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KOGLER & ASSOCIATES

ENVIRONMENTAL SERVICES

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

KA 102-96-04

November 13, 1996

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BUREAU OF  
AIR REGULATION

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

Subject: Hamilton County - AP  
PCS Phosphate  
Clarification of Permit Language For  
Molten Sulfur System Operation Rate

Dear Mr. Fancy:

This is a follow up to your recent conversations with FDEP's Northeast District office staff regarding the permitted operation rates of the existing molten sulfur systems at PCS Phosphate (previously Occidental), in Hamilton County, Florida.

This letter is submitted to clarify the operation rates identified in PCS's existing molten sulfur system permits (see attached). It should be noted that this discussion is equally valid for all the molten sulfur systems in the state which were mass permitted, as a result of the state's "sulfur rule".

To summarize, the Department issued permits for molten sulfur systems that contained estimates of emissions rates and daily and annual throughput rates associated with sulfuric acid production rates. The permits did not limit in any way the sulfur receiving rate or internal molten sulfur transfer rates.

#### BACKGROUND

At a typical phosphate fertilizer plant, the molten sulfur storage and handling system is a support activity associated with a sulfuric acid plant. Molten sulfur may be received by truck or rail; gravity unloaded into a below-grade pit; pumped from the pit to a storage tank; and, ultimately pumped to a sulfur furnace in a sulfuric acid plant. Steam is widely used throughout the system to maintain the sulfur in a molten form.

Mr. Clair H. Fancy  
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November 13, 1996  
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Initial sulfuric acid plant permits/permit applications mentioned sulfur as a necessary raw material. Generally regarded by FDEP as an insignificant activity, it was only after the promulgation of the state's "sulfur rule" that the existing molten sulfur systems required permitting.

Two important specific conditions in initial molten sulfur system construction permits addressed the estimated air emission rates and the allowable operation rate. The estimated air emission rates were generally tabulated and mentioned in the permit for PSD inventory purposes only. The allowable operation rate was stated as a throughput rate which was based on daily and annual sulfuric acid production rates. A throughput limit was determined by FDEP to be necessary to establish the operation level of the sulfur system. A sulfur throughput limit associated with the sulfuric acid production rate was practical, as the one rate is dependent on the other rate. Separate sulfur unloading/transfer/pumping rate limits were deemed unnecessary by FDEP for the purpose of air permitting. FDEP expected that a sulfur throughput limit would need to be revised only when the sulfuric acid production rate limit was revised.

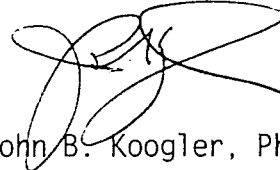
#### PCS MOLTEN SULFUR SYSTEMS

PCS has molten sulfur systems at the Suwannee River and Swift Creek Plants. Wording in the specific conditions of both the construction and operation permits, relative to the operation level of the sulfur systems, corresponds to the sulfuric acid plant production rates (as explained above). It should be noted the permits do not restrict the sulfur unloading rate, transfer rate, or pumping rate, all of which vary from time to time.

It is expected that this letter will update your permitting files relative to this issue. If you have any questions, please call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES



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

JBK:par  
Encl.

c: C. Pults, PCS  
R. Leetch, FDEP, NE District



PERMITTEE:  
Occidental Chemical Corp.

Permit Number: AC 24-171595  
Expiration Date: Jan. 1, 1991

GENERAL CONDITIONS:

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Occidental's SCCC molten sulfur storage and handling system shall be allowed to operate continuously, i.e. 8760 hours/year.

→ 2. The maximum molten sulfur throughput rate shall neither exceed 1650 tons per day (TPD), nor 600,000 tons per year (TPY), based on the combined maximum rated sulfuric acid production rate of 5000 TPD 100% sulfuric acid for plants E and F.

3. Visible emissions (VE) shall not exceed 20% opacity from any source in the molten sulfur system.

4. The permittee shall employ procedures to minimize emissions, from the molten sulfur system pursuant to the applicable requirements of F.A.C. Rule 17-2.600(11)(a) [Molten Sulfur Storage and Handling Facilities]. The permittee shall also comply with other applicable provisions of F.A.C. Chapters 17-2 and 17-4.

5. No objectionable odors shall be allowed, in accordance with F.A.C. Rule 17-2.620(2) [Objectionable Odor Prohibited].

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Occidental Chemical Corp.

Permit Number: AC 24-171596  
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GENERAL CONDITIONS:

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
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- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Occidental's SRCC molten sulfur storage and handling system shall be allowed to operate continuously, i.e. 8760 hours/year.
2. The maximum molten sulfur throughput rate shall neither exceed 1850 tons per day (TPD), nor 670,000 tons per year (TPY), based on the combined maximum rated sulfuric acid production rate of 5600 TPD 100% sulfuric acid for plants A, C, and D.
3. Visible emissions (VE) shall not exceed 20% opacity from any source in the molten sulfur system.
4. The permittee shall employ procedures to minimize emissions, from the molten sulfur system pursuant to the applicable requirements of F.A.C. Rule 17-2.600(11)(a) [Molten Sulfur Storage and Handling Facilities]. The permittee shall also comply with other applicable provisions of F.A.C. Chapters 17-2 and 17-4.
5. No objectionable odors shall be allowed, in accordance with F.A.C. Rule 17-2.620(2) [Objectionable Odor Prohibited].

PERMITTEE:  
Occidental Chemical Corporation  
Post Office Box 300  
White Springs, Florida 32096

I.D. Number: 31JAX24000254  
Permit/Cert: A024-187726  
Date of Issue:  
Expiration Date: January 01, 1996

SPECIFIC CONDITIONS:

- 1. The maximum input rate (operating rate) is shown below and shall not be exceeded without prior approval.

<u>Rate</u>	<u>Material</u>
1,850 TPD <sup>1,2,3</sup>	Molten Sulfur
670,000 TPY <sup>1,2</sup>	Molten Sulfur

<sup>1</sup>From CP #AC24-171596

→ <sup>2</sup>Per CP, based on combined maximum production rate of 5600 TPD of 100% sulfuric acid for plants A, C & D

<sup>3</sup>Also, 77.08 TPH

2. Testing of emissions must be performed at an operating rate of at least 90% of the rate in Specific Condition (SC) No. 1, or SC No. 3 will become effective.
3. The operating rate shall not exceed 110% of the operating rate during the most recent test except for testing purposes, but shall not exceed that rate in SC No. 1. After testing at an operating rate greater than 110% of the last test operating rate, the operating rate shall not exceed 110% of the last (submitted) test operating rate until the test report at the higher rate has been reviewed and accepted by the Department.
4. The permitted maximum allowable emission rate for each pollutant is as follows:

<u>Pollutant</u>	<u>F.A.C. Rule</u>	<u>Emission Limit</u>
VE <sup>1</sup>	17-2.600(11)(a)7.	20% opacity <sup>2,3</sup>
Odors	17-2.620(2)	None objectionable

Hours of operation are limited to 8760 H/Y and shall be recorded.

<sup>1</sup>VE - Visible emissions

<sup>2</sup>Basis: From CP# AC24-171596

<sup>3</sup>Per CP, from any source in this molten sulfur system

5. The permittee shall employ procedures to minimize emissions, from the molten sulfur system pursuant to the applicable requirements of F.A.C. Rule 17-2.600(11)(a), Molten Sulfur Storage and handling Facilities. The permittee shall also comply with other applicable provisions of F.A.C. Chapters 17-2 and 17-4.

PERMITTEE:  
Occidental Chemical Corporation  
Post Office Box 300  
White Springs, Florida 32096

I.D. Number: 31JAX24000515  
Permit/Cert: A024-187633  
Date of Issue:  
Expiration Date: January 01, 1996

SPECIFIC CONDITIONS:

- 1. The maximum input rate (operating rate) is shown below and shall not be exceeded without prior approval.

<u>Rate</u>	<u>Material</u>
1,650 TPD <sup>1,2,3</sup>	Molten Sulfur
600,000 TPY <sup>1,2</sup>	Molten Sulfur

<sup>1</sup>From CP #AC24-171595

→ <sup>2</sup>Per CP, based on combined maximum production rate of 5000 TPD of 100% sulfuric acid for plants E and F

<sup>3</sup>Also, 68.75 TPH

2. Testing of emissions must be performed at an operating rate of at least 90% of the rate in Specific Condition (SC) No. 1, or SC No. 3 will become effective.
3. The operating rate shall not exceed 110% of the operating rate during the most recent test except for testing purposes, but shall not exceed that rate in SC No. 1. After testing at an operating rate greater than 110% of the last test operating rate, the operating rate shall not exceed 110% of the last (submitted) test operating rate until the test report at the higher rate has been reviewed and accepted by the Department.
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<u>Pollutant</u>	<u>F.A.C. Rule</u>	<u>Emission Limit</u>
VE <sup>1</sup>	17-2.600(11)(a)7.	20% opacity <sup>2,3</sup>
Odors	17-2.620(2)	None objectionable

Hours of operation are limited to 8760 H/Y and shall be recorded.

<sup>1</sup>VE - Visible emissions

<sup>2</sup>Basis: From CP# AC24-171595

<sup>3</sup>Per CP, from any source in this molten sulfur system

5. The permittee shall employ procedures to minimize emissions, from the molten sulfur system pursuant to the applicable requirements of F.A.C. Rule 17-2.600(11)(a), Molten Sulfur Storage and handling Facilities. The permittee shall also comply with other applicable provisions of F.A.C. Chapters 17-2 and 17-4.5.

Date: 12/11/96 1:35:58 PM  
From: Bob Leetch JAX  
Subject: PCS Phosphate Permit Modifications  
To: Clair Fancy TAL  
To: Alvaro Linero TAL  
CC: Christopher Kirts JAX  
CC: Johnny Cole JAX

Clair,

We received by one letter dated 11/25, 30 permit modification requests from PCS Phosphate to modify the operation rates at 30 emissions units. You were carbon copied on this request. In our meeting on November 7, I asked for a clarification regarding the permit modifications that PCS is proposing, and I said that we could do them in the NED even though we felt that they should be processed by DARM. At that time, you said that since this is a PSD source it would be better if the permit modifications were processed by DARM. I called PCS and told them that they would need to send the modification request to DARM.

Based on the 11/25 letter, I would like to confirm with you that you discussed this matter with Pradeep Raval of Koogler and Associates, and that you agreed that the permits could be modified and should be processed in the NED. It is also stated that you felt that the permits could be modified to reflect an hourly rate based on a 30 day, 12 month rolling average; and also a maximum one hour rate, given that the EPA does allow up to 30 day averaging periods in operation permits.

If we do not hear from you in the near future, we will assume that what is stated in the 11/25 letter is exactly as to what was discussed by phone with you and Pradeep Praval.

At this time we expect to send out a modification letter with a chart similar to the one in their 11/25 letter to PCS instead of modifying the 30 permits. Do you feel that they need to public notice the modification? If so, should 30 public notices be required?

Thanks

Bob

Date: 12/12/96 9:52:08 AM  
From: Alvaro Linero TAL  
Subject: Re: PCS Phosphate Permit Modifications  
To: Bob Leetch JAX  
To: Clair Fancy TAL  
CC: Christopher Kirts JAX  
CC: Johnny Cole JAX

Clair put the following notes on his printed copy of the E-Mail you sent him. Paragraph 2 regarding switch to 30 day, 12 month rolling average - "can be done." Paragraph 4 regarding need to publish 30 public notices - "no." He circled the word "exactly" in paragraph 3. I don't recall the 11/25 letter and perhaps Clair did not either.

Feel free to give Clair a call about anything else that you need clarification on. Thanks.