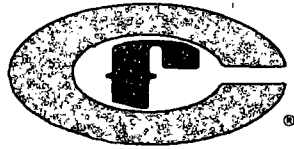


CENTRAL PHOSPHATES, INC., Subsidiary of

P.O. Drawer L.
Plant City, Florida 33566
Telephone: 813/782-1591



CF Industries, Inc.
Plant City Phosphate Complex

October 9, 1989

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OCT 13 1989
DER-BAOM

Mr. C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: CF Sulfur Facility Permitting AC29-167204

Dear Mr. Fancy:

In reference to your letter asking additional information, the following is supplied:

1. Please estimate the expected emissions from the sulfur delivery vehicle(s) while it is at the CF facility.

The trucks enter the facility with all vents closed. The unloading hose is connected to the truck, the vent opened and then the unloading valve is opened. This allows air to enter the vent while unloading is occurring. As soon as the unloading is complete, the vent on the truck is closed and the hose is disconnected from the truck. The hose remains in the unloading spout. Therefore, the emissions from the vehicle are negligible.

2. What is the total permitted sulfuric acid production capacity at this facility and the corresponding elemental sulfur requirement per day?

This facility has four sulfuric acid plants with the following capacities:

"A" Sulfuric Acid	1050
"B" Sulfuric Acid	1050
"C" Sulfuric Acid	2400
"D" Sulfuric Acid	<u>2400</u>

Total permitted capacity 6900 tons/day

Corresponding average sulfur requirement per day is:

$6900 \div 3.06 = 2255$ tons/day average

CF Industries, Inc.

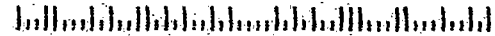
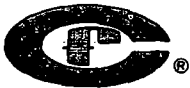
Plant City Phosphate Complex
P.O. Drawer "L" • Plant City, FL 33566

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OCT 13 1989

DER - BAQM

Mr. C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400



10/13/89
11:30 AM
10/13/89

3. Please submit air emission estimates for any other source/equipment/process within (or associated with) the sulfur facility which has not yet been permitted by DER.

CPI also has a facility for unloading railroad tank cars of molten sulfur which has not been used for several years, but could be used in the future. Should this station be used, it should not result in a change in emissions since truck unloading would decrease by a similar quantity during its use.

4. Submit air emission estimates for all the air pollutants emitted by the sources in the sulfur facility.

The following is calculated based on the information submitted by Enviro Plan in 1987 for Freeport:

(a)	H ₂ S as Total Reduced Sulfur	4.3 x 10 ⁻⁵ lbs/dscf
	∴ .000043 x 131 dscf* x 1440 min/day x	<u>365 days/yr</u>
		2000 lbs/ton = 1.479 T/yr TRS

$$1.479 \times \frac{.823 \times 10^6 \text{ T/yr at CPI(S)}}{1.69 \text{ T/yr at Pennzoil(S)}} = 0.72 \text{ T/yr TRS Emission}$$

(b)	SO ₂ as S	9.1 x 10 ⁻⁵ lbs/dscf
	∴ .000091 x 131 dscf* x 1440 min/day x	<u>365 day/yr</u>
		2000 lbs/ton = 3.13 T/yr SO ₂

$$3.13 \times \frac{.823 \times 10^6 \text{ T/yr at CPI(S)}}{1.69 \text{ T/yr at Pennzoil(S)}} = 1.52 \text{ T/yr SO}_2$$

$$1.52 \times \frac{32}{64} = 0.76 \text{ T/yr as S}$$

(c)	VOC	5.2 x 10 ⁻⁵ lbs/dscf
	∴ .000052 x 131 dscf* x 1440 min/day x	<u>365 days/yr</u>
		2000 lb/ton = 1.79 T/yr VOC

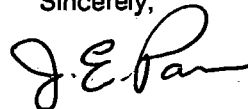
$$1.79 \times \frac{.823 \times 10^6 \text{ T/yr at CPI(S)}}{1.69 \text{ T/yr at Pennzoil(S)}} = .872 \text{ T/yr VOC}$$

* This is dry standard cubic feet per minute calculated from the ACFM previously submitted based on Pennzoil data in their report.

These estimates are probably high by at least a factor of two (2) because of the difference in instantaneous unloading rates, i.e., their unloading from ships.

If any additional information is needed, please call Jim Martin at (813) 782-1591.

Sincerely,



J. E. Parsons
General Manager

JEP/CJM/tjj

cc: P.R. Roberts/T.A. Edwards
C.J. Martin/Env. File
P. Raval
D. Kerns, SW Dist.
E. Sull, EPCHC