51	0.36	1.902	1.9	112			91	80	57	9
19	45.0	697.54	0.4	2.115	2.1	112			91	80	57	10
20	47.5	699.55	0.35	1.851	1.8	112			91	80	58	9
21	50.0	701.56	0.35	1.851	1.8	112			92	80	58	9
22	52.5	703.58	0.34	1.799	1.7	112			92	82	59	9
23	55.0	705.56	0.29	1.538	1.5	112			92	82	59	9
24	57.5	707.31	0.35	1.856	1.8	112			92	82	60	8
End	60.0	709.28										
				Average		111.6			84.0		57.1	
			0.4	Max							62	10
				Min							55	
				Range							32-68	

Time End 945

Pitot Check		Min Value
pos	4.4	0.4 in H2O
neg	4.6	0.4 in H2O
Leak Check		
cfm	0.000	<0.020 cfm
vac	12	10 in Hg

Field Data Sheet

Run Number: 1

Facility: New Wales

Plant: Multifos C-Kiln SO2 Company ID: 1108

Test Team: FB, DC, RS FDEP AIRS & Pt. ID: 1050059-004-AV

Date	8/8/00	Meter Box Number	3787		
Traverse Points	24	Meter Delta Ha (in. H2O)	1.742	Pitot Check	
Stack Diameter	36 inches	Meter Correction Factor	.9969	pos	4.2 in H2O
Dwell Time	2.5 min.	Nozzle Identification:	.280	neg	4.4 in H2O
Est % Saturation	90 %	Nozzle Diameter Dn:	.280	Leak Check	
Stack Static Pressure	.32 in H2O	Impinger Set Number:	S-1	cfm	.000
Barometric Pressure	30.15 in Hg	Probe length/Liner:	3 6/35	vac	15 in Hg
Dry Molecular Weight	28.969	Filter Set Number:	1		

Time Start 840

Point	Time	Meter Volume	Delta P	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0	662.67	.30	1.5	109	N/A	N/A	79	81	60	7
2	2.5	664.36	.40	2.1	110			79	79	55	8
3	5	666.48	.40	2.1	111			82	81	55	9
4	7.5	668.60	.40	2.1	112			83	81	55	10
5	10	670.67	.40	2.1	112			83	81	55	10
6	12.5	672.71	.37	1.9	112			84	81	55	10
7	15	674.71	.37	1.9	112			85	81	55	10
8	17.5	676.85	.33	1.7	111			86	81	56	9
9	20	678.88	.30	1.5	111			87	81	57	7
10	22.5	680.71	.25	1.3	113			88	81	57	6
11	25	682.41	.22	1.1	112			88	81	57	5
12	27.5	684.01	.20	1.0	112			88	81	58	5
13	30	685.51	.35	1.8	111			86	79	62	7
14	32.5	687.45	.40	2.1	112			88	80	58	10
15	35	689.48	.35	1.8	112			88	80	55	9
16	37.5	691.41	.39	2.0	111			90	80	55	9
17	40	693.55	.35	1.8	112			90	80	57	9
18	42.5	695.51	.36	1.9	112			91	80	57	9
19	45	697.54	.40	2.1	112			91	80	57	10
20	47.5	699.55	.35	1.8	112			91	80	58	9
21	50	701.56	.35	1.8	112			92	80	58	9
22	52.5	703.58	.34	1.7	112			92	82	59	9
23	55	705.56	.29	1.5	112			92	82	59	9
24	57.5	707.31	.35	1.8	112			92	82	60	8
25	60	709.20									
End											

Time End 945

Pitot Check		Leak Check	
pos	4.4 in H2O	cfm	.000
neg	4.6 in H2O	vac	12 in Hg

Run 2 **Calculations and Results**

Facility: New Wales
Plant: Multifos C-Kiln
Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074
Test Team: FB,DC,RS

Date: 8/8/00
Start Time: 1000 End Time: 1105

Standard Meter Volume Vms:	45.24	dscf
Average Stack Velocity:	34.83	fps
Stack Gas Volume:	14763	ACFM
Stack Gas Dry Volume:	12504	DSCFM
Isokinetic Variation:	99.71	%
Isokinetics Adjusted For Bws>Saturation:	NA	%
Vlc calculated for Saturated Conditions:	NA	ml H2O

Emission Calculations

Sulfur Dioxide	Total mg:	86.3	mg
		3.15	lb/hr
		75.66	lb/day

Run 2 Data

Facility:	New Wales		
Plant:	Multifos C-Kiln		
Company ID:	1108		
FDEP AIRS & Pt. ID:	1050059 & 074		
Test Team:	FB,DC,RS		
Date:	8/8/00		
Start Time:	1000	End Time:	1105
Number ot Traverse Points:	24		
Dwell Time/Point:	2.5 min.		
Total Test Time:	60 min.		
Stack Diameter:	36 inches		
Stack Area:	7.07 sq. ft.		
Molecular Weight Dry Md:	28.969		
Volume of Water Vapor Condensed:	84 ml		
Weight of Water Collected in Silica Gel:	10.0 gram		
Moisture Volume Fraction Bwo:	0.0891		
Moisture Volume Saturated Bwo:	0.0928		
Moisture Percent Saturation:	96		
Moisture Used for Calculations:	0.0891		
Stack Molecular Weight Ms:	27.992		
Barometric Pressure Pb:	30.15 in Hg		
Stack Static Pressure Pv:	0.32 in H2O		
Stack Pressure Ps:	30.174 in Hg		
Average Meter Delta H:	1.813 in H2O		
Meter Pressure Pm:	30.283 in Hg		
Console Number:	3187		
Meter Delta Ha:	1.742		
Meter Correction Factor:	0.9969		
Average Meter Temperature:	89.3 deg. F		
Average Stack Temperature:	112.6 deg. F	44.8 deg C	
Average Square Root Delta P:	0.589		
Meter Volume Vm:	46.66 cu. ft.		
Probe Length/Liner:	3' Glass		
Cp:	0.84		
Nozzle Ident.:	0.280		
Nozzle Diameter Dn:	0.280 in.		
Impinger Set Number:	S-3		
Average Computer K:	5.3005		

Run 2 Data Sheet

Facility: New Wales
Plant: Multifos C-Kiln
Team (CB/PR): FB,DC,RS

Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074

Date	8/8/00	Meter Box Number	3187	
Dwell Time	2.5 min.	Meter Delta Ha (in. H2O)	1.742	Pitot Check
Traverse Points	24	Meter Correction Factor	0.9969	pos 4.3 in H2O
Stack Diameter	36 inches	Nozzle Ident.:	0.280	neg 4.7 in H2O
Est % Saturation	90 %	Nozzle Diameter Dn:	0.280	Leak Check
Stack Static Pressure	0.32 in H2O	Impinger Set Number:	S-3	cfm 0.010 cfm
Barometric Pressure	30.15 in Hg	Probe length/Liner:	3' Glass	vac 15 in Hg
Dry Molecular Weight	28.969	Filter Set Number	2	

Time Start: 1000

Point	Time	Meter Volume	Delta P	Calc'd Delta H	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0.0	709.664	0.44	2.309	2.3	112			82	81	65	9
2	2.5	711.81	0.43	2.257	2.5	112			87	82	60	9
3	5.0	714.05	0.41	2.164	2.1	113			89	82	56	8
4	7.5	716.2	0.39	2.050	2	113			90	82	55	8
5	10.0	718.24	0.35	1.841	1.8	112			92	82	54	7
6	12.5	720.21	0.35	1.856	1.8	112			94	83	54	7
7	15.0	722.17	0.34	1.808	1.8	113			96	83	56	7
8	17.5	724.15	0.33	1.747	1.7	113			97	83	56	7
9	20.0	726.06	0.34	1.802	1.8	113			97	84	57	7
10	22.5	727.99	0.35	1.856	1.8	113			98	84	60	7
11	25.0	729.92	0.32	1.699	1.6	113			98	84	60	6
12	27.5	731.79	0.29	1.539	1.5	112			98	84	62	6
13	30.0	733.593	0.27	1.442	1.4	113			91	83	66	5
14	32.5	735.29	0.3	1.581	1.5	112			95	84	62	6
15	35.0	737.05	0.34	1.811	1.8	113			96	84	60	7
16	37.5	738.96	0.36	1.908	1.9	113			97	84	58	7
17	40.0	740.93	0.36	1.909	1.9	113			97	84	56	7
18	42.5	742.9	0.39	2.068	2	113			98	85	57	8
19	45.0	744.92	0.41	2.179	2.1	112			98	85	57	8
20	47.5	746.98	0.37	1.978	1.9	112			98	85	58	7
21	50.0	748.98	0.32	1.711	1.7	113			98	85	60	7
22	52.5	750.91	0.3	1.594	1.5	113			98	85	62	6
23	55.0	752.71	0.32	1.700	1.7	113			98	85	64	6
24	57.5	754.56	0.28	1.488	1.4	112			98	85	65	6
End	60.0	756.328										
				Average		112.6			89.3		59.2	
			0.44	Max							66	9
				Min							54	
				Range							32-68	

Time End: 1105

Pitot Check		Min Value
pos	4.6	0.44 in H2O
neg	5.0	0.44 in H2O
Leak Check		
cfm	0.010	<0.020 cfm
vac	10	9 in Hg

Field Data Sheet

Run Number: 2

Facility: New Wales

Plant: Multifos C- K. LN SO2

Company ID: 1108

Test Team: FB, DC, RS

FDEP AIRS & Pt. ID: 1050059 ; 074

Date	8/10/00	Meter Box Number	3187		
Traverse Points	24	Meter Delta Ha (in. H2O)	1.742	Pitot Check	
Stack Diameter	36 inches	Meter Correction Factor	.9969	pos	4.3 in H2O
Dwell Time	2.5 min.	Nozzle Identification:	.280	neg	4.7 in H2O
Est % Saturation	90 %	Nozzle Diameter Dn:	.280	Leak Check	
Stack Static Pressure	.32 in H2O	Impinger Set Number:	S-2	cfm	.010
Barometric Pressure	30.15 in Hg	Probe length/Liner:	5' 6/45	vac	15 in Hg
Dry Molecular Weight	28.969	Filter Set Number:	2		

Time Start 1000

Point	Time	Meter Volume	Delta P	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0	709.664	.44	2.3	112			82	81	65	9
2	2.5	711.81	.43	2.5	112			87	82	60	9
3	5	714.05	.41	2.1	113			89	82	56	8
4	7.5	716.20	.39	2.0	113			90	82	55	8
5	10	718.24	.35	1.8	112			92	82	54	7
6	12.5	720.21	.35	1.8	112			94	83	54	7
7	15	722.17	.34	1.8	113			96	83	56	7
8	17.5	724.15	.33	1.7	113			97	83	56	7
9	20	726.06	.34	1.8	113			97	84	57	7
10	22.5	727.98	.35	1.8	113			98	84	60	7
11	25	729.92	.32	1.6	113			98	84	60	6
12	27.5	731.79	.29	1.5	112			98	84	62	6
13	30	733.593	.27	1.4	113			91	83	66	5
14	32.5	735.29	.30	1.5	112			95	84	62	6
15	35	737.05	.34	1.8	113			96	84	60	7
16	37.5	738.96	.36	1.9	113			97	84	58	7
17	40	740.93	.36	1.9	113			97	84	56	7
18	42.5	742.90	.39	2.0	113			98	85	57	8
19	45	744.92	.41	2.1	112			98	85	57	8
20	47.5	746.98	.37	1.9	112			98	85	58	7
21	50	748.98	.32	1.7	113			98	85	60	7
22	52.5	750.91	.30	1.5	113			98	85	62	6
23	55	752.71	.32	1.7	113			98	85	64	6
24	57.5	754.56	.28	1.4	112			98	85	65	6
25	60	756.328									
End											

Time End 1105

Pitot Check		Leak Check	
pos	4.6 in H2O	cfm	.010
neg	5.0 in H2O	vac	10 in Hg

Run 3 **Calculations and Results**

Facility: New Wales
Plant: Multifos C-Kiln
Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074
Test Team: FB,DC,RS

Date: 8/8/00
Start Time: 1114 End Time: 1220

Standard Meter Volume Vms:	45.91	dscf
Average Stack Velocity:	35.63	fps
Stack Gas Volume:	15103	ACFM
Stack Gas Dry Volume:	12768	DSCFM
Isokinetic Variation:	99.11	%
Isokinetics Adjusted For Bws>Saturation:	NA	%
Vlc calculated for Saturated Conditions:	NA	ml H2O

Emission Calculations

Sulfur Dioxide	Total mg:	172.0	mg
		6.32	lb/hr
		151.71	lb/day

Run 3 Data

Facility:	New Wales		
Plant:	Multifos C-Kiln		
Company ID:	1108		
FDEP AIRS & Pt. ID:	1050059 & 074		
Test Team:	FB,DC,RS		
Date:	8/8/00		
Start Time:	1114	End Time:	1220
Number ot Traverse Points:	24		
Dwell Time/Point:	2.5 min.		
Total Test Time:	60 min.		
Stack Diameter:	36 inches		
Stack Area:	7.07 sq. ft.		
Molecular Weight Dry Md:	28.969		
Volume of Water Vapor Condensed:	85 ml		
Weight of Water Collected in Silica Gel:	10.7 gram		
Moisture Volume Fraction Bwo:	0.0894		
Moisture Volume Saturated Bwo:	0.0953		
Moisture Percent Saturation:	94		
Moisture Used for Calculations:	0.0894		
Stack Molecular Weight Ms:	27.989		
Barometric Pressure Pb:	30.15 in Hg		
Stack Static Pressure Pv:	0.32 in H2O		
Stack Pressure Ps:	30.174 in Hg		
Average Meter Delta H:	1.858 in H2O		
Meter Pressure Pm:	30.287 in Hg		
Console Number:	3187		
Meter Delta Ha:	1.742		
Meter Correction Factor:	0.9969		
Average Meter Temperature:	85.7 deg. F		
Average Stack Temperature:	113.5 deg. F	45.3 deg C	
Average Square Root Delta P:	0.602		
Meter Volume Vm:	47.04 cu. ft.		
Probe Length/Liner:	3' Glass		
Cp:	0.84		
Nozzle Ident.:	0.280		
Nozzle Diameter Dn:	0.280 in.		
Impinger Set Number:	S-2		
Average Computer K:	5.2391		

Run 3 Data Sheet

Facility: New Wales
Plant: Multifos C-Kiln
Team (CB/PR): FB,DC,RS

Company ID: 1108
FDEP AIRS & Pt. ID: 1050059 & 074

Date	8/8/00	Meter Box Number	3187
Dwell Time	2.5 min.	Meter Delta Ha (in. H2O)	1.742
Traverse Points	24	Meter Correction Factor	0.9969
Stack Diameter	36 inches	Nozzle Ident.:	0.280
Est % Saturation	90 %	Nozzle Diameter Dn:	0.280
Stack Static Pressure	0.32 in.H2O	Impinger Set Number:	S-2
Barometric Pressure	30.15 in Hg	Probe length/Liner:	3' Glass
Dry Molecular Weight	28.969	Filter Set Number	3

Pitot Check: pos 4.5 in H2O; neg 4.6 in H2O
Leak Check: cfm 0.005 cfm; vac 15 in Hg

Time Start: 1114

Point	Time	Meter Volume	Delta P	Calc'd Delta H	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0.0	756.793	0.28	1.463	1.4	113			83	82	67	5
2	2.5	758.51	0.33	1.725	1.7	113			86	81	62	7
3	5.0	760.37	0.36	1.885	1.8	112			88	82	55	8
4	7.5	762.3	0.38	2.007	2	113			90	82	55	9
5	10.0	764.34	0.42	2.209	2.2	113			91	82	54	10
6	12.5	766.43	0.41	2.159	2.1	112			92	83	54	10
7	15.0	768.53	0.4	2.123	2.1	113			93	83	53	10
8	17.5	770.61	0.38	2.006	2	114			93	82	53	10
9	20.0	772.67	0.39	2.045	2	114			94	83	53	10
10	22.5	774.67	0.37	1.943	1.9	114			93	83	55	11
11	25.0	776.64	0.34	1.784	1.7	114			93	83	56	11
12	27.5	778.53	0.35	1.837	1.8	113			93	83	57	12
13	30.0	780.417	0.38	2.006	2	114			84	81	64	12
14	32.5	782.43	0.44	2.286	2.2	114			84	81	58	9
15	35.0	784.55	0.42	2.182	2.1	114			84	81	55	9
16	37.5	786.66	0.44	2.286	2.2	114			84	81	55	9
17	40.0	788.77	0.37	1.922	1.9	114			87	81	56	8
18	42.5	790.75	0.34	1.771	1.7	113			86	81	57	8
19	45.0	792.65	0.34	1.780	1.7	114			89	81	59	7
20	47.5	794.55	0.33	1.722	1.7	114			90	81	60	7
21	50.0	796.43	0.35	1.828	1.8	114			91	82	62	8
22	52.5	798.37	0.31	1.622	1.6	114			93	82	64	8
23	55.0	800.26	0.3	1.573	1.5	114			93	82	65	7
24	57.5	802.05	0.3	1.573	1.5	114			94	82	66	7
End	60.0	803.835										
				Average		113.5			85.7		58.1	
			0.44	Max							67	12
				Min							53	
				Range							32-68	

Time End: 1220

Pitot Check		Min Value
pos	4.4	0.44 in H2O
neg	4.9	0.44 in H2O
Leak Check		
cfm	0.005	<0.020 cfm
vac	13	12 in Hg

Field Data Sheet

Run Number: 3

Facility: New Wales

Plant: Multifos C-Kiln SO_2 Company ID: 1108

Test Team: DC, RS, FB FDEP AIRS & Pt. ID: 1050059 ; 074

Date	8-8-00		Meter Box Number	3187			
Traverse Points	24		Meter Delta Ha (in. H2O)	1.742	Pitot Check		
Stack Diameter	36	inches	Meter Correction Factor	.9969	pos	4.5	in H2O
Dwell Time	2.5	min.	Nozzle Identification:	.280	neg	4.6	in H2O
Est % Saturation	90	%	Nozzle Diameter Dn:	.280	Leak Check		
Stack Static Pressure	.32	in H2O	Impinger Set Number:	S-2	cfm	.005	
Barometric Pressure	30.15	in Hg	Probe length/Liner:	3' GLASS	vac	15	in Hg
Dry Molecular Weight	28.969		Filter Set Number:	3			

Time Start 1114

Point	Time	Meter Volume	Delta P	Actual Delta H	Stack Temp	Probe Temp	Hot Box Temp.	Meter In Temp	Meter Out Temp	Impinger Temp	Pump Vac
1	0	756.793	.28	1.4	113			94	84	67	5
2	2.5	758.51	.33	1.7	113			86	81	62	7
3	5	760.37	.36	1.8	112			88	82	55	8
4	7.5	762.30	.38	2.0	113			90	82	55	9
5	10	764.34	.42	2.2	113			91	82	54	10
6	12.5	766.43	.41	2.1	112			92	93	54	10
7	15	768.53	.40	2.1	113			93	83	53	10
8	17.5	770.61	.38	2.0	114			93	82	53	10
9	20	772.67	.39	2.0	114			94	83	53	10
10	22.5	774.67	.37	1.9	114			93	83	55	11
11	25	776.64	.34	1.7	114			93	83	56	11
12	27.5	778.53	.35	1.8	113			93	83	57	12
13	30	780.417	.38	2.0	114			84	81	64	12
14	32.5	782.43	.44	2.2	114			84	81	58	9
15	35	784.55	.42	2.1	114			84	81	55	9
16	37.5	786.66	.44	2.2	114			84	81	55	9
17	40	788.77	.37	1.9	114			87	81	56	8
18	42.5	790.75	.34	1.7	113			86	81	57	8
19	45	792.65	.34	1.7	114			89	81	59	7
20	47.5	794.55	.33	1.7	114			90	81	60	7
21	50	796.43	.35	1.8	114			91	82	62	8
22	52.5	798.37	.31	1.6	114			93	82	64	8
23	55	800.26	.30	1.5	114			93	82	65	7
24	57.5	802.05	.30	1.5	114			94	82	66	7
25	60	803.875									
End											

Time End 1220

Pitot Check			Leak Check		
pos	4.4	in H2O	cfm	.005	
neg	4.9	in H2O	vac	13	in Hg

Analytical Data

IMC Phosphates Company

Particulate and Moisture Data Sheet
Method 5 & 13B Combined

Facility NEW WALES Date : 08/04/00

Plant MULTIFOS C- KILN Run 1

Impinger Set Number: P-2

Impinger Number:	1	2	3	4
Final (grams/mls):	156	114	0	331.5
Initial (grams/mls):	100	100	0	320.6
Difference (grams/mls):	56	14	0	10.9
Total Moisture Collected:			70 mls	10.9 gram

Filter Set Number: 4

Filter Analysis		**Probe Wash Analysis**	
Filter Number:	66	Beaker Number:	70
Final Weight	0.8132	Final Weight:	104.0672
Initial Weight:	0.6769	Initial Weight:	104.0632
Difference:	0.1363	Difference:	0.0040

Fluoride and Particulate Calculations

Fluoride

Probe Wash Fluoride mg	0.63
Impinger Fluoride mg:	0.15
Filter Fluoride mg:	15.00
Total Fluoride mg:	15.78

Particulate

Probe Wash Particulate mg	4.0
Filter Particulate mg:	136.3
Total Particulate mg:	140.3

Run 2

IMC Phosphates Company

Particulate and Moisture Data Sheet
Method 5 & 13B Combined

Facility NEW WALES Date : 08/04/00

Plant MULTIFOS C- KILN Run 2

Impinger Set Number: F-3

Impinger Number:	1	2	3	4
Final (grams/mls):	160	110	0	343.7
Initial (grams/mls):	100	100	0	334.3
Difference (grams/mls):	60	10	0	9.4
Total Moisture Collected:			70 mls	9.4 gram

Filter Set Number: 5

Filter Analysis		**Probe Wash Analysis**	
Filter Number:	67	Beaker Number:	M
Final Weight	0.7813	Final Weight:	144.2870
Initial Weight:	0.6964	Initial Weight:	144.2800
Difference:	0.0849	Difference:	0.0070

Fluoride and Particulate Calculations

Fluoride

Probe Wash Fluoride mg	0.51
Impinger Fluoride mg:	0.14
Filter Fluoride mg:	13.00
Total Fluoride mg:	13.65

Particulate

Probe Wash Particulate mg	7.0
Filter Particulate mg:	84.9
Total Particulate mg:	91.9

IMC Phosphates Company

Particulate and Moisture Data Sheet
Method 5 & 13B Combined

Facility NEW WALES Date : 08/04/00

Plant MULTIFOS C- KILN Run 3

Impinger Set Number: P-3

Impinger Number:	1	2	3	4
Final (grams/mls):	160	110	0	371.5
Initial (grams/mls):	100	100	0	362.3
Difference (grams/mls):	60	10	0	9.2
Total Moisture Collected:			70 mls	9.2 gram

Filter Set Number: 6

Filter Analysis		**Probe Wash Analysis**	
Filter Number:	68	Beaker Number:	10
Final Weight	0.7357	Final Weight:	97.6201
Initial Weight:	0.6777	Initial Weight:	97.6185
Difference:	0.0580	Difference:	0.0016

Fluoride and Particulate Calculations

Fluoride

Probe Wash Fluoride mg	2.08
Impinger Fluoride mg:	0.19
Filter Fluoride mg:	5.80
Total Fluoride mg:	8.07

Particulate

Probe Wash Particulate mg	1.6
Filter Particulate mg:	58.0
Total Particulate mg:	59.6

IMC-Agrico Company

Moisture Data Sheet
Method 8

Facility New Wales Date : 8/8/00

Plant Multifos C-Kiln Run 1

Impinger Set Number:	S-1			
Impinger Number:	1	2	3	4
Final (grams/mls):	163	114	105	341.7
Initial (grams/mls):	100	100	100	327.0
Difference (grams/mls):	63	14	5	14.7
Total Moisture Collected:			82 mls	14.7 gram

Sulfur Dioxide

Laboratory mg 75.30

IMC-Agrico Company

Moisture Data Sheet
Method 8

Facility New Wales Date : 8/8/00

Plant Multifos C-Kiln Run 2

Impinger Set Number:	S-3			
Impinger Number:	1	2	3	4
Final (grams/mls):	164	116	104	323.5
Initial (grams/mls):	100	100	100	313.5
Difference (grams/mls):	64	16	4	10.0
Total Moisture Collected:			84 mls	10.0 gram

Sulfur Dioxide

Laboratory mg 86.30

IMC-Agrico Company

Moisture Data Sheet
Method 8

Facility New Wales Date : 8/8/00

Plant Multifos C-Kiln Run 3

Impinger Set Number:		S-2		
Impinger Number:	1	2	3	4
Final (grams/mls):	164	116	105	311.3
Initial (grams/mls):	100	100	100	300.6
Difference (grams/mls):	64	16	5	10.7
Total Moisture Collected:			85 mls	10.7 gram

Sulfur Dioxide

Laboratory mg 172.00

Laboratory Analysis Data

This report details the laboratory analysis results for the following source:

Project: Multifos C-Kiln
Facility: New Wales Operations
Point ID: 74
AIRS: 1050059
Permit Number: 1050059-014-AV (1050059-024-AC)
Test Date: August 4 & 8 , 2000
Test Time: 1224-1700, 0840-1220

			Run 1	Run 2	Run 3
Titrant Blank	Vtb	ml	0.02	0.02	0.02
Barium Perchlorate Normality	N	meq/ml	0.0105	0.0105	0.0105
Volume of aliquot SO2	Va(SO2)	ml	20	20	20
Volume of Solution SO2	Vsoln(SO2)	ml	1000	1000	1000
Volume of Titrant SO2	Vt(SO2)	ml	4.6	5.2	10.2
Replicant					
Volume of aliquot SO2	Va(SO2)	ml	20	20	20
Volume of Solution SO2	Vsoln(SO2)	ml	1000	1000	1000
Volume of Titrant SO2	Vt(SO2)	ml	4.4	5.1	10.3
Average					
Volume of Titrant SO2	Vt(SO2)	ml	4.5	5.15	10.25
Calculated mg SO2	SO2 mg	mg	75.3	86.3	172.0

Calibrations

IMC Phosphates Company

Post Test Dry Gas Meter Calibration Form

Facility: New Wales

Plant: Multifos C-Kiln

Meter Box Number: 3187 Date: 9/7/00

Barometric Pressure, Pb: 30.05 Standard Test Meter Number: 693497

Delta H	Gas Volume				Temperature, F				Time	Yi	Delta H@
	Standard Meter		Dry Gas Meter		Standard Meter		Dry Gas Meter				
	Initial	Final	Initial	Final	Inlet	Outlet	Inlet	Outlet	min.		
1.8	862.72	873.63	109.44	120.51	62	66	72	72	15	0.9962	1.8526
1.8	873.63	884.56	120.51	131.58	62	66	72	72	15	0.9980	1.8458
1.8	884.56	895.5	131.58	142.66	62	66	74	72	15	0.9999	1.8390
									Tolerance	+/- 0.02	+/- 0.15
									Deviation	0.0019	0.0068
									Average	0.998	1.846

Delta H to be at intermediate setting from test.

Test Performed at Vacuum: 12 in Hg

Percentage Difference in Yi Pretest vs Post Test. 0.12 %

Pretest Yi Value 0.9969

Percentage Difference cannot exceed 5%

Person Performing Calibration: Flint Barnes

Flint Barnes

IMC Phosphates Company

Post Test Dry Gas Meter Calibration Form

Facility: NEW WALES

Plant: MULTIFOS C - KILN

Meter Box Number: 3187 Date: 8/16/00

Barometric Pressure, Pb: 30.16 Standard Test Meter Number: 693497

Delta H	Gas Volume				Temperature, F				Time	Yi	Delta H@
	Standard Meter		Dry Gas Meter		Standard Meter		Dry Gas Meter				
	Initial	Final	Initial	Final	Inlet	Outlet	Inlet	Outlet	min.		
1.5	792.019	802.431	174.974	185.633	67	70	81	73	15	0.9889	1.7020
1.5	802.431	812.852	185.633	196.304	68	70	83	75	15	0.9914	1.6959
1.5	812.852	823.263	196.304	206.978	68	70	84	76	15	0.9920	1.6960
									Tolerance	+/- 0.02	+/- 0.15
									Deviation	0.0019	0.0040
									Average	0.9908	1.698

Delta H to be at intermediate setting from test.

Test Performed at Vacuum: 15 in Hg

Percentage Difference in Yi Pretest vs Post Test. 0.61 %

Pretest Yi Value 0.9969

Percentage Difference cannot exceed 5%

Person Performing Calibration: Ross Sellers

IMC-Agrico Company

Dry Gas Meter Calibration Form

Meter Box Number: 3187

Date: 02/08/00

Barometric Pressure, Pb: 30.25

Standard Test Meter Number: 693497

Delta H	Gas Volume				Temperature, F				Time	Yi	Delta H@
	Standard Meter		Dry Gas Meter		Standard Meter		Dry Gas Meter				
	Initial	Final	Initial	Final	Inlet	Outlet	Inlet	Outlet	min.		
0.5	60.271	65.638	43.039	48.515	70	71	75	74	14	0.9863	1.8772
1	65.969	71.027	48.852	53.982	70	71	75	74	9	0.9910	1.7470
1.5	71.662	77.16	54.624	60.198	70	71	80	74	8	0.9948	1.7442
2	77.793	83.385	60.736	66.395	70	71	81	74	7	0.9964	1.7196
3	84.125	90.099	67.238	73.163	70	71	81	74	6	1.0142	1.6604
4	91.448	97.122	74.617	80.318	70	71	80	75	5	0.9987	1.7043
									Tolerance	+/- 0.02	+/- 0.15
									Deviation	0.0173	0.1351
									Average	0.9969	1.742

Person Performing Calibration: Flint Barnes

Flint Barnes

IMC-AGRICO CO. NEW WALES

ENVIRONMENTAL Department

THERMOMETER CALIBRATIONS

Calibrated BY FLINT BARNES

				ICE BATH			TEPID WATER			BOILING WATER		
DATE	ID NO.	TYPE	RANGE	STD THERM	TEMP	% or o DIFF	STD THERM	TEMP	% or o DIFF	STD THERM	TEMP	
6/26/00	OM1	Them	Dig	38	38	0	62	62	0	210	210	0
6/26/00	OM2	Them	Dig	38	38	0	62	62	0	210	210	0
6/26/00	OM3	Them	Dig	38	38	0	62	62	0	210	210	0
6/26/00	OM4	Them	Dig	34	34	0	62	62	0	210	210	0
6/26/00	PS3	T/T	Dig	34	34	0	72	72	0	212	212	0
6/26/00	PSA (5)	T/T	Dig	34	34	0	68	68	0	210	210	0
6/26/00	PSB (5)	T/T	Dig	34	34	0	70	69	1	210	210	0
6/26/00	PSC (5)	T/T	Dig	34	34	0	70	70	0	210	210	0
6/26/00	PS8-OLD	T/T	Dig	34	34	0	72	72	0	210	210	0
6/26/00	PS6.5	T/T	Dig	34	34	0	68	68	0	212	212	0
6/26/00	PG3	T/T	Dig	34	34	0	72	72	0	210	210	0
6/26/00	PG5	T/T	Dig	34	34	0	70	70	0	212	212	0
6/26/00	E1	T/T	Dig	34	34	0	68	68	0	0		0
6/26/00	E2	T/T	Dig	34	34	0	68	68	0	0		0
6/26/00	E3	T/T	Dig	34	34	0	70	70	0	0		0
6/26/00	E4	T/T	Dig	34	34	0	68	68	0	0		0
6/26/00	HB1	T/T	Dig	0	0	0	70	70	0	212	212	0
6/26/00	HB2	T/T	Dig	0	0	0	70	70	0	210	210	0
6/26/00	HB3	T/T	Dig	0	0	0	72	72	0	212	212	0
6/26/00	HB4	T/T	Dig	0	0	0	70	70	0	210	210	0
6/26/00	PS 8 NE	T/T	Dig	34	34	0	68	68	0	210	210	0
								PS	STEEL	PROBE		
								PG	GLASS	PROBE		
								E	EXIT	ADAPTOR		
								HB	HOT	BOX		
								Them	Digital	Thermometer		
								T/T	Thermometer-Them-Couple			

IMC-Agrico Company

Environmental Department

Nozzle Size Calibration

Facility: New Wales

Plant: Multifos C-Kiln

Date: 5-4-00

Nozzle ID	Run Number	D-1	D-2	D-3	Delta	Average
.250	1, 2, 3	.250	.250	.251	.001	.251

D-1, D-2, D-3 — Measurement of Diameter at Three locations
Three Decimal Places required.

Delta — Maximum Difference in a D-1, D-2, D-3.
Value not to exceed 0.004.

Average — Average of D-1, D-2, D-3.
Three Decimal Places required.

Person Performing Calibration: Stephen L. Sellers

IMC-Agrico Company

Environmental Department

Nozzle Size Calibration

Facility: New Wales

Plant: Multifos C-Kiln

Date: 8-8-00

Nozzle ID	Run Number	D-1	D-2	D-3	Delta	Average
.280	1, 2, 3	.280	.281	.280	.001	.280

D-1, D-2, D-3 — Measurement of Diameter at Three locations
Three Decimal Places required.

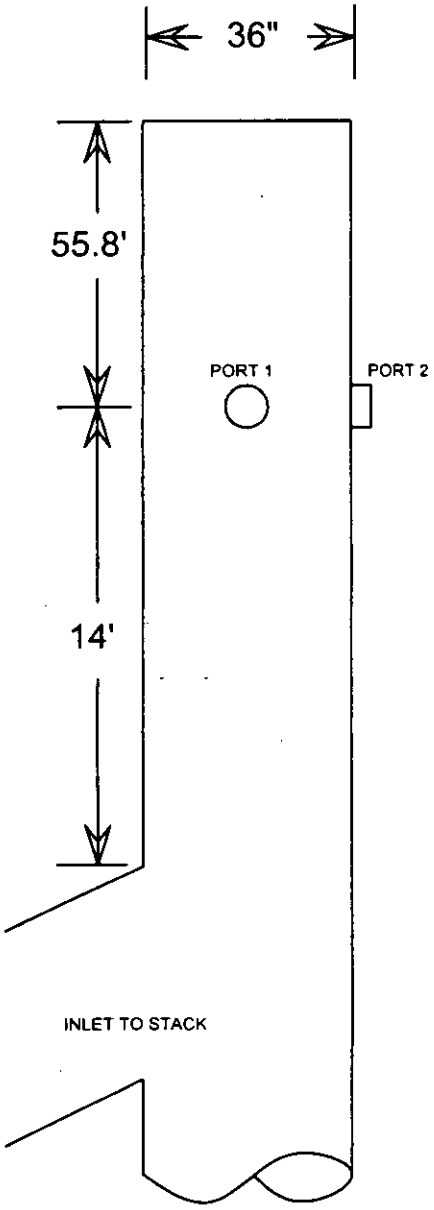
Delta — Maximum Difference in a D-1, D-2, D-3.
Value not to exceed 0.004.

Average — Average of D-1, D-2, D-3.
Three Decimal Places required.

Person Performing Calibration: Stephen R. Sellers

Stack Diagram and Sampling Locations

SAMPLE PORT LOCATION
NEW WALES OPERATIONS
MULTIFOS C KILN



POINT NO.	INCHES INSIDE STACK WALL
1	1.00
2	2.41
3	4.25
4	6.38
5	9.00
6	12.80
7	23.20
8	27.00
9	29.62
10	31.75
11	33.59
12	35.00

PREPARED: CDT	TITLE: TRAVERSE POINT LOCATION	IMC-AGRIC CO.	
DATE:		LOCATION: NEW WALES	FILE:
REVISED:		SCALE:	DRAWING NO.:

IMC

xc: Stack Team – UR Bldg.
A. A. Linero

Certified Mail 7099 3400 0005 0929 3477
Return Receipt Requested

September 11, 2000

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

RE: Multifos C-Kiln
Permit ID No. 1050059-014-AV (1050059-024-AC)
Unit ID No. 074
New Wales Plant

Dear Mr. Thomas:

Enclosed is a corrected date summary page for the above referenced emissions test report. The testing was conducted July 11, 12, 13, 2000.

If you have any questions, please contact me at 863-428-7106.

Sincerely,

P. A. Steadham, Manager
Environmental Services
Concentrates - Florida

PAS:oan

Enclosures

a:\t_1108

Introduction:

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

Project: Multifos C-Kiln
Facility: New Wales Operations
Point ID: 74
AIRS: 1050059
Permit Number: 1050059-014-AV (1050059-024-AC)
Test Date: July 11, 12, 13, 2000

Summary of Results

The source was found to be in compliance with the permits and regulations of the Florida Department of Environmental Protection except for the fluoride emission limit.
The process data and emissions testing results are summarized below:
(revised 8/31/00)

Process Data:

Kiln P2O5 Feed Rate	2.05 TPH
Avg Kiln Feed Rate	5.8 TPH

Fuel Firing Information

Fuel: Natural Gas

C Kiln Fuel Rate 32.1 MMBtu/hr

Emissions:

Allowables by Permit Condition Number P.5, P.6 , P.8, & P.9

		Actual	Allowable	
Fluorides:	lb/hr	0.45	0.08	based on operating rate
	lb/ton P2O5	0.220	0.038	
Particulates:	lb/hr	2.23	3.08	based on operating rate
	lb/ton P2O5	1.09	1.5	
Sulfur Dioxide:	lb/hr	2.27	8.70	
Nitrogen Oxides:	lb/hr	6.25	NA	
Visible Emissions:	%	12.9	15	

Emissions Testing Methods:

Methods in accordance with Specific Condition Number P.15

Fluorides:	Method 5 & 13B Combined with modifications as allowed by Department for analysis.
Particulate:	Method 5 & 13B Combined.
Sulfur Dioxide:	Method 8
Nitrogen Oxides:	Method 7E
Visible Emissions:	Method 9

IMC

CERTIFIED MAIL 7099-3400-0005-0929-6355
RETURN RECEIPT REQUESTED

August 31, 2000

Mr. A. A. Linero, P.E.
Administrator, New Source Review Section
Bureau of Air Regulation
Florida Department of
Environmental Protection
2600 Blair Stone Road MS 5505
Tallahassee, Florida 32399-2400

RE: Construction Permit Extension Response
Permit No. 1050059-024-AC (PSD-FL-244)
AIRS No. 1050059
Emissions Units Nos. 074, 075 and 076
New Wales Plant

Dear Mr. Linero:

In the letter dated August 28, 2000 in which IMC responded to your letter of August 7, 2000, which requested additional information related to IMC Phosphates' request to extend the Mulifos Kiln "C" construction permit. IMC requests that the second sentence of the first paragraph be considered confidential pursuant to Section 403.111, Florida Statues. IMC wishes to keep its production plans confidential.

Thank you for your attention to this matter. If you have any questions, please contact P.A. Steadham at 863/428-7106 or C.D. Turley at 863/428-7153.

Sincerely,

M. A. Daigle
General Manager
New Wales Plant

MAD:oan
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cc: J. R. Gruber
W.C. Tims
G. J. Kissel, FDEP Tampa
Koogler and Associates