



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

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May 11, 2001

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MAY 16 2001

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

BUREAU OF AIR REGULATION

RE: Construction Permit Extension Response
Permit No. 1050059-024-AC (PSD-FL-244)A
AIRS No. 1050059 033
Emissions Units Nos. 074, 075 and 076
New Wales Plant

Dear Mr. Linero:

This letter is in response to your letter of April 4, 2001, which requested additional information related to IMC Phosphates' request to extend the expiration date of the Multifos Kiln C construction permit. The responses follow:

1. **List the tasks that were completed as identified in your letter dated August 28, 2000, a copy of which is attached. List any additional tasks to be performed to achieve "normal operating conditions" and the approximate dates for completing those tasks.**

The status of the tasks in the referenced letter is as follows:

- 1.A. A summary of actions was attached.
- 1.B. The new burner was evaluated and was found to operate similar to the burners of the A and B Kilns.
- 1.C. Instrumentation to monitor volumetric flow through the kiln was to be installed to improve combustion control for the burner. This task was not completed because the CO analyzer that had been installed proved to be sufficient to achieve adequate combustion control.

- 1.D. Operating procedures for kiln combustion control were developed based on the carbon monoxide monitoring instrumentation. Fuel usage rate for C kiln is now comparable to that of A or B kilns.
- 2.A. C Kiln was used for drying mixed feed for A and B Kilns. This is the basis for the request for the current authorization for use of a kiln as a dryer to further evaluate this improvement to operation of the kilns in general.
- 2.B. No specific testing was conducted as indicated. The primary focus of attention was on the "normal" operation of the kiln for extended periods. The attached operating history provides a description of these efforts.
- 2.C. The fluoride testing that had been done accompanied the application.
2. **Identify additional production and emission testing that needs to be conducted and provide estimated dates for completion of those tasks.**
 - A. Two approaches have been identified as possible methods to further reduce fluoride emissions in the existing system: 1)The source of pond water for the quench tower and the cross-flow scrubber can be changed and 2) steam can be introduced in the transition section in order to retard any potential evaporation of the pond water. These approaches will be evaluated using a statistically designed testing protocol to compare the impact of these changes. This testing will be completed by June 1. Pending the results, subsequent emission testing will be undertaken to confirm the findings and will be conducted separately or included with that required in item B.
 - B. The first production test using one kiln to dry the mixed feed will be conducted beginning on May 14. This is the test authorized pursuant to the Department's letter dated March 13. If additional testing is indicated, tests will be scheduled at that time.
 - C. During the operation of C Kiln for approximately the last 5 months, a problem has developed in the SO₂ Scrubber. Plugging of the demist section has become extensive. Plugging with particulate matter may result from some type of chemical reaction which leads to the formation of fine material that is not removed by the packed scrubbers. Efforts to improve this situation will be attempted in the next three months.
 - D. A proposal from Kimre has been received which proposes to replace the packing in the cross-flow scrubber with four pads in order to control the fine particulate. This will require the retrofitting of the scrubber body to accommodate the new pads. This proposal will be evaluated by June 1.

The A and B Kiln scrubber demist sections have been fitted with a recirculating caustic solution system as required by the permit. Due to the entrained pond water from the main scrubber packing, the sections are subject to severe plugging. The attached pictures show this plugging of

the demist packing. Although not accepted by the Department, the original IMC proposal for this system was to introduce the solution through duct sprays and to recirculate using duct drains. At this point, IMC requests reconsideration of this approach. A sketch is attached which shows this configuration for SO₂ scrubbing. An operating history provides a description of these problems for the A and B Kiln scrubbers.

3. Provide a statement (and basis for believing) that the facility will comply with applicable regulation.

Based on the compliance testing conducted on the new kiln, the emission limits of the construction permit will be met with the exception of the fluoride limit of 0.038 lb./ton P205. From the compliance tests that have been conducted on this kiln, the fluoride emissions have been found to be located primarily in the probe/filter portion of the sampling train. This indicates that the fluoride is a liquid, solid, or both. As the Department is aware, the design of the scrubbing system was based on the fluoride being in a gaseous form. The purpose of the revised permit application and request for the extension to the expiration date is to review this fluoride limit. IMC has proposed that the limit be increased.

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

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cc: J. R. Gruber
P. A. Steadham
G. J. Kissel, FDEP Tampa
Koogler and Associates, Inc.



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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.

M. Daigle
(Signature of Responsible Official)

5/11/01
(Date)

Name: M. A. Daigle

Title: General Manager, New Wales

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
C. D. Turley, P.E.
No. 0023344

5/11/01
Date



Current Operating History for Kiln C.

The "C" Kiln was shut down November 8, 2000 for brick repair. During this shutdown the chevrons in the SO₂ scrubber were hydroblasted to remove buildup. The kiln was re-started on November 24, 2000.

The SO₂ scrubber operated without problems until December 26, 2000, when again problems were encountered with plugging of the packing and chevrons. The rate on the kiln was restricted on numerous occasions due to plugging.

The shift supervisors log book shows almost daily notations of having to wash the packing and chevrons on the SO₂ scrubber to lower the pressure drop on this system to maintain an adequate draft on the kiln from January 11, 2001 until April 18, 2001.

The SO₂ scrubber packing and chevrons were hydroblasted again on April 18, 2001.

The packing and chevrons have been washed once per week since the last hydroblasting to control pressure drop on the scrubber.

Current Operating History for Kilns A and B

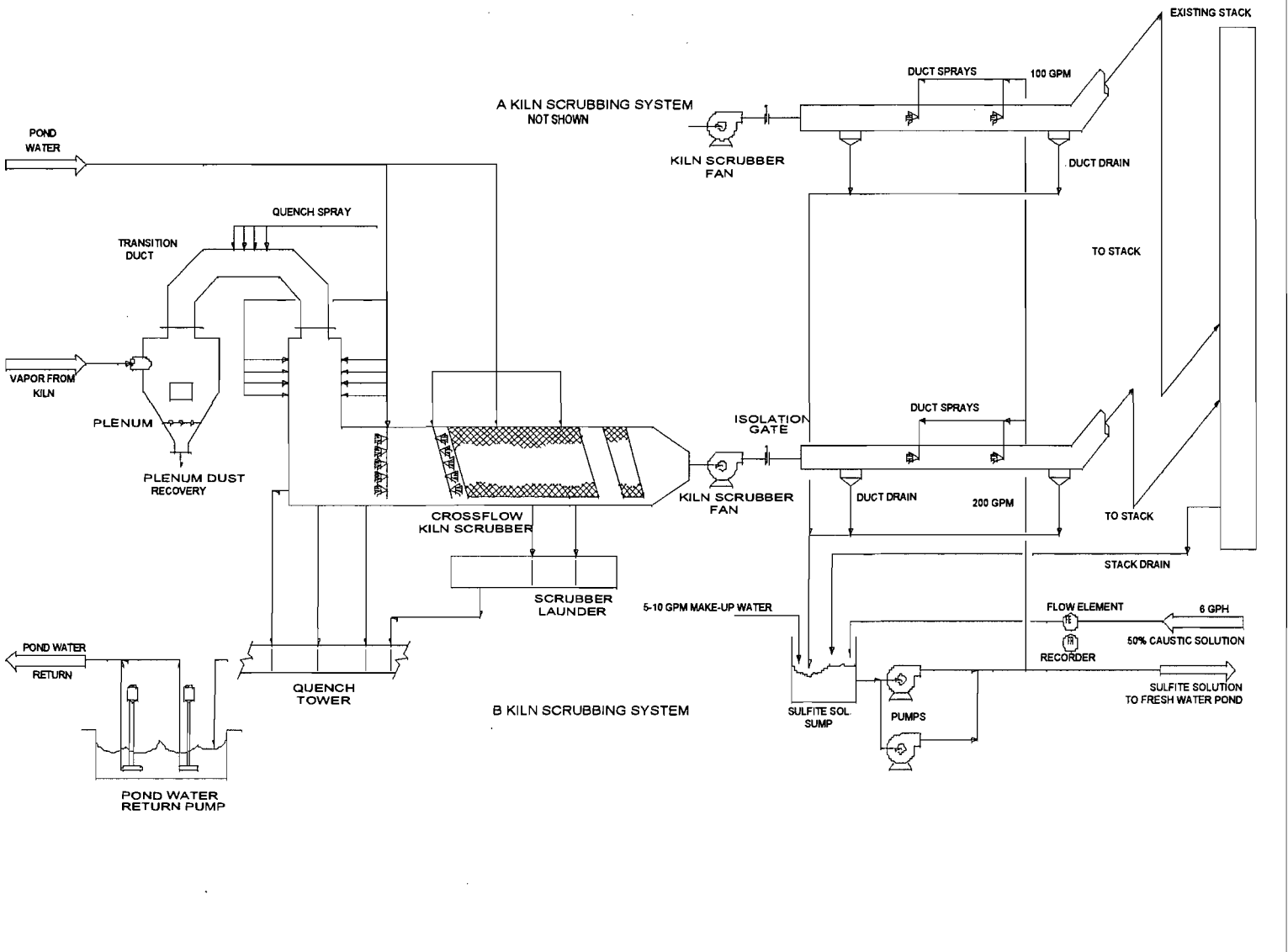
The "A" Kiln started having problems with plugging in the demist section on December 21, 2000. The longest period of operation without having to wash the demist section was three days from December 21, 2000 until February 14, 2001. From Jan. 24, 2001 until February 14, 2001 the demist section was washed and rodded at least two times per day to maintain an adequate pressure drop on the system.

The demist packing was changed on "A" scrubber on February 14, 2001. The packing had to be jackhammered out due to the plugging. The kiln was down for 10 hours to remove the packing and buildup from the demist section.

The kiln operated until March 3, 2001 with no additional cleaning needed in the demist section packing. From March 3, 2001 until April 24, 2001 the packing in the demist section required washing at intervals of three to seven days to maintain adequate pressure drop. On April 24, 2001 we started having to wash the packing every day. The kiln was shut down again on May 7, 2001 and the demist section packing and buildup were hydroblasted from the scrubber. New packing was added to the scrubber demist section.

The "B" Kiln demist section packing has not given as much trouble as the "A" Kiln. The demist section packing has had to be washed and rodded two to three times per week since January 6, 2001. This continued until April 18, 2001. Since April 18, 2001 the demist packing has had to be washed and rodded daily. The kiln was shut down May 4, 2001, and the demist section packing and buildup were hydroblasted from the scrubber. New packing was added to the demist section.

Original Proposal for SO₂ Scrubbing at A and B Scrubbers.



PREPARED:	CDT	TITLE:	PROPOSED MULTIFOS KILN C	COMPANION:	NEWVALES	FILE:	KILN02
DATE:	11/13/97	MODIFICATIONS TO A&B SCRUBBER SYSTEM		SCALE:	NONE	DRAWING NO.:	L9
REVISED:	8/25/98	IMC-AGRIGO CO.					

A Scrubber Demist Section Plugging



Packing From Demist Section



Build up in Demist Section



Demist Section