

Department of Environmental Protection

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

David B. Struhs Secretary

October 24, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. M. A. Daigle Vice President, Florida Concentrates IMC Phosphates Company P.O. Box 2000 Mulberry, FL 33860-1100

Re: Synthetic Minor Source Application DEP File No. 1050059-044-AC Original Permit PSD-FL-244 (1050059-024-AC)

Dear Mr. Daigle:

On September 26, 2003 the Department received your application (dated September 25) for a synthetic minor source (non-PSD) permit for the existing tricalcium phosphate animal feed (Multifos) Kiln C. On October 16, we received your responses to our partial list of questions related to the application. Following are the additional questions for which a response is needed in order to process the application.

- Please provide updated information on NO_X emissions. Although the original permit did acknowledge NO_X emissions marginally greater than 40 tons per year, a final BACT value has not been determined because the kiln has not been tested at relatively high production rates. The new application still anticipates operating at a higher rate than the recent historical operation of Kiln C. The possibility of substantial NO_X formation (thermal NO_X) exists based on the temperatures required to defluorinate the raw materials. The alternative given in the October 16 letter to limit fuel usage would make sense for controlling fuel-related NO_X but not thermal NO_X.
- 2. Please describe the features incorporated into the kiln design that control NO_X.
- 3. Please provide a rough overall material balance regarding the fluorides that enter the process and their fate. This would include the fluorides in the raw materials entering the Multifos process, incoming and outgoing scrubber water, etc. Estimate percent removal by the control equipment.

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days.

If you have any questions regarding this matter, please call me at 850/921-9523.

Sincerely,

A. A. Linero, Administrator New Source Review Program

AAL/aal

cc: Jerry Kissel, DEP-SWD

John Koogler, P.E., Koogler & Associates

"More Protection, Less Process"

Printed on recycled paper.



Certified Mail 7002 0460 0002 8878 7070 Return Receipt Requested IMC Phosphates Company P. O. Box 2000 Mulberry, Florida 33860-1100 863.428.2500

October 13, 2003

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

> 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

RECLIVED
OCT 16 2003

BUREAU OF AIR REGULATION

Dear Mr. Linero:

RE:

This letter is in response to the e-mail from Syed Arif dated October 2, 2003, which requested additional information related to IMC Phosphates' application to modify the Multifos Kiln C construction permit. The responses follow:

1. Please provide the feed rate for each of the 15 runs. In addition, provide a copy of the production logsheet for the date and times the tests were conducted.

The individual run feed rates are contained in the table submitted in the application. They are in the third line under "Process" and labeled "C Kiln Feed Belt: ton/hr." These values are feed rate averages for the specific run time periods. These values are averages of recorded readings obtained using a computer historian software system. The field values are obtained by the plant DCS computer and recorded by the PI Systems historian software which then can be retrieved in various report formats. All of the "process" values and the "venturi pressure difference" reported in the table were obtained in this manner. The "venturi total nozzle flow" was estimated based on manually recorded nozzle supply pressures.

Mr. A. A. Linero, PE Florida Department of Environmental Protection October 13, 2003 Page 2

2. Show calculations in determining fluoride emissions in lb/hr for any one of the runs.

From Run 1:

Impinger: mg F 0.79 Probe wash: mg F 0.64

Filter: mg F 2.80 Standard Meter Volume: Cubic Feet 18.32 Total: mg F 4.24 Dry Standard Stack Gas Flow: DSCFM 13379

lb/hr F = 4.24 mg F /1000/453.6 /18.32 scf x 13379 scfm x 60 = 0.41

3. What reasonable assurance does the Department have that the kiln will operate as a minor source at the asking design feed rate of 17 tons/hr.

The amount of fluoride introduced into the kiln is proportional to the feed rate. If the scrubber efficiencies are not affected with feed rate changes, then the estimated emissions at 17 tph would be in the range of a 50% higher than the measured emissions $(0.32 \text{ lb/hr} \times 17/11 = 0.49)$. This would be approximately 72% of the hourly emission rate at 8760 hours/yr to remain below the PSD significance level for fluoride.

Additional testing is planned to confirm the scrubbing system capability over a broader time range for other operating conditions.

4. Please demonstrate to the Department that NOx emissions stay below the significant emissions rate of 40 tons per year at the design feed rate of 17 tons/hr.

The BACT Determination for the permit acknowledged that the emissions could exceed 40 tpy and that the emission rate should be determined based on performance test data. Further testing will be conducted to determine NOx emissions to provide the appropriate data. As a practical alternative, the NOx limit could be implemented as a "Max. fuel usage in lieu of limit", as was done for Kilns A and B.

5. Please provide a written write-up as an attachment to the application, which is an integral part of each application.

The C Kiln scrubber system will be modified to provide a venturi throat section between the existing crossflow scrubber and the SO_2 scrubber. The purpose of this installation is to collect the portion of the soluble fluoride that is collected as particulate. The venturi section is installed as two individual throats because of limited access to the mounting location between the two vessels. The venturi throats discharge over the sump and below the packed section of the SO_2 scrubber.

Mr. A. A. Linero, PE Florida Department of Environmental Protection October 13, 2003 Page 3

The venturi nozzles will be installed in the transition section of the crossflow scrubber to provide maintenance access. The SO₂ scrubber liquid will be recirculated through the venturi throats. The pressure drop across the venturi throats and the nozzle flow rates will be measured and electronically recorded for reporting along with the other scrubber parameters.

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

Vice President //
Florida Concentrates

MAD:jp\kilnc09 enc.

cc: J. R. Gruber

P. A. Steadham

G. J. Kissel, FDEP Tampa Koogler and Associates, Inc.

CERTIFICATION BY RESPONSIBLE OFFICIAL

Based on information and belief formed after reasonable inquiry, I certify that all statements made in this report, including any attachments, are true, accurate and complete.

(Signature of Responsible Official)

Name: M. A. Daigle

Title: Vice President, Florida Concentrates

Certification by Professional Engineer

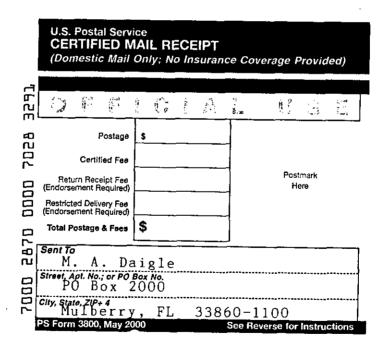
Based on my review of the above information submitted, I certify, to the best of my knowledge, that there is reasonable assurance the air pollutant emission unit and the air pollution control equipment described herein, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in Florida statutes and rules of the Department. Furthermore, I certify that, to the best of my knowledge, the emission estimates and cost estimates reported or relied upon in these documents are true, accurate and complete and are based on reasonable techniques available for calculating emissions.

C. D. Turley, P.E.

No. 0023344

10/13/03 (Date)

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
 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. 	A Received by (Please Print Clearly) Received by (Please Print Clearly) B. Date of Delivery 10 - 2 7 - 03 C. Signature Agent Addressee
1. Article Addressed to: Mr. M. A. Daigle Vice President, Florida Co IMC Phosphates Company	D. Is delivery address different from item 19
Post Office Box 2000	
Mulberry, FL 33860-1100	3. Service Type
	4. Restricted Delivery? (Extra Fee)
2. Article Number (Copy from service label)	
7000 2870 0000 7028 3291	
PS Form 3811, July 1999 Domestic Retu	urn Receipt 102595-99-M-1789



This is a Patch T type separator sheet.



Form Type = "PSD"



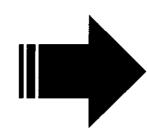
Portrait Feed New Form Follows...

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New Form Follows...
Printed on 5/3/2004 12:09:07 PM

Landscape Feed



Form Type = "PSD"
CODE128 type barcode

This is a Patch T type separator sheet.



FedEx 836531849903

IMC Phosphates Company
P.O. Box 2000
Mulberry, Florida 33860-1100
863.428.2500

September 25, 2003

RECEIVED

Mr. A. L. Linero, P.E. Florida Department of Environmental Protection Twin Towers Office Building 2600 Blair Stone Road Tallahassee, FL 32399-2400 SEP 26 2003

BUREAU OF AIR REGULATION

Re: Construction Permit Application

Multifos Plant - Kiln C

No. 1050059-024-AC, PSD-FL-244 10 5 0054 - 044-AC IMC Phosphates MP Inc. (New Wales) PSD-FL-144

Dear Mr. Linero:

Enclosed you will find our application and three copies submitted to the Department for the purpose of establishing an allowable fluoride emission limit of less than 3 tons/year. Compliance with this new limit will be accomplished by the installation of a venturi throat sections with an area of 0.9 sq. ft. between the packed crossflow scrubber and the packed SO₂ scrubber. The Six-Sigma team designed a multi-factor experiment to test this venturi configuration. The results are included in the application.

Concurrently with this application, IMC withdraws the previous application to modify the fluoride limit filed on January 30, 2001. These actions will result in compliance status for C Kiln and allow the Title V permit renewal processing to include this unit.

Thank you for your attention and assistance in this matter. Please feel free to contact me if you have any questions or need additional information, or contact C. D. Turley at 863.428.7153 or P. A. Steadham at 863.428.7106.

Sincerely

Vice President

Florida Concentrates

MAD:jp\multi091903 Enclosures A. L. Linero, P.E. Florida Department of Environmental Protection September 25, 2003 Page 2

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vithout enclosures unless noted
W. C. Tims, Jr., IMC
P. A. Steadham, IMC
J. R. Gruber, IMC
Pradeep Raval, Koogler & Associates
Trina L. Vielhauer, FDEP
Syed Arif, FDEP
Jerry Kissel, FDEP – with enclosures

b, waley, EPA



IMC Phosphates Company
P.O. Box 2000
Mulberry, Florida 33860-1100





7002 0460 0002 8878 6905



Trina L. Vielhauer, Chief FDEP - Bureau of Air Regulation Twin Towers Office Building 2600 Blair Stone Road Tallahassee, FL 32399-2400

Return Receipt Requested



Department of Environmental Protection CEIVED

Division of Air Resources Management SEP 26 2003

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1.	Facility Owner/Company Name: IMC	C Phosp	hates MP Inc	•	
2.	Site Name: IMC New Wales				
3.	Facility Identification Number: 10500	159	<u></u>	[] Unknown	
4.	Facility Location: Street Address or Other Locator: 3095	5 Highv	vay 640		
	City: Mulberry Cou	nty: Po	lk	Zip Code: 33860	
5.	Relocatable Facility?		6. Existing Pe	ermitted Facility?	
	[] Yes [X] No		[X] Yes	[] No	
Aı	pplication Contact				
1.	Name and Title of Application Contac		leep Raval, Co	onsultant	
2.	Application Contact Mailing Address Organization/Firm: Koogler & Assoc				
	Street Address: 4014 NW 13th Street			•	
	City: Gainesville	Stat	e: FL	Zip Code: 32609	
3.	Application Contact Telephone Numb	ers:			
	Telephone: (352) 377-5822		Fax: (352)	377-7158	
Aı	Application Processing Information (DEP Use)				
1.	Date of Receipt of Application:		9-24-03		
2.	2. Permit Number: 10 5 0059-044-AC				
3.	PSD Number (if applicable): PSD -FL - 244B				
4.	Siting Number (if applicable):				

Purpose of Application

Air Operation Permit Application

Th	is	Application for Air Permit is submitted to obtain: (Check one)
[]	Initial Title V air operation permit for an existing facility which is classified as a Title V source.
[]	Initial Title V air operation permit 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:
[]	Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.
		Current construction permit number:
		Operation permit number to be revised:
[X	Γ[Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)
		Operation permit number to be revised/corrected: TV Permit renewal
[]	Title V air operation permit revision 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 number to be revised:
		Reason for revision:
Ai	r (Construction Permit Application
Th	is	Application for Air Permit is submitted to obtain: (Check one)
[X]/	Air construction permit to construct or modify one or more emissions units.
[}	Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
ſ	1	Air construction permit for one or more existing, but unpermitted, emissions units.

DEP Form No. 62-210.900(1) - Form

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

	M. A. Daigle, Vice President Florida Concentra	ites
2.	Organization/Firm: IMC Phosphates MP Inc. Street Address: P.O. Box 2000 City: MulberryState: FL Zip Code Owner/Authorized Representative or Responsible	e: 33860
4.		
	I, the undersigned, am the owner or authorized repether responsible official (check here [X], if so) of application, whichever is applicable. I hereby cerformed after reasonable inquiry, that the statement accurate and complete and that, to the best of my reported in this application are based upon reason emissions. The air pollutant emissions units and in this application will be operated and maintaine standards for control of air pollutant emissions for and rules of the Department of Environmental Production of the Department, and I will product the product of the Department, and I will product the product of the Department of Environmental Production from the Department, and I will product the product of the produ	Tthe Title V source addressed in this tify, based on information and belief its made in this application are true, knowledge, any estimates of emissions mable techniques for calculating air pollution control equipment described d so as to comply with all applicable and in the statutes of the State of Florida stection and revisions thereof. I ment, cannot be transferred without
	Signature	Date
* /	Attach letter of authorization if not currently on file.	
<u>Pr</u>	ofessional Engineer Certification	
	Professional Engineer Name: John B. Koogler, P Registration Number: 12925	h.D., P.E.
2.	Professional Engineer Mailing Address: Organization/Firm: Koogler & Associates	

3. Professional Engineer Telephone Numbers:

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

State: FL

3

Zip Code: 32609

4014 NW 13th Street

Gainesville

DEP Form No. 62-210.900(1) - Form

Street Address:

City:

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 [X], 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 Date

Output

Date

* Attach any exception to certification statement.

Scope of Application

Emissions		Permit	Processing
Unit ID	Description of Emissions Unit	Type AC1F	Fee
074	Multifos C Kiln	AC1F	0
	<u> </u>		-

			,

Application Processing Fee

Check one: [] Attached - Amount: \$ [X	X] Not A	pplicable
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Construction/Modification Information

1. Description of Proposed Project or Alterations:			
In accordance with discussions with FDEP staff, IMC hereby requests a retroactive permit revision of the fluoride emission limit for Multifos Kiln C to establish the project as synthetic non-PSD with regards to fluoride emissions, at < 3 tpy emission rate. Also, requested are changes to the processing rate (reduced from 25 to 17 tph feed rate and visble emissions limitation from 15 to 20 percent opacity, based on stack specifics.			
The information submitted herein is limited to the requested changes.			
2. Projected or Actual Date of Commencement of Construction: NA			
3. Projected Date of Completion of Construction: NA			
Application Comment			
The application is presented in the format previously discussed with FDEP. The information submitted herein is limited to the requested changes.			

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DEP Form No. 62-210.900(1) - Form Effective: 2/11/99

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1.	Facility UTM Coor	dinates:			
	Zone: 17	East (km)	396.6	North (km): 30	78.9
2.	Facility Latitude/Longitude: NA				
	Latitude (DD/MM/	SS): Longitude (DD/MM/SS):			
3.	Governmental	4. Facility Status	5. Facility N	Major 6. Facili	ty SIC(s):
	Facility Code:	Code:	Group SI	C Code:	
	0	A	28	2874	
<u> </u>			<u></u>		
7.	Facility Comment (limit to 500 characters):			
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		•			
	1				
Щ.	<u>'</u>				

Facility Contact

1.	Name and Title of Facility Contact:				
	P.A. Steadham, Manager Environmen	ital Services	– Florida Cor	icentrates	
2.	Facility Contact Mailing Address: Organization/Firm: IMC Phosphates M Street Address: P.O. Box 2000	P Inc.			
	City: Mulberry	State: FL	Zip (Code: 33860	
3.	Facility Contact Telephone Numbers: Telephone: Telephone: (863) 428- 2	500 Fax:	() -		

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DEP Form No. 62-210.900(1) - Form

Facility Regulatory Classifications

Check all that apply:

1. [] Small Business Stationary Source? [] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?
3. [] Synthetic Minor Source of Pollutants Other than HAPs?
4. [] Major Source of Hazardous Air Pollutants (HAPs)?
5. [] Synthetic Minor Source of HAPs?
6. [X] One or More Emissions Units Subject to NSPS?
7. [X] One or More Emission Units Subject to NESHAP?
8. [] Title V Source by EPA Designation?
9. Facility Regulatory Classifications Comment (limit to 200 characters):

List of Applicable Regulations

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B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions	5. Pollutant Comment	
Emitted	Classii.	lb/hour	tons/year	Cap	Comment	
PM/PM10	A					
SO2	A					
NOX	A					
SAM	A					
FL	A					
	'	: :				
		-				
					.	
					• • • • • • • • • • • • • • • • • • • •	
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DEP Form No. 62-210.900(1) - Form Effective: 2/11/99

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

i	Area Map Showing Facility Location:								
	[] Attached, Document ID:	_[]]	Not .	Appli	cabl e	[X]	Waiver Requested	
2.	Facility Plot Plan:							, <u></u>	
	[] Attached, Document ID:	[] 1	lot .	Appli	cable	[X]	Waiver Requested	
3.	Process Flow Diagram(s):								
	[] Attached, Document ID:	[] 1	lot .	Appli	cab le	[X]	Waiver Requested	
4.	Precautions to Prevent Emissions of U	ncon	fined	Pa	rticula	ate M	atter:	<u> </u>	
	[] Attached, Document ID:	_ [] N	Not .	Appli	cable	[X]	Waiver Requested	
5.	Fugitive Emissions Identification:								
	[] Attached, Document ID:	_ [] N	lot .	Appli	cable	[X]	Waiver Requested	
6.	Supplemental Information for Constru	ction	Pern	nit A	Applic	cation	1:		
	[X] Attached, Document ID: Att. 1	[] N	lot .	Appli	cable			
	Supplemental Requirements Comment						_		
	ere are no changes from the informat	tion s	subm	itte	ed to]	FDEI	•		

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
[] Attached, Document ID: [X] Not Applicable
9. List of Equipment/Activities Regulated under Title VI:
[] Attached, Document ID:
[] Equipment/Activities On site but Not Required to be Individually Listed
[X] Not Applicable
10. Alternative Methods of Operation:
[] Attached, Document ID: [X] Not Applicable
11. Alternative Modes of Operation (Emissions Trading):
[] Attached, Document ID: [X] Not Applicable
12. Identification of Additional Applicable Requirements:
[] Attached, Document ID: [X] Not Applicable
13. Risk Management Plan Verification:
[] Plan previously submitted to Chemical Emergency Preparedness and Prevention
Office (CEPPO). Verification of submittal attached (Document ID:) or
previously submitted to DEP (Date and DEP Office:)
[] Plan to be submitted to CEPPO (Date required:)
[X] Not Applicable
·
14. Compliance Report and Plan:
[] Attached, Document ID: [X] Not Applicable
15. Compliance Certification (Hard-copy Required):
[] Attached, Document ID: [X] Not Applicable

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Emissions Unit Information Section 1	of	1	
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III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

Emissions Unit Description and Status

1.	1. Type of Emissions Unit Addressed in This Section: (Check one)					
[X	[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).					
[This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.					
[[] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.					
2.	Regulated or Unr	egulated Emissions Unit	? (Check one)			
[X	The emissions un emissions unit.	it addressed in this Emis	sions Unit Information Secti	on is a regulated		
[The emissions emissions unit.	unit addressed in this Em	issions Unit Information Sec	ction is an unregulated		
	-	nissions Unit Addressed	in This Section (limit to 60 c	characters):		
M	ultifos Kiln C					
4.		dentification Number:		[] No ID		
	ID: 074			[] ID Unknown		
5.	Emissions Unit	6. Initial Startup	7. Emissions Unit Major	8. Acid Rain Unit?		
	Status Code: C	Date: 1999	Group SIC Code: 28	[]		
9.	Emissions Unit C	Comment: (Limit to 500 C	Characters)	<u> </u>		
		,	·			
				·		

DEP Form No. 62-210.900(1) - Form

Emissions Unit Information Section1 of1						
Emissions Unit Control Equipment						
1. Control Equipment/Method Description (Limit to 200 characters per device or metho Packed scrubbers with a venturi throat section	d):					
*						

2. Control Device or Method Code(s): 013

Emissions Unit Details

1.	Package Unit: NA		
	Manufacturer:	Model Number:	
2.	Generator Nameplate Rating:	MW	
3.	Incinerator Information:		
	Dwell Temperature:	°F	•
[Dwell Time:	seconds	
	Incinerator Afterburner Temperature:	°F	

r.missiniis ()iii(liiiol iliation Section - 1 - 01 - 1	Emissions	S Unit Information Section	1	of	1	
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B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

] 1.	Maximum Heat Input Rate:	56	mmBtu/hr
2.	Maximum Incineration Rate:	lb/hr	tons/day
3.	Maximum Process or Throughp	out Rate: 17 tph feed input (new kili	alone)
4.	Maximum Production Rate:		
5.	Requested Maximum Operating	Schedule:	
		24 hours/day	7 days/week
		52 weeks/year	8760 hours/year
6.	Operating Capacity/Schedule C	omment (limit to 200 characters):	

Emissions	Unit	Inform:	ation S	ection	1	of	1	
a minositums	V 11114	Thur Ap ene.	~~.~	~~~~			_	

C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

List of Applicable Regulations

No change	

DEP Form No. 62-210.900(1) - Form Effective: 2/11/99

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Emissions	Unit	Information	Section	1	of :	1

D. EMISSION POINT (STACK/VENT) INFORMATION (Regulated Emissions Units Only)

Emission Point Description and Type

Identification of Point on P Flow Diagram?			oint Type Code:	
3. Descriptions of Emission P 100 characters per point):			,	
4. ID Numbers or Description	s of Emission U	nits with this Emi	ssion Point in Comm	on:
· · _				
5. Discharge Type Code:	6. Stack Heig		7. Exit Diameter:	· C •
		feet		feet
8. Exit Temperature:		umetric Flow	10. Water Vapor:	
°F	Rate:	acfm		%
11. Maximum Dry Standard Flo	ow Rate:		mission Point Height:	
	dscfm		_	feet
13. Emission Point UTM Coord	linates:			
Zone: E	ast (km):	Nort	h (km):	
14. Emission Point Comment (l	imit to 200 char	acters):		
No changes proposed.		·		

DEP Form No. 62-210.900(1) - Form

Emissions	Unit !	Information Section	1	of	1

E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Pro	cess/Fuel Type)	limit to 500 ch	aract	ers):
1. Oogment Bootispiion (1.0		(
Defluorination				
2. Source Classification Code	e (SCC):	3. SCC Units	: To	ns Feed
3-05-150-02				
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6.	Estimated Annual Activity
17 tph	149,000		_	Factor:
7. Maximum % Sulfur:	8. Maximum 9	% Ash:	9.	Million Btu per SCC Unit:
10.0	1 200 -h	<u> </u>	<u> </u>	
10. Segment Comment (limit	to 200 characters):		
Revised rate, per discussion	with FDEP.			
Teviseu rate, per diseassion				
	·			
Segment Description and Ra	te: Segment	of		
1. Segment Description (Proc	cess/Fuel Type)	(limit to 500 cl	narac	ters):
•				
2. Source Classification Code	e (SCC):	3. SCC Unit	is:	
	·		T -	
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6.	Estimated Annual Activity
			 	Factor:
7. Maximum % Sulfur:	8. Maximum 9	∕o Ash:	9.	Million Btu per SCC Unit:
10. Segment Comment (limit t	to 200 characters	\.	<u> </u>	
10. Segment Comment (IIIIII)	io 200 characters).		

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Emissions Unit Information Section 1 of 1	Emissions	Unit	Informa	ation S	Section	1	of	1	
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F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Po	Ilutant Emitted	Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code			
	FL	013		EL			
			Ì				
<u> </u>			<u> </u>	<u> </u>			
1							
<u> </u>							
	·						
]				
			[

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Emissions Unit Information Section	ı1_	of _	_1_	_
Pollutant Detail Information Page	1_	of _	1	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: FL	2. Total Percent Effic	viency of Control: NA
1. Pollutant Emitted: FL	2. Total Fercent Effic	dency of Condol. NA
3. Potential Emissions:		4. Synthetically
lb/hour	<3 tons/year	Limited? [X]
5. Range of Estimated Fugitive Emissions:		
[] 1 [] 2 [] 3	to t	ons/year
6. Emission Factor: <3 tpy		7. Emissions
Reference: Limit		Method Code: 1
8. Calculation of Emissions (limit to 600 chara	cters):	
(,	
FL < 3 tpy limit.		
	. (1* *** 200 1	
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 char	acters):
,		
·		
Allowable Emissions Allowable Emissions		
1. Basis for Allowable Emissions Code:	2. Future Effective	Date of Allowable
	Emissions:	
3. Requested Allowable Emissions and Units:	4. Equivalent Allow	able Emissions:
<3 tpy	0.68 lb/hour, av	g. <3 tons/year
5. Method of Compliance (limit to 60 character	rs): EPA Method 13A	, 13B
6. Allowable Emissions Comment (Desc. of O	perating Method) (limit	t to 200 characters):
Avoid PSD		·

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Emissions Unit Information Section	1	of_	1
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H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

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Emissions	Unit	Information Section	1	of	1

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION (Regulated Emissions Units Only)

Supplemental Requirements

1.	Process Flow Diagram
	[X] Attached, Document ID: Flow Diagram [] Not Applicable [] Waiver Requested
2.	Fuel Analysis or Specification
	[] Attached, Document ID: [] Not Applicable [X] Waiver Requested
3.	Detailed Description of Control Equipment
	[] Attached, Document ID: [] Not Applicable [X] Waiver Requested
4.	Description of Stack Sampling Facilities
	[] Attached, Document ID: [] Not Applicable [X] Waiver Requested
5.	Compliance Test Report
	[] Attached, Document ID:
	[] Previously submitted, Date:
	[] Not Applicable
6.	Procedures for Startup and Shutdown
	[] Attached, Document ID: [] Not Applicable [] Waiver Requested
7.	Operation and Maintenance Plan
	[] Attached, Document ID: [] Not Applicable [] Waiver Requested
8.	Supplemental Information for Construction Permit Application
	[X] Attached, Document ID: Att. 1. [] Not Applicable
9.	Other Information Required by Rule or Statute
	[X] Attached, Document ID: Att. 1. [] Not Applicable
10	. Supplemental Requirements Comment: See Attachment 1.
i	

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Emissions	Unit	Information	Section	1	of	1

Additional Supplemental Requirements for Title V Air Operation Permit Applications

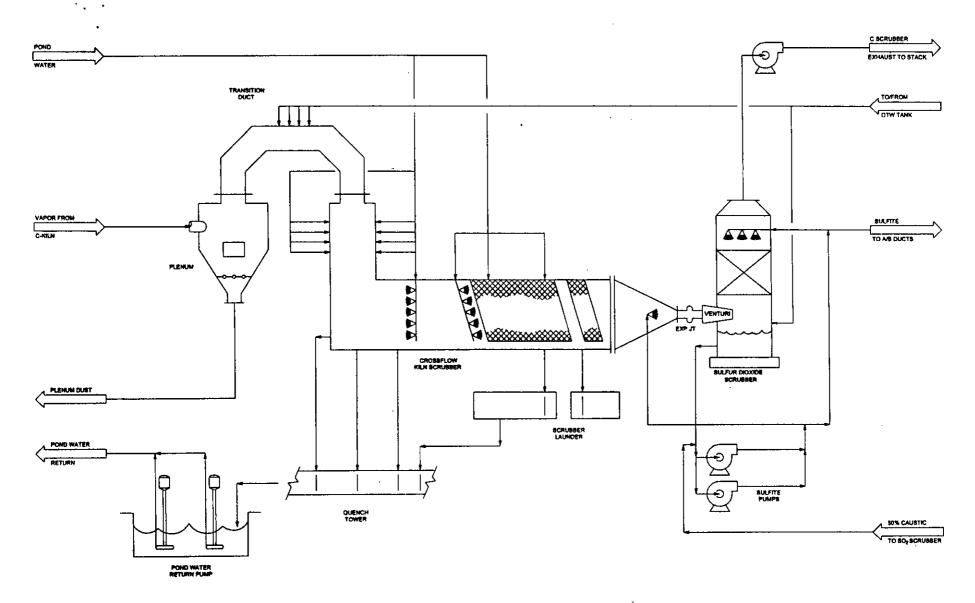
11. A	Iternative Methods of Operation
[] Attached, Document ID: [X] Not Applicable
12. A	Iternative Modes of Operation (Emissions Trading)
] [] Attached, Document ID: [X] Not Applicable
13. Id	entification of Additional Applicable Requirements
] Attached, Document ID: [X] Not Applicable
14. C	ompliance Assurance Monitoring Plan
] Attached, Document ID: [X] Not Applicable
15. A	cid Rain Part Application (Hard-copy Required)
[Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:
] [Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:
[New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:
[Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:
1	Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:
[Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:
[X	[] Not Applicable

ATTACHMENT 1

PERFORMANCE TEST DATA
IN SUPPORT OF
REQUEST FOR REVISED FLUORIDES EMISSION LIMIT

Multifos C Kiln Testing	1	DOE testing				-	Average H	eat Input r	nmBtu/hr:	44,7	1				-	Γ	
Venturi Installed		Total throat area 0.9 sf				Average Feed Rate tph: 11.0				Allowable F lb/hr: 0.14			Average F lb/hr: 0.32				
		1				~		Average P2O5 tph: 3.8		Allowable PM lb/hr: 5.7				PM lb/hr:			
Parameters	Units	Run:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Test		Meth:	5/13	5/13	5/13	5/13	5/13	5/13	5/13	5/13	5/13	5/13	5/13	5/13	5/13	5/13	5/13
Date:			09/04	09/04	09/04	09/04	09/04	09/04	09/04	09/04	09/04	09/04	09/04	09/04	09/04	09/04	09/04
Time Start:	-		408	500	550	647	737	838	935	1027	1116	1210	1256	1344	1441	1530	1622
Time End:	-		438	530	620	717	807	909	1005	1057	1146	1240	1326	1415	1511	1600	1652
Barometric Pressure:	Inch Ha		30.17	30.17	30,17	30.17	30.17	30,17	30,17	30.17	30.17	30.17	30,17	30.17	30.17	30.17	30,17
Static Pressure:			-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0,11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11
Stack Pressure:			30.16	30.16	30.16	30.16	30.16	30.16	30.16	30.16	30.16	30.16	30,16	30.16	30.16	30.16	30.16
Average Sqrt Delta P:	Inch HOH 1/2		0.61	0.60	0.60	0.58	0.57	0.57	0.58	0.59	0.60	0.57	0.58	0.56	0.60	0.63	0.58
Average Delta H:			0.99	0.95	0.97	0.89	0.86	0.86	0.90	0.93	0.95	0.88	0.90	0.87	0.98	1.06	0.91
Maximum Run Vacuum:		1	5.0	4.0	3.0	4.0	3.0	4.0	4.0	3,0	5.0	2.0	5.0	4.0	3.0	3.0	4.0
Meter Box Number:			3188	3188	3188	3188	3188	3188	3188	3188	3188	3188	3188	3188	3188	3188	3188
Average Meter Temp:		†	78.3	81.8	83.8	82.4	80.9	83.8	85.2	85.6	87.6	86.9	88.4	89.8	91.5	91.7	90.6
Average Stack Temp:			103.8	103.3	102,5	101.5	101.2	101.7	103.7	103.3	103.5	101.8	102.2	101.8	103.8	103.7	103,7
Metered Sample Volume:		 	17.36	17,45	17.58	16.81	16,60	16.26	16.84	17.04	17,26	16.94	16.93	16.24	17.58	18.68	16.66
Standard Meter Volume:			18.32	18.30	18.37	17.61	17.43	16.99	17.55	17.75	17.90	17.59	17.53	16.78	18.11	19.24	17.19
Moisture Measured:		1	0.066	0.134	0.072	0.059	0.064	0.079	0.078	0.071	0.077	0.060	0.094	0.055	0.079	0.065	0.073
Moisture Saturation:		<u> </u>	0.072	0.071	0.069	0.053	0.066	0.067	0.072	0.071	0.071	0.068	0.068	0.068	0.079	0.063	0.073
Moisture Used for Calculations:		 	0.066	0.071	0.069	0.059	0.064	0.067	0.072	0.071	0.071	0.060	0.068	0.055	0.072	0.072	0.072
Pilot Coefficient:	• • • • • • • • • • • • • • • • • • • 	 	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.072
Nozzle Diameter:		<u> </u>	0.245	0.245	0.245	0.245	0.245	0.245	0.245	0.245	0.245	0.245	0.245	0.245	0.245	0.245	0.245
	Square Feet	 	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07
Traverse Points:	<u> </u>	-	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		ļ	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Sampling Time: Stack Gas Molecular Weight:		 	28.2	28.2	28.2	28.3	28.3	28.2	28.2	28.2	28.2	28.3	28.2	28.4	28.2	28.3	28.2
	+	<u> </u>	35.8	35.3	35.2	33.8	33.1	33.1	34,1	34.3	34.9	33.0	33.8	32.7	35.2	36.7	33.8
Actual Stack Velocity: Actual Stack Gas Flow:		-	15178	14972	14919	14307	14037	14040	14474	14534	14809	13973	14344	13855	14905	15547	14312
		-	13379	13144	13141	12756	12468	12408	12690	12760	12992	12442	12652	12405	13059	13719	12548
Dry Standard Stack Gas Flow: Isokinetic Rate:		 	98.6	100.2	100.6	99.4	100.6	98.6	99.6	100.1	99.2	101.8	99.8	97.4	99.8	101.0	98.6
	70	┼	80.0	100.2	100.0	35.4	100.0	50.0	33.0	100.1	85.2	101.0	33.0	31.4	33.0	101.0	30.0
Results Fluoride Emission:	115/55	 	0.41	0.37	0.19	0.40	0.16	0.41	0.32	0.29	0.36	0.13	0.43	0.42	0.21	0.28	0.38
Particulate Emission:		1	2.7	2.7	0.4	1.6	0.9	2.4	2.7	1.3	2.1	0.2	2.4	2.7	0.5	1.1	1.9
		 	0.79	0.99	1.33	1.04	0.80	1,02	0.97	1.22	1,04	0,30	0.95	0.96	1.43	0.81	0.70
Impinger Probe wash		1	0.64	0.09	0.54	0.96	0.23	0.68	0.23	0.55	0.80	0.55	1.01	0.86	0.60	1.03	0.92
L	mg F	 	2.80	2.80	0.13	2.20	0.65	2.50	2.10	1.30	1.90	0.54	2.60	2.50	0.17	1.10	2.30
		+	2.00	0.3	· 1.3	1.40	1.6	1.5	4.00	6.20	2.80	2.20	2.8	4.8	4.50	6.5	4.2
Probe wash		 	25.60	27.9	2.7	15.70	7.7	23.2	24.70	8.00	18.60	0.40	22.4	22.5	0.80	5.7	15.2
	mg PM	+	25.00	21.5	2.7	13.70		20.2	24.70	- 0.00	10.00	0.40			0,00	 	70.2
Venturi Tatal Nassia Sign		+	100	100	130	100	170	170	130	170	130	170	130	130	100	130	130
Total Nozzle Flow		 	16.0	15.9	17.2	15.9	17.7	17.7	16.9	17.6	17.0	17.4	17.1	17.0	16.2	17.1	17.0
Pressure Difference	; in non	 	10.0	13.9	17.2	13.8	17.7	17.7	10.5	11.0	17.0	17.7	12.1	1	10.2	 '''	11.0
Process	OFM.	 	735	735	735	735	735	735	735	734	735	735	734	734	734	735	735
C Kiln Natural Gas Flow		+	69.7	69.7	69.9	50.8	50.9	69.5	88.0	88.7	68.6	72.2	49.1	49.1	87.7	74.3	88.1
OTW to Transition Duct		 			11.0	11.0	11.0	11.0	11.0	11.1	11.0	11.0	11.0	11.0	11.0	11.0	11.0
C Kiln Feed Belt		↓	11.0	11.0		122	122	121	122	121	123	121	123	123	125	123	122
C Scrubber Fan		 	122	122	123	7.0	6.9	7.0	7.0	7.0	7.1	7.1	7.1	7,1	7.1	7.1	7.1
C Kiln SO2 Scrubber PH		 	7.0	7.0	6.9		0.3	0.3	0.3	0.3	0.3	0.4	0.2	0.3	0.3	0.3	0.4
C Crossflow Scrubber DP		 	0.3	0.5	0.4	0.3			+					1.8	1.8	1.7	1,7
C SO2 Scrubber DP		 	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7				
C Crossflow Scrubber Flow		<u> </u>	512	803	650	650	650	525	519	652	669	798	512	802	655	636	839
C Quench Tower Face Sprays		<u> </u>	569	570	571	585	586	584	583	583	584	584	582	580	574	573	573
C Quench Tower Flow	: GPM		1002	1004	1001	908	908	908	908	906	904	904	902	896	889	887	885
C SO2 Scrubber Flow	: GPM	1	222	223	223	222	221	222	222	221	222	220	219	218	218	218	218
50 %Caustic Flow	: gal/hr		10.9	10.7	10.7	10.9	10.6	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5

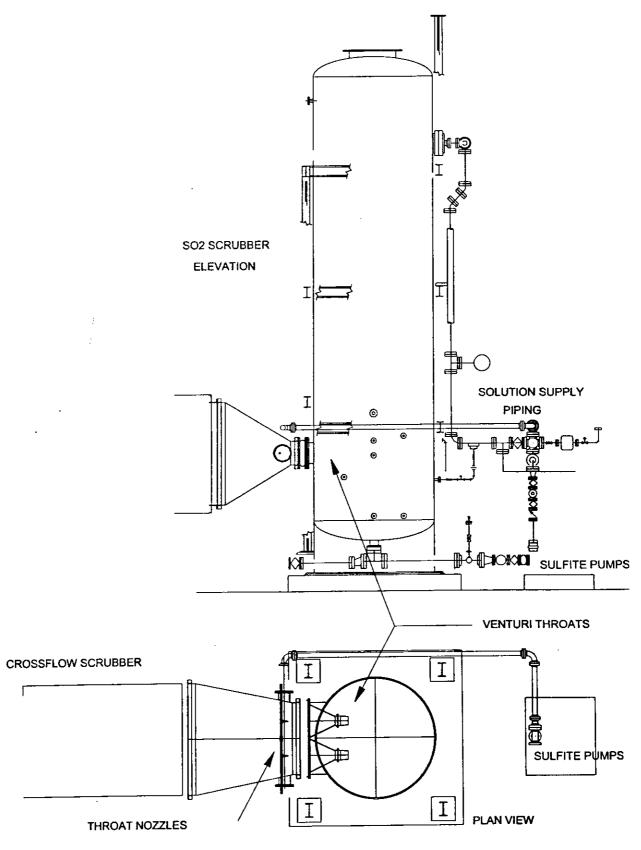
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C KILN SCRUBBING SYSTEM REVISION ADDITION OF VENTURI SECTION TO SO2 SCRUBBER SCRUBBER FLOW DIAGRAM

PREPARED: 09/18/03

IMC PHOSPHATES NEW WALES



C KILN SCRUBBING SYSTEM REVISION
ADDITION OF VENTURI SECTION TO SO2 SCRUBBER
PLAN AND ELEVATION VIEWS

IMC PHOSPHATES NEW WALES PREPARED: 09/18/03