

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee	
To: _____	Loctn.: _____
To: _____	Loctn.: _____
To: _____	Loctn.: _____
From: _____	Date: _____

Copy I - To B.T. on 10-27-80

TO: Jacob D. Varn
 FROM: Steve Smallwood
 DATE: October 24, 1980
 SUBJ: BACT - Occidental Chemical Company
 Phosphoric Acid Feed Preparation

Facility: A 422 TPD P₂O₅ acid defluorination plant where diatomaceous earth is mixed with 54 percent phosphoric acid, heated and then air is blown through the mixture to remove fluorides from the acid. The fluoride is removed from this air with a cross-flow packed scrubber before the air is discharged to the atmosphere. Dust from the diatomaceous earth handling equipment is controlled with a baghouse.

BACT Determination Requested by the Applicant:

Fluoride: 0.05 lb F/ton P₂O₅ feed
 Particulate: 1.26 lb/hr.

Date of Receipt of a BACT Application:

October 8, 1980

Date of Publication in the Florida Administrative Weekly:

OCT. 31, 1980

Study Group Members:

Johnny Cole, St. Johns River Subdistrict
 Teresa Heron, Bureau of Air Quality Management
 Bob King, Bureau of Air Quality Management

Study Group Recommendation:

	Fluoride (lb F/TP ₂ O ₅ in.)	Particulate
Johnny Cole	0.05	20% opacity
Teresa Heron	0.04	1.05 lb/hr (scrubber)
Bob King	0.02	0.21 lb/hr (baghouse)

BACT Determination by the DER:

Maximum Allowable Emission Rate are as follows:

Fluoride - 0.04 $\frac{\text{lb. total F}}{\text{TP}_2\text{O}_5 \text{ input}}$ and 0.65 lb F/hr.

Particulate - 0.015 grains/ACF or 5% opacity

Compliance to be determined by reference methods 1, 2, 3, 4, 5, 9, 13A or 13B as published in 40 CFR 60, Appendix A or by other DER approved procedures. Minimum sample volume per run is 30 DSCF collected during an integral number of cycles over a period of 60 minutes ^{or} longer. Fluoride emission compliance tests are to be conducted near permitted capacity during the time the process pond water is expected to be near its maximum annual temperature.

Justification of DER Determination:

The cross-flow packed scrubber and baghouses are the most satisfactory types of control devices for this service. The BACT standard can be met with properly designed, maintained and operated control devices. Lower fluoride emission from this plant is possible if the scrubber water is treated to remove fluoride. The expense of treating the water to obtain lower emission is not justified at this time.

Details of the Determination:

Details of the determination may be obtained by contacting:

Willard Hanks
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Jacob D. Varn
Page Three

Recommendation from the Bureau of Air Quality Management:

By: _____
Steve Smallwood

Date: _____

Department of Environmental Regulation approval:

By: _____
Jacob D. Varn

Date: _____

Attachment: Application
Recommendation (3)



INTER-OFFICE MEMO
OCCIDENTAL CHEMICAL COMPANY

DATE: October 21, 1980
TO: Wes Atwood
FROM: J. P. Harvey
SUBJECT: COOLING POND TEMPERATURES

Attached is a modified Xerox copy of some data that was accumulated during 1977 and 1978.

Notes:

Old Pond refers to Dorr-Oliver Pond.

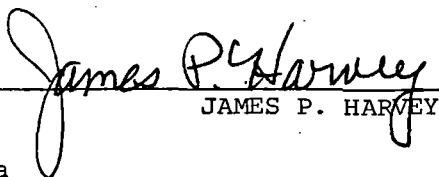
New Pond refers to CTC Pond.

Col. 1 is an average of Old & New Pond - 1977

Col. 2 is an average of Old & New Pond - 1978.

Col. 3 is an average of Col. 1 and Col. 2.

These measurements were made at about 8 to 10 o'clock a.m. once per month.



JAMES P. HARVEY

dsa

Attachment: Xerox Copy Pond Temperatures Daylight Measurements

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TO: Willard Hanks
FROM: Bob King *B. King*
DATE: October 14, 1980
SUBJ: BACT Determination for Occidental Chemical Company

1. The defluorination process used by Occidental Chemical Company is similar to superphosphoric acid process/ phosphoric acid process. The proposed cross-flow packed scrubber for fluoride control is the best control technology for phosphate fertilizer industry.
2. The company is using 0.6% fluoride phosphoric acid as feed for superphosphoric acid process and other processes. The application specifies 1.65% fluoride in the phosphoric acid used as feed to calculate scrubber removing efficiency.
3. A standard 0.02 lb. F/ton P_2O_5 can be met by using acid feed with 0.6% fluoride and a cross-flow packed scrubber with 99.9% efficiency.
4. I recommend 0.02 lb F /ton P_2O_5 as the BACT emission standard for this source.
5. For particulate, I agree with applicant on his proposal, 0.21 lbs./hr. as BACT emission standard.

BK:caa

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ST. JOHNS RIVER SUBDISTRICT, JACKSONVILLE

TO: Willard Hanks

FROM: Johnny Cole *[Signature]*

DATE: October 8, 1980

SUBJECT: Hamilton County - AP
Occidental Chemical Co. - Suwannee River
Dical Acid Prep Unit

My BACT recommendation on subject is 0.05 lb. fluoride per ton of P₂O₅ input.

For particulate emissions from the stack (pt. 3) and from the vent (pt. 4), and since BACT is not applicable, I plan to use Chapter 17-2.05(1)(a) as the limit in lieu of 17-2.05(2) because stack testing either would not be practicable.

JLC:vk

