



Lawton Chiles
Governor

15:30

DEPT. OF ENVIR. PROTECT.

Depa Environmer

Twin Tow
2600 Bl
Tallahassee, Florida 32399-2400

Post-It* Fax Note

71

Date

813 7446458

P.04/05

5/5

pages

1

To Eric Peterson

From

John Reynolds

Co/Dept.

Co

DEP

Phone #

Phone #

Fax #

Fax #

Secretary

December 14, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Melody Russo
Cargill Fertilizer, Inc.
Post Office Box 9002
Bartow, Florida 33831

Re: DEP File No. 1050046-001-AC (PSD-FL-229)
Sulfuric Acid Plants 4, 5, and 6

Dear Ms. Russo:

The Bureau of Air Regulation received Cargill's December 9 response to the Bureau's October 28 letter requesting additional information on the request to install cesium catalyst in Sulfuric Acid Plants 4 and 5.

Recently, the EPA expressed concerns regarding the potential for increased production and emissions following catalyst changes in sulfuric acid plants. Consequently, the Department must consider this request as an additional modification with potential to increase emissions through increased production. Since the requested modification is equivalent to a change in control technology, the BACT determination should be revised to reflect the emission capabilities of the new catalyst. Assurance will need to be provided through CEMs data that the annual emissions increase will be less than PSD-significant.

The fee for a permit modification involving technical review is \$250 (F.A.C. Rule 62-4.050), therefore an additional \$200 will be required which will also cover the extension request. If there are any questions regarding the above, please call John Reynolds at 850/921-9536.

Sincerely,

A. A. Linero, P.E. Administrator
New Source Review Section

AAL/JR

cc: Brian Beals, EPA
John Bunyak, NPS
Bill Thomas, SWD
Joe King, Polk Co.
David Buff, Golder Assoc.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

CARGILL INFORMATION

for

SAP Nos. 8 & 9

STACK TEST HISTORY for SAP No. 9		
Date	Production Rate*	Emission Rate**
	Tons/hr. of 100% H ₂ SO ₄	Lbs. of SO ₂ /ton of 100% H ₂ SO ₄
12/2/99	133.08	3.6
12/9/98	131.25	3.7
12/19/97	131.42	3.7
6/20/97	106.67	2.0
5/16/96	115.6	3.0

* Max. Allowable production is 3400 TPD = 141.7 TPH

** Max. Allowable emission rate is 4.0 lbs. of SO₂/ton

ANNUAL PRODUCTION HISTORY			
Year	SAP No. 9* (tons)	SAP No. 8** (tons)	SAP No. 9 + SAP No. 8*** combined (tons)
1999	885,377	681,265	1,566,642
1998	1,053,683	646,400	1,700,083
1997	840,562	703,956	1,544,518
1996	893,157	794,817	1,687,974

* Max. Allowable annual production 3400 TPD x 365 = 1,241,000

** Max. Allowable annual production 2700 TPD x 365 = 985,500

*** Max. Allowable annual combined 5700 TPD x 365 = 2,080,500

Jim McDonald's

INFO

6.3 RECEPTOR LOCATIONS

6.3.1 SIGNIFICANT IMPACT ANALYSIS

To determine the SO₂ significant impact area, concentrations were predicted for 216 receptors located in a radial grid centered on H₂SO₄ No. 4 stack. Receptors were located in "rings" with 36 receptors per ring, spaced at 10° intervals and at distances of 5, 7, 10, 15, 20, and 25 km from the H₂SO₄ No. 4 stack location. The proposed expansion was determined to be significant out to 15 km from the Cargill site, based on the annual averaging time.

6.3.2 AAQS AND PSD CLASS II IMPACT ASSESSMENT

A polar receptor grid was used to cover the spatial extent of the proposed project's significant impact area (15 km). The screening grid included 180 regular grid and 146 discrete receptors. The regular grid receptors were located as rings at distances of 5.0, 7.0, 9.0, 12.0, and 15.0 km. Discrete receptors included 36 receptors located on the plant property boundary at 10° intervals, plus 110 additional off-property receptors at distances of 1.5, 2.0, 2.5, 3.0, and 4.0 km from the DAP No. 4 stack to cover the area between the property boundary and the closest regular receptor grid distance (i.e., 5.0 km). The 36 property boundary receptors used for the screening analysis are presented in Table 6-4. All receptor locations are relative to the DAP No. 4 stack location, which is the origin for the AAQS and PSD increment analysis.

6.3.3 CLASS I IMPACT ASSESSMENT

Maximum SO₂ impacts for the Chassahowitzka NWA were predicted at 13 discrete receptors located along the border of the Class I area. SO₂ and NO_x impacts for the proposed modification only were also compared to the Class I significance levels recommended by the National Park Service (NPS). A listing of Class I receptors is provided in Table 6-5.

6.4 BACKGROUND CONCENTRATIONS

To estimate total air quality concentrations, a background concentration must be added to the modeling results. The background concentration is considered to be the air quality concentration contributed by sources not included in the modeling evaluation.

The estimation of appropriate background levels for this project was based on existing ambient air quality data. Some of the ambient monitors under consideration are influenced by local SO₂ sources. Since all the major SO₂ sources near the Bartow facility are included in the emission