

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

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

KA 124-97-03

April 15, 1998

RECEIVED

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BUREAU OF
AIR REGULATION

Mr. John Reynolds
Florida Department of
Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: IMC-Agrico Company (New Wales)
Multifos Plant Production Increase
DEP File No. 1050059-024-AC, PSD-FL-244

Dear Mr. Reynolds:

This is a follow up to your telephone conversation with Pradeep Raval on April 7, regarding the revision of the emissions estimates for sulfur dioxide from the proposed Multifos kiln.

On April 9, IMC-Agrico conducted additional measurements of sulfur dioxide emissions from the existing Multifos Plant. The sulfur dioxide emissions were measured, using EPA Method 8, at 376 pounds per hour. A summary of the emissions measurements is presented in Attachment 1.

IMC-Agrico is willing to accept federally enforceable permit conditions, on the annual material processing rate, in order to avoid PSD applicability for sulfur dioxide. The emissions calculations for the proposed kiln, presented in Attachment 2, are based on the recent emissions data and an updated scrubber performance guarantee. A letter from the scrubber manufacturer will be sent under separate cover.

IMC-Agrico will conduct the initial compliance tests on the proposed kiln at three operating levels of 50, 75 and 100 percent of the permitted hourly rate. These levels reflect the expected operating range of the new kiln during the course of a year. While operating in compliance with the sulfur dioxide emissions limit, a relationship will be established between the caustic feed rate to the scrubber and the kiln operation rate. During subsequent operations, the caustic feed rate to the scrubber will be kept within the compliant levels established during the compliance tests for the corresponding kiln operating level. This method of operation will ensure, for instance, that the caustic feed rate to the scrubber does not correspond to the maximum permitted kiln operation rate when the kiln is actually operating at 50 percent of the permitted rate.

It is expected, based on past FDEP permitting procedure, that appropriate caustic feed rate limit(s) will be incorporated into the Title V operation permit and the necessary recordkeeping will be required. Consequently, the condition will be federally enforceable.

Mr. John Reynolds
Florida Department of
Environmental Protection

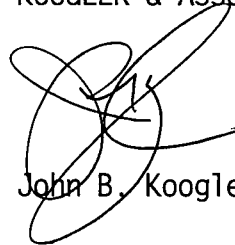
April 15, 1998
Page 2

It is our understanding that FDEP will be able to conclude the technical review of the proposed project with the enclosed information.

If you have any further questions, please do not hesitate to call Pradeep Raval or me.

Very truly yours,

KOGLER & ASSOCIATES



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

JBK:par
encl.

c: C. Dave Turley, IMC-Agrico

cc: File
Dalk CO
SWD
EPA
NPS

ATTACHMENT 1

**SULFUR DIOXIDE EMISSIONS MEASUREMENTS
FROM MULTIFOS PLANT**

Source Sampling Summary Sheet						
	Facility:	New Wales				
	Plant:	Multifos Plant				
	Company ID:	1100				
	FDEP AIRS & Pt. ID:	1050059 & 36				
	Test Team:	ML / RS				
	Parameter	Unit	Run 1	Run 2	Run 3	Average
	Date:		4/9/98	4/9/98	4/9/98	
	Time Start:		820	1015	1140	
	Time End:		940	1115	1245	
	Barometric Pressure:	Inch Hg	30.05	30.05	30.05	
	Static Pressure:	Inch H2O	0.69	0.69	0.69	
	Stack Pressure:	Inch Hg	30.101	30.101	30.101	
	Average Sqrt Delta P:	Inch HOH 1/2	1.069	1.071	1.079	
	Average Delta H:	Inch HOH	1.150	1.158	1.167	1.158
	Maximum Run Vacuum:	Inch Hg	3.0	4.0	4.0	4.0
	Meter Box Number:	Unity	3188	3188	3188	
	Average Meter Temp:	Degrees F	79.1	82.6	80.4	
	Average Stack Temp:	Degrees F	98.2	100.8	100.9	100.0
	Metered Sample Volume:	Cubic Feet	37.92	37.76	38.02	
	Standard Meter Volume:	Cubic Feet	38.04	37.64	38.05	
	Moisture Measured:	%	0.0508	0.0604	0.0549	
	Moisture Saturation:	%	0.0608	0.0659	0.0660	
	Moisture Used for Calculations:	%	0.0508	0.0604	0.0549	0.0554
	Pitot Coefficient:	Unity	0.84	0.84	0.84	
	Nozzle Diameter:	Inch	0.186	0.186	0.186	
	Stack Area:	Square Feet	15.90	15.90	15.90	
	Traverse Points:	Unity	12	12	12	
	Sampling Time:	Minutes	60	60	60	
	Stack Gas Molecular Weight:	lb/lb-mol	28.412	28.306	28.367	
	Actual Stack Velocity:	Feet/sec	62.046	62.385	62.787	62.406
	Actual Stack Gas Flow:	ACFM	59178	59501	59885	59521
	Dry Standard Stack Gas Flow:	DSCFM	53456	52949	53598	53335
	Isokinetic Rate:	%	100.01	99.90	99.76	
	SO2 Emission:	lb/day	8842.39	8887.95	9360.45	9030.26
	SO2 Emission:	lb/hr	368.43	370.33	390.02	376.26
	Production Information:		tph	moisture	P content	P2O5 tph
	Kiln A tph		12.5	0.0542	0.1618	4.38
	Kiln B tph		11.0	0.0510	0.1611	3.85
					total tph P2O5	8.23
					lb OSO/ton P2O5	45.7

ATTACHMENT 2

SULFUR DIOXIDE EMISSIONS ESTIMATES

IMC-Agrico proposes to limit the annual material input rates in order to avoid PSD review for sulfur dioxide emissions.

SULFUR DIOXIDE EMISSIONS

In order to avoid PSD review for SO₂, the annual emissions have to be less than the PSD significant level of 40 tpy.

Annual SO ₂ Cap	=	39 tpy
Scrubber Eff.	=	97 percent
SO ₂ to Scrubber	=	$39 \text{ tpy} / (1 - 0.97) \times 2000 \text{ lbs/ton} \times \text{yr} / 8760 \text{ hrs}$
	=	296.8 lbs/hr
Material Input	=	$296.8 \text{ lbs/hr} / 376 \text{ lbs/hr (test)} \times 8.23 \text{ tph P205}$
	=	6.5 tph P205 feed, annual average
	=	$\times 8760 \text{ hrs/yr}$
	=	56,910 tpy P205 feed

Please accept the corrected annual material input cap as an amendment to the permit application under FDEP review. A maximum hourly feed rate of 7.2 tph P205 (within 10 percent of the annual average), is requested in order to accommodate fluctuations in normal operations. IMC-Agrico will retain records to demonstrate compliance with the limits.