



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

August 18, 2000

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Ms. Mallika Muthiah, P.E.
Chief, Air Facilities Section
Miami-Dade County Department
of Environmental Resources Management
33 SW 2nd Avenue, Suite 900
Miami, Florida 33130-1540

Re: Comments on DRAFT Permit No. 0250020-002-AV
Tarmac America, Miami-Dade County

Dear Ms. Muthiah:

The Bureau of Air Regulation received the DRAFT Title V permit prepared by Miami-Dade Department of Environmental Resources Management (DERM) for the Tarmac-America facility in Medley. Pursuant to the public notice published on July 21, 2000, the following are our comments for your consideration regarding the draft permit:

1. Cement Kiln No. 2 is not operating in compliance with construction permit AC 13-169901, clerked on February 27, 1991 and does not comply with the Final Order dated December 7, 1990 (clerked on December 10, 1990). In particular the unit does not comply with the range of nitrogen oxides (NO_x) limits given in those documents. The limits required by these documents are not embodied in the draft permit.
2. The higher limits in the draft Title V permit are based on the Agreement dated January 30, 1998 between Tarmac and DERM that gave Tarmac reasonable amounts of time to either: 1) fix the NO_x problem and comply with the permit; 2) shut down the kiln; or, 3) operate it with adjusted NO_x limits until completion of a facility modernization project. This was a reasonable settlement of the matter that included a penalty and continuous emission monitoring requirements.
3. On February 10, 1999 we issued Permit 0250020-007-AC to Tarmac to implement a project at Kiln No. 2 to switch to indirect firing. The purpose of that project was to bring Kiln No. 2 into compliance with the Department's permit. Tarmac allowed the permit to expire without implementation and chose to pursue the modernization option.
4. Based on the subsequent DERM Permit 0250020-008-AC, issued October 21, 1999 Tarmac has until October 21, 2002 to complete the modernization project while operating Kiln No. 2 in accordance with the Agreement. This date is about 8 (eight) years after Tarmac completed the project on Kiln No. 2 for which AC 13-169901 was issued and almost 5 (five) years after the Agreement with the County was signed.

"More Protection, Less Process"

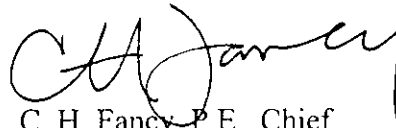
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5. A compliance plan should be included in the Title V permit based on the Agreement. It should specifically provide for a date-certain of October 21, 2002 for the shutdown of Kiln No. 2 (as implied by our reading of the Agreement). It should provide no opportunities for continued operation past October 21, 2002. Rule 62-213.440(2), F.A.C., contains the requirements for compliance plans. Rule 62-213.440(2), F.A.C. should be cited for the regulatory basis for the compliance plan.
6. The draft Title V permit added petroleum coke as a fuel. The existing facility does not have a permit allowing use of petroleum coke. A separate construction permit would be required for that activity. The modernization permit allows use of petroleum coke when the new kiln is built, however the modernization is not incorporated into the draft Title V permit. Therefore this fuel should be removed from the authorized fuel slate, i.e., methods of operation.
7. Placard page, List of attachments. It was not intended for APPENDIX H-1 to be part of the permit. Delete APPENDIX H-1 from the list of attachments. APPENDIX H-1 is a document on file.
8. The permits should be signed by the Air Program Head or higher.
9. Use new RMP language:
 4. Prevention of Accidental Releases (Section 112(r) of CAA).
 - a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable; and,
 - b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C. [40 CFR 68]
10. Recommend changing all references of "particulate emissions" to "particulate matter emissions".
11. Subsection III.A. Good description.
12. Conditions A.5., A.6., B.7., and B.8. Remove all "Emission Factor" references, these are emission limits.
13. Condition A.31. and B.36. Delete the AOR requirement here because it's already contained in APPENDIX TV-3.
14. You reference APPENDIX C, 40 CFR 60, Subpart Y, Coal Preparation Plants as a part of the permit on the placard page but, it's not referenced in Subsection C. for the coal handling sources. Recommend adding APPENDIX C, 40 CFR 60, Subpart Y to Condition C.1. Also, recommend adding to the permitting notes where appropriate in Subsection C.
15. All references to "Title V DRAFT Permit" (cover page, headers, etc.) should be changed to "Title V Revised DRAFT Permit".
16. Consider removing Condition II.5. since no unregulated units are included in this permit.
17. Is Condition III.A.10. missing? If not, please renumber remainder of section.

18. In the Test Methods tables for Kilns 1, 2, and 3, are you trying to impose Methods 5 and 8 for sulfuric acid mist? Consider adding another line to the tables.
19. Conditions III.A.14. and III.B.16. require an annual test for CO and VOC. These are not reflected in the tables or in the following conditions that describe the test methods.
20. All references to sulfur percentage limitations for coal and oil should be specified as "by weight".
21. Condition III.B.12. needs a rule citation.
22. Section III, Subsections C. and D. contain tables listing air-to-cloth ratios for the baghouses. Several of these ratios appear to be incorrect. Please check all of them for accuracy.
23. Conditions III.C.5. and D.6. have allowable emissions for the coal handling system in terms of gr/ACF, while the limits for the Slag Dryer are in terms of gr/dscf. Are these reflective of the limits in the respective PSD permits? Also, there is a statement that the standard may be modified if tests show an air-to-cloth ratio of 4.5:1 or larger, and the filtering area is unable to meet the standard of 0.02 gr/dscf. This is not an acceptable condition for a Title V permit. Changes to the standard would require a construction permit and a Title V permit revision.
24. Condition III.D.6. has a PM limit for the slag dryer of 4.8 lbs/hr and 7.44 TPY. Is this from the PSD permit? ($4.8 \text{ lbs/hr} \times 8760 \text{ hours} / 2000 \text{ lbs/ton} = 21.02 \text{ TPY}$)
25. Correct typo on Page 7 in the permitting note PSD-FIL-142.
26. Condition A.6. Add footnotes to the corresponding limits shown in the table.
27. Condition B.7. The reference to "***See Permit" is ambiguous.
28. Condition B.8. Make appropriate edits to the "*****" footnote for better understanding.

Additional comments pertaining to formatting and corrected air-to-cloth ratios are being sent in a marked-up copy of the revised Draft permit. Thank you for providing us with the opportunity to comment. If you have any questions, please contact Scott M. Sheplak at 850/921-9532 or A. A. Linero at 850/921-9523.

Sincerely,



C. H. Fancy, P.E., Chief
Bureau of Air Regulation

Cc: H. Patrick Wong
I. Goldman, DEP SED

7099 3400 0000 1453 2634

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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Article Sent To:	
Ms. Mallika Muthiah, P.E.	
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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$
Tarmac American	
8/21 Postmark Here	
Name (Please Print Clearly) (to be completed by mailer)	
Mallika Muthiah	
Street, Apt. No., or PO Box No.	
33 SW 2nd Ave., Ste 900	
City, State, ZIP+4	
Miami, FL 33130-1540	
PS Form 3800, July 1999	
See Reverse for Instructions	

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1. Article Addressed to:

Ms. Mallika Muthiah, P.E.
 Chief, Air Facilities Section
 Miami-Dade County Dept. of
 Environmental Resources Mgt.
 33 SW Second Ave., Suite 900
 Miami, FL 33130-1540

2. Article Number (Copy from service label)
 7099 3400 0000 1453 2634

COMPLETE THIS SECTION ON DELIVERY

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Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

August 14, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David B. Jellerson
Cargill Fertilizer, Inc.
Post Office Box 9002
Bartow, Florida 33831

Re: Cargill Fertilizer, Inc., Sulfuric Acid Plants 4
File No. AC 53-271436 (PSD-FL-229)

Dear Mr. Jellerson:

The Department has reviewed the letters dated January 31 and June 30, 2000 requesting or supporting a determination that a construction permit is not required for certain work to be performed on Sulfuric Acid Plant 4 (SAP 4) in Bartow. The specific work described will be performed during the upcoming periodic "turnaround" of SAP 4 and consists of the following work (refer to the attached diagram):

1. Retube the No. 2 boiler
2. Replace the hot gas to gas heat exchanger
3. Replace the 4A superheater/economizer
4. Replace the final tower mist section

The stated purpose of items 1 through 3 is "to restore or improve the heat recovery capability of the unit." Item 4 is an in-kind replacement intended to maintain the required acid mist removal efficiency of the unit. According to your January 31 letter, "these activities will have the direct effect of providing for better waste heat recovery and improve the overall efficiency of the plant."

According to the letter from industry consultant, Richard Davis, P.E., of Davis and Associates Consulting Inc., the replacement of these pieces of process equipment is necessary and normal maintenance activities." Furthermore, "the producer will restore the original plant availability and the environment will have less emissions due to improved plant reliability."

Following review of the request and information subsequently provided by Cargill, it is the Department's conclusion that such installation is within the scope of *routine* replacement, maintenance and repair for this specific sulfuric acid plant. This conclusion is based on the following facts:

- The plant achieved its permitted production rates of 2,600 tons per day (TPD) following the previously permitted PSD construction project (1996-1998) to increase its capacity. No increase is requested.
- Except for the final tower mist section, the described work will not be conducted on a key piece of process equipment such as the sulfur furnace, drying tower, main compressor, absorption towers, converters, etc. The in-kind replacement of the tower mist section will limit sulfuric acid mist emissions.

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- The physical production rates steadily decrease from the permitted 2600 TPD production rate following a turn-around in a characteristic and expected manner prior to another turnaround. The scheduled turn-around will be conducted to restore the plant to its design or permitted production rate as is commonly done (on 9 to 24 month cycles) throughout the industry.
- With only the **usual** routine repair, maintenance and replacement (such as catalyst screening and typical turnaround work) the plant would still be capable of achieving the permitted production rate. Per Cargill the improvements are necessary for safety and reliability.
- According to Cargill, the planned activities will not eliminate existing production bottlenecks.
- The overall effect of this project is that, following a turn-around, the plant will operate at the already physically-achievable and permitted production rate of 2600 TPD for a longer period of time thereafter. This is a major goal of all turn-arounds.
- The proposed work will allow Cargill to maintain existing turn-around cycles on SAP 4. The emissions will remain within the short-term limits and the existing long-term potential-to-emit.

Because the described work is considered as routine repair, maintenance, or replacement in this case, it is not a physical change or change in method of operation. Therefore it is not a modification as defined in Rule 62-210.200, F.A.C. (definitions) and is not subject to pre-construction review under Rule 62-212, F.A.C. Furthermore the work will not change the description of the plant or its components as presently permitted.

Please note that this determination is applicable only for the specified work at Bartow SAP 4. There are many different configurations of SAPs and relevant circumstances (such as whether electricity is produced in addition to heat and steam) that could affect a decision at other installations. If the described work is part of a larger modernization project, the Department can aggregate this work with future work and come to a different conclusion. Clearly, this project on its own is at about the limits of what can be considered routine.

The Department supplied EPA Region IV staff with copies of your request and discussed the matter with them prior to making this determination. However this determination is not an interpretation of federal rules at 40CFR52.21 or 40CFR60.

A person whose substantial interests are affected by the proposed decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.


Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until

the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This letter constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition which conforms to Rule 62-110.106, F.A.C. Upon timely filing of a petition or a request for an extension of time this Notice will not be effective until further Order of the Department.

If either a petition for administrative hearing or a request for extension of time is not timely filed with the Department, then this letter shall constitute final agency action. Any party to this order would then have the right to seek judicial review pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.


C.H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this letter was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 8/16/00 to the person(s) listed:

David Jellerson *
Gregg Worley, EPA
John Bunyak, NPS
Bill Thomas, DEP SWD
Iris Hill, Polk County

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Charlotte J. Hayes 8/16/00
(Clerk) (Date)

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David B. Jellerson

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Mr. David B. Jellerson
 Cargill Fertilizer, Inc.
 PO Box 9002
 Bartow, FL 33831

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1. Article Addressed to:

Mr. David B. Jellerson
 Cargill Fertilizer, Inc.
 P. O. Box 9002
 Bartow, FL 33831

COMPLETE THIS SECTION ON DELIVERY

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K. Pickard

08-21-00

C. Signature

X K. Pickard

☒ Agent

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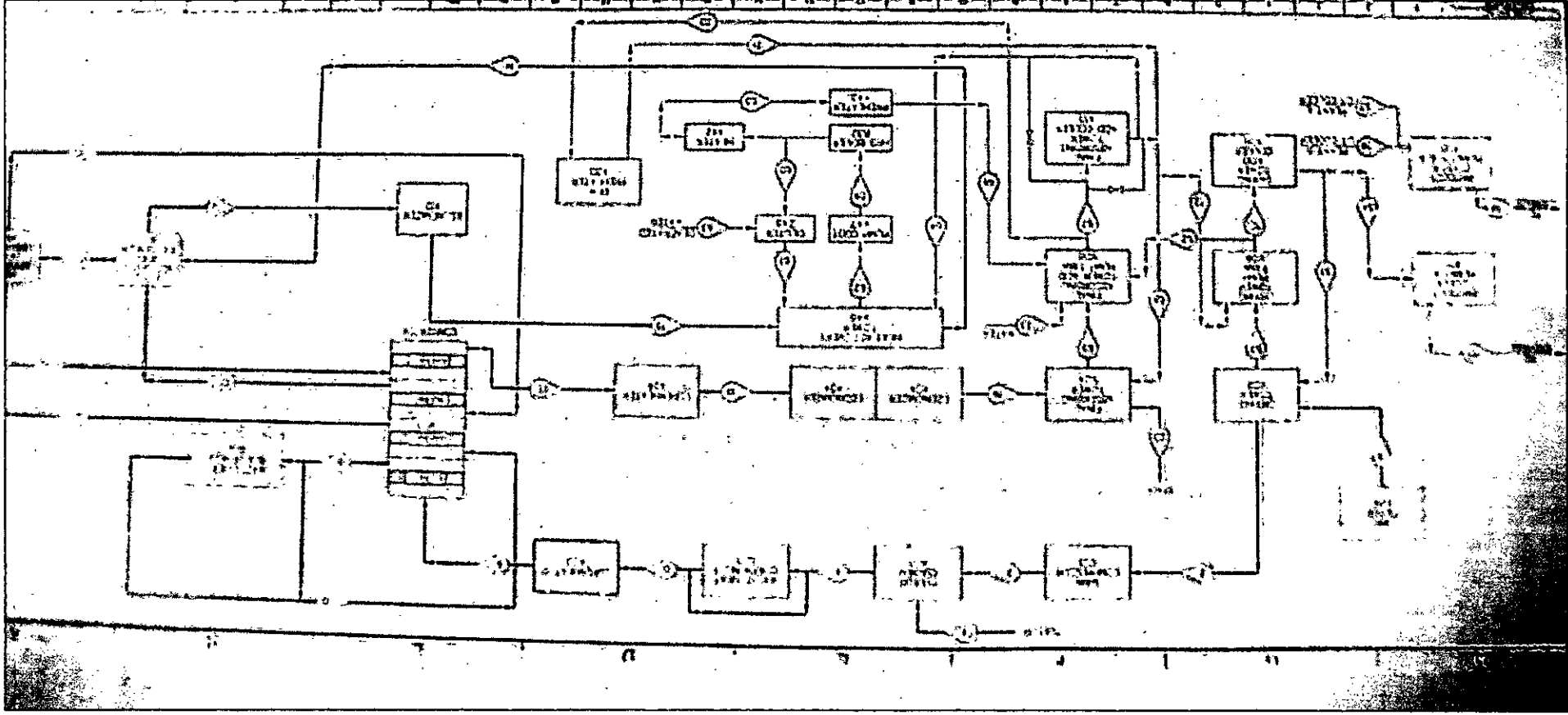
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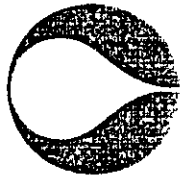
PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

Process Flow Diagram - Cargill Bartow Sulfuric Acid Plant 4
Highlighting Areas of Planned Work





**CARGILL
FERTILIZER, INC.**

RECEIVED

FEB 04 2000

BUREAU OF AIR REGULATION

8813 Highway 41 South - Riverview, Florida 33569 - Telephone 813-677-9111 - TWX 810-876-0648 - Telex 52666 - FAX 813-571-6146

January 31, 2000

Certified Mail: Z 426 769 208

Mr. Al Linero, PE
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Cargill Fertilizer, Inc.
Bartow #4 Sulfuric Acid Plant Turnaround
File No. AC 53-271436 (PSD-FL-229)

Dear Al,

As per our telephone conversation, this letter is being submitted to request confirmation that the following activities planned for an upcoming turnaround at our #4 Sulfuric Acid Plant do not trigger a requirement to obtain a Department Construction Permit.

During this turnaround the following activities are planned:

1. Retube the #2 boiler
2. Replace a hot gas to gas heat exchanger.
3. Replace the 4A superheater/economizer.
4. Replace the final tower mist section.

Items 1 through 3 all are intended to restore or improve the heat recovery capability of the unit. Item 4 is an in-kind replacement intended to maintain the required acid mist removal efficiency of the plant.

These activities will have the direct effect of providing for better waste heat recovery and improve the overall energy efficiency of the unit.

Since the performance testing conducted on January 15, 1998, this sulfuric acid plant has consistently achieved maximum permitted production capacity. Attached for your review is a summary of the daily production rates for this unit from January 1, 1999 through January 25, 2000. As indicated by this data, since January 1999, the plant has operated a total of 379 days. Operating rates were within 10% of maximum permitted levels for 70% of these operating days (265 days). Following completion of the upcoming turnaround



Mr. Al Linero
January 31, 2000
Page 2

the sulfuric acid production capacity of the unit will continue to be limited to the permitted rate.

I trust that the information provided is sufficient for a determination that a construction permit is not required for this work. However, should you have any questions or need additional information, please feel free to call me at 813-671-6297 or e-mail david_jellerson@cargill.com.

Sincerely,



David B. Jellerson
Environmental Manager

cc: Morris, Waters, Polk
D. Buff

Fayed SWD
& EPA

PRODUCTION REPORT FOR 1/1/99 - 1/25/00

Bartow #4 Sulfuric Acid Plant

DATE	Tons/day	Hrs/day	lb SO2/ton	DATE	Tons/day	Hrs/day	lb SO2/ton
01-01-99	2256	24	3.47	02-24-99	2250	24	3.86
01-02-99	2231	24	3.26	02-25-99	2295	24	3.86
01-03-99	2258	24	3.32	02-26-99	2316	24	3.81
01-04-99	1748	20	3.16	02-27-99	2346	24	3.82
01-05-99	2284	24	3.47	02-28-99	2332	24	3.94
01-06-99	2294	24	3.48	03-01-99	2358	24	3.90
01-07-99	2299	24	3.30	03-02-99	2402	24	3.90
01-08-99	2318	24	3.53	03-03-99	2402	24	3.91
01-09-99	2268	24	3.61	03-04-99	2427	24	3.90
01-10-99	2310	24	3.53	03-05-99	2451	24	3.92
01-11-99	2308	24	3.46	03-06-99	2391	24	3.60
01-12-99	2315	24	3.45	03-07-99	2297	23	3.75
01-13-99	385	5	3.12	03-08-99	2401	24	3.85
01-14-99	2283	24	3.51	03-09-99	2317	23.75	3.83
01-15-99	1426	17	2.63	03-10-99	2366	24	3.86
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01-19-99	2346	24	3.54	03-14-99	2332	24	3.85
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02-01-99	2460	24	3.93	03-27-99	2406	24	3.93
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02-14-99	2490	24	3.90	04-09-99	1850	20	3.21
02-15-99	2470	24	3.94	04-10-99	2384	24	3.77
02-16-99	2484	24	3.93	04-11-99	2412	24	3.73
02-17-99	2475	24	3.81	04-12-99	2389	24	3.71
02-18-99	2385	24	3.76	04-13-99	2179	22	3.65
02-19-99	2427	24	3.91	04-14-99	2410	24	3.61
02-20-99	2361	24	3.93	04-15-99	2381	24	3.68
02-21-99	278	1	3.96	04-16-99	2404	24	3.72
02-22-99	777	1	3.47	04-17-99	2357	24	3.73
02-23-99	2174	24	3.74	04-18-99	2354	24	3.69

PRODUCTION REPORT FOR 1/1/99 - 1/25/00

Bartow #4 Sulfuric Acid Plant

DATE	Tons/day	Hrs/day	lb SO2/ton	DATE	Tons/day	Hrs/day	lb SO2/ton
04-19-99	2359	24	3.68	06-12-99	2546	24	3.81
04-20-99	2367	24	3.69	06-13-99	1646	22.25	1.95
04-21-99	2352	24	3.62	06-14-99	0	0 na	Plant down
04-22-99	2348	24	3.47	06-15-99	0	0 na	Plant down
04-23-99	1683	18.5	3.43	06-16-99	0	0 na	Plant down
04-24-99	2377	24	3.78	06-17-99	951	.8	2.90
04-25-99	2386	24	3.89	06-18-99	1991	24	1.39
04-26-99	2386	24	3.80	06-19-99	2002	24	0.94
04-27-99	2389	24	3.85	06-20-99	2234	24	1.18
04-28-99	2414	24	3.84	06-21-99	2250	24	1.37
04-29-99	2172	22	3.83	06-22-99	2278	24	1.35
04-30-99	2368	24	3.80	06-23-99	1409	15	3.55
05-01-99	2380	24	3.81	06-24-99	1469	15	3.40
05-02-99	2416	24	3.81	06-25-99	2195	24	3.64
05-03-99	2022	20.5	3.71	06-26-99	2530	24	3.16
05-04-99	2458	24	3.79	06-27-99	2537	24	3.70
05-05-99	2441	24	3.71	06-28-99	1930	24	3.46
05-06-99	2464	24	3.78	06-29-99	2328	24	3.55
05-07-99	2438	24	3.85	06-30-99	2570	24	3.67
05-08-99	1962	21.6	3.47	07-01-99	2567	24	3.80
05-09-99	1991	24	3.39	07-02-99	2566	24	3.81
05-10-99	1632	19.8	3.69	07-03-99	2242	23	3.13
05-11-99	2022	24	3.67	07-04-99	2449	24	3.01
05-12-99	1294	3.25	0.89	07-05-99	2468	24	3.28
05-13-99	0	0 na	Plant down	07-06-99	2016	20.25	3.19
05-14-99	0	0 na	Plant down	07-07-99	2294	22.75	3.16
05-15-99	0	0 na	Plant down	07-08-99	2477	24	2.98
05-16-99	0	0 na	Plant down	07-09-99	2475	24	3.03
05-17-99	0	0 na	Plant down	07-10-99	1967	24	2.45
05-18-99	0	0 na	Plant down	07-11-99	2379	24	1.95
05-19-99	0	0 na	Plant down	07-12-99	2439	24	3.48
05-20-99	0	0 na	Plant down	07-13-99	2207	21.5	3.63
05-21-99	1972	18	3.31	07-14-99	1826	17.75	3.46
05-22-99	2587	24	3.12	07-15-99	2506	24	3.51
05-23-99	2159	21.5	2.01	07-16-99	2498	24	3.72
05-24-99	2456	24	2.73	07-17-99	2435	23.75	3.83
05-25-99	2178	19.75	3.50	07-18-99	2522	24	3.88
05-26-99	2558	24	3.57	07-19-99	2450	23	3.89
05-27-99	2586	24	3.50	07-20-99	1580	15	3.73
05-28-99	2570	24	2.97	07-21-99	2507	24	3.79
05-29-99	2405	23.5	3.69	07-22-99	2475	24	3.77
05-30-99	2583	24	3.79	07-23-99	2480	24	3.85
05-31-99	2575	24	3.81	07-24-99	2476	24	3.79
06-01-99	2552	24	3.72	07-25-99	2494	24	3.80
06-02-99	1242	10.75	3.02	07-26-99	2504	24	3.83
06-03-99	2591	24	3.77	07-27-99	2500	24	3.82
06-04-99	2569	24	3.53	07-28-99	2474	24	3.76
06-05-99	2573	24	3.62	07-29-99	2460	24	3.69
06-06-99	2573	24	3.78	07-30-99	2460	24	3.73
06-07-99	2593	24	3.62	07-31-99	2478	24	3.79
06-08-99	2562	24	3.80	08-01-99	2394	23.25	3.76
06-09-99	2553	24	3.62	08-02-99	2015	22	3.95
06-10-99	2555	24	3.74	08-03-99	2308	22	3.91
06-11-99	2568	24	3.78	08-04-99	1070	10.1	4.00

PRODUCTION REPORT FOR 1/1/99 - 1/25/00

Bartow #4 Sulfuric Acid Plant

DATE	Tons/day	Hrs/day	lb SO2/ton	DATE	Tons/day	Hrs/day	lb SO2/ton
08-05-99	2567	24	3.82	09-28-99	2505	24	3.79
08-06-99	2571	24	3.86	09-29-99	1565	14.75	2.71
08-07-99	2563	24	3.88	09-30-99	2355	24	3.18
08-08-99	2521	24	3.85	10/01/99	1740	17.5	3.20
08-09-99	2557	24	3.84	10/02/99	2519	24	3.78
08-10-99	2542	24	3.78	10/03/99	2525	24	3.73
08-11-99	2515	24	3.81	10/04/99	2541	24	3.58
08-12-99	2486	24	3.83	10/05/99	2516	24	3.87
08-13-99	2489	24	3.66	10/06/99	2515	24	3.90
08-14-99	2534	24	3.88	10/07/99	2508	24	3.92
08-15-99	2153	21	3.52	10/08/99	2539	24	3.86
08-16-99	2542	24	3.67	10/09/99	2546	24	3.90
08-17-99	1976	20	3.82	10/10/99	2555	24	3.88
08-18-99	1121	11	3.68	10/11/99	2530	24	3.91
08-19-99	2558	24	3.88	10/12/99	2412	23	3.88
08-20-99	2361	24	3.35	10/13/99	1350	13.25	3.32
08-21-99	2237	24	3.22	10/14/99	1970	21.75	2.17
08-22-99	2452	24	3.61	10/15/99	1751	17.5	3.42
08-23-99	2567	24	3.75	10/16/99	2510	24	3.80
08-24-99	2569	24	3.85	10/17/99	2525	24	3.80
08-25-99	2550	24	3.86	10/18/99	2515	24	3.73
08-26-99	2514	24	3.88	10/19/99	2554	24	3.78
08-27-99	2532	24	3.90	10/20/99	2520	24	3.77
08-28-99	2533	24	3.86	10/21/99	2527	24	3.79
08-29-99	2406	22.75	3.85	10/22/99	2497	24	3.84
08-30-99	2546	24	3.91	10/23/99	2498	24	3.86
08-31-99	2550	24	3.90	10/24/99	2492	24	3.86
09-01-99	2552	24	3.89	10/25/99	2508	24	3.85
09-02-99	2557	24	3.90	10/26/99	2498	24	3.64
09-03-99	2568	24	3.81	10/27/99	2494	24	3.63
09-04-99	2562	24	3.86	10/28/99	2511	24	3.62
09-05-99	2556	24	3.86	10/29/99	2536	24	3.57
09-06-99	2576	22	3.61	10/30/99	2537	24	3.77
09-07-99	1974	24	3.69	10/31/99	2656	24	3.71
09-08-99	2555	24	3.74	11/01/99	2493	24	3.65
09-09-99	2478	24	3.73	11/02/99	2483	24	3.74
09-10-99	2528	24	3.80	11/03/99	1068	10.5	3.63
09-11-99	2371	24	3.77	11/04/99	2528	24	3.84
09-12-99	2443	24	3.65	11/05/99	2332	22.5	3.65
09-13-99	2548	24	3.84	11/06/99	2489	24	3.76
09-14-99	2501	24	3.80	11/07/99	2489	24	3.80
09-15-99	2314	22.5	3.60	11/08/99	2489	24	3.72
09-16-99	2529	24	3.79	11/09/99	2505	24	3.81
09-17-99	2554	24	3.83	11/10/99	2036	20.5	2.73
09-18-99	2523	23.75	3.74	11/11/99	2390	24	2.39
09-19-99	2528	24	3.71	11/12/99	2389	24	3.25
09-20-99	2515	24	3.83	11/13/99	2389	24	3.56
09-21-99	2402	23.25	3.83	11/14/99	2424	24	3.65
09-22-99	2567	24	3.78	11/15/99	2415	24	3.48
09-23-99	2500	24	3.75	11/16/99	2193	21.75	3.38
09-24-99	2496	24	3.64	11/17/99	2469	24	3.70
09-25-99	2511	24	3.79	11/18/99	2476	24	3.79
09-26-99	2524	24	3.70	11/19/99	2474	24	3.78
09-27-99	2488	24	3.69	11/20/99	2362	22.45	3.74

PRODUCTION REPORT FOR 1/1/99 - 1/25/00

Bartow #4 Sulfuric Acid Plant

DATE	Tons/day	Hrs/day	lb SO2/ton
11/21/99	2470	24	3.82
11/22/99	2493	24	3.79
11/23/99	2482	24	3.71
11/24/99	2499	24	3.75
11/25/99	2517	24	3.85
11/26/99	2499	24	3.82
11/27/99	2439	23	3.71
11/28/99	2439	22.45	3.82
11/29/99	2311	22.25	3.64
11/30/99	434	6.75	3.00
12/01/99	1894	24	2.29
12/02/99	2079	24	2.87
12/03/99	2284	24	3.24
12/04/99	2279	23.5	3.08
12/05/99	2273	23.75	3.18
12/06/99	2368	24	3.01
12/07/99	2454	24	3.33
12/08/99	2447	24	3.44
12/09/99	2451	24	3.61
12/10/99	2103	21.5	2.88
12/11/99	2308	24	2.51
12/12/99	2326	24	2.54
12/13/99	2330	24	2.78
12/14/99	2320	24	2.80
12/15/99	1932	21.75	2.30
12/16/99	2116	21.45	2.96
12/17/99	2493	24	3.76
12/18/99	2522	24	3.17
12/29/00	2433	23.75	3.29
12/20/99	2450	24	3.59
12/21/99	2440	24	3.81
12/22/99	2477	24	3.82
12/23/99	2467	24	3.83
12/24/99	2466	24	3.84
12/25/99	2462	24	3.84
12/26/99	2490	24	3.85
12/27/99	2542	24	3.56
12/28/99	2542	24	3.78
12/29/99	2522	24	3.79
12/30/99	2527	24	3.76
12/31/99	2423	24	3.53
01/01/00	2509	24	3.65
01/02/00	2523	24	3.68
01/03/00	2531	24	3.56
01/04/00	2549	24	3.79
01/05/00	2569	24	3.73
01/06/00	2585	24	3.83
01/07/00	2577	24	3.68
01/08/00	2579	24	3.61
01/09/00	2235	21.25	3.51
01/10/00	2553	24	3.78
01/11/00	2543	24	3.81
01/12/00	996	11	3.90
01/13/00	2410	24	3.88

DATE	Tons/day	Hrs/day	lb SO2/ton
01/14/00	2544	24	3.83
01/15/00	2524	24	3.83
01/16/00	2481	24	3.83
01/17/00	2050	24	2.60
01/18/00	2334	24	3.72
01/19/00	2087	23.45	3.62
01/20/00	2125	24	3.08
01/21/00	2268	24	3.69
01/22/00	2287	24	3.78
01/23/00	2312	24	3.74
01/24/00	2325	24	3.73
01/25/00	2353	24	3.80

# of operating days=	379
# of operating days exceeding 90% permitted capacity =	266
Percent of operating days exceeding 90% capacity =	70.2%
Avg. Emission rate when operating above 90% capacity (# SO2/ton) =	3.7

Davis & Associates Consulting, Inc.

P. O. Box 5312
Lakeland, Florida 33807
863-646-7930
e-mail: sulfuric@fdn.com

RECEIVED

June 30, 2000

JUL 12 2000

Mr. Al Linero, P.E.
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399

BUREAU OF AIR REGULATION

Re: Cargill Fertilizer - Bartow Complex
No. 4 Sulphuric Acid Plant 2000 Turnaround

Dear Mr. Linero:

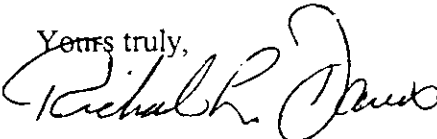
I have reviewed the planned maintenance activities for the upcoming turnaround at Cargill Fertilizer's No. 4 sulphuric acid plant at their Bartow, Florida facility. In the fourth quarter of 2000, Cargill Fertilizer is planning to replace the following pieces of equipment:

- Steam Superheater & Economizer
- Hot Interpass Heat Exchanger
- Replacement of the Final Absorption Tower acid mist elimination section
- Retube the No. 2 Waste Heat Boiler

It is my opinion that the replacement of these pieces of process equipment is necessary and normal maintenance activities. These components, if not replaced will reduce the availability and the reliability of the plant. These replacements will achieve increased energy recovery and environmental enhancements of the No. 4 Sulphuric Acid Plant. The producer will restore the original plant availability and the environment will have less emissions due to improved plant reliability. Improving the energy recovery from the sulphuric acid unit, which will be gained by these projects, will help the producer and the environment. Increasing energy recovery of the sulphuric acid process decreases the need to burn coal in the local utility plants, therefore, reducing emissions.

This opinion is based on twenty-eight years of experience in the design, operation, and maintenance of sulphuric acid plants and our understanding of the environmental concerns of the citizens of the State of Florida. References are available.

Please let me know if you have any questions or concerns in reference to Cargill's planned maintenance replacement.

Yours truly,

Richard L. Davis P.E.

INTEROFFICE MEMORANDUM

Date: 01-Aug-2000 04:46pm
From: David_Jellerson
David_Jellerson@cargill.com
Dept:
Tel No:

To: Alvaro.Linero (Alvaro.Linero@dep.state.fl.us)
CC: Debbie_Waters (Debbie_Waters@cargill.com)

Subject: Cargill Bartow #4 Sulfuric Acid Plant

Al,

per our conversation, following are confirmation of your assumptions for authorization of the proposed maintenance activities.

The plant already achieved its permitted production rates of 2,600 tons per day (TPD) following the previously permitted construction project to increase its capacity. (See January 31, 2000 letter and attached production report)

* Except for the final tower mist section, the described work will not be conducted on a key piece of process equipment such as the sulfur furnace, drying tower, Main compressor, absorption towers, converters, etc. The in-kind replacement of the tower mist section will limit sulfuric acid mist emissions.

* The physical production rates have steadily decreased in a characteristic and expected manner prior to a periodic turnaround. The scheduled turn-around will be conducted to restore the plant to its design or permitted production rate as is commonly done (on 9 to 24 month cycles) throughout the industry.

* With normal turnaround activities including repair, maintenance and replacement (such as catalyst screening and typical turnaround work) the plant would still be capable of achieving the permitted production rate, although the improvements are necessary for safety and reliability.

* The planned activities will not eliminate existing production bottlenecks.

* The overall effect of this project is that the plant will operate at the already physically-achievable and permitted production rates for a longer period of time thereafter. This is a major goal of all turn-arounds.

* The proposed work will allow us to maintain existing turnaround cycles. The emissions will remain within the short-term limits and the existing long-term potential-to-emit

Give me a call if you have any questions.

David Jellerson
Environmental Manager
Cargill Fertilizer, Inc.



**CARGILL
FERTILIZER, INC.**

P.O. Box 9002 • Bartow, Florida 33831 • Telephone 941-534-9610 • FAX 941-534-9680

July 7, 2000
Certified Mail
7099 3220 0007 3015 1443

RECEIVED

JUL 12 2000

BUREAU OF AIR REGULATION

Mr. Al Linero, P.E.
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399

Dear Mr. Linero:

**RE: CARGILL FERTILIZER – BARTOW FACILITY
#4 SULFURIC ACID PLANT TURNAROUND
FILE NO. AC 53-271436 (PSD-FL-229)**

Attached please find a letter from Richard L. Davis, a certified Professional Engineer in the State of Florida, which clarifies that the activities planned for the above referenced turnaround are considered to be necessary and normal maintenance and replacement of process equipment. We hope that this information, in conjunction with the previously submitted production data, will be sufficient for a determination that a construction permit is not required for this work.

If you have any questions or need any additional information, please call me at (863) 534-9615 or email debbie_waters@cargill.com.

Sincerely,

Debra R. Waters
Environmental Superintendent

Xc: Jellerson, Edgemon, Polk, File 60-07-01A



recycled paper

Davis & Associates Consulting, Inc.

P. O. Box 5312
Lakeland, Florida 33807
863-646-7930
e-mail: sulfuric@fdn.com

RECEIVED

June 30, 2000

JUL 12 2000

Mr. Al Linero, P.E.
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399

BUREAU OF AIR REGULATION

Re: Cargill Fertilizer - Bartow Complex
No. 4 Sulphuric Acid Plant 2000 Turnaround

Dear Mr. Linero:

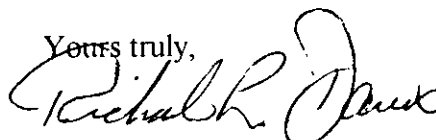
I have reviewed the planned maintenance activities for the upcoming turnaround at Cargill Fertilizer's No. 4 sulphuric acid plant at their Bartow, Florida facility. In the fourth quarter of 2000, Cargill Fertilizer is planning to replace the following pieces of equipment:

- Steam Superheater & Economizer
- Hot Interpass Heat Exchanger
- Replacement of the Final Absorption Tower acid mist elimination section
- Retube the No. 2 Waste Heat Boiler

It is my opinion that the replacement of these pieces of process equipment is necessary and normal maintenance activities. These components, if not replaced will reduce the availability and the reliability of the plant. These replacements will achieve increased energy recovery and environmental enhancements of the No. 4 Sulphuric Acid Plant. The producer will restore the original plant availability and the environment will have less emissions due to improved plant reliability. Improving the energy recovery from the sulphuric acid unit, which will be gained by these projects, will help the producer and the environment. Increasing energy recovery of the sulphuric acid process decreases the need to burn coal in the local utility plants, therefore, reducing emissions.

This opinion is based on twenty-eight years of experience in the design, operation, and maintenance of sulphuric acid plants and our understanding of the environmental concerns of the citizens of the State of Florida. References are available.

Please let me know if you have any questions or concerns in reference to Cargill's planned maintenance replacement.

Yours truly,

Richard L. Davis P.E.

DRAFT SENT TO

March 10, 2000

CARGILL

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David B. Jellerson
Cargill Fertilizer, Inc.
Post Office Box 9002
Bartow, Florida 33831

Re: Cargill Fertilizer, Inc., Sulfuric Acid Plants 4
File No. AC 53-271436 (PSD-FL-229)

Dear Mr. Jellerson:

The Department has reviewed your letter dated January 31, 2000 requesting a determination that a construction permit is not required for certain work to be performed on Sulfuric Acid Plant 4 (SAP 4) in Bartow. The specific work described will be performed during the upcoming periodic "turnaround" of SAP 4 and consists of the following work (refer to the attached diagram):

1. Retube the No. 2 boiler
2. Replace the hot gas to gas heat exchanger
3. Replace the 4A superheater/economizer
4. Replace the final tower mist section

The stated purpose of items 1 through 3 is "to restore or improve the heat recovery capability of the unit." Item 4 is an in-kind replacement intended to maintain the required acid mist removal efficiency of the unit. According to your letter, "these activities will have the direct effect of providing for better waste heat recovery and improve the overall efficiency of the plant."

Following review of the request and information subsequently provided by Cargill, it is the Department's conclusion that such installation is within the scope of *routine* replacement, maintenance and repair for this specific sulfuric acid plant. This conclusion is based on the following facts:

- The plant already achieved its permitted production rates of 2,600 tons per day (TPD) following the previously permitted construction project to increase its capacity. - True -> (11/11) ✓
- Except for the final tower mist section, the described work will not be conducted on a key piece of process equipment such as the sulfur furnace, drying tower, Main compressor, absorption towers, converters, etc. The in-kind replacement of the tower mist section will limit sulfuric acid mist emissions.
- The physical production rates have steadily decreased in a characteristic and expected manner prior to a periodic turnaround. The scheduled turn-around will be conducted to restore the plant to its design or permitted production rate as is commonly done (on 9 to 24 month cycles) throughout the industry.

Need verification of these items prior to issuance

- Same as above*
- With *minimal* repair, maintenance and replacement (such as catalyst screening and typical turnaround work) the plant will still be capable of achieving the permitted production rate, though less reliably than with the improvements.
 - The production bottleneck will continue to be Waste Heat Boiler No. 2 that will undergo identical re-tubing per conversations with Cargill personnel.
 - The overall effect of this project is that the plant will operate at the already physically-achievable and permitted production rates for a longer period of time thereafter. This is a major goal of all turn-arounds.
 - There may greater total sulfur dioxide emissions during an entire turn-around cycle. These will remain within the short-term limits and the existing long-term potential-to-emit.

Because the described work is considered as routine repair, maintenance, or replacement in this case, it is not a physical change or change in method of operation. Therefore it is not a modification as defined in Rule 62-210.200, F.A.C. (definitions) and is not subject to pre-construction review under Rule 62-212, F.A.C. Furthermore the work will not change the description of the plant or its components as presently permitted.

Please note that this determination is applicable only for the specified work at Bartow SAP 4. There are many different configurations of SAPs and relevant circumstances (such as whether electricity is produced in addition to heat and steam) that could affect a decision at other installations. If the described work is part of a larger modernization project, the Department can aggregate this work with future work and come to a different conclusion.

The Department supplied EPA Region IV staff with copies of your request and discussed the matter with them prior to making this determination. However this determination is not an interpretation of federal rules at 40CFR52.21 or 40CFR60.

A person whose substantial interests are affected by the proposed decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when

petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This letter constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition which conforms to Rule 62-110.106, F.A.C. Upon timely filing of a petition or a request for an extension of time this Notice will not be effective until further Order of the Department.

If either a petition for administrative hearing or a request for extension of time is not timely filed with the Department, then this letter shall constitute final agency action. Any party to this order would then have the right to seek judicial review pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

C.H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this letter was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on _____ to the person(s) listed:

David Jellerson *
Gregg Worley, EPA
John Bunyak, NPS
Bill Thomas, DEP SWD
Joe King, Polk County
David A. Buff, P.E.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk)

(Date)

Note: E-Mailed to Cargill on Feb 20.
Met with Cargill on Feb 22.

February, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David B. Jellerson, Environmental Manager
Cargill Fertilizer, Inc.
Post Office Box 9002
Bartow, Florida 33831

Re: Bartow Sulfuric Acid Plant 4 Turnaround
File No. AC 53-271436 (PSD-FL-229)

Dear Mr. Jellerson:

The Department has reviewed your request dated January 31 for a determination that certain component replacement projects planned during the Sulfuric Acid Plant 4 turnaround are not subject to Department construction permitting requirements.

Please provide a process flow diagram of the plant showing the main components and highlighting the replacements to be made. Also advise whether the previously-authorized addition of cesium-promoted vanadium-containing catalyst already occurred or will actually occur during the planned turnaround.

Please advise if the cesium-promoted catalyst was installed in SAP 5 and whether sulfur dioxide emissions or production characteristics improved compared with characteristics following previous turnarounds. Please provide a summary of production and emissions from SAP 5 and 6 in a similar manner to the information from SAP 4. After we review the information, we will set up a meeting to discuss the matter.

If you have any questions, please call me at (850)921-9523.

Sincerely,

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

AAL/aal

cc: Bill Thomas, DEP SWD
Dave Buff, P.E., Golder Associates

Received 2/22

INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 10-Feb-2000 10:30am

From: Sam Chidester
SHC@topsoe.com

Dept:
Tel No:

To: Alvaro Linero TAL 850/921-9523 (Alvaro.Linero@dep.state.fl.us)

Subject: Re: Cesium Catalyst

Al,

Yes, 80,000 liters of Topsoe VK69 was installed in the top of the 4th pass of the #5 plant in the fall of 1999. In the fall of 1998 about 76,000 liters of Monsanto cesium CS-110 was installed in the top of the #6 plant. The two plants are nearly identical. What we have seen is that the #5 plant is able to run with a much stronger feed gas than the #6 plant. For Cargill this means less blower energy consumed and more steam produced - better efficiency. (For Topsoe it means our VK69 is a hell of a lot better than Monsanto's CS-110. I'm so proud.)

At the time we visited in October both plants were running at near their production limits and just under their emissions limits. With the more active catalyst in the #5 plant it should be able to maintain this rate of production for a longer period of time before having to cut back as the plant plugs up. That's the justification for installing VK69.

No cesium catalyst was installed at Riverview.

There is no cesium catalyst in the #4 plant at Bartow so far.

Best Regards,

Samuel H. Chidester
Sales Manager
Sulfuric Acid Catalyst
Haldor Topsoe, Inc.

-----Original Message-----

From: Alvaro Linero TAL 850/921-9523
[SMTP:Alvaro.Linero@dep.state.fl.us]
Sent: Wednesday, February 09, 2000 8:21 AM
To: shc@topsoe.com
Subject: Cesium Catalyst
Sensitivity: Confidential

Sam. Did Topsoe install VK-69 at Bartow? Did you see any reductions in SO2 or increase in production? How about Riverview?

They are going to make some changes on Bartow SAP 4 including retubing the No. 2 boiler, replacing a hot gas to gas heat exchanger, replacing

INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 09-Feb-2000 08:34am

From: Alvaro Linero TAL
LINERO_A

Dept: Air Resources Management

Tel No: 850/921-9523

To: little.james@epa.gov@in

CC: Gerald Kissel TPA

(KISSEL_G @ A1 @ DEPTPA)

Subject: Projects at Cargill

Jim. I faxed you a letter from Cargill requesting a determination whether the various projects planned at a sulfuric acid plant trigger PSD. I guess the real question is whether the items listed comprise a physical/operational change or are routine maintenance, repair or replacement.

Prior to this, we allowed them to add some Monsanto cesium-promoted vanadium-containing catalyst. The catalyst they added is not of higher activity at the normal temperature (~800 deg F) of the last catalyst bed. However it is more active than the potassium-promoted vanadium containing catalyst at lower temperatures (like 750 deg F).

Can you also give some thought as to projects where there is an increase at a process in a fertilizer complex. For example if a company increases phosphoric acid production, should we look at PSD (and BACT) for the sulfuric acid plant (SAP) that makes the reagent for the phosphoric acid plant (PAP)? There is always the possibility that the SAP is already operating at capacity and that the extra acid needed by the PAP is "purchased at the market."

Our rules read differently than yours, but we still want to know what your rules (together with policies) require. Let's talk soon. No need to write anything. Thanks. Al.

*Discussed with Jim Little ~ 2/16/00
Initially sees no problem after discussing with
people working on power plants. Told him I'd
prefer something more definite.*

AAZ

*If it were a power plant - it would! Discussing
with Jim Little on 2/29/00
ad*



**CARGILL
FERTILIZER, INC.**

RECEIVED

FEB 04 2000

BUREAU OF AIR REGULATION

8813 Highway 41 South - Riverview, Florida 33569 - Telephone 813-677-9111 - TWX 810-876-0648 - Telex 52666 - FAX 813-671-6146

January 31, 2000

Certified Mail: Z 426 769 208

Mr. Al Linero, PE
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Cargill Fertilizer, Inc.
Bartow #4 Sulfuric Acid Plant Turnaround
File No. AC 53-271436 (PSD-FL-229)

Dear Al,

As per our telephone conversation, this letter is being submitted to request confirmation that the following activities planned for an upcoming turnaround at our #4 Sulfuric Acid Plant do not trigger a requirement to obtain a Department Construction Permit.

During this turnaround the following activities are planned:

1. Retube the #2 boiler
2. Replace a hot gas to gas heat exchanger.
3. Replace the 4A superheater/economizer.
4. Replace the final tower mist section.

Items 1 through 3 all are intended to restore or improve the heat recovery capability of the unit. Item 4 is an in-kind replacement intended to maintain the required acid mist removal efficiency of the plant.

These activities will have the direct effect of providing for better waste heat recovery and improve the overall energy efficiency of the unit.

Since the performance testing conducted on January 15, 1998, this sulfuric acid plant has consistently achieved maximum permitted production capacity. Attached for your review is a summary of the daily production rates for this unit from January 1, 1999 through January 25, 2000. As indicated by this data, since January 1999, the plant has operated a total of 379 days. Operating rates were within 10% of maximum permitted levels for 70% of these operating days (265 days). Following completion of the upcoming turnaround



recycled paper

Mr. Al Linero
January 31, 2000
Page 2

the sulfuric acid production capacity of the unit will continue to be limited to the permitted rate.

I trust that the information provided is sufficient for a determination that a construction permit is not required for this work. However, should you have any questions or need additional information, please feel free to call me at 813-671-6297 or e-mail david_jellerson@cargill.com.

Sincerely,



David B. Jellerson
Environmental Manager

cc: Morris, Waters, Polk
D. Buff

Fatted SWD
+ EPA



recycled paper

PRODUCTION REPORT FOR 1/1/99 - 1/25/00

Bartow #4 Sulfuric Acid Plant

DATE	Tons/day	Hrs/day	lb SO2/ton	DATE	Tons/day	Hrs/day	lb SO2/ton
01-01-99	2256	24	3.47	02-24-99	2250	24	3.86
01-02-99	2231	24	3.26	02-25-99	2295	24	3.86
01-03-99	2258	24	3.32	02-26-99	2316	24	3.81
01-04-99	1748	20	3.16	02-27-99	2346	24	3.82
01-05-99	2284	24	3.47	02-28-99	2332	24	3.94
01-06-99	2294	24	3.48	03-01-99	2358	24	3.90
01-07-99	2299	24	3.30	03-02-99	2402	24	3.90
01-08-99	2318	24	3.53	03-03-99	2402	24	3.91
01-09-99	2268	24	3.61	03-04-99	2427	24	3.90
01-10-99	2310	24	3.53	03-05-99	2451	24	3.92
01-11-99	2308	24	3.46	03-06-99	2391	24	3.60
01-12-99	2315	24	3.45	03-07-99	2297	23	3.75
01-13-99	385	5	3.12	03-08-99	2401	24	3.85
01-14-99	2283	24	3.51	03-09-99	2317	23.75	3.83
01-15-99	1426	17	2.63	03-10-99	2366	24	3.86
01-16-99	1271	15.5	1.94	03-11-99	2360	24	3.71
01-17-99	2343	24	1.87	03-12-99	2307	24	3.73
01-18-99	2362	24	2.12	03-13-99	2345	24	3.90
01-19-99	2346	24	3.54	03-14-99	2332	24	3.85
01-20-99	2218	23	3.31	03-15-99	2347	24	3.87
01-21-99	2269	24	3.09	03-16-99	2364	24	3.87
01-22-99	2302	24	3.17	03-17-99	2380	24	3.84
01-23-99	2349	24	3.39	03-18-99	2352	24	3.85
01-24-99	2334	24	2.44	03-19-99	2363	24	3.87
01-25-99	2353	24	2.88	03-20-99	2361	24	3.90
01-26-99	2343	24	3.26	03-21-99	2309	24	3.88
01-27-99	2101	21.25	3.51	03-22-99	2389	24	3.88
01-28-99	2488	24	3.86	03-23-99	2364	24	3.87
01-29-99	2490	24	3.71	03-24-99	2416	24	3.84
01-30-99	2500	24	3.91	03-25-99	2411	24	3.82
01-31-99	2491	24	3.92	03-26-99	2322	24	3.80
02-01-99	2460	24	3.93	03-27-99	2406	24	3.93
02-02-99	2461	24	3.91	03-28-99	2426	24	3.97
02-03-99	2458	24	3.93	03-29-99	2445	24	3.94
02-04-99	2124	22.75	3.96	03-30-99	2451	24	3.93
02-05-99	2458	24	3.74	03-31-99	2423	24	3.72
02-06-99	2481	24	3.83	04-01-99	2426	24	3.63
02-07-99	2463	24	3.85	04-02-99	2380	24	3.63
02-08-99	2486	24	3.93	04-03-99	2264	24	3.69
02-09-99	2471	24	3.86	04-04-99	2346	24	3.61
02-10-99	2471	24	3.23	04-05-99	2365	24	3.61
02-11-99	2488	24	3.09	04-06-99	2291	23.25	3.66
02-12-99	2479	24	3.91	04-07-99	2091	21.75	3.61
02-13-99	2460	24	3.88	04-08-99	2376	24	3.52
02-14-99	2490	24	3.90	04-09-99	1850	20	3.21
02-15-99	2470	24	3.94	04-10-99	2384	24	3.77
02-16-99	2484	24	3.93	04-11-99	2412	24	3.73
02-17-99	2475	24	3.81	04-12-99	2389	24	3.71
02-18-99	2385	24	3.76	04-13-99	2179	22	3.65
02-19-99	2427	24	3.91	04-14-99	2410	24	3.61
02-20-99	2361	24	3.93	04-15-99	2381	24	3.68
02-21-99	278	1	3.96	04-16-99	2404	24	3.72
02-22-99	777	1	3.47	04-17-99	2357	24	3.73
02-23-99	2174	24	3.74	04-18-99	2354	24	3.69

PRODUCTION REPORT FOR 1/1/99 - 1/25/00

Bartow #4 Sulfuric Acid Plant

DATE	Tons/day	Hrs/day	lb SO2/ton	DATE	Tons/day	Hrs/day	lb SO2/ton
04-19-99	2359	24	3.68	06-12-99	2546	24	3.81
04-20-99	2367	24	3.69	06-13-99	1646	22.25	1.95
04-21-99	2352	24	3.62	06-14-99	0	0 na	Plant down
04-22-99	2348	24	3.47	06-15-99	0	0 na	Plant down
04-23-99	1683	18.5	3.43	06-16-99	0	0 na	Plant down
04-24-99	2377	24	3.78	06-17-99	951	8	2.90
04-25-99	2386	24	3.89	06-18-99	1991	24	1.39
04-26-99	2386	24	3.80	06-19-99	2002	24	0.94
04-27-99	2389	24	3.85	06-20-99	2234	24	1.18
04-28-99	2414	24	3.84	06-21-99	2250	24	1.37
04-29-99	2172	22	3.83	06-22-99	2278	24	1.35
04-30-99	2368	24	3.80	06-23-99	1409	15	3.55
05-01-99	2380	24	3.81	06-24-99	1469	15	3.40
05-02-99	2416	24	3.81	06-25-99	2195	24	3.64
05-03-99	2022	20.5	3.71	06-26-99	2530	24	3.16
05-04-99	2458	24	3.79	06-27-99	2537	24	3.70
05-05-99	2441	24	3.71	06-28-99	1930	24	3.46
05-06-99	2464	24	3.78	06-29-99	2328	24	3.55
05-07-99	2438	24	3.85	06-30-99	2570	24	3.67
05-08-99	1962	21.6	3.47	07-01-99	2567	24	3.80
05-09-99	1991	24	3.39	07-02-99	2566	24	3.81
05-10-99	1632	19.8	3.69	07-03-99	2242	23	3.13
05-11-99	2022	24	3.67	07-04-99	2449	24	3.01
05-12-99	1294	3.25	0.89	07-05-99	2468	24	3.28
05-13-99	0	0 na	Plant down	07-06-99	2016	20.25	3.19
05-14-99	0	0 na	Plant down	07-07-99	2294	22.75	3.16
05-15-99	0	0 na	Plant down	07-08-99	2477	24	2.98
05-16-99	0	0 na	Plant down	07-09-99	2475	24	3.03
05-17-99	0	0 na	Plant down	07-10-99	1967	24	2.45
05-18-99	0	0 na	Plant down	07-11-99	2379	24	1.95
05-19-99	0	0 na	Plant down	07-12-99	2439	24	3.48
05-20-99	0	0 na	Plant down	07-13-99	2207	21.5	3.63
05-21-99	1972	18	3.31	07-14-99	1826	17.75	3.46
05-22-99	2587	24	3.12	07-15-99	2506	24	3.51
05-23-99	2159	21.5	2.01	07-16-99	2498	24	3.72
05-24-99	2456	24	2.73	07-17-99	2435	23.75	3.83
05-25-99	2178	19.75	3.50	07-18-99	2522	24	3.88
05-26-99	2558	24	3.57	07-19-99	2450	23	3.89
05-27-99	2586	24	3.50	07-20-99	1580	15	3.73
05-28-99	2570	24	2.97	07-21-99	2507	24	3.79
05-29-99	2405	23.5	3.69	07-22-99	2475	24	3.77
05-30-99	2583	24	3.79	07-23-99	2480	24	3.85
05-31-99	2575	24	3.81	07-24-99	2476	24	3.79
06-01-99	2552	24	3.72	07-25-99	2494	24	3.80
06-02-99	1242	10.75	3.02	07-26-99	2504	24	3.83
06-03-99	2591	24	3.77	07-27-99	2500	24	3.82
06-04-99	2569	24	3.53	07-28-99	2474	24	3.76
06-05-99	2573	24	3.62	07-29-99	2460	24	3.69
06-06-99	2573	24	3.78	07-30-99	2460	24	3.73
06-07-99	2593	24	3.62	07-31-99	2478	24	3.79
06-08-99	2562	24	3.80	08-01-99	2394	23.25	3.76
06-09-99	2553	24	3.62	08-02-99	2015	22	3.95
06-10-99	2555	24	3.74	08-03-99	2308	22	3.91
06-11-99	2568	24	3.78	08-04-99	1070	10.1	4.00

PRODUCTION REPORT FOR 1/1/99 - 1/25/00

Bartow #4 Sulfuric Acid Plant

DATE	Tons/day	Hrs/day	lb SO2/ton	DATE	Tons/day	Hrs/day	lb SO2/ton
08-05-99	2567	24	3.82	09-28-99	2505	24	3.79
08-06-99	2571	24	3.86	09-29-99	1565	14.75	2.71
08-07-99	2563	24	3.88	09-30-99	2355	24	3.18
08-08-99	2521	24	3.85	10/01/99	1740	17.5	3.20
08-09-99	2557	24	3.84	10/02/99	2519	24	3.78
08-10-99	2542	24	3.78	10/03/99	2525	24	3.73
08-11-99	2515	24	3.81	10/04/99	2541	24	3.58
08-12-99	2486	24	3.83	10/05/99	2516	24	3.87
08-13-99	2489	24	3.66	10/06/99	2515	24	3.90
08-14-99	2534	24	3.88	10/07/99	2508	24	3.92
08-15-99	2153	21	3.52	10/08/99	2539	24	3.86
08-16-99	2542	24	3.67	10/09/99	2546	24	3.90
08-17-99	1976	20	3.82	10/10/99	2555	24	3.88
08-18-99	1121	11	3.68	10/11/99	2530	24	3.91
08-19-99	2558	24	3.88	10/12/99	2412	23	3.88
08-20-99	2361	24	3.35	10/13/99	1350	13.25	3.32
08-21-99	2237	24	3.22	10/14/99	1970	21.75	2.17
08-22-99	2452	24	3.61	10/15/99	1751	17.5	3.42
08-23-99	2567	24	3.75	10/16/99	2510	24	3.80
07-24-99	2569	24	3.85	10/17/99	2525	24	3.80
08-25-99	2550	24	3.86	10/18/99	2515	24	3.73
08-26-99	2514	24	3.88	10/19/99	2554	24	3.78
08-27-99	2532	24	3.90	10/20/99	2520	24	3.77
08-28-99	2533	24	3.86	10/21/99	2527	24	3.79
08-29-99	2406	22.75	3.85	10/22/99	2497	24	3.84
08-30-99	2546	24	3.91	10/23/99	2498	24	3.86
08-31-99	2550	24	3.90	10/24/99	2492	24	3.86
09-01-99	2552	24	3.89	10/25/99	2508	24	3.85
09-02-99	2557	24	3.90	10/26/99	2498	24	3.64
09-03-99	2568	24	3.81	10/27/99	2494	24	3.63
09-04-99	2562	24	3.86	10/28/99	2511	24	3.62
09-05-99	2556	24	3.86	10/29/99	2536	24	3.57
09-06-99	2576	22	3.61	10/30/99	2537	24	3.77
09-07-99	1974	24	3.69	10/31/99	2656	24	3.71
09-08-99	2555	24	3.74	11/01/99	2493	24	3.65
09-09-99	2478	24	3.73	11/02/99	2483	24	3.74
09-10-99	2528	24	3.80	11/03/99	1068	10.5	3.63
09-11-99	2371	24	3.77	11/04/99	2528	24	3.84
09-12-99	2443	24	3.65	11/05/99	2332	22.5	3.65
09-13-99	2548	24	3.84	11/06/99	2489	24	3.76
09-14-99	2501	24	3.80	11/07/99	2489	24	3.80
09-15-99	2314	22.5	3.60	11/08/99	2489	24	3.72
09-16-99	2529	24	3.79	11/09/99	2505	24	3.81
09-17-99	2554	24	3.83	11/10/99	2036	20.5	2.73
09-18-99	2523	23.75	3.74	11/11/99	2390	24	2.39
09-19-99	2528	24	3.71	11/12/99	2389	24	3.25
09-20-99	2515	24	3.83	11/13/99	2389	24	3.56
09-21-99	2402	23.25	3.83	11/14/99	2424	24	3.65
09-22-99	2567	24	3.78	11/15/99	2415	24	3.48
09-23-99	2500	24	3.75	11/16/99	2193	21.75	3.38
09-24-99	2496	24	3.64	11/17/99	2469	24	3.70
09-25-99	2511	24	3.79	11/18/99	2476	24	3.79
09-26-99	2524	24	3.70	11/19/99	2474	24	3.78
09-27-99	2488	24	3.69	11/20/99	2362	22.45	3.74

PRODUCTION REPORT FOR 1/1/99 - 1/25/00

Bartow #4 Sulfuric Acid Plant

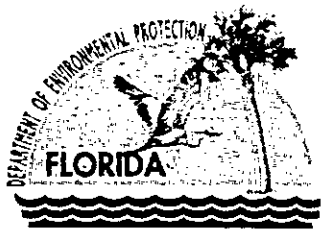
DATE Tons/day Hrs/day lb SO2/ton

11/21/99	2470	24	3.82
11/22/99	2493	24	3.79
11/23/99	2482	24	3.71
11/24/99	2499	24	3.75
11/25/99	2517	24	3.85
11/26/99	2499	24	3.82
11/27/99	2439	23	3.71
11/28/99	2439	22.45	3.82
11/29/99	2311	22.25	3.64
11/30/99	434	6.75	3.00
12/01/99	1894	24	2.29
12/02/99	2079	24	2.87
12/03/99	2284	24	3.24
12/04/99	2279	23.5	3.08
12/05/99	2273	23.75	3.18
12/06/99	2368	24	3.01
12/07/99	2454	24	3.33
12/08/99	2447	24	3.44
12/09/99	2451	24	3.61
12/10/99	2103	21.5	2.88
12/11/99	2308	24	2.51
12/12/99	2326	24	2.54
12/13/99	2330	24	2.78
12/14/99	2320	24	2.80
12/15/99	1932	21.75	2.30
12/16/99	2116	21.45	2.96
12/17/99	2493	24	3.76
12/18/99	2522	24	3.17
12/29/06	2433	23.75	3.29
12/20/99	2450	24	3.59
12/21/99	2440	24	3.81
12/22/99	2477	24	3.82
12/23/99	2467	24	3.83
12/24/99	2466	24	3.84
12/25/99	2462	24	3.84
12/26/99	2490	24	3.85
12/27/99	2542	24	3.56
12/28/99	2542	24	3.78
12/29/99	2522	24	3.79
12/30/99	2527	24	3.76
12/31/99	2423	24	3.53
01/01/00	2509	24	3.65
01/02/00	2523	24	3.68
01/03/00	2531	24	3.56
01/04/00	2549	24	3.79
01/05/00	2569	24	3.73
01/06/00	2585	24	3.83
01/07/00	2577	24	3.68
01/08/00	2579	24	3.61
01/09/00	2235	21.25	3.51
01/10/00	2553	24	3.78
01/11/00	2543	24	3.81
01/12/00	996	11	3.90
01/13/00	2410	24	3.88

DATE Tons/day Hrs/day lb SO2/ton

01/14/00	2544	24	3.83
01/15/00	2524	24	3.83
01/16/00	2481	24	3.83
01/17/00	2050	24	2.60
01/18/00	2334	24	3.72
01/19/00	2087	23.45	3.62
01/20/00	2125	24	3.08
01/21/00	2268	24	3.69
01/22/00	2287	24	3.78
01/23/00	2312	24	3.74
01/24/00	2325	24	3.73
01/25/00	2353	24	3.80

# of operating days=	379
# of operating days exceeding 90% permitted capacity =	266
Percent of operating days exceeding 90% capacity =	70.2%
Avg. Emission rate when operating above 90% capacity (# SO2/ton) =	3.7



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

July 7, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David B. Jellerson
Cargill Fertilizer, Inc.
Post Office Box 9002
Bartow, Florida 33831

Re: Cargill Fertilizer, Inc., Sulfuric Acid Plants 4 and 5
File No. AC 53-271436 (PSD-FL-229)

Dear Mr. Jellerson:

The Department has reviewed your request dated October 21, 1998 to replace some of the potassium-promoted vanadium catalyst with cesium-promoted vanadium catalyst in Sulfuric Acid Plants 4 and 5 during the next scheduled turn-around. Following review of information subsequently provided by Cargill, it is the Department's conclusion that such installation is within the scope of routine replacement, maintenance and repair. This conclusion is based on the following facts:

- The plants already achieved their permitted production rates of 2,600 tons per day (TPD) following the previously permitted construction project to increase their capacity.
- The physical production rates have steadily decreased in a characteristic and expected manner. A scheduled turn-around will be conducted to restore the plant to its physical and permitted production rate.
- The production rate will be restored to the permitted level by routine repair, maintenance, and replacement of components within the emission units. The permitted production rate will be achieved (in part) by screening and adding vanadium catalyst in the beds to restore activity.
- The permitted and physical capacity of the plant will be achieved following the turn-around whether potassium-promoted or cesium-promoted vanadium catalyst is used.
- For the purposes of this application, the main difference between the two catalysts is that the Topsoe VK-69 cesium-promoted catalyst contains more vanadium and has a greater surface-to-volume ratio than conventional Topsoe catalysts. Thus greater activity can be achieved when compared to equal amounts of the conventional potassium-promoted catalyst.
- The benefit of cesium promotion versus potassium promotion is realized at "low temperature" operation. Therefore cesium promotion may not further add to catalyst activity in this application at steady state conditions. It may allow the plant to be started up faster.

- The overall effect of this product is likely to be lower sulfur dioxide emissions per ton of product following a turn-around. It will also allow maintenance of the already physically-achievable and permitted production rates for a longer period of time thereafter. This is the main purpose of all turn-arounds.
- There may be lower or greater total sulfur dioxide emissions during an entire turn-around cycle.

Because use of the cesium-promoted vanadium catalyst in this application is considered as routine repair, maintenance, or replacement in this case, it is not necessary to extend the existing permits or issue a permit modification. Also there are no references in the permit or BACT determination that need to be changed. Under different circumstances (e.g. if the plants had not been able to achieve their permitted production rates without resorting to this product), the Department might have made a different determination.

A person whose substantial interests are affected by the proposed decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.


Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This letter constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition which conforms to Rule 62-110.106, F.A.C. Upon timely filing of a petition or a request for an extension of time this Notice will not be effective until further Order of the Department.

If either a petition for administrative hearing or a request for extension of time is not timely filed with the Department, then this letter shall constitute final agency action. Any party to this order would then have the right to seek judicial review pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate

District Court of Appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.


C.H. Fancy, P.E., Chief
Bureau of Air Regulation


CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this letter was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 7-7-99 to the person(s) listed:

David Jellerson *
Gregg Worley, EPA
John Bunyak, NPS
Bill Thomas, DEP SWD
Joe King, Polk County
David A. Buff, P.E.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52, Florida Statutes,
with the designated Department Clerk, receipt of
which is hereby acknowledged.


(Clerk) 7-7-99
(Date)

7 333 618 192

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	
David Jellerson	
Street & Number	
Cargill Fert.	
Post Office, State, & ZIP Code	
Bartow, FL	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	
SAP 4+5 7-7-99	
PSD-FL-229	

PS Form 3800 April 1995

Fold at line over top of envelope to
return address

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. David B. Jellerson
Cargill Fertilizer
P O Box 9002
Bartow, FL 33831

4a. Article Number
2 333 618 192

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
7-12-99

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X Richard

Thank you for using Return Receipt Service.

PS Form 3811, December 1994

102595-98-B-0229

Domestic Return Receipt

Sulphuric Acid Catalyst VK69

New Options for Double-Absorption Plants

Since the introduction of the first VK38 catalyst more than 50 years ago, the VK Series has represented Topsøe's heritage and commitment to quality and innovation.

The introduction of the first caesium-promoted vanadium catalyst, VK58, in the late 1980's meant a tremendous step forward in reducing tail-gas emissions from single-absorption sulphuric acid plants through operation at hitherto unseen low temperatures.

Other application areas of caesium-promoted catalysts include:

- Handling of strong, oxygen-rich SO₂ gases
- Significant reduction in SO₂ emissions during start-up
- Savings in start-up time and extended autothermal restart time limits
- Overcoming plant constraints

VK69

In 1996 Topsøe introduced VK69, a newly developed caesium-promoted catalyst, optimized for operation in the last pass of double-absorption sulphuric acid plants. At these conditions VK69 shows a very significant activity advantage compared to regular catalysts.

Features and Benefits

The improvement in activity has been brought about through physical as well as chemical changes compared to Topsøe's well-known VK58 caesium-promoted catalyst.

VK69, 9-mm mini-Daisy alongside 10-mm rings and 12-mm Daisy

Support

VK69 is manufactured by a special extrusion process resulting in a highly porous catalyst.

Shape

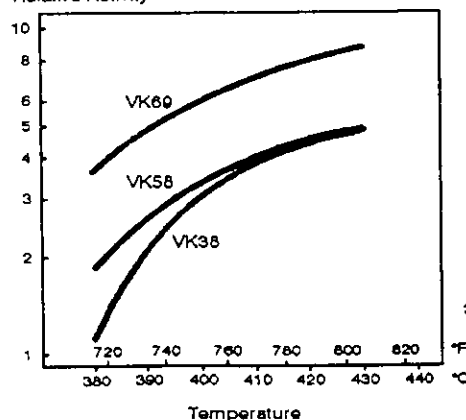
In gases with low concentrations of sulphur dioxide the rate of oxidation of sulphur dioxide is impeded by intra-particle diffusion. The size and shape of the catalyst particles are hence important for the efficiency of the catalyst.

Topsøe's new 9-mm mini-Daisy shape proves 20 % more efficient compared with smooth 10-mm rings without compromising a low pressure drop.

Chemical Composition

VK69 combines an increased vanadium content with a revised composition of the active phase. Caesium is used to stabilize the vanadium in its active state at low operating temperatures.

Relative Activity



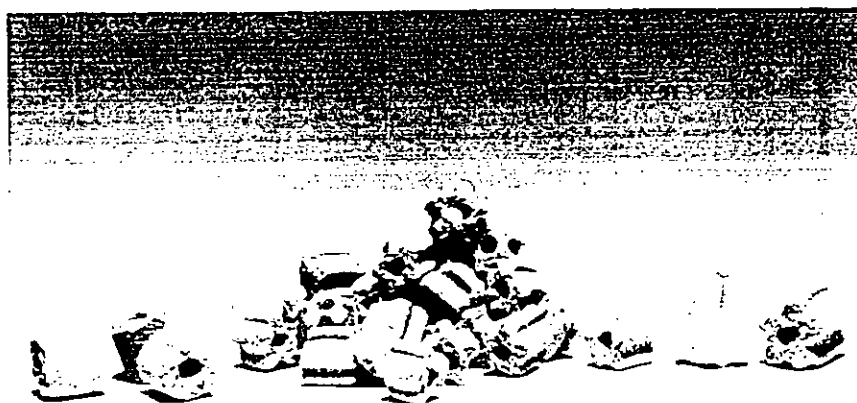
Outstanding Activity

The revised support material, the optimum chemical composition, and the mini-Daisy shape together result in a 2-3 times higher activity for VK69 compared to other vanadium catalysts.

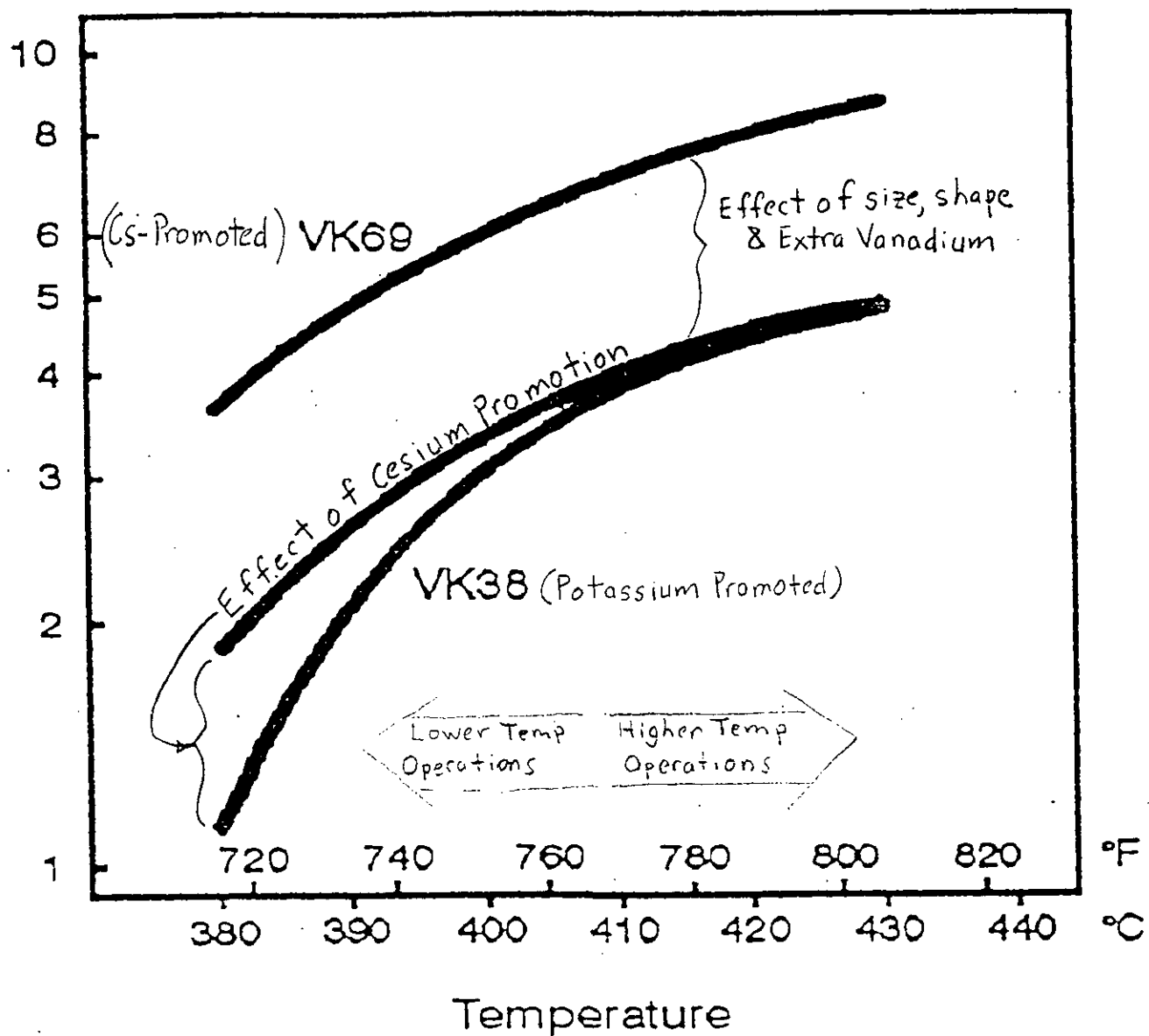
Improved Performance

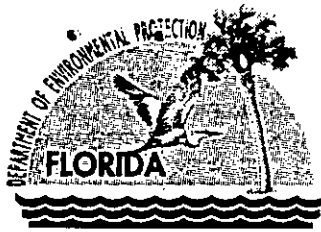
The very high activity of VK69 offers significant performance improvements in terms of:

- Emissions from existing plants can be cut in half without increasing the catalyst volume
- Increased production rate by using higher-strength SO₂ gas without increasing emissions or plant pressure drop



Relative Activity





Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

June 29, 1999

2 letters

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James S. Jenkins III
Vice President of Cement Operations
Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

Re: DEP File No. 0250014-002-AC
Modernization Project, Permit Extension

Dear Mr. Jenkins:

On June 21, 1999, the Department received a request from your consultant, Koogler and Associates, to extend the May 30, 1999 expiration date of the Modernization Project Air Construction Permit. Please note that Rule 62-4.080(3) reads as follows:


"A permittee may request that a permit be extended as a modification of the permit. Such a request must be submitted to the Department in writing before the expiration of the permit." (Emphasis added).

Normally an extension following expiration would require re-issuance of the permit and a public notice. We note, however, that the original application did project a completion date "approximately 36 months after commencement of construction." The date to commence construction was estimated by Rinker at that time to be "upon Dade County and FDEP approval: expected April 1997." The State permit was actually issued in September of 1997. However the expiration date given in the issued permit was May 30, 1999 (only about 20 months).

We have extended the expiration date until September 30, 2000 as a "corrective amendment" to reflect the originally requested 36 month construction schedule. Upon submittal of your updated construction schedule, showing the status of the present project and expected milestones, we can further extend the expiration date as allowed under Rule 62-4.080, F.A.C.

If you have any questions regarding this matter, please contact me or Teresa Heron at 850/488-0114.

Sincerely,


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

AAL/aal

cc: John Koogler, P.E., K&A
Patrick Wong, Miami-Dade DERM

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

Printed on recycled paper.



KOOGLER & ASSOCIATES

ENVIRONMENTAL SERVICES

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

KA 263-94-04

June 18, 1999

RECEIVED

JUN 21 1999

BUREAU OF
AIR REGULATION

VIA FEDEX

Mr. Al Linero
Florida Department of
Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Rinker Materials Corporation
Dade County, Florida
Cement Plant Modernization Project
Permit 0250014-002-AC

Dear Mr. Linero:

As we discussed by telephone on this date, I am requesting that the subject air construction permit be extended for two additional years; through May 30, 2001. The subject permit was issued on September 11, 1997, and did not trigger PSD permitting requirements because of emission offsets from the existing wet process cement plant. The modernization project is well underway and the two year extension is requested to allow completion of the project and demonstration of compliance with all applicable Department rules and permit conditions.

I am enclosing a \$50 check to cover the permit amendment requested should a fee be required. If it is determined that a fee is not required (as a result of the Title V status of the facility), the enclosed check can either be returned or voided.

I appreciate your attention to this matter. If you have any questions, please do not hesitate to contact me at 352-377-5822.

Very truly yours,

KOOGLER & ASSOCIATES


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

JBK:wa
Enc.

c: Mr. Michael Vardeman, Rinker

* no green card
Z 333 618 188

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent To <i>James Jenkins</i>	
Street & Number <i>Printer Materials</i>	
Post Office, State, & ZIP Code <i>Miami FL</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date <i>6-30-99</i> <i>0250014-002-AC</i>	

PS Form 3800 April 1995

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. James Jenkins III
1200 NW 137th Ave.
Miami, FL 33182

4a. Article Number

2333 612 564

4b. Service Type

- | | |
|---|---|
| <input type="checkbox"/> Registered | <input checked="" type="checkbox"/> Certified |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Insured |
| <input type="checkbox"/> Return Receipt for Merchandise | <input type="checkbox"/> COD |

7. Date of Delivery

12/9/98

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)

X

[Signature]

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

June 29, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James S. Jenkins III
Vice President of Cement Operations
Rinker Materials Corporation
1200 Northwest 137th Avenue
Miami, Florida 33182

Re: DEP File No. 0250014-002-AC
Modernization Project, Permit Extension

Dear Mr. Jenkins:

The Department has reviewed the extension request received on June 23, 1999. The expiration date is hereby corrected to September 30, 2000 as requested in your original construction permit application. Any further extension beyond that date shall require submittal of an updated construction schedule.

A copy of this Permit Amendment shall be attached to the referenced construction permit and shall become part of the permit.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each

agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the

program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This Permit Amendment constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition which conforms to Rule 62-110.106, F.A.C. Upon timely filing of a petition or a request for an extension of time this Notice will not be effective until further Order of the Department.

If either a petition for administrative hearing or a request for extension of time is not timely filed with the Department, then this Permit Amendment shall constitute final agency action. Any party to this order would then have the right to seek judicial review pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Howard L. Rhodes, Director
Division of Air Resources
Management

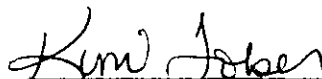
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Permit Amendment was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 6-30-99 to the person(s) listed:

James S. Jenkins III, * RMC
H. Patrick Wong, Miami-Dade DERM
John Koogler, P.E., K&A

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52, Florida Statutes,
with the designated Department Clerk, receipt of
which is hereby acknowledged.


(Clerk)

6-30-99
(Date)

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603



May 26, 1999

9837580-0100

Florida Department of Environmental Protection
Bureau of Air Regulation
New Source Review Section
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED

MAY 28 1999

**BUREAU OF
AIR REGULATION**

Attention: Mr. A. A. Linero, P.E.

RE: CARGILL FERTILIZER, INC.
BARTOW NOS. 4 AND 5 SULFURIC ACID PLANTS

Dear Mr. Linero:

This correspondence is in response to the Department's letter dated December 14, 1998, regarding installation of cesium catalyst in the Nos. 4 and 5 Sulfuric Acid Plants at Bartow. Cargill has requested that the Department allow the use of cesium catalyst in the last mass at each of these sulfuric acid plants. Cargill's primary purpose in installing the cesium catalyst is to improve plant efficiency.

The Department states that the EPA has expressed concerns regarding the potential for increased production and emissions following catalyst changes in sulfuric acid plants. Although Cargill believes that some production increase may result from the cesium catalyst, this will be offset by lower SO₂ emissions, particularly during the time following turnarounds.

Cargill cannot accept a limitation on annual SO₂ emissions equal to the past 2 years of actual emissions, nor would it be appropriate to impose such a limit. This is because many other factors affect annual emissions, including plant operating days, periods of downtime or reduced production, market demand for phosphate products, time since last turnaround (some calendar years may have no turnaround), sulfuric acid plant operating variables, actual lb/ton emission rates, etc. Annual SO₂ emissions already vary from year to year based upon these factors and variations will continue from year to year. There would be no way to separate out the effects of the cesium catalyst alone on actual SO₂ emissions. If annual emissions from the two plants did increase in the future, it may be totally unrelated to the cesium catalyst. PSD regulations specifically exempt from PSD review increases in emissions due to increased production rates or operating hours, if such increases are due to increased demand, plant operating variations, etc.

Cargill is not requesting any increase in permitted sulfuric acid production rates for these two plants. Cargill already operates up to the permitted 2,600 TPD of acid production on a

routine basis at both Nos. 4 and 5 Sulfuric Acid Plants. Thus, the plants are already able to achieve the permitted operating rate. The cesium catalyst will not allow production to increase on a short-term basis, since the plants are already restricted to 2,600 TPD by permit condition.

The Department has been advocating the use of Topsoe catalyst for some time due to its potential for lowering actual emissions. Cargill is proposing to use Topsoe catalyst in this project. This will be a distinct benefit to the environment since it is expected that SO₂ emissions will decrease on the basis of lb/ton of 100-percent acid produced. This project, if approved, could be a demonstration of the capabilities of this new catalyst. If the cesium catalyst is not installed in the Nos. 4 and 5 Sulfuric Acid Plants, Cargill will continue to produce and purchase acid from sulfuric acid plants where the acid is produced with no cesium catalyst, resulting in higher SO₂ emissions in terms of lb/ton of acid produced.

It is also noted that Cargill has no incentive to increase SO₂ emissions from the sulfuric acid plants. Higher SO₂ emissions means more potential sulfuric acid product being lost. Cargill will operate the sulfuric acid plants in the most efficient manner at all times to reduce potential SO₂ emissions, while meeting production demands.

In conclusion, Cargill believes the Department should allow Cargill to proceed immediately with this environmentally beneficial project, and this should not be a PSD issue. If you have any questions concerning this information, please call myself at 325-336-5600 or David Jellerson at 813-671-6297.

Sincerely,

GOLDER ASSOCIATES INC.



David A. Buff, P.E.,
Principal Engineer
Florida P.E. #19011
SEAL

DB/db/jkk

Enclosures

cc: David Jellerson
Deborah Waters
Melody Russo

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Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
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.

Z 333 612 573

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

PS Form 3800, April 1995

Sent to <i>Melody Russo</i>	
Street Number <i>Carsill Fert</i>	
Post Office, State, & ZIP Code <i>Barton FI</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date <i>12-18-98</i> <i>1050046-001-AC</i> <i>P50-F1-229</i> <i>SAP 4,5,6</i>	

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Ms. Melody Russo
Carsill Fertilizer
PO Box 9002
Barton, FI
33831

4a. Article Number

Z 333 612 573

4b. Service Type

- | | |
|---|---|
| <input type="checkbox"/> Registered | <input checked="" type="checkbox"/> Certified |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Insured |
| <input type="checkbox"/> Return Receipt for Merchandise | <input type="checkbox"/> COD |

7. Date of Delivery

12-21-98

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)

X *R. Perhach*

8. Addressee's Address (Only if requested and fee is paid)

n Receipt

Thank you for using Return Receipt Service.

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603



December 9, 1998

Florida Department of Environmental Protection
New Source Review Section
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

DEC 10 1998

BUREAU OF
AIR REGULATION

Attention: Mr. A. A. Linero, P.E.

RE: CARGILL FERTILIZER, INC. NOS. 4, 5, and 6 SULFURIC ACID PLANTS – BARTOW
DEP FILE NO. AC53-271436; PSD-FL-229

Dear Mr. Linero:

Cargill Fertilizer, Inc has received the FDEP's request for further information dated October 28, 1998, regarding the extension of the above referenced air construction permit to install Cesium-promoted catalyst in a portion of the existing catalyst beds of the Nos. 4 and 5 SAPs. Presented below are responses to the FDEP's questions and comments in the same order as they appear in the letter from FDEP.

1. Emissions testing dates following increase in plant capacity:

No. 4 SAP – January 15, 1998

No. 5 SAP – January 22, 1998

No. 6 SAP – February 10, 1998

Note that these are the only compliance testing conducted since the increase in capacity (2,600 TPD each plant) was accomplished.

2. Production rates and emissions achieved on the above referenced test dates.

Refer to Table 1.

3. Proposed catalyst volume and properties:

75,600 to 142,000 liters installed in each plant. The vendor will either be Monsanto or Topsoe. Refer to attachments for Monsanto's Cs-110 Cesium-promoted catalyst properties and Topsoe's VK58 Cesium-promoted catalyst properties. Cargill is also going to consider the newly developed VK68 Cesium-promoted catalyst from Topsoe. Properties of this catalyst are not currently available.

4. Short-term emissions decreases due to addition of Cesium-promoted catalyst.

The expected change in short-term emissions is negligible, refer to Table 2. As shown the change in short-term (24-hour) SO₂ emissions before and after the change on No. 6 SAP (3.93 lb/ton and 3.91 lb/ton, respectively) is negligible. Similar results are expected in Nos. 4 and 5 SAPs. The expected primary benefit of the cesium-promoted catalyst will be to provide an additional six months of production between turn-arounds (i.e., 24 months instead of 18 months between turn-arounds).

9837580A/1

5. Long-term emissions increases due to higher production rates.

Expected production rate increases and long-term emissions will not change significantly, refer to Table 2. As shown, the change in maximum and average production rates and average emission rates before and after the change on No. 6 SAP are small. However, the decrease in the average emission rate more than offsets the increase in production rates as shown below:

Before: 2,392 TPD acid x 3.78 lb/ton = 9,042 lb/day SO₂

After: 2,429 TPD acid x 3.66 lb/ton = 8,890 lb/day SO₂

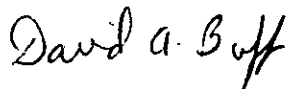
Net Decrease 152 lb/day SO₂

The benefit the cesium-promoted catalyst will provide is an additional six months of production between turn-arounds. Therefore, no increases in long-term emissions due to the catalyst replacement are expected.

Thank you for consideration of this information. Please call me at 352-336-5600, if you have any questions concerning this matter.

Sincerely,

GOLDER ASSOCIATES INC.



David A. Buff, P.E.
Principal Engineer
Florida P.E. #19011

DB/arz

cc: David Jellerson, Cargill
Kathy Edgemon, Cargill
Melody Russo, Cargill
Bill Thomas, Tampa FDEP

Table 1. Summary of Emissions Testing Data

Plant	Run Number	Production Rate 100 % Acid		Emission Rates					
				H2SO4 Mist		SO2		NOx	
		TPH	TPD (a)	lb/hr	lb/ton 100% Acid	lb/hr	lb/ton 100% Acid	lb/hr	lb/ton 100% Acid
No. 4 SAP									
	1	101.5	2,436	2.35	0.023	383.5	3.8	9.4	0.09
	2	101.5	2,436	3.22	0.032	362.9	3.6	11.4	0.11
	3	101.5	2,436	3.00	0.030	361.6	3.6	11.8	0.12
	Average	101.5	2,436	2.86	0.028	369.3	3.7	10.9	0.11
No. 5 SAP									
	1	104.2	2,501	2.58	0.025	384.5	3.7	12.7	0.12
	2	104.2	2,501	1.87	0.018	378.9	3.6	12.4	0.12
	3	104.2	2,501	1.37	0.013	373.5	3.6	12.0	0.11
	Average	104.2	2,501	1.94	0.019	379.0	3.6	12.4	0.12
No. 6 SAP									
	1	100.4	2,410	0.86	0.009	396.5	3.9	11.3	0.11
	2	100.4	2,410	1.70	0.017	416.3	4.1	11.4	0.11
	3	100.4	2,410	1.06	0.011	385.7	3.8	11.6	0.12
	Average	100.4	2,410	1.21	0.012	399.5	3.9	11.4	0.11

Source: Southern Environmental Sciences, Inc. (1/15/98, 1/22/98, and 2/10/98)

(a) Equivalent daily production rate based on compliance testing hourly rates.

Table 2. Current and Estimated Future SO2 Emissions Due the Installation of a Cesium-Promoted Catalyst

Scenario	Period	Production Rate 100 % Acid (b)		SO2 Emissions 100% Acid	
		Maximum (TPD)	Average (TPD)	Daily Maximum (lb/ton)	Average (lb/ton)
Before Cesium-promoted catalyst installed (a)	1/1/98-4/30/98	2,501	2,392	3.93	3.78
After Cesium-promoted catalyst installed (a)	6/1/98-10/31/98	2,574	2,429	3.91	3.66
	Net Change	73	37	-0.02	-0.12
	% Change	2.9	1.5	-0.5	-3.2

notes:

Cesium-promoted catalyst installed May 1998

(a) Based on SO2 emissions data from No. 6 SAP before and after cesium-promoted catalyst installed.

(b) Based on production data provided by Cargill.

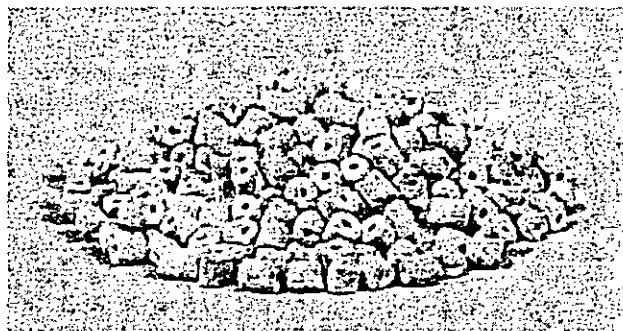
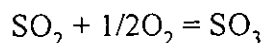


Enviro-Chem Systems

MONSANTO ENVIRO-CHEM SULFURIC ACID CATALYST

Monsanto has been manufacturing and marketing sulfuric acid catalyst since 1925. The catalyst is sold worldwide and Enviro-Chem provides high quality technical and commercial support before and after the sale. The vanadium-based catalyst is an extremely important "cog" in the many sulfuric acid technologies provided by Monsanto Enviro-Chem.

The sulfuric acid catalyst is used in the oxidation of sulfur dioxide (SO₂) as follows:



The sulfur trioxide (SO₃) is then reacted with water to form sulfuric acid (H₂SO₄). The main components of the Enviro-Chem catalyst include: SiO₂ (silica; as a support), vanadium (V), potassium (K) and/or cesium (Cs), and various binders and additives. The reaction shown above actually occurs within a molten salt consisting of potassium/cesium sulfates and vanadium sulfates, coated on the solid silica support. This unique catalyst has proven to be very stable and long-lived in the sulfuric acid production industry. Because of the unique chemistry of this molten salt system, the vanadium is present as a complex sulfated salt mixture and NOT as vanadium pentoxide (V₂O₅). Therefore, the catalyst is more correctly called a "vanadium-containing" catalyst rather than the commonly-used "vanadium pentoxide" catalyst.

Monsanto Enviro-Chem provides a wide variety of sulfuric acid catalyst products:

Rings	LP-120	LP-110	LP-220
Application	First/Second Beds	Third/Fourth Beds	First/Second Beds
Outside Diameter (mm)	12.7	9.5	9.5
Inside Diameter (mm)	5.0	4.0	4.0
Average Ring Length (mm)	14.0	13.0	13.0
Pellets	T-210	T-11	
Application	First/Second Beds	Third/Fourth Beds	
Diameter (mm)	5.5	5.5	
Crush Strength (kg)	12.0	12.0	
* Cesium-Promoted	Cs-120	Cs-110	Cs-210
Shape	Ring	Ring	Pellet
Application	First/Second Beds	Lower Beds	All Beds
Outside Diameter (mm)	12.7	9.5	5.5
Inside Diameter (mm)	5.0	4.0	

The **cesium-promoted catalyst** was developed specifically for lower temperature operations which can lead to greater SO₂ conversion and hence lower emissions to the atmosphere. The cesium salt promoter reduces the required operating temperature for the sulfuric acid catalyst by as much as 40

°C (70°F). Higher SO₂ conversion is possible at lower temperatures as long as the catalyst is "active"; the cesium-promoted catalysts are sufficiently active at these lower temperatures (390-410 °C/735-770°F) to take advantage of this conversion "opportunity." The cesium/vanadium catalyst can be used in the first bed to reduce the bed inlet temperature (saving energy and start-up time). The Cs-110 or Cs-210 catalyst can be used in the final catalyst bed (at a low inlet temperature) to maximize the SO₂ conversion and reduce emissions. This unique catalyst was introduced in the late 1980's and has been applied in a variety of situations with significant SO₂ emissions reductions. Although the cesium catalyst is more costly than the standard potassium/vanadium catalysts, many customers have justified the added expense by increased production, higher steam production, and reduced emissions.

Technical service is also a major part of the overall sulfuric acid catalyst story. Enviro-Chem provides catalyst engineering studies to assist the customer in determining the catalyst needs in a specific plant, activity analysis and hardness determinations for used catalyst samples, and on-site converter-heat exchanger testing (called *PeGASvS*) to fully characterize the sulfuric acid plant operations which assist the customer in maintenance planning. Enviro-Chem has a variety of commercial and inventory locations throughout the world. Technical service functions are centered in St. Louis, MO (U.S.A.) and in Brussels, Belgium.

**TOPSOE
SULFURIC ACID
CATALYSTS VK SERIES**



HALDOR TOPSOE, INC.



process gases. Through the use of specially selected raw materials, VK-WSA has achieved an even higher strength desirable in the water-vapour containing gases. Simultaneously an enhanced activity in gases of low or moderate SO_2 strength has been obtained.

Sizes and shapes

Topsoe VK catalysts are offered in several shapes to yield optimum performance.

10-mm Rings

The 10-mm rings are suitable for complete passes and combine a low pressure drop with a high tolerance with respect to pressure drop build-up from dust in the feed gas.

20-mm Rings

Improved protection against pressure drop build-up from dust can be obtained by using a top layer of VK38, 20-mm rings. In this way, the intervals between screenings can typically be extended by 50-75%.

DAISY-Shape

The DAISY-shape VK catalyst, in the form of 12-mm ribbed rings, gives a

further 20% reduction in pressure drop in comparison with the 10-mm ring catalyst. The rate of pressure drop build-up from dust is similarly reduced due to the higher void fraction afforded by the optimized shape. Yet the DAISY-shape has the same activity on account of the more favourable surface-to-volume ratio and can therefore replace 10-mm rings on a litre-for-litre basis.

6-mm Cylinders

Energy savings and longer intervals between screenings normally makes low pressure drop 10-mm rings or DAISY-shape the preferred choice. However, the lower the pressure drop across a catalyst layer, the higher the risk of non-uniform gas distribution. For beds having very low gas velocity, a full or partial loading of solid 6-mm cylinders promotes uniform gas distribution.

VK58, 14-mm Rings

For installation in the upper part of first passes, VK58 is offered in the form of 14-mm rings. The larger-sized rings have better dust tolerance and pressure drop properties and can be separated from the underlying conventional catalyst

without resorting to use a separation layer of ceramics or rocks.

Packaging and Storage

VK catalysts are normally supplied in fibre drums or 1000-litre bags. Alternatively the catalyst can be supplied in steel drums. In all cases a polyethylene liner protects the catalyst from moisture. The catalyst can be stored for many years under dry conditions without loss of activity or hardness.

VK catalysts contain no dust or undersize material when delivered. Therefore, screening is not required prior to loading.

Technical Service

Topsoe's core business is catalysts and the design of industrial plants based on catalytic processes. The most refined techniques available for research and testing are employed in Topsoe's state-of-the-art facilities.

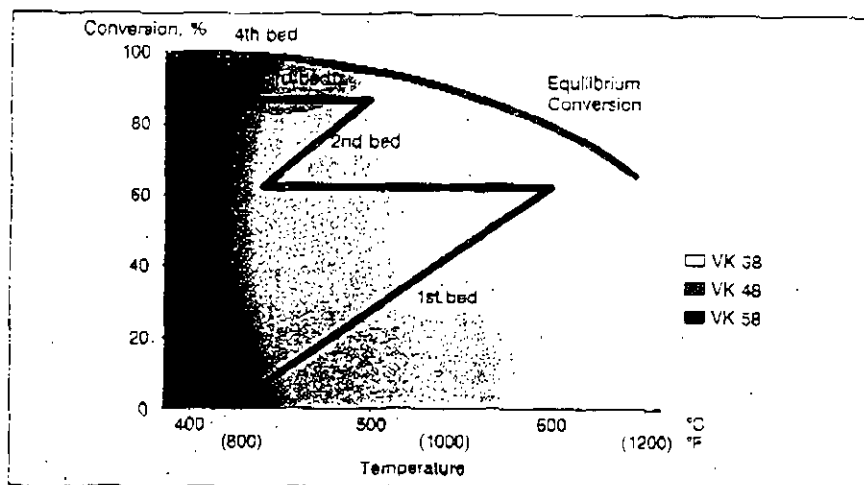
Plant Performance Analysis

Highly sophisticated and proprietary computer programs are used to simulate plant operation based on operating data. This provides assistance in:

- Evaluating catalyst activity
- Making operating adjustments for improved performance
- Trouble-shooting
- Planning of catalyst replacements

Catalyst Sample Analysis

Samples of installed catalyst are analyzed for chemical composition and tested for activity and strength. This information, when considered along with plant performance analysis, is a most effective tool to follow catalyst history and help in forecasting.



Application areas of VK catalysts.

Sulfuric Acid Catalysts VK Series

Topsoe has been involved in the development and production of sulfuric acid catalysts for more than half a century and has during that period taken an industry leading role in developing the first ring-shape extrudates (1976), the DAISY-shape catalyst (1984), and the cesium-promoted catalyst, VK58 (1988).

Today, Topsoe's VK-Series of catalysts offers a choice among three catalyst types in five different sizes to effectively meet all requirements of sulfuric acid plants.

Topsoe VK catalysts are renowned for yielding a unique performance combining high and stable activity, low pressure drop, and exceptional mechanical strength. Used in conjunction with Topsoe's plant performance evaluations and catalyst sample analyses, unmatched plant performance is assured.

VK38

Recommended as optimum for the first two passes, VK38 is the only catalyst on the market which can be used effectively in all passes of the converter. VK38 has a temperature range for continuous operation from 400-630°C (750-1170°F) and is able to endure temperature peaks as high as 650°C (1200°F). At the other extreme, the VK38 features ignition temperatures as low as 360°C (680°F) for fresh catalyst and 380°C (720°F) even after years of operation. This ensures ease of start-up and enhanced operating flexibility.

VK48

The composition of VK48 has been optimized for superior performance in the last passes. A higher content of vanadium combined with a change in the active phase offers a 10-30% activity advantage in this region of the converter, depending on the gas conditions.

VK58

VK58 incorporates the use of cesium to enhance the action of vanadium. Through its very high activity at low temperatures and its extremely low ignition temperature of 320-330°C (610-630°F), this catalyst provides a number of advantages:

- Improved conversion
- Overcome of limitations in heat exchanger capacity
- Faster and cleaner start-ups
- Processing of gases with unusual high SO₂ strength
- Autothermal start-up after a prolonged period of time
- Improved performance during periods of degraded operation as for instance loss of feed gas or fluctuations in SO₂ concentration

VK-WSA

The VK-WSA catalyst is used in Topsoe's WSA desulfurization process which is characterized by the direct oxidation of SO₂ and formation of sulfuric acid in humid

Catalyst type	VK38	VK48	VK58	VK-WSA
Chemical Composition	Alkali-metal promoted vanadium pentoxide on a diatomaceous-earth silica support material			
V ₂ O ₅ content, % by weight	6-8	7-9	6-8	6-8
Alkali-metal oxides, % by weight	11-15	11-15	20-25	11-15
Special Characteristics	Excellent activity in the full range of operating conditions. Suited for all passes	High-vanadium catalyst with enhanced activity in the last passes	Cesium-promoted catalyst with extremely low ignition temperature	For operation in humid SO ₂ gases in Topsoe's WSA desulfurization process
Size/shape	6 mm cylinders 10 mm rings 12 mm DAISY 20 mm rings	6 mm cylinders 10 mm rings 12 mm DAISY	6 mm cylinders 10 mm rings 12 mm DAISY 14 mm rings	6 mm cylinders 10 mm rings 20 mm rings
Typical range of operating temperature	°C 400-630 °F 750-1170	400-550 750-1020	370-450 700-840	400-550 750-1020
Packaging	The VK-Series catalysts are normally supplied in 100 litre fibre drums with a polyethylene liner or in 1000 litre bags. Delivery in 100 litre or 200 litre steel drums is available upon request.			



Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

October 28, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

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

Dear Ms. Russo:

We have reviewed the letter dated October 21, 1998 from Golder Associates requesting an extension of the referenced permit to install cesium-promoted catalyst in some of the beds at SAPs 4 and 5. Please provide the following information to complete the application:

- The date when each plant was tested following completion of the final phase of work to increase plant capacity under the referenced permit.
- The production and emission rates achieved during those tests.
- The expected amount of catalyst to be installed as well as its basic properties (Monsanto Cs 110/120, Topsoe VK-69, BASF O4-115, etc.).
- The expected short-term emissions decreases, if any, following a turn-around due to use of cesium-promoted catalyst.
- The expected long-term emissions increases, if any, due to the ability to sustain higher production between turn-arounds.

EPA Region X is treating the replacement of conventional catalyst formulations with cesium-promoted catalyst as a modification subject to PSD. The above information will allow us to determine: whether the Cargill project falls within the present permit and work scope; if past actual emissions have already been established; and if the current PSD permit is sufficient to implement the change. We acknowledge that a similar change was authorized for SAP 6 during the expected life of the applicable permit. We are interested to know the results of the use of cesium catalyst in that plant.

If you have any questions, please call me at (850)921-9523.

Sincerely,

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

AAL/aal

cc: Bill Thomas, DEP SWD
Dave Buff, P.E., Golder Associates

Z 333 612 490

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SAP 4,5+6 10-29-98	
P50-FL-229	

PS Form 3800, April 1995

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Ms. Melody Russo
Garsill Fertilizer
PO Box 9002
Bartow, FL 33831

4a. Article Number

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PS Form 3811, December 1994

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Thank you for using Return Receipt Service.

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603



October 21, 1998

Florida Department of Environmental Protection
New Source Review Section
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: Mr. A. A. Linero, P.E.

RE: CARGILL FERTILIZER, INC. NO. 5 SULFURIC ACID PLANT - BARTOW DEP
FILE NO. AC53-271436; PSD-FL-229

Dear Mr. Linero:

Cargill Fertilizer was issued the above referenced construction permit on November 16, 1995, for modification of the No. 4, 5 and 6 Sulfuric Acid Plants (SAPs) at the Bartow facility. The expiration date of this permit is October 31, 1998. The purpose of this correspondence is to request, on behalf of Cargill, an extension of the construction permit for the No. 4 and 5 SAPs to June 30, 1999. This extension, if granted, will allow sufficient time for Cargill to install cesium-based catalyst in a portion of the existing catalyst beds of the No. 4 and 5 SAPs. This request is similar to Cargill's previous request regarding installation of cesium catalyst in the No. 6 SAP at Bartow. The cesium catalyst is expected to provide greater efficiency of acid recovery in the sulfuric acid plant. Please note that Cargill is contemplating additional cesium catalyst for the No. 5 SAP at this time; however, they desire to keep this option open for the No. 4 SAP as well. Therefore, the request is to extend the construction permit for both these plants.

Thank you for considering this request. Attached is a permit amendment fee of \$50. If you require anything further, please do not hesitate to call.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff, P.E.
Principal Engineer
Florida P.E. #19011 SEAL

DB/tds

cc: David Jellerson, Cargill
Kathy Edgemon, Cargill
Melody Russo, Cargill

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----- Permitting Application -----							
+----- ARMS Facility -----+							
Facility Name: CARGILL FERTILIZER - BARTOW				AIRS ID: 1050046			
County: POLK				Owner: CARGILL FERTILIZER, INC.			
Office: SW: TAMPA				Category: POINT			
+----- Project -----+							
AIR Permit #: 1050046-001-AC				Project #: 001 CRA Reference #:			
Permit Office: TAL (HEADQUARTERS)				Agency Action: Issued			
Project Name: SULFURIC ACID PLANTS 4, 5 & 6				Desc: PSD-FL-229, AC53-271436.			
Type/Sub/Req: AC /1A PSD or NAA \$7500				Logged: 13-OCT-1995			
Received: 24-MAY-1995				Issued: 16-NOV-1995 Expires: 31-OCT-1998 OGC:			
Fee: 7550.00 Fee Recd:				Dele: Override: PATS HISTORY			
N----- Related Party -----+							
Role: APPLICANT				Begin: 24-MAY-1995 End:			
Name: RUSSO, MELODY				Company: CARGILL FERTILIZER, INC			
Addr: P.O. BOX 9002							
City: BARTOW				State: FL Zip: 33831- Country:			
Phone: 941-534-9613				Fax: 941-534-9680			
+----- Processors -----+							
Processor: ARIF_S				Y Active: 24-MAY-1995 Inactive:			
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Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

May 1, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David B. Jellerson
Cargill Fertilizer, Inc.
Post Office Box 9002
Bartow, Florida 33830

Re: Cargill Fertilizer, Inc., Sulfuric Acid Plant 6
File No. AC 53-271436 (PSD-FL-229)

Dear Mr. Jellerson:

Per our conversation and the information submitted by Cargill on May 1, 1998, it is the Department's conclusion that the replacement of a portion of the existing catalyst mass in the fourth pass of the subject plant with cesium-promoted catalyst is within the scope of the approved project to increase production at Sulfuric Acid Plant No. 6 at the Bartow facility.

This conclusion is based primarily on the fact that the permit to increase production to 2,600 tons per day (TPD) at SAP No. 6 is still in effect. It is our understanding that the use of the cesium-promoted catalyst will not, in this case, result in a short-term maximum achievable production rate increase. Additionally, it is our understanding that without the replacement the plant can already achieve 2,600 TPD.

Past annual emissions have not yet been established under the approved project and would therefore be equal to the permitted (and demonstrable) "potential-to-emit." A comparison of past to future emissions would therefore not indicate an increase in emissions requiring another permit.

The expectation is that by using the cesium catalyst, the plant will still initially produce up to 2,600 TPD, but with lower sulfur dioxide (SO₂) emissions. However the plant will be able to sustain production at or near the authorized production limit for a longer period within a turn-around cycle while meeting the current SO₂ emission limit. It is also expected that total emissions within a turn-around cycle will not appreciably change and will remain well within the permitted and modeled annual limits.

Please note that per the attached letter, it appears that the Monsanto Enviro-Chem catalyst will actually produce no benefit if the operating temperature is not reduced below 425 °C. For reference, there are other manufacturers who claim a benefit whether or not operating temperature is reduced. If you have any questions, please call me at (850)921-9523.

Sincerely,

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

AAL/aal

cc: Mr. Bill Thomas, DEP SWD



ENVIRO-CHEM SYSTEMS

ENVIRO-CHEM SYSTEMS
A MONSANTO COMPANY
14522 SOUTH OUTER FORTY ROAD
CHESTERFIELD, MISSOURI 63017
P.O. Box 14547
ST. LOUIS, MISSOURI 63178
PHONE (314) 275-5700
FAX (314) 275-5701
enviroch@monsanto.com
www.enviro-chem.com

5 March 1998

Mr. Chuck Jenkins
Farmland Hydro, LP
P. O. Box 960
Bartow, FL 33830

Dear Mr. Jenkins:

The following statements are made in response to the FDEP's question regarding the sulfur dioxide emissions guarantee for the proposed sulfuric acid plant:

The Department should be made aware that the optimum fourth pass inlet temperature, based on the design for Farmland's new sulfuric acid plant, is 425°C. At this inlet temperature, Farmland Hydro would not realize any emissions reduction benefits by simply using the cesium-promoted catalyst as a direct substitute for the proposed conventional potassium-promoted catalyst in the fourth pass of the plant; the sulfur dioxide emissions would basically remain unchanged at a cost penalty to Farmland. Monsanto's performance guarantee for the proposed plant is 4.0 pounds of sulfur dioxide per ton of 100 percent sulfuric acid produced.

Sincerely yours,

John R. Horne
Sales Director
Monsanto Enviro-Chem

Atis Vavere
Business and Technology Manager
Monsanto Enviro-Chem

P 265 659 346

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Cargill Fertilizer
P O Box 9002
Bartow, FL

33830

4a. Article Number

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