Department of Environmental Protection

Jeb Bush
Governor

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.

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 lbs/hr X 8760 hours / 2000 lbs/ton = 21.02 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

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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7099 3400 0000 1453 2634

Article Sent To:
Ms. Mallika Muthiah, P.E.

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
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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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* S SIGGS
B. Date of Delivery 8/23/00
C. Signature X
☐ Agent
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D. Is delivery address different from item 1? ☐ Yes
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PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

Department of Environmental Protection

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

Jeb Bush
Governor

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.

- 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)

U.S. Postal Service
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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

A. Received by *(Please Print Clearly)*: K Pickard
B. Date of Delivery: 08-21-00

C. Signature: X K Pickard ☒ Agent ~~☐ Addressee~~

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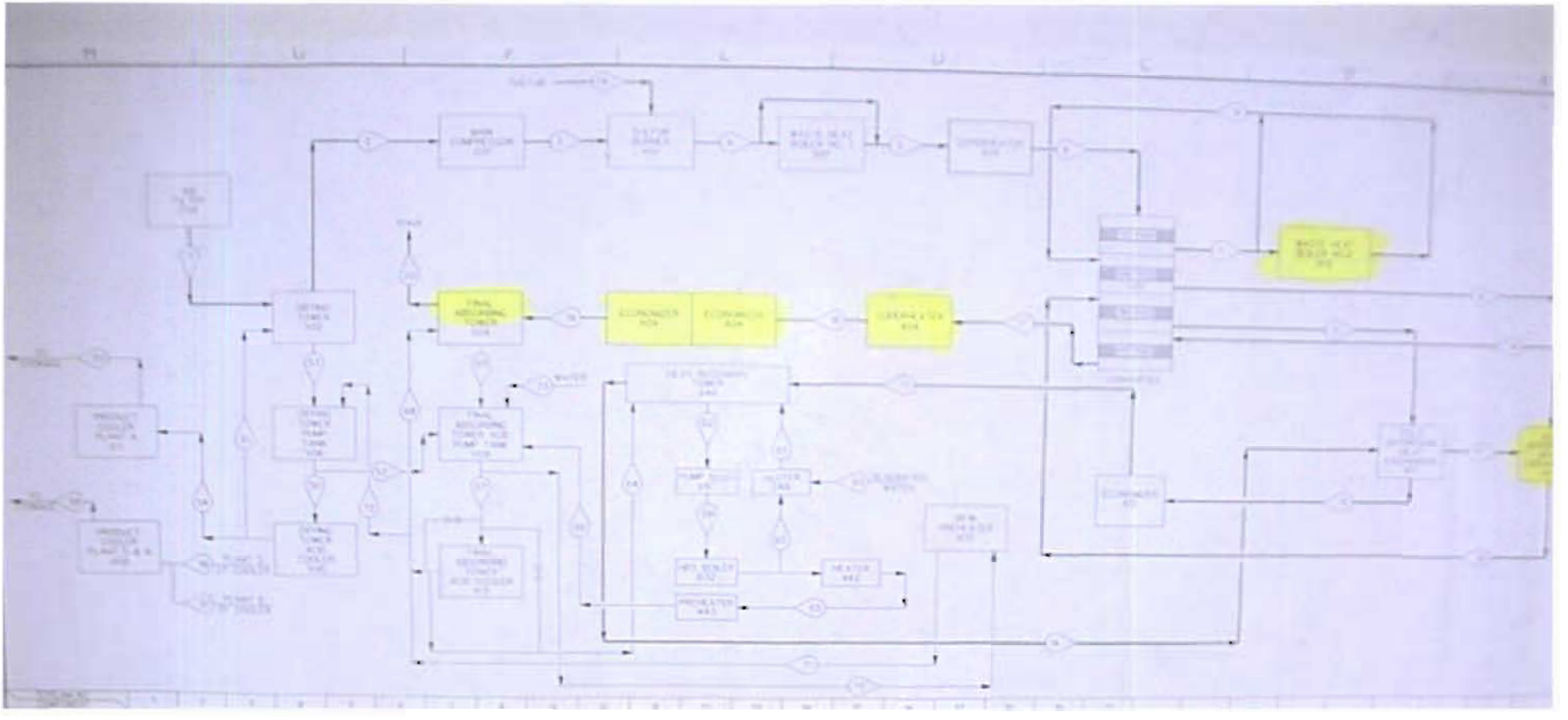

Process Flow Diagram – Cargill Bartow Sulfuric Acid Plant 4
Highlighting Areas of Planned Work

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 813-671-6146

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

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

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
01-01-99	2256	24	3.47
01-02-99	2231	24	3.26
01-03-99	2258	24	3.32
01-04-99	1748	20	3.16
01-05-99	2284	24	3.47
01-06-99	2294	24	3.48
01-07-99	2299	24	3.30
01-08-99	2318	24	3.53
01-09-99	2268	24	3.61
01-10-99	2310	24	3.53
01-11-99	2308	24	3.46
01-12-99	2315	24	3.45
01-13-99	385	5	3.12
01-14-99	2283	24	3.51
01-15-99	1426	17	2.63
01-16-99	1271	15.5	1.94
01-17-99	**2343**	24	1.87
01-18-99	**2362**	24	2.12
01-19-99	**2346**	24	3.54
01-20-99	2218	23	3.31
01-21-99	2269	24	3.09
01-22-99	2302	24	3.17
01-23-99	**2349**	24	3.39
01-24-99	2334	24	2.44
01-25-99	**2353**	24	2.88
01-26-99	**2343**	24	3.26
01-27-99	2101	21.25	3.51
01-28-99	**2488**	24	3.86
01-29-99	**2490**	24	3.71
01-30-99	**2500**	24	3.91
01-31-99	**2491**	24	3.92
02-01-99	**2460**	24	3.93
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02-03-99	**2458**	24	3.93
02-04-99	2124	22.75	3.96
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02-20-99	**2361**	24	3.93
02-21-99	278	1	3.96
02-22-99	777	1	3.47
02-23-99	2174	24	3.74
02-24-99	2250	24	3.86
02-25-99	2295	24	3.86
02-26-99	2316	24	3.81
02-27-99	**2346**	24	3.82
02-28-99	2332	24	3.94
03-01-99	**2358**	24	3.90
03-02-99	**2402**	24	3.90
03-03-99	**2402**	24	3.91
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03-12-99	2307	24	3.73
03-13-99	**2345**	24	3.90
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03-15-99	**2347**	24	3.87
03-16-99	**2364**	24	3.87
03-17-99	**2380**	24	3.84
03-18-99	**2352**	24	3.85
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03-25-99	**2411**	24	3.82
03-26-99	2322	24	3.80
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03-28-99	**2426**	24	3.97
03-29-99	**2445**	24	3.94
03-30-99	**2451**	24	3.93
03-31-99	**2423**	24	3.72
04-01-99	**2426**	24	3.63
04-02-99	**2380**	24	3.63
04-03-99	2264	24	3.69
04-04-99	**2346**	24	3.61
04-05-99	**2365**	24	3.61
04-06-99	2291	23.25	3.66
04-07-99	2091	21.75	3.61
04-08-99	**2376**	24	3.52
04-09-99	1850	20	3.21
04-10-99	**2384**	24	3.77
04-11-99	**2412**	24	3.73
04-12-99	**2389**	24	3.71
04-13-99	2179	22	3.65
04-14-99	**2410**	24	3.61
04-15-99	**2381**	24	3.68
04-16-99	**2404**	24	3.72
04-17-99	**2357**	24	3.73
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	
04-19-99	**2359**	24	3.68	
04-20-99	**2367**	24	3.69	
04-21-99	**2352**	24	3.62	
04-22-99	**2348**	24	3.47	
04-23-99	1683	18.5	3.43	
04-24-99	**2377**	24	3.78	
04-25-99	**2386**	24	3.89	
04-26-99	**2386**	24	3.80	
04-27-99	**2389**	24	3.85	
04-28-99	**2414**	24	3.84	
04-29-99	2172	22	3.83	
04-30-99	**2368**	24	3.80	
05-01-99	**2380**	24	3.81	
05-02-99	**2416**	24	3.81	
05-03-99	2022	20.5	3.71	
05-04-99	**2458**	24	3.79	
05-05-99	**2441**	24	3.71	
05-06-99	**2464**	24	3.78	
05-07-99	**2438**	24	3.85	
05-08-99	1962	21.6	3.47	
05-09-99	1991	24	3.39	
05-10-99	1632	19.8	3.69	
05-11-99	2022	24	3.67	
05-12-99	1294	3.25	0.89	
05-13-99	0	0	na	Plant down
05-14-99	0	0	na	Plant down
05-15-99	0	0	na	Plant down
05-16-99	0	0	na	Plant down
05-17-99	0	0	na	Plant down
05-18-99	0	0	na	Plant down
05-19-99	0	0	na	Plant down
05-20-99	0	0	na	Plant down
05-21-99	1972	18	3.31	
05-22-99	**2587**	24	3.12	
05-23-99	2159	21.5	2.01	
05-24-99	**2456**	24	2.73	
05-25-99	2178	19.75	3.50	
05-26-99	**2558**	24	3.57	
05-27-99	**2586**	24	3.50	
05-28-99	**2570**	24	2.97	
05-29-99	**2405**	23.5	3.69	
05-30-99	**2583**	24	3.79	
05-31-99	**2575**	24	3.81	
06-01-99	**2552**	24	3.72	
06-02-99	1242	10.75	3.02	
06-03-99	**2591**	24	3.77	
06-04-99	**2569**	24	3.53	
06-05-99	**2573**	24	3.62	
06-06-99	**2573**	24	3.78	
06-07-99	**2593**	24	3.62	
06-08-99	**2562**	24	3.80	
06-09-99	**2553**	24	3.62	
06-10-99	**2555**	24	3.74	
06-11-99	**2568**	24	3.78	

DATE	Tons/day	Hrs/day	lb SO2/ton	
06-12-99	**2546**	24	3.81	
06-13-99	1646	22.25	1.95	
06-14-99	0	0	na	Plant down
06-15-99	0	0	na	Plant down
06-16-99	0	0	na	Plant down
06-17-99	951	8	2.90	
06-18-99	1991	24	1.39	
06-19-99	2002	24	0.94	
06-20-99	2234	24	1.18	
06-21-99	2250	24	1.37	
06-22-99	2278	24	1.35	
06-23-99	1409	15	3.55	
06-24-99	1469	15	3.40	
06-25-99	2195	24	3.64	
06-26-99	**2530**	24	3.16	
06-27-99	**2537**	24	3.70	
06-28-99	1930	24	3.46	
06-29-99	2328	24	3.55	
06-30-99	**2570**	24	3.67	
07-01-99	**2567**	24	3.80	
07-02-99	**2566**	24	3.81	
07-03-99	2242	23	3.13	
07-04-99	**2449**	24	3.01	
07-05-99	**2468**	24	3.28	
07-06-99	2016	20.25	3.19	
07-07-99	2294	22.75	3.16	
07-08-99	**2477**	24	2.98	
07-09-99	**2475**	24	3.03	
07-10-99	1967	24	2.45	
07-11-99	**2379**	24	1.95	
07-12-99	**2439**	24	3.48	
07-13-99	2207	21.5	3.63	
07-14-99	1826	17.75	3.46	
07-15-99	**2506**	24	3.51	
07-16-99	**2498**	24	3.72	
07-17-99	**2435**	23.75	3.83	
07-18-99	**2522**	24	3.88	
07-19-99	**2450**	23	3.89	
07-20-99	1580	15	3.73	
07-21-99	**2507**	24	3.79	
07-22-99	**2475**	24	3.77	
07-23-99	**2480**	24	3.85	
07-24-99	**2476**	24	3.79	
07-25-99	**2494**	24	3.80	
07-26-99	**2504**	24	3.83	
07-27-99	**2500**	24	3.82	
07-28-99	**2474**	24	3.76	
07-29-99	**2460**	24	3.69	
07-30-99	**2460**	24	3.73	
07-31-99	**2478**	24	3.79	
08-01-99	**2394**	23.25	3.76	
08-02-99	2015	22	3.95	
08-03-99	2308	22	3.91	
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
08-05-99	**2567**	24	3.82
08-06-99	**2571**	24	3.86
08-07-99	**2563**	24	3.88
08-08-99	**2521**	24	3.85
08-09-99	**2557**	24	3.84
08-10-99	**2542**	24	3.78
08-11-99	**2515**	24	3.81
08-12-99	**2486**	24	3.83
08-13-99	**2489**	24	3.66
08-14-99	**2534**	24	3.88
08-15-99	2153	21	3.52
08-16-99	**2542**	24	3.67
08-17-99	1976	20	3.82
08-18-99	1121	11	3.68
08-19-99	**2558**	24	3.88
08-20-99	**2361**	24	3.35
08-21-99	2237	24	3.22
08-22-99	**2452**	24	3.61
08-23-99	**2567**	24	3.75
07-24-99	**2569**	24	3.85
08-25-99	**2550**	24	3.86
08-26-99	**2514**	24	3.88
08-27-99	**2532**	24	3.90
08-28-99	**2533**	24	3.86
08-29-99	**2406**	22.75	3.85
08-30-99	**2546**	24	3.91
08-31-99	**2550**	24	3.90
09-01-99	**2552**	24	3.89
09-02-99	**2557**	24	3.90
09-03-99	**2568**	24	3.81
09-04-99	**2562**	24	3.86
09-05-99	**2556**	24	3.86
09-06-99	**2576**	22	3.61
09-07-99	1974	24	3.69
09-08-99	**2555**	24	3.74
09-09-99	**2478**	24	3.73
09-10-99	**2528**	24	3.80
09-11-99	**2371**	24	3.77
09-12-99	**2443**	24	3.65
09-13-99	**2548**	24	3.84
09-14-99	**2501**	24	3.80
09-15-99	2314	22.5	3.60
09-16-99	**2529**	24	3.79
09-17-99	**2554**	24	3.83
09-18-99	**2523**	23.75	3.74
09-19-99	**2528**	24	3.71
09-20-99	**2515**	24	3.83
09-21-99	**2402**	23.25	3.83
09-22-99	**2567**	24	3.78
09-23-99	**2500**	24	3.75
09-24-99	**2496**	24	3.64
09-25-99	**2511**	24	3.79
09-26-99	**2524**	24	3.70
09-27-99	**2488**	24	3.69
09-28-99	**2505**	24	3.79
09-29-99	1565	14.75	2.71
09-30-99	**2355**	24	3.18
10/01/99	1740	17.5	3.20
10/02/99	**2519**	24	3.78
10/03/99	**2525**	24	3.73
10/04/99	**2541**	24	3.58
10/05/99	**2516**	24	3.87
10/06/99	**2515**	24	3.90
10/07/99	**2508**	24	3.92
10/08/99	**2539**	24	3.86
10/09/99	**2546**	24	3.90
10/10/99	**2555**	24	3.88
10/11/99	**2530**	24	3.91
10/12/99	**2412**	23	3.88
10/13/99	1350	13.25	3.32
10/14/99	1970	21.75	2.17
10/15/99	1751	17.5	3.42
10/16/99	**2510**	24	3.80
10/17/99	**2525**	24	3.80
10/18/99	**2515**	24	3.73
10/19/99	**2554**	24	3.78
10/20/99	**2520**	24	3.77
10/21/99	**2527**	24	3.79
10/22/99	**2497**	24	3.84
10/23/99	**2498**	24	3.86
10/24/99	**2492**	24	3.86
10/25/99	**2508**	24	3.85
10/26/99	**2498**	24	3.64
10/27/99	**2494**	24	3.63
10/28/99	**2511**	24	3.62
10/29/99	**2536**	24	3.57
10/30/99	**2537**	24	3.77
10/31/99	**2656**	24	3.71
11/01/99	**2493**	24	3.65
11/02/99	**2483**	24	3.74
11/03/99	1068	10.5	3.63
11/04/99	**2528**	24	3.84
11/05/99	2332	22.5	3.65
11/06/99	**2489**	24	3.76
11/07/99	**2489**	24	3.80
11/08/99	**2489**	24	3.72
11/09/99	**2505**	24	3.81
11/10/99	2036	20.5	2.73
11/11/99	**2390**	24	2.39
11/12/99	**2389**	24	3.25
11/13/99	**2389**	24	3.56
11/14/99	**2424**	24	3.65
11/15/99	**2415**	24	3.48
11/16/99	2193	21.75	3.38
11/17/99	**2469**	24	3.70
11/18/99	**2476**	24	3.79
11/19/99	**2474**	24	3.78
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
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.Emisson 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
JUL 12 2000
BUREAU OF AIR REGULATION

June 30, 2000

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

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

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 L. Waters

Debra R. Waters
Environmental Superintendent

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

Davis & Associates Consulting, Inc.

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

RECEIVED
JUL 12 2000
BUREAU OF AIR REGULATION

June 30, 2000

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

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

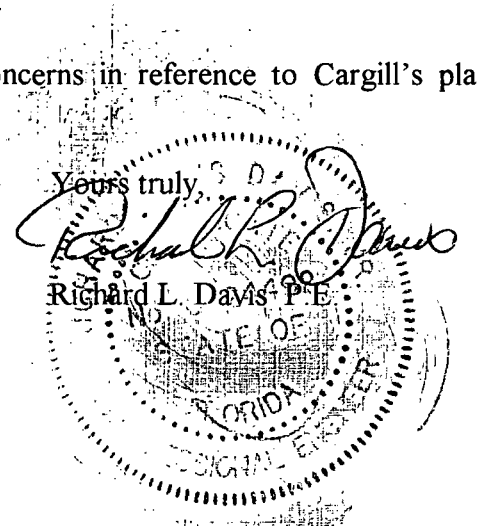
It is my opinion that the replacement of these pieces of process equipment is necessary and normal maintenance activities. These components, if not replaced will reduce the availability and the reliability of the plant. These replacements will achieve increased energy recovery and environmental enhancements 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 (73)
- 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

- 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.

AAL

If it were a powerplant - it would! Discussed with Jim Little on 2/29/00

cag

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

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

David B. Jellerson
Environmental Manager

cc: Morris, Waters, Polk
D. Buff

Faxed SWD + EPA

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

Bartow #4 Sulfuric Acid Plant

DATE	Tons/day	Hrs/day	lb SO2/ton
01-01-99	2256	24	3.47
01-02-99	2231	24	3.26
01-03-99	2258	24	3.32
01-04-99	1748	20	3.16
01-05-99	2284	24	3.47
01-06-99	2294	24	3.48
01-07-99	2299	24	3.30
01-08-99	2318	24	3.53
01-09-99	2268	24	3.61
01-10-99	2310	24	3.53
01-11-99	2308	24	3.46
01-12-99	2315	24	3.45
01-13-99	385	5	3.12
01-14-99	2283	24	3.51
01-15-99	1426	17	2.63
01-16-99	1271	15.5	1.94
01-17-99	**2343**	24	1.87
01-18-99	**2362**	24	2.12
01-19-99	**2346**	24	3.54
01-20-99	2218	23	3.31
01-21-99	2269	24	3.09
01-22-99	2302	24	3.17
01-23-99	**2349**	24	3.39
01-24-99	2334	24	2.44
01-25-99	**2353**	24	2.88
01-26-99	**2343**	24	3.26
01-27-99	2101	21.25	3.51
01-28-99	**2488**	24	3.86
01-29-99	**2490**	24	3.71
01-30-99	**2500**	24	3.91
01-31-99	**2491**	24	3.92
02-01-99	**2460**	24	3.93
02-02-99	**2461**	24	3.91
02-03-99	**2458**	24	3.93
02-04-99	2124	22.75	3.96
02-05-99	**2458**	24	3.74
02-06-99	**2481**	24	3.83
02-07-99	**2463**	24	3.85
02-08-99	**2486**	24	3.93
02-09-99	**2471**	24	3.86
02-10-99	**2471**	24	3.23
02-11-99	**2488**	24	3.09
02-12-99	**2479**	24	3.91
02-13-99	**2460**	24	3.88
02-14-99	**2490**	24	3.90
02-15-99	**2470**	24	3.94
02-16-99	**2484**	24	3.93
02-17-99	**2475**	24	3.81
02-18-99	**2385**	24	3.76
02-19-99	**2427**	24	3.91
02-20-99	**2361**	24	3.93
02-21-99	278	1	3.96
02-22-99	777	1	3.47
02-23-99	2174	24	3.74
02-24-99	2250	24	3.86
02-25-99	2295	24	3.86
02-26-99	2316	24	3.81
02-27-99	**2346**	24	3.82
02-28-99	2332	24	3.94
03-01-99	**2358**	24	3.90
03-02-99	**2402**	24	3.90
03-03-99	**2402**	24	3.91
03-04-99	**2427**	24	3.90
03-05-99	**2451**	24	3.92
03-06-99	**2391**	24	3.60
03-07-99	2297	23	3.75
03-08-99	**2401**	24	3.85
03-09-99	2317	23.75	3.83
03-10-99	**2366**	24	3.86
03-11-99	**2360**	24	3.71
03-12-99	2307	24	3.73
03-13-99	**2345**	24	3.90
03-14-99	2332	24	3.85
03-15-99	**2347**	24	3.87
03-16-99	**2364**	24	3.87
03-17-99	**2380**	24	3.84
03-18-99	**2352**	24	3.85
03-19-99	**2363**	24	3.87
03-20-99	**2361**	24	3.90
03-21-99	2309	24	3.88
03-22-99	**2389**	24	3.88
03-23-99	**2364**	24	3.87
03-24-99	**2416**	24	3.84
03-25-99	**2411**	24	3.82
03-26-99	2322	24	3.80
03-27-99	**2406**	24	3.93
03-28-99	**2426**	24	3.97
03-29-99	**2445**	24	3.94
03-30-99	**2451**	24	3.93
03-31-99	**2423**	24	3.72
04-01-99	**2426**	24	3.63
04-02-99	**2380**	24	3.63
04-03-99	2264	24	3.69
04-04-99	**2346**	24	3.61
04-05-99	**2365**	24	3.61
04-06-99	2291	23.25	3.66
04-07-99	2091	21.75	3.61
04-08-99	**2376**	24	3.52
04-09-99	1850	20	3.21
04-10-99	**2384**	24	3.77
04-11-99	**2412**	24	3.73
04-12-99	**2389**	24	3.71
04-13-99	2179	22	3.65
04-14-99	**2410**	24	3.61
04-15-99	**2381**	24	3.68
04-16-99	**2404**	24	3.72
04-17-99	**2357**	24	3.73
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	
04-19-99	**2359**	24	3.68	
04-20-99	**2367**	24	3.69	
04-21-99	**2352**	24	3.62	
04-22-99	**2348**	24	3.47	
04-23-99	1683	18.5	3.43	
04-24-99	**2377**	24	3.78	
04-25-99	**2386**	24	3.89	
04-26-99	**2386**	24	3.80	
04-27-99	**2389**	24	3.85	
04-28-99	**2414**	24	3.84	
04-29-99	2172	22	3.83	
04-30-99	**2368**	24	3.80	
05-01-99	**2380**	24	3.81	
05-02-99	**2416**	24	3.81	
05-03-99	2022	20.5	3.71	
05-04-99	**2458**	24	3.79	
05-05-99	**2441**	24	3.71	
05-06-99	**2464**	24	3.78	
05-07-99	**2438**	24	3.85	
05-08-99	1962	21.6	3.47	
05-09-99	1991	24	3.39	
05-10-99	1632	19.8	3.69	
05-11-99	2022	24	3.67	
05-12-99	1294	3.25	0.89	
05-13-99	0	0	na	Plant down
05-14-99	0	0	na	Plant down
05-15-99	0	0	na	Plant down
05-16-99	0	0	na	Plant down
05-17-99	0	0	na	Plant down
05-18-99	0	0	na	Plant down
05-19-99	0	0	na	Plant down
05-20-99	0	0	na	Plant down
05-21-99	1972	18	3.31	
05-22-99	**2587**	24	3.12	
05-23-99	2159	21.5	2.01	
05-24-99	**2456**	24	2.73	
05-25-99	2178	19.75	3.50	
05-26-99	**2558**	24	3.57	
05-27-99	**2586**	24	3.50	
05-28-99	**2570**	24	2.97	
05-29-99	**2405**	23.5	3.69	
05-30-99	**2583**	24	3.79	
05-31-99	**2575**	24	3.81	
06-01-99	**2552**	24	3.72	
06-02-99	1242	10.75	3.02	
06-03-99	**2591**	24	3.77	
06-04-99	**2569**	24	3.53	
06-05-99	**2573**	24	3.62	
06-06-99	**2573**	24	3.78	
06-07-99	**2593**	24	3.62	
06-08-99	**2562**	24	3.80	
06-09-99	**2553**	24	3.62	
06-10-99	**2555**	24	3.74	
06-11-99	**2568**	24	3.78	
06-12-99	**2546**	24	3.81	
06-13-99	1646	22.25	1.95	
06-14-99	0	0	na	Plant down
06-15-99	0	0	na	Plant down
06-16-99	0	0	na	Plant down
06-17-99	951	8	2.90	
06-18-99	1991	24	1.39	
06-19-99	2002	24	0.94	
06-20-99	2234	24	1.18	
06-21-99	2250	24	1.37	
06-22-99	2278	24	1.35	
06-23-99	1409	15	3.55	
06-24-99	1469	15	3.40	
06-25-99	2195	24	3.64	
06-26-99	**2530**	24	3.16	
06-27-99	**2537**	24	3.70	
06-28-99	1930	24	3.46	
06-29-99	2328	24	3.55	
06-30-99	**2570**	24	3.67	
07-01-99	**2567**	24	3.80	
07-02-99	**2566**	24	3.81	
07-03-99	2242	23	3.13	
07-04-99	**2449**	24	3.01	
07-05-99	**2468**	24	3.28	
07-06-99	2016	20.25	3.19	
07-07-99	2294	22.75	3.16	
07-08-99	**2477**	24	2.98	
07-09-99	**2475**	24	3.03	
07-10-99	1967	24	2.45	
07-11-99	**2379**	24	1.95	
07-12-99	**2439**	24	3.48	
07-13-99	2207	21.5	3.63	
07-14-99	1826	17.75	3.46	
07-15-99	**2506**	24	3.51	
07-16-99	**2498**	24	3.72	
07-17-99	**2435**	23.75	3.83	
07-18-99	**2522**	24	3.88	
07-19-99	**2450**	23	3.89	
07-20-99	1580	15	3.73	
07-21-99	**2507**	24	3.79	
07-22-99	**2475**	24	3.77	
07-23-99	**2480**	24	3.85	
07-24-99	**2476**	24	3.79	
07-25-99	**2494**	24	3.80	
07-26-99	**2504**	24	3.83	
07-27-99	**2500**	24	3.82	
07-28-99	**2474**	24	3.76	
07-29-99	**2460**	24	3.69	
07-30-99	**2460**	24	3.73	
07-31-99	**2478**	24	3.79	
08-01-99	**2394**	23.25	3.76	
08-02-99	2015	22	3.95	
08-03-99	2308	22	3.91	
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
08-05-99	**2567**	24	3.82
08-06-99	**2571**	24	3.86
08-07-99	**2563**	24	3.88
08-08-99	**2521**	24	3.85
08-09-99	**2557**	24	3.84
08-10-99	**2542**	24	3.78
08-11-99	**2515**	24	3.81
08-12-99	**2486**	24	3.83
08-13-99	**2489**	24	3.66
08-14-99	**2534**	24	3.88
08-15-99	2153	21	3.52
08-16-99	**2542**	24	3.67
08-17-99	1976	20	3.82
08-18-99	1121	11	3.68
08-19-99	**2558**	24	3.88
08-20-99	**2361**	24	3.35
08-21-99	2237	24	3.22
08-22-99	**2452**	24	3.61
08-23-99	**2567**	24	3.75
07-24-99	**2569**	24	3.85
08-25-99	**2550**	24	3.86
08-26-99	**2514**	24	3.88
08-27-99	**2532**	24	3.90
08-28-99	**2533**	24	3.86
08-29-99	**2406**	22.75	3.85
08-30-99	**2546**	24	3.91
08-31-99	**2550**	24	3.90
09-01-99	**2552**	24	3.89
09-02-99	**2557**	24	3.90
09-03-99	**2568**	24	3.81
09-04-99	**2562**	24	3.86
09-05-99	**2556**	24	3.86
09-06-99	**2576**	22	3.61
09-07-99	1974	24	3.69
09-08-99	**2555**	24	3.74
09-09-99	**2478**	24	3.73
09-10-99	**2528**	24	3.80
09-11-99	**2371**	24	3.77
09-12-99	**2443**	24	3.65
09-13-99	**2548**	24	3.84
09-14-99	**2501**	24	3.80
09-15-99	2314	22.5	3.60
09-16-99	**2529**	24	3.79
09-17-99	**2554**	24	3.83
09-18-99	**2523**	23.75	3.74
09-19-99	**2528**	24	3.71
09-20-99	**2515**	24	3.83
09-21-99	**2402**	23.25	3.83
09-22-99	**2567**	24	3.78
09-23-99	**2500**	24	3.75
09-24-99	**2496**	24	3.64
09-25-99	**2511**	24	3.79
09-26-99	**2524**	24	3.70
09-27-99	**2488**	24	3.69
09-28-99	**2505**	24	3.79
09-29-99	1565	14.75	2.71
09-30-99	**2355**	24	3.18
10/01/99	1740	17.5	3.20
10/02/99	**2519**	24	3.78
10/03/99	**2525**	24	3.73
10/04/99	**2541**	24	3.58
10/05/99	**2516**	24	3.87
10/06/99	**2515**	24	3.90
10/07/99	**2508**	24	3.92
10/08/99	**2539**	24	3.86
10/09/99	**2546**	24	3.90
10/10/99	**2555**	24	3.88
10/11/99	**2530**	24	3.91
10/12/99	**2412**	23	3.88
10/13/99	1350	13.25	3.32
10/14/99	1970	21.75	2.17
10/15/99	1751	17.5	3.42
10/16/99	**2510**	24	3.80
10/17/99	**2525**	24	3.80
10/18/99	**2515**	24	3.73
10/19/99	**2554**	24	3.78
10/20/99	**2520**	24	3.77
10/21/99	**2527**	24	3.79
10/22/99	**2497**	24	3.84
10/23/99	**2498**	24	3.86
10/24/99	**2492**	24	3.86
10/25/99	**2508**	24	3.85
10/26/99	**2498**	24	3.64
10/27/99	**2494**	24	3.63
10/28/99	**2511**	24	3.62
10/29/99	**2536**	24	3.57
10/30/99	**2537**	24	3.77
10/31/99	**2656**	24	3.71
11/01/99	**2493**	24	3.65
11/02/99	**2483**	24	3.74
11/03/99	1068	10.5	3.63
11/04/99	**2528**	24	3.84
11/05/99	2332	22.5	3.65
11/06/99	**2489**	24	3.76
11/07/99	**2489**	24	3.80
11/08/99	**2489**	24	3.72
11/09/99	**2505**	24	3.81
11/10/99	2036	20.5	2.73
11/11/99	**2390**	24	2.39
11/12/99	**2389**	24	3.25
11/13/99	**2389**	24	3.56
11/14/99	**2424**	24	3.65
11/15/99	**2415**	24	3.48
11/16/99	2193	21.75	3.38
11/17/99	**2469**	24	3.70
11/18/99	**2476**	24	3.79
11/19/99	**2474**	24	3.78
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.Emisson rate when operating above 90% capacity (# SO2/ton) =	3.7

Department of Environmental Protection

Jeb Bush
Governor

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)

Z 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

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. David B. Jellerson
Cargill Fertilizer
P O Box 9002
Bartow, Fl 33831

4a. Article Number
Z 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

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

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 SO_2 gases
- Significant reduction in SO_2 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.

Support

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

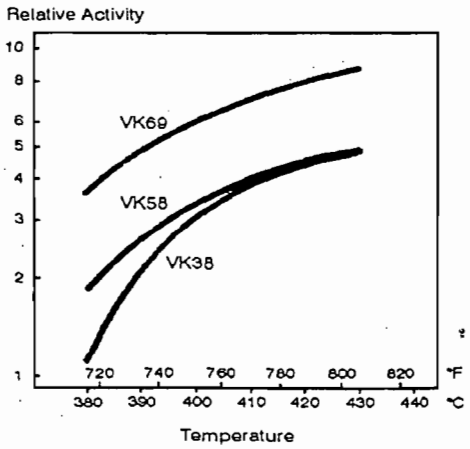
Shape

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.



Outstanding Activity

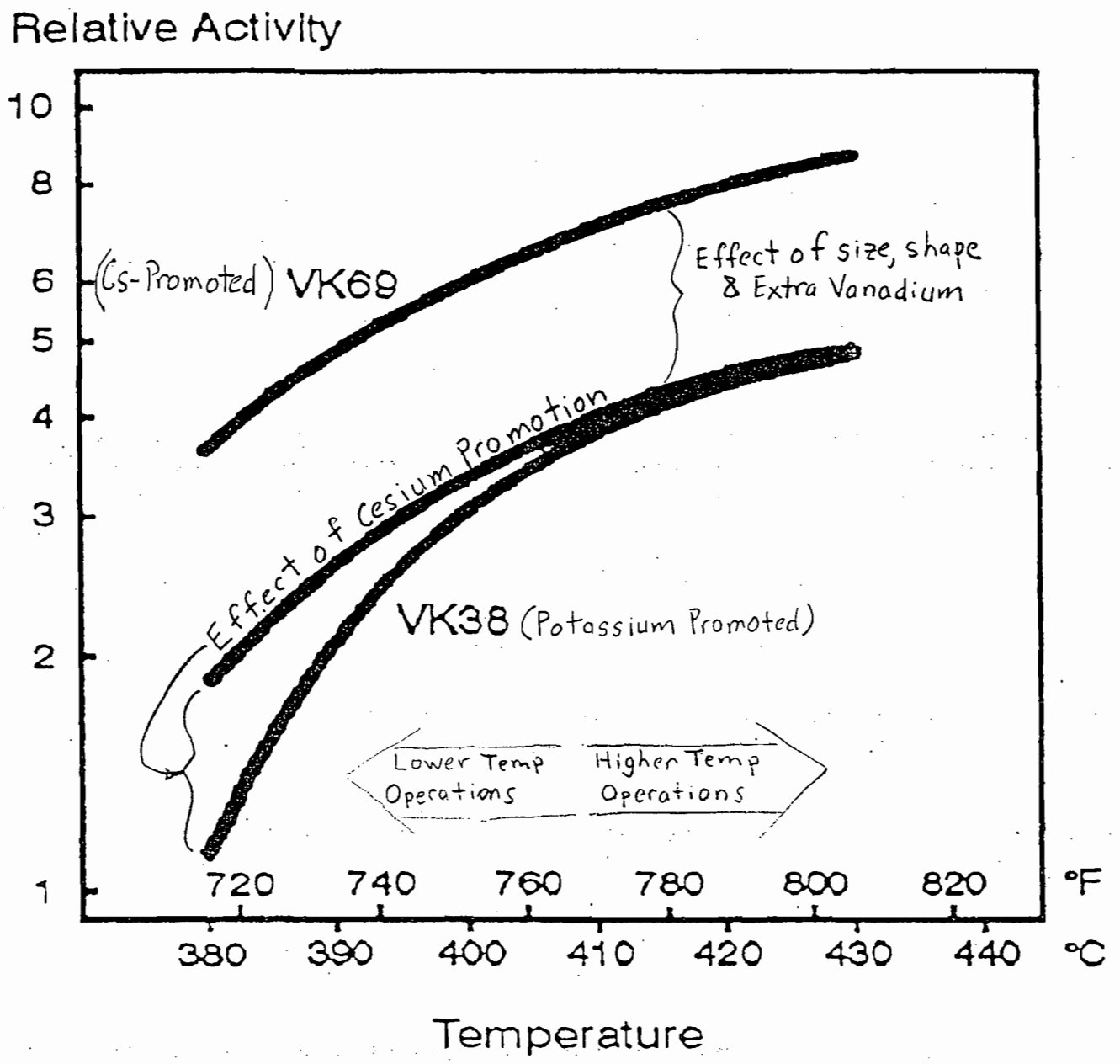
The revised support material, the optimum chemical composition, and the mini-Daisy shape together result in a 2-3 times higher activity for VK69 compared to other vanadium catalysts.

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 SO_2 gas without increasing emissions or plant pressure drop

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


Relative Activity
10
8
6
5
4
3
2
1
(Cs-Promoted) VK69
Effect of size, shape & Extra Vanadium
Effect of Cesium Promotion
VK38 (Potassium Promoted)
Lower Temp Operations
Higher Temp Operations
720
740
760
780
800
820
°F
380
390
400
410
420
430
440
°C
Temperature

2 letters

Department of Environmental Protection

Jeb Bush
Governor

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:

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,

AA Linero 6/29

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

AAL/aal

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

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX/377-7158

KA 263-94-04

June 18, 1999

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	James Jenkins
Street & Number	Tinker Materials
Post Office, State, & ZIP Code	Miami 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	6-30-99

0250014-002-AC

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: Z333 612 564

4b. Service Type

☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery: 2/9/98

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*

X

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

Department of Environmental Protection

Jeb Bush
Governor

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.

Kimi Joben (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

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 SO_2 emissions, particularly during the time following turnarounds.

Cargill cannot accept a limitation on annual SO_2 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 SO_2 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 SO_2 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 SO_2 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 SO_2 emissions in terms of lb/ton of acid produced.

It is also noted that Cargill has no incentive to increase SO_2 emissions from the sulfuric acid plants. Higher SO_2 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 SO_2 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

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

SEAL

DB/db/jkk

Enclosures

cc: David Jellerson
Deborah Waters
Melody Russo

J:\DP\PROJECTS\98\9837\9837580a\02\#02ltr.doc

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)*

Sent to Melody Russo	
Street & Number Carsill Fert	
Post Office, State, & ZIP Code Barton 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 12-18-98	

PS Form **3800**, April 1995

1050046-001-AC
PSO-FL-229
SAP 4,5,6

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

4a. Article Number
Z 333 612 573

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

7. Date of Delivery 12-21-98

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X

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

Golder Associates

December 9, 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. 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) SO_2 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).

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 SO_2
   After: 2,429 TPD acid x 3.66 lb/ton = 8,890 lb/day SO_2

   Net Decrease 152 lb/day SO_2

   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

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

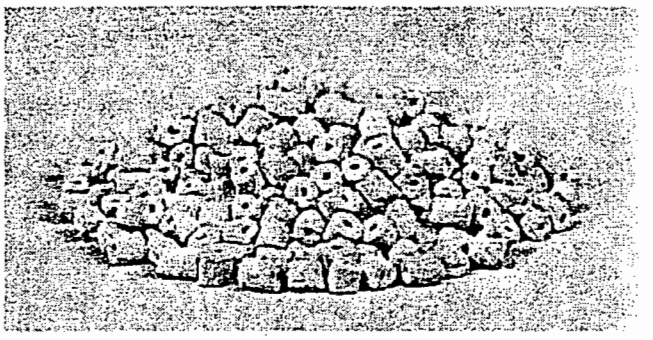
Scenario	Period	Production Rate 100 % Acid (b) Maximum (TPD)	Production Rate 100 % Acid (b) Average (TPD)	SO2 Emissions 100% Acid Daily Maximum (lb/ton)	SO2 Emissions 100% Acid Average (lb/ton)
Before Cesium-promoted catalyst installed (a)	1/1/98-4/30/98	2,501	2,392	3.93	3.78
After Cesium-promoted catalyst 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 (SO_2) as follows:

$$SO_2 + 1/2O_2 = SO_3$$

The sulfur trioxide (SO_3) is then reacted with water to form sulfuric acid (H_2SO_4). The main components of the Enviro-Chem catalyst include: SiO_2 (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 (V_2O_5). 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 SO_2 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 SO_2 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 SO_2 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 SO_2 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

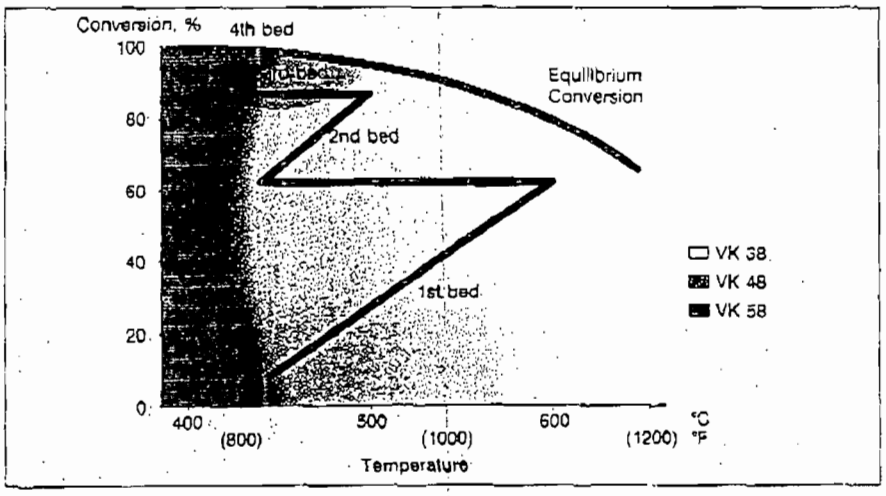
The DAISY-shape VK catalyst, in the form of 12-mm ribbed rings, gives a further 20% reduction in pressure drop in comparison with the 10-mm ring catalyst. The rate of pressure drop build-up from dust is similarly reduced due to the higher void fraction afforded by the optimized shape. Yet the DAISY-shape 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.



Application areas of VK catalysts.

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.

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 SO_2 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 SO_2 concentration

VK-WSA

The VK-WSA catalyst is used in Topsoe's WSA desulfurization process which is characterized by the direct oxidation of SO_2 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_2O_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 °F	400-630 750-1170	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 polysthylene liner or in 1000 litre bags. Delivery in 100 litre or 200 litre steel drums is available upon request.			

Chemical and physical characteristics.

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,

for 10/29

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

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Melody Russo	
Street & Number Carsill 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 10-29-98	

SAP 4,5+6

PSO-FI-229

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:

Ms. Melody Russo
Carsill Fertilizer
PO Box 9002
Bartow, Fl 33831

4a. Article Number

Z 333 612 490

4b. Service Type

☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

NOV - 2 1998

5. Received By: *(Print Name)*

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

X 900 27 -

6. Signature: *(Addressee or Agent)*

X

PS Form **3811**, December 1994

Return 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

Golder Associates

October 21, 1998

973-7605

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

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

DB/tds

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

9737605A/05

perMits | Events | Payment | Facility | partY | Reports | Help | eXit

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

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:

Database has been successfully updated.
Count: 1 v <List><Replace>

once issued
Change expiration date
in ARMS

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 (SO_2) 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 SO_2 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

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail (See reverse)

Sent to David B Jellerson	
Street & Number Carsill Dist.	
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 #6 5-6-98 PSD-FL-229	

PS Form **3800**, April 1995

Fold at line over top of envelope to

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:
David B. Jellerson
Carsill Fertilizer
P O Box 9002
Bartow, Fl 33830

4a. Article Number
P 265 659 346

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

7. Date of Delivery
5/12/98

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*
X 9002

6. Signature: *(Addressee or Agent)*
X K Richard

PS Form **3811**, December 1994 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

September 4, 2001

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 Plant #5
File No. AC 53-271436 (PSD-FL-229)

Dear Mr. Jellerson:

The Department has reviewed the letter dated July 30, 2001 requesting or supporting a determination that a construction permit is not required for certain work to be performed on Sulfuric Acid Plant 5 (SAP 5) in Bartow. The specific work described will be performed during the upcoming periodic "turn-around" of SAP 5 and consists of the following work (refer to the attached diagram):

1. Replace the 4A superheater/economizer
2. Replacement of the HRS acid circuit piping
3. Replacement of HRS 1st and 2nd stage acid distribution troughs

The stated purpose of items 1 through 3 is "to restore or improve the heat recovery capability of the unit." Items 2 and 3 are in-kind replacements. According to your July 30 letter, "these activities will have the direct effect of providing for better waste heat recovery and improve the overall energy efficiency of the operating unit."

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." According to Mr. Davis, "the producer (Cargill) will restore the original plant availability and the environment will have less emissions and or discharges due to improved plant reliability."

Following review of the information 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 operating rates for this plant were within 10% of the maximum permitted level of 2,600 tons per day (TPD) for 77% of the operating days (282 of 366 days) following the previous turn-around conducted in September 1999. No production rate increase is requested.
- 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 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 turn-around. 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 turn-around 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 5. 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 5. 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.

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 9/5/01 to the person(s) listed:

David Jellerson, Cargill Fertilizer, Inc. *
Gregg Worley, EPA
John Bunyak, NPS
Bill Thomas, DEP SWD
David Buff, P.E., Golder Associates, Inc.

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.

Barbara J. Judah 9/5/01
(Clerk) (Date)

CARGILL FERTILIZER, INC.

P.O. Box 9002 • Bartow, Florida 33831 • Telephone 941-534-9610 • FAX 863-534-9680

July 30, 2001
Certified Mail
7099 3220 0007 3016 7512

Al Linero, P.E.
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Dear Mr. Linero;

RE: CARGILL FERTILIZER, BARTOW FACILITY
#5 SULFURC ACID PLANT TURNAROUND
FILE NO. AC-53-271436 (PSD-FL-229); Title V Permit 1050046-003-AV Emission Unit -033

Cargill Fertilizer has an upcoming turnaround scheduled for the #5 Sulfuric Acid Plant (SAP) at our Bartow Facility. This letter is being submitted to request confirmation that the following planned activities do not trigger a requirement to obtain a Department Construction Permit.

During this turnaround the following activities are planned:

1. Replace the 4A superheater/economizer
2. Replacement of the HRS acid circuit piping
3. Replacement of HRS 1st and 2nd stage acid distribution troughs

The purpose of Item 1 is to restore or improve the heat recovery capability of the unit. Items 2 and 3 are replacements in-kind. Attached is a drawing that indicates the areas to be effected by these activities.

These activities will have the direct effect of providing for better waste heat recovery and improve the overall energy efficiency of the operating unit. The FDEP has made a previous determination that a construction permit was not needed for similar work performed at our #4 SAP last year (see attached letter dated August 14, 2000 signed by C.H. Fancy).

Following the previous turnaround conducted in September 1999, the #5 Sulfuric Acid Plant has consistently achieved maximum permitted production capability. Attached for your review is a summary of the daily production rates for this unit from October 1, 1999 through September 30, 2000. As indicated by this data, the operating rates were within 10% of the maximum permitted level of 2600 tons per day for 77% of the operating days (282 of 366 days). Since that time, physical production rates have steadily decreased in a characteristic and expected manner prior to a periodic turnaround.

The scheduled turnaround will be conducted to restore the plant to its design or permitted production rate as is commonly done throughout the industry. No production rate increase is requested. The planned activities will not eliminate existing production bottlenecks. The improvements are necessary for safety, reliability and energy efficiency. The overall effect of this project is that the plant will operate at the already physically achievable and permitted production rate. This is a major goal of all turnarounds. 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.

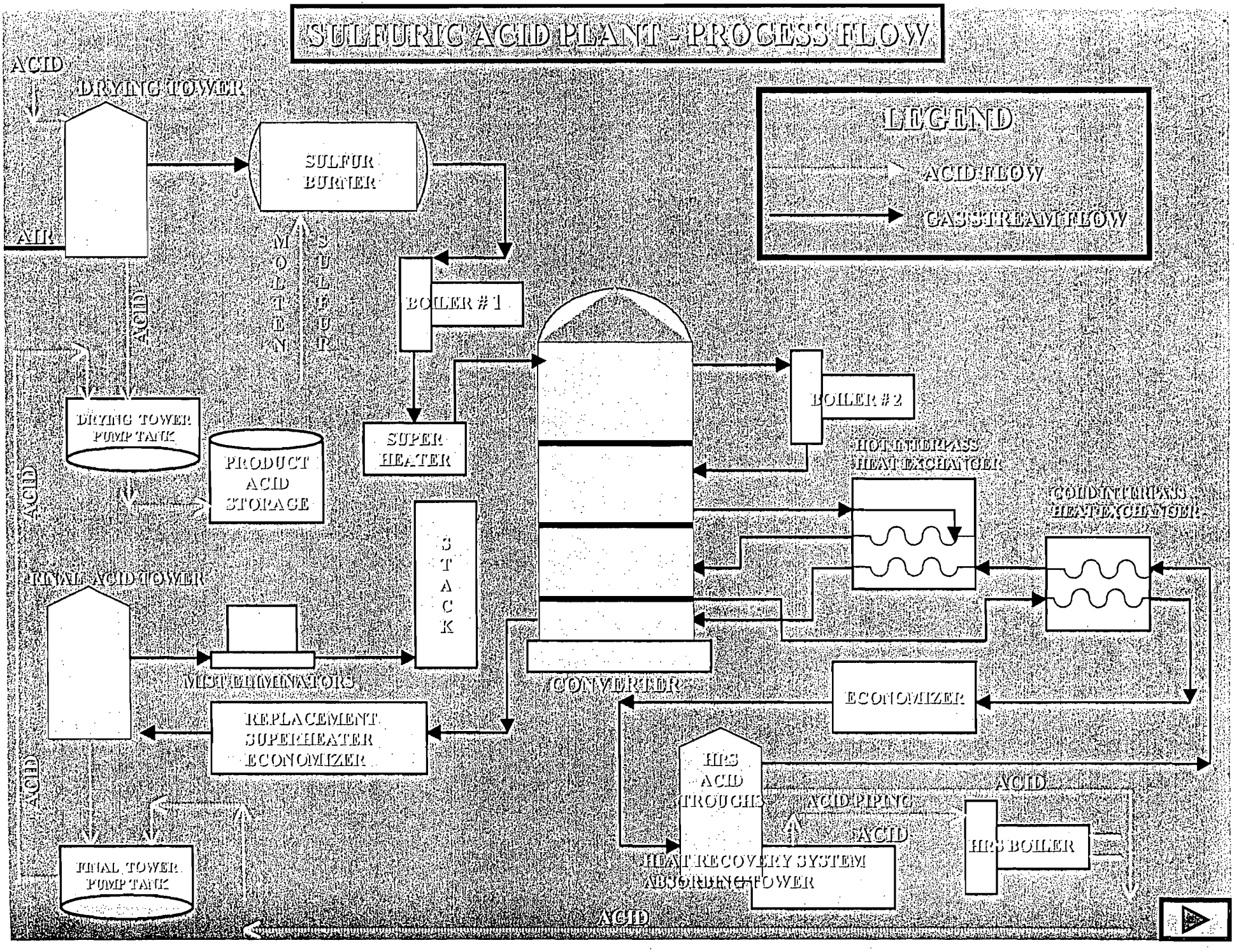
Attached is a letter from Richard L. Davis, a certified Professional Engineer in the State of Florida, which clarifies that the activities planned for the turnaround are considered to be necessary and normal maintenance and replacement of process equipment.

I trust that the information provided is 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 feel free to call me at 813-671-6297 or via email at *david_jellerson@cargill.com*.

Sincerely,

David B. Jellerson, P.E.
Environmental Manager

Xc: Waters, Morris, Miller, Norman, Royster, File 60-07-01A
D. Buff - Golder


SULFURIC ACID PLANT - PROCESS FLOW
LEGEND
ACID FLOW
GAS STREAM FLOW
ACID
DRYING TOWER
AIR
SULFUR BURNER
MOLTEN SULFUR
BOILER # 1
BOILER # 2
SUPER HEATER
DRYING TOWER PUMP TANK
PRODUCT ACID STORAGE
HOT BYPASS HEAT EXCHANGER
COLD BYPASS HEAT EXCHANGER
STACK
FINAL ACID TOWER
MIST ELIMINATORS
CONVERTER
ECONOMIZER
REPLACEMENT SUPERHEATER ECONOMIZER
HRS ACID TROUGHS
ACID PIPING
HEAT RECOVERY SYSTEM ABSORBING TOWER
HRS BOILER
FINAL TOWER PUMP TANK

Davis & Associates Consulting, Inc.

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

July 26, 2001

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

Re: Cargill Fertilizer - Bartow Complex
No. 5 Sulphuric Acid Plant 2001 Turnaround

Dear Sirs:

I have reviewed the planned maintenance activities for the upcoming turnaround at Cargill Fertilizer's No. 5 sulphuric acid plant at their Bartow, Florida facility. In the fourth quarter of 2001, Cargill Fertilizer is planning to replace the following pieces of equipment:

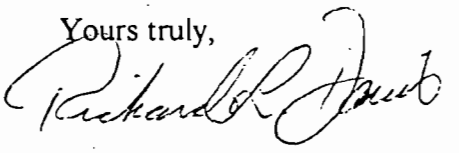
4A Steam Superheater & Economizer
Heat Recovery System (HRS) first and second stage acid distributors
HRS acid circulation piping

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 decrease the safety and reliability of the plant. These replacements will achieve increased energy recovery and environmental enhancements of the No. 5 Sulphuric Acid Plant. The producer will restore the original plant availability and the environment will have less emissions and or discharges 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-nine 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 replacements.

Yours truly,



Richard L. Davis P.E.

SENDER: *COMPLETE THIS SECTION*

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- Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to:

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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*: K Pickard — B. Date of Delivery: 9·10·01

C. Signature: X K Pickard — ☒ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
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☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
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PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

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Restricted Delivery Fee (Endorsement Required)	
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Recipient's Name (Please Print Clearly) (to be completed by mailer)
David B. Jellerson, Cargill Fertilizer
Street, Apt. No.; or PO Box No.
P. O. Box 9002
City, State, ZIP+4
Bartow, FL 33831

PS Form 3800, February 2000 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*: K Pickard
B. Date of Delivery: 9-10-01

C. Signature
X J Pickard
☒ Agent
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7000 0600 0026 4129 8009

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7000 0600 0026 4129 8009

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Recipient's Name *(Please Print Clearly) (to be completed by mailer)*
David B. Jellerson, Cargill Fertilizer
Street, Apt. No.; or PO Box No.
P. O. Box 9002
City, State, ZIP+4
Bartow, FL 33831

PS Form 3800, February 2000 See Reverse for Instructions

July 27, 1995

Mr. Al Linero, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Cargill Fertilizer, Inc.
Bartow Nos. 4, 5 and 6 Sulfuric Acid Plants
AC53-271436; PSD-FL-229

Dear Mr. Linero:

This letter is in response to the Department's letters dated June 19 and June 29, 1995, regarding the above referenced permits. Responses are provided below in the same order as presented in the Department's letters.

June 19 Letter

1. The emissions from the 3,000 ton tank are greater than the emissions from the 7,500 ton tank because, to be conservative, it was assumed that a much greater amount of molten sulfur is sent through the 3,000 ton tank. By assuming that a much greater quantity of sulfur is processed through the 3,00 ton tank, the operating hours per year are increased. Also, since the 3,000 ton tank has five vents compared to one vent for the 7,500 ton tank, the ventilation rate of the 3,000 ton tank is greater, thereby increasing emissions. These assumptions result in higher emissions for the 3,000 ton tank and compared to the 7,500 ton tank, and also results in overall higher hourly and annual emissions from the molten sulfur handling system.

2. Cargill is currently sending a portion of the sulfuric acid produced at Riverview to the Bartow facility. After the Bartow expansion, this will cease. Therefore, the Riverview sulfuric acid plants may experience a decrease in acid production, or may use the additional acid to support increased phosphoric acid production at Riverview. Cargill will be submitting an application for increased phosphoric acid production at Riverview in the near future.

3. A copy of the quotation from Monsanto is attached as Attachment A.

4. The statistical analysis of SO_2 data from the sulfuric acid plants have been reviewed, and some inadvertent errors were discovered. A revised analysis is attached as Attachment B. The revised analysis shows that the 95 percent confidence level exceeds the 4.0 lb/ton limit for only the No. 5 sulfuric acid plant. However, Cargill implements immediate corrective measures if the continuous monitors indicate levels near the limit. If these measures are not effective, and the limit is in danger of being exceeded, Cargill requires the operators to immediately shutdown the plant. Also, the physical modifications to the plants described on page 2-11 of the application are designed to achieve the 4.0 lb/ton limit at the higher production rates.

5. Questions concerning the modeling analysis are addressed in the responses to the June 29 completeness letter.

June 29 Letter

1. The 3-hour limits are proposed only because there is a 3-hour SO_2 air quality standard. The limits are the same for the 3-hour, 24-hour and annual averaging times.

KBN ENGINEERING AND APPLIED SCIENCES, INC.

6241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 904-336-5600 FAX 904-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717 FAX 813-287-1716
1801 Clint Moore Road, Suite 105, Boca Raton, Florida 33487, 407-994-9910, FAX 407-994-9393
7785 Baymeadows Way, Suite 105, Jacksonville, Florida 32256, 904-739-5600 FAX 904-739-7777
1616 'P' Street N.W., Suite 450, Washington, D.C. 20036, 202-462-1100, FAX 202-462-2270

2. The 7,500 ton storage tank has not yet been designed. However, a 7,500 ton molten sulfur storage tank will require a tank of approximately 1 million gallon capacity. A tank of dimensions 40 feet tall by 65 feet in diameter would hold approximately 1 million gallons. The ambient impacts from the molten storage handling system are evaluated in Attachment C.

3. The National Park Service's comments are discussed below.

Air Quality Modeling Analysis

The SO_2 emission sources used for the PSD Class I incremental analysis in the PSD Application were based on a previous but recent PSD Class I modeling analysis for the Chassahowitzka NWR. The emission inventory was brought up-to-date with the assistance of the FDEP. No screening of emission sources was performed for this analysis.

Impacts of H_2SO_4 emissions upon the Chassahowitzka WA were addressed on page 7-15 of the application (Section 7.2.3). The analysis demonstrated no adverse effects upon the Class I area.

Air Quality Related Values Analysis

A revised VISCREEN analysis is attached as Attachment D. Revised analysis shows no significant impact upon the Class I area.

A regional haze analysis has been performed as is provided in Attachment E. The analysis was conducted according to instructions by the National Park Service. The analysis shows that no significant impact upon regional haze at the Class I area as a result of the Cargill modification.

Please call me or Steve Marks (regarding modeling analysis) if you have any further questions concerning this additional information.

Sincerely,

David A. Buff

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

cc: David Jellerson
J. Harper, EPA
J. Bunyak, NPS
B. Thomas, FDEP/SWD
S. Marks, KBN
File (2)

DABuff/ehj

Cleve Holladay (BAR)
Syed Arif
Linda Novak, Polk Co.

14442C\RTC1\1

ATTACHMENT A

MONSANTO QUOTATION FOR FGD SYSTEM

Monsanto Enviro-Chem

Monsanto Enviro-Chem Systems, Inc.
Corporate Pointe
P.O. Box 14547
St. Louis, Missouri 63178-4547
Phone: (314) 275-5700

April 19, 1994

Mr. David Buff
KBN Engineering
1034 Northwest 57th Street
Gainesville, FL 32605-4482
FAX: 904-332-4189

Re: *DynaWave*® Scrubber Proposal, MCD-1757

Dear David:

We are pleased to offer Monsanto's *DynaWave* scrubber to reduce the SO_2 emissions from sulfuric acid plants. Per your request, I've put together budgetary information for two plants, 2900 T/D and 3200 T/D with the following simplified design basis:

	2900 T/D	3200 T/D
Gas flowrate, ACFM	150,000	165,000
Temperature, °F	150	150
Inlet SO_2, lb/hr	483	533

The heart of the *DynaWave* system is the Reverse Jet, a gas-to-liquid contactor that creates a zone of intense mixing. The feed gas stream enters the top of a vertical duct and collides with the scrubbing liquid which is injected upward through a large bore injector. A standing wave of highly turbulent flow is created at the point the liquid is reversed by the gas. This region is called the Froth Zone. In this zone, a very high rate of liquid surface renewal efficiently quenches the gas, while providing particulate removal and gas contaminant absorption. The proposed systems include one or two Reverse Jets.

DynaWave scrubbers were invented to solve air pollution control problems requiring reliable operation with dirty, hot gases. *DynaWave* scrubbers are an excellent fit with tough gas cleaning applications because they are able to operate reliably in dirty environments with high collection efficiencies. The scrubbers utilize large diameter liquid injectors and nonrestrictive, open vessels. This allows routine operation with scrubbing slurries such as lime, limestone or magnesium hydroxide without pluggage or downtime.

I looked at three reagents - caustic, limestone and ammonia and have summarized the results in two tables that are attached.

The advantage of ammonia scrubbing is that it produces a by-product (ammonium sulfate) which may be marketable as fertilizer. The disadvantage is that, due to the high vapor pressure of ammonia, a ga phase reaction between SO_2 and ammonia produces a very fine solid particulate (ammonium sulfite/bisulfite). To prevent a visible plume due to this particulate, the gas from the scrubber must pass through a high efficiency mist eliminator where the particulate is removed and dissolved in collected liquid mist. The mist eliminators and the vessel to hold them increase the capital investment significantly.

The advantage of sodium scrubbing is that it does not involve the formation of the fine solid particulate and, therefore, does not require high efficiency mist elimination. A simple chevron is sufficient.

The advantage of limestone scrubbing is the relatively low cost of limestone as compared to caustic and ammonia. However, it involves the problem of handling slurries and disposal of a waste product (calcium sulfite/bisulfite).

I will send you some additional background information on *DynaWave* scrubbers, including write-ups on installed *DynaWave* scrubbers that use ammonia for sulfuric acid plant tail gas scrubbing and limestone for cement kiln offgas scrubbing.

I hope this gives you a good start at looking at the alternatives. Please feel free to call m e at 314-275-5932. Our sales manager, Steve Williams, is located just outside Tampa. He would be happy to visit and discuss this proposal with you. Steve's phone number is 813-661-2284. We look forward to working together.

Best regards,

Deli Schleiffarth

Deli Schleiffarth
DynaWave® Sales Engineer

cc: SRW
JRH
JWS
JJT
JRS
SSM
SMP
MEA

File: KBN, MCD-1757, Proposal

H:\PROPOSAL\W1757P01.WPF

Cargill Tail Gas Scrubber Options
Plant #1 - 2900 TPD

	Caustic NaOH	Limestone $CaCO_3$	Ammonia NH_3
System Configuration	RJ	RJ>RJ	RJ>RJ>MME
Efficiency / exit SO_2 Concentration	95% lower limit = 10 ppm	90% lower limit = 10 ppm	50 ppm
Budget Price	$1,000,000	$1,400,000	$2,500,000
Scope of Supply	Single stage *DynaWave* scrubber plus circulation pump and instrumentation	Two stage *DynaWave* scrubber plus circulation pumps and instrumentation	Two stage *DynaWave* scrubber, mist eliminators and vessel, circulation pump and instrumentation
Pressure drop	8" wc	24" wc	26" wc
Reagent consumption	574 lb/hr	1017 lb/hr	350 lb/hr
Circulation rate	4500 gpm	7500 gpm per Reverse Jet	3800 gpm per Reverse Jet

Caustic Reactions

$SO_2 + 2NaOH \rightarrow Na_2SO_3 + H_2O$
$SO_2 + 2NaOH + 0.5\ O_2 \rightarrow Na_2SO_4 + H_2O$

Limestone Reactions

$SO_2 + CaCO_3 \rightarrow CaSO_3 + CO_2$
$SO_2 + CaCO_3 + 0.5\ O_2 \rightarrow CaSO_4 + CO_2$

Ammonia Reactions

$SO_2 + NH_3 + H_2O \rightarrow (NH_4)_2SO_3$
$SO_2 + H_2O + (NH_4)_2SO_3 \rightleftharpoons 2NH_4HSO_3$
$NH_3 + NH_4HSO_3 \rightleftharpoons (NH_4)_2SO_3$

Cargill Tail Gas Scrubber Options
Plant #1 - 3200 TPD

	Caustic $NaOH$	Limestone $CaCO_3$	Ammonia NH_3
System Configuration	RJ	RJ>RJ	RJ>RJ>MME
Efficiency / exit SO_2 Concentration	95% lower limit = 10 ppm	90% lower limit = 10 ppm	50 ppm
Budget Price	$1,200,000	$1,600,000	$2,800,000
Scope of Supply	Single stage *DynaWave* scrubber plus circulation pump and instrumentation	Two stage *DynaWave* scrubber plus circulation pumps and instrumentation	Two stage *DynaWave* scrubber, mist eliminators and vessel, circulation pump and instrumentation
Pressure drop	8" wc	24" wc	26" wc
Reagent consumption	633 lb/hr	1078 lb/hr	372 lb/hr
Circulation rate	4800 gpm	8000 gpm per Reverse Jet	4000 gpm per Reverse Jet

Caustic Reactions

$SO_2 + 2NaOH \rightarrow Na_2SO_3 + H_2O$
$SO_2 + 2NaOH + 0.5\ O_2 \rightarrow Na_2SO_4 + H_2O$

Limestone Reactions

$SO_2 + CaCO_3 \rightarrow CaSO_3 + CO_2$
$SO_2 + CaCO_3 + 0.5\ O_2 \rightarrow CaSO_4 + CO_2$

Ammonia Reactions

$SO_2 + NH_3 + H_2O \rightarrow (NH_4)_2SO_3$
$SO_2 + H_2O + (NH_4)_2SO_3 \rightleftarrows 2NH_4HSO_3$
$NH_3 + NH_4HSO_3 \rightleftarrows (NH_4)_2SO_3$

ATTACHMENT B

REVISED STATISTICAL ANALYSIS OF SO_2 DATA

FOR NOS. 4, 5, AND 6 SULFURIC ACID PLANTS

Continuous SO2 Emission Data -- Recalculated

#4 Sulfuric Acid Plant

	Original Data SO2 Emissions (lb/ton) from Table B-1	Recalculated SO2 Emissions (lb/ton)
Sum		431
Number	169	157
Max	3.67	3.67
Avg	2.55	2.74
Std Dev	0.88	0.55
95% CI	4.27	3.81

#5 Sulfuric Acid Plant

	Original Data SO2 Emissions (lb/ton) from Table B-2	Recalculated SO2 Emissions (lb/ton)
Sum		591
Nurnber	203	191
Max	3.83	3.83
Avg	2.91	3.09
Std Dev	0.95	0.62
95% CI	4.77	4.31

#6 Sulfuric Acid Plant

	Original Data SO2 Emissions (lb/ton) from Table B-3	Recalculated SO2 Emissions (lb/ton)
Sum		600
Number	192	180
Max	3.78	3.78
Avg	3.13	3.33
Std Dev	0.84	0.24
95% CI	4.77	3.81

Text was included in the range that the spreadsheed calculated; therefore twelve values of zero were in used the original calculations.

Table B-1
SO2 emissions from #4 Sulfuric Acid Plant
Cargill Fertilizer, Inc. Bartow, FL

Date	#4 Plant SO2 emissions (ppm)	%O2 (%)	SO2 emissions (lb/ton)	Plant Down? *
11/19/94	344.58	4.4	3.22	
11/20/94	275.67	4.63	2.61	
11/21/94	352.04	4.4	3.29	
11/22/94	351.96	4.4	3.29	
11/23/94	345.42	4.4	3.23	
11/24/94	351.25	4.4	3.28	
11/25/94	357.42	4.4	3.34	
11/26/94	348.29	4.4	3.26	
11/27/94	351.79	4.4	3.29	
11/28/94	349.33	4.4	3.27	
11/29/94	344.29	4.45	3.23	
11/30/94	340.17	4.5	3.20	
12/01/94	343.46	4.4	3.21	
12/02/94	345.79	4.4	3.23	
12/03/94	342.04	4.4	3.20	
12/04/94	346.96	4.4	3.24	
12/05/94	349.46	4.4	3.27	
12/06/94	356.42	4.4	3.33	
12/07/94	359.63	4.4	3.36	
12/08/94	363.00	4.4	3.39	
12/09/94	359.46	4.4	3.36	
12/10/94	333.71	4.3	3.10	
12/11/94	344.54	4.3	3.20	
12/12/94	336.04	4.3	3.12	
12/13/94	333.46	4.3	3.10	
12/14/94	326.17	4.3	3.03	
12/15/94	-----	-----		Yes
12/16/94	-----	-----		Yes
12/17/94	381.92	4.3	3.55	
12/18/94	376.42	4.3	3.50	
12/19/94	375.88	4.3	3.49	
		Total	431	
		Number	157	
		Max	3.67	
		Avg	2.74	
		Std dev	0.55	
		95% CI	3.81	

Note: * Yes = Plant downtime occurred on this day.
95% CI = (1.96 x Std dev) + Avg

Table B-2
SO2 emissions from #5 Sulfuric Acid Plant
Cargill Fertilizer, Inc. Bartow, FL

Date	#5 Plant SO2 emissions (ppm)	%O2 (%)	SO2 emissions (lb/ton)	Plant Down? *
11/19/94	401.96	3.9	3.65	
11/20/94	392.54	3.9	3.56	
11/21/94	-----	-----		Yes
11/22/94	373.71	4	3.41	
11/23/94	361.50	4	3.30	
11/24/94	364.21	4.1	3.34	
11/25/94	362.17	4.1	3.33	
11/26/94	356.83	4.1	3.28	
11/27/94	354.29	4.1	3.25	
11/28/94	354.46	4.1	3.25	
11/29/94	357.88	4.1	3.29	
11/30/94	350.08	4.2	3.23	
12/01/94	342.96	4.1	3.15	
12/02/94	371.46	4	3.39	
12/03/94	373.42	4	3.41	
12/04/94	373.33	4	3.41	
12/05/94	371.83	4	3.39	
12/06/94	-----	-----		Yes
12/07/94	-----	-----		Yes
12/08/94	276.12	4.4	2.58	
12/09/94	249.21	4.4	2.33	
12/10/94	-----	-----		Yes
12/11/94	244.83	4.6	2.32	
12/12/94	238.50	4.5	2.24	
12/13/94	243.88	4.5	2.29	
12/14/94	247.21	4.5	2.32	
12/15/94	246.17	4.5	2.31	
12/16/94	245.00	4.5	2.30	
12/17/94	250.08	4.5	2.35	
12/18/94	249.04	4.5	2.34	
12/19/94	247.29	4.4	2.31	
		Total	591	
		Number	191	
		Max	3.83	
		Avg	3.09	
		Std dev	0.62	
		95% CI	4.31	

Note: * Yes = Plant downtime occurred on this day.
95% CI = (1.96 x Std dev) + Avg

Table B-3
SO2 emissions from #6 Sulfuric Acid Plant
Cargill Fertilizer, Inc. Bartow, FL

Date	#6 Plant SO2 emissions (ppm)	%O2 (%)	SO2 emissions (lb/ton)	Plant Down? *
11/19/94	383.04	4.3	3.56	
11/20/94	373.54	4.4	3.49	
11/21/94	367.08	4.4	3.43	
11/22/94	361.25	4.3	3.36	
11/23/94	348.29	4.4	3.26	
11/24/94	363.33	4.25	3.37	
11/25/94	345.71	4.3	3.21	
11/26/94	353.54	4.3	3.28	
11/27/94	359.38	4.2	3.32	
11/28/94	365.08	4.2	3.37	
11/29/94	358.50	4.2	3.31	
11/30/94	348.46	4.2	3.22	
12/01/94	358.79	4.4	3.35	
12/02/94	349.54	4.35	3.26	
12/03/94	357.04	4.25	3.31	
12/04/94	358.13	4.27	3.32	
12/05/94	365.25	4.25	3.38	
12/06/94	369.00	4.2	3.41	
12/07/94	384.38	4.2	3.55	
12/08/94	378.46	4.4	3.54	
12/09/94	378.08	4.3	3.51	
12/10/94	-----	-----		Yes
12/11/94	351.21	4.4	3.28	
12/12/94	357.08	4.2	3.30	
12/13/94	349.33	4.3	3.25	
12/14/94	-----	-----		Yes
12/15/94	361.54	4.1	3.32	
12/16/94	380.25	4.2	3.51	
12/17/94	379.38	4.2	3.50	
12/18/94	390.63	4.15	3.60	
12/19/94	386.50	4.2	3.57	
		Total	600	
		Number	180	
		Max	3.78	
		Avg	3.33	
		Std dev	0.24	
		95% CI	3.81	

Note: * Yes = Plant downtime occurred on this day.
95% CI = (1.96 x Std dev) + Avg

ATTACHMENT C

AMBIENT IMPACTS OF MOLTEN SULFUR HANDLING SYSTEM

ATTACHMENT C
AMBIENT AIR QUALITY IMPACTS OF THE MOLTEN SULFUR HANDLING FACILITY

The maximum ambient air quality impacts for Cargill Bartow's molten sulfur handling facility (MSHF) were determined using the modeling approach outlined in Section 6.0 of the PSD Permit Application. All MSHF impacts are based on the proposed expanded MSHF, which is described in Section 2.2.2 of the PSD permit application. The proposed sources include molten sulfur Pits A and B, and 3,000 and 7,500 ton tanks. The MSHF will result in emissions of sulfur dioxide (SO_2), sulfur particles (PM), and total reduced sulfur (TRS) (as hydrogen sulfide, H_2S). The maximum SO_2 and PM impacts were compared to the EPA Significant Impact Levels. The maximum TRS impacts were compared to the Florida Air Reference Concentrations (FARC). The maximum emission rates presented in Table 2-3 of the application were used for all ambient air quality impacts.

Stack parameters for these sources are presented on Attachment EU4-1 of the Air Permit Application Long Form. As a building downwash analysis indicated that the MSHF sources, located as in Figure 2-2 of the application, are not affected by any of Cargill's buildings, the effects of building downwash were not considered.

The SO_2 modeling results for the screening analysis are presented in Table C-1. Based on the screening modeling results, both 24- and 3-hour refinements were performed. The SO_2 refined analysis results are compared with the EPA significant impact levels in Table C-2. The maximum predicted annual, 24-hour and 3-hour SO_2 impacts are 0.33, 4.26, and 20.45 $\mu g/m^3$, respectively. These impacts are less than the significant impact levels of 1, 5, and 25 $\mu g/m^3$, respectively.

The PM modeling results for the screening analysis are presented in Table C-3. Based on the screening modeling results, further refinements were not performed. The maximum predicted annual and 24-hour PM impacts are 0.13 and 1.64 $\mu g/m^3$, respectively. These impacts are well below the respective significant impact levels of 1 and 5 $\mu g/m^3$.

The TRS modeling results for the screening analysis are presented in Table C-4. Based on the screening modeling results, further refinements were not performed. The maximum predicted annual, 24-hour and 8-hour TRS impacts are 0.16, 2.04, and 4.57 $\mu g/m^3$, respectively. These impacts are less than the H_2S FARCs of 0.9, 33.6, and 140 $\mu g/m^3$, respectively.

Table C-1. Maximum Predicted SO_2 Concentrations for the Modified Molten Sulfur Facility - Screening Analysis

Averaging Time	Concentration ($\mu g/m^3$)	Receptor Location[a] Direction (degrees)	Receptor Location[a] Distance (m)	Period Ending (YYMMDDHH)
Annual	0.29	250.	2092.	82123124
	0.27	250.	2092.	83123124
	0.33	260.	1996.	84123124
	0.32	260.	1996.	85123124
	0.28	250.	2092.	86123124
24-Hour High	3.26	260.	2000.	82012924
	3.96	140.	1179.	83011524
	3.31	180.	1142.	84010324
	4.13	120.	1460.	85051824
	4.26	220.	1481.	86101724
24-Hour HSH	2.31	140.	1179.	82081224
	2.93	120.	1460.	83011124
	3.02	230.	1761.	84102524
	3.11	120.	1460.	85092724
	3.48	220.	1481.	86102024
3-Hour High	16.8	130.	1265.	82031803
	17.2	120.	1460.	83071803
	16.4	160.	1500.	84060224
	16.0	230.	1761.	85070806
	17.2	230.	1265.	86071524
3-Hour HSH	14.2	140.	1179.	82081224
	14.8	140.	1179.	83072224
	14.0	230.	1761.	84100306
	12.9	170.	1160.	85122021
	12.9	230.	1761.	86012124

Note: YY=Year, MM=Month, DD=Day, HH=Hour, HSH = Highest, Second-Highest.

[a] All receptor coordinates are reported with respect the DAP #4 stack location.

Table C-2. Maximum Predicted SO_2 Concentrations for the Modified Molten Sulfur Facility - Refined Analysis

Averaging Time	Concentration ($\mu g/m^3$)	Receptor Locations[a]		Period Ending (YYMMDDHH)	EPA Significant Impact Level ($\mu g/m^3$)
		Direction (degrees)	Distance (m)		
Annual	0.33	260	1,996	84123124	1
24-Hour[b]	4.13	120	1,460	85051824	5
	4.26	220	1,481	86101724	
3-Hour[b]	20.45	122	1,380	83082024	25
		126	1,314	86012024	

Note: YY= Year, MM = Month, DD= Day, HH= Hour

[a] Receptors locations are relative to the DAP No. 4 location.

[b] All short-term concentrations are highest, second-highest concentrations.

Table C-3. Maximum Predicted PM Concentrations for the Modified Molten Sulfur Facility - Screening Analysis

Averaging Time	Concentration ($\mu g/m^3$)	Receptor Location[a]		Period Ending	EPA Significant Impact Levels ($\mu g/m^3$)
		Direction (degreees)	Distance (m)	(YYMMDDHH)	
Annual	0.111	250.	2092.	82123124	1
	0.105	250.	2092	83123124	
	0.127	260.	1996.	84123124	
	0.122	260.	1996.	85123124	
	0.108	250.	2092.	86123124	
24-Hour High	1.26	260.	2000.	82012924	5
	1.53	140.	1179.	83011524	
	1.27	180.	1142.	84010324	
	1.59	120.	1460.	85051824	
	1.64	220.	1481.	86101724	
24-Hour HSH	0.89	140.	1179.	82081224	—
	1.13	120.	1460.	83011124	
	1.17	230.	1761.	84102524	
	1.20	120.	1460.	85092724	
	1.34	220.	1481.	86102024	

Note: YY = Year, MM = Month, DD = Day, HH = Hour, HSH = Highest, Second-Highest.

[a] All receptor coordinates are reported with respect to the DAP #4 stack location.

Table C-4. Maximum Predicted TRS/H_2S Concentrations for the Modified Molten Sulfur Facility - Screening Analysis

Averaging Time	Concentration ($\mu g/m^3$)	Receptor Location[a]		Period Ending	Florida Air Reference Concentration ($\mu g/m^3$)
		Direction (degreees)	Distance (m)	(YYMMDDHH)	
Annual	0.138	250.	2092.	82123124	0.9
	0.130	250.	2092.	83123124	
	0.157	260.	1996.	84123124	
	0.151	260.	1996.	85123124	
	0.133	250.	2092.	86123124	
24-Hour High	1.56	260.	2000.	82012924	33.6
	1.90	140.	1179.	83011524	
	1.59	180.	1142.	84010324	
	1.98	120.	1460.	85051824	
	2.04	220.	1481.	86101724	
8-Hour High	4.36	260.	2000.	82012908	140
	4.35	230.	1761.	83102808	
	3.69	140.	2000.	84010424	
	4.57	120.	1460.	85032508	
	3.90	300.	2270.	86040408	

Note: YY = Year, MM = Month, DD = Day, HH = Hour, HSH = Highest, Second-Highest.

[a] All receptor coordinates are reported with respect to the DAP #4 stack location.

ATTACHMENT D

REVISED VISCREEN ANALYSIS

Visual Effects Screening Analysis for
Source: CARGILL BARTOW H2SO4 PLA
Class I Area: CHASSAHOWITZKA NWA

*** Level-1 Screening ***

Input Emissions for

Particulates	.00	TON/YR
NOx (as NO2)	213.50	TON/YR
Primary NO2	.00	TON/YR
Soot	.00	TON/YR
Primary SO4	213.50	TON/YR

**** Default Particle Characteristics Assumed

Transport Scenario Specifications:

Background Ozone:	.04 ppm
Background Visual Range:	65.00 km
Source-Observer Distance:	105.00 km
Min. Source-Class I Distance:	105.00 km
Max. Source-Class I Distance:	124.00 km
Plume-Source-Observer Angle:	11.25 degrees
Stability:	6
Wind Speed:	1.00 m/s

R E S U L T S

Asterisks (*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area
Screening Criteria ARE NOT Exceeded

					Delta E		Contrast	
Backgrnd	Theta	Azi	Distance	Alpha	Crit	Plume	Crit	Plume
SKY	10.	84.	105.0	84.	2.00	.291	.05	.004
SKY	140.	84.	105.0	84.	2.00	.169	.05	-.008
TERRAIN	10.	84.	105.0	84.	2.00	.375	.05	.004
TERRAIN	140.	84.	105.0	84.	2.00	.096	.05	.003

Maximum Visual Impacts OUTSIDE Class I Area
Screening Criteria ARE NOT Exceeded

					Delta E		Contrast	
Backgrnd	Theta	Azi	Distance	Alpha	Crit	Plume	Crit	Plume
SKY	10.	60.	96.0	109.	2.00	.309	.05	.004
SKY	140.	60.	96.0	109.	2.00	.184	.05	-.009
TERRAIN	10.	45.	89.3	124.	2.00	.490	.05	.005
TERRAIN	140.	45.	89.3	124.	2.00	.133	.05	.005

ATTACHMENT E

REGIONAL HAZE ANALYSIS

ATTACHMENT E
EFFECT OF CARGILL'S H_2SO_4 PLANT EXPANSION ON REGIONAL HAZE AT THE CHASSAHOWITZKA NWR

A regional haze analysis was conducted to determine if the proposed Cargill sulfuric acid plant expansion would cause a perceptible degradation in visibility at the Chassahowitzka National Wildlife Refuge (CNWR). The CNWR is located approximately 105 kilometers (km) northwest of the Cargill plant. Visibility is an Air Quality Related Value (AQRV) at the CNWR. The visibility of an area is generally characterized by either its visual range, V_r (i.e., the greatest distance that a dark object can be seen) or its extinction coefficient, b_{ext} (i.e., the attenuation of light over a distance due to particle scattering and/or gaseous absorption). The visual range and extinction coefficient are related to one another by the following equation[a]:

$$b_{ext} = 3.912 / V_r \ (km^{-1}) \qquad (1)$$

The National Park Service (NPS) in coordination with the U.S. Fish and Wildlife Service (USFWS) uses the Deciview index[a], d_v, to describe an area's change in extinction coefficient. The deciview is defined as:

$$d_v = 10 \ln (b_{ext}/0.01) \qquad (2)$$

where ln represents the natural logarithm of the quantity in parentheses. A change in an area's deciview[b], Δd_v, of 1 corresponds to an approximate 10 percent changed in extinction, which is considered as a noticeable change in regional haze. The deciview change is defined by:

$$\Delta d_v = 10 \ln (1 + b_{exts}/b_{extb}) \qquad (3)$$

where b_{exts} and b_{extb} represent the extinction coefficients due to the source (i.e., the proposed expansion) and for the CNWR background visual range, respectively. Based on recent communications with the NPS, the background visual range for the CNWR is 65 km based on air monitoring data[c].

Calculation of Source Extinction

The source extinction due to the proposed plant expansion is calculated according to interim recommendations that are provided in the Interagency Workgroup on Air Quality Modeling (IWAQM) Phase I Report, Appendix B. The report states that the primary sources of regional visibility degradation are mostly fine particles with diameters ≤ 2.5 μm, ammonium bi-sulfate $[(NH_4)_2SO_4]$ and ammonium nitrate (NH_4NO_3). The procedures for determining the ambient concentration levels of these compounds due to the proposed project are:

1. Obtain the maximum hourly sulfur dioxide (SO_2), nitrogen oxides (NO_x), and sulfuric acid (H_2SO_4) mist impacts due to the proposed expansion from air quality dispersion models such as the Industrial Source Complex Short Term (ISCST2) or the MESOPUFF II model. For the present analysis, the maximum impacts were provided from the ISCST2 model, a steady state model that was used for the modeling analysis for the Prevention of Significant Deterioration (PSD) application. Based on verbal communications with Bud Rolofson of the NPS, the NPS had changed it's policy of using the hourly maximum impacts to using the highest 24-hour impacts for these pollutants. The maximum 24-hour

impacts are based on the highest predicted concentrations from the ISCST2 model for the 5-year period, 1982 to 1986. The maximum 24-hour impacts at the CNWR due to the proposed project only are 0.3582, 0.0326, and 0.0134 $\mu g/m^3$ for SO_2, NO_x, and H_2SO_4 mist, respectively.

2. Assume a 100 percent conversion of SO_2 to SO_4^{2-} and NO_x to NO_3. Multiplicative factors for this conversion are presented in IWAQM Inset 1, as 1.5 and 1.35, respectively, which are based on the ratios of the molecular weights of the compounds. Based on further discussions with the NPS, a 3 percent per hour conversion rate for SO_2 to SO_4^{2-} was used instead of assuming a 100 percent conversion for SO_2 to SO_4^{2-}. Table E-1 shows the hourly conversion of SO_2 to SO_4^{2-} for a maximum 24-hour SO_2 concentration of 0.3582 $\mu g/m^3$. For the worst-case 24-hour period, a 24-hour cumulative SO_4^{2-} concentration was calculated to be 0.1858 $\mu g/m^3$. Concentrations of H_2SO_4 mist were assumed to exist as primary fine particulates.

3. Calculate maximum concentrations of ammonium sulfate and ammonium nitrate from multiplicative factors 1.375 and 1.29, respectively, from IWAQM, Appendix B.

4. Obtain hourly values of relative humidity (RH). The maximum predicted 24-hour impacts from the ISCST2 model occurred on July 29, 1982. The Tampa National Weather Services' hourly surface observations for this day indicate an average RH of approximately 90 percent.

5. Calculate the extinction coefficients of ammonium sulfate, ammonium nitrate, and primary fine particulate. The extinction coefficients for each compound are defined by:

$$b_{exts} = 0.003 \text{ (comp) } f(RH)$$

where (comp) represents the ambient concentration of the compound in question, and f(RH) is the relative humidity factor. From Figure B-1 in Appendix B, a RH of 90 percent corresponds to a RH factor of 6.0. For H_2SO_4 mist (as fine particulate matter), an RH factor of unity was used per IWAQM recommendations. The total source extinction coefficient value is equal to the sum of the calculated extinction coefficients for each compound.

A summary of the calculations are provided in Table E-2. The total source extinction coefficient due to the proposed project was determined to be 0.0057. From equation (3), above, the total deciview change due to the proposed project is 0.899.

Based on this analysis, the proposed project will result in less that a 10 percent decrease in visibility to the clearest days observed at the CNWR. Therefore, no adverse impacts upon regional haze is predicted due to the proposed Cargill project.

References:

a. National Park Service, Memorandum from J. Vimont to IWAQM, December 12, 1992 (see appendix 1).
b. National Park Service, Regional haze analysis calculation worksheet, facsimile from B. Rolofson, NPS to S. Marks, KBN, July 10, 1995 (see appendix 2).
c. U.S. Fish and Wildlife Service, Air Quality Branch, Technical Review of Cargill Fertilizer. PSD Application June 26, 1995.

Table E–1. Hourly Conversion Rate of SO2 to SO4 for Proposed Cargill Expansion at the Chassahowitzka NWR

Hour	SO_2 Remaining (μg/m3)	SO_4 Produced (μg/m3)
1	0.3582	0.0107
2	0.3475	0.0104
3	0.3370	0.0101
4	0.3269	0.0098
5	0.3171	0.0095
6	0.3076	0.0092
7	0.2984	0.0090
8	0.2894	0.0087
9	0.2807	0.0084
10	0.2723	0.0082
11	0.2641	0.0079
12	0.2562	0.0077
13	0.2485	0.0075
14	0.2411	0.0072
15	0.2338	0.0070
16	0.2268	0.0068
17	0.2200	0.0066
18	0.2134	0.0064
19	0.2070	0.0062
20	0.2008	0.0060
21	0.1948	0.0058
22	0.1889	0.0057
23	0.1833	0.0055
24	0.1778	0.0053
Total		0.1858

Note: Assumes hourly conversion rate of 3 percent.

Table E–2. Calculation of Change in Deciview Due to the Proposed Cargill Project

Pollutant	Value	Reference
Maximum Emission Rates (lb/hr)		
SO_2	160.00	
NO_x	14.54	
H_2SO_4 (as PM)	6.00	
Highest 24–Hour Chassahowitzka NWR Impacts ($\mu g/m^3$)		
SO_2	0.3582	(a)
NO_x	0.0326	(b)
H_2SO_4 (as PM)	0.0134	(b)
SO_4	0.1858	(c)
NO_3	0.0439	(d)
$(NH_4)_2SO_4$	0.2555	(e)
NH_4NO_3	0.0567	(f)
Average RH (percent)	90	(g)
RH factor, f (RH)	6.0	(h)
Extinction Coefficients (km^{-1})		
Background: (b_{extb})	0.0602	(i)
$(NH_4)_2SO_4$	0.0046	(j)
NH_4NO_3	0.0010	(j)
H_2SO_4 (as PM)	0.0000	(k)
Total (bexts)	0.0057	
Deciview Change		
total delta dv =	0.8987	(l)

References:

a. Highest predicted concentration from ISCST2 model using a 5–year meteorological data record from 1982–86
b. Concentration calculated from ratio of emissions to SO_2 emissions times the maximum SO2 concentration
c. SO_4 concentrations based on 3 percent per hour conversion rate from SO2
d. $NO_3 = NO_x$ * 1.35 from IWAQM Inset No. 1
e. = SO_4 times 1.375 from IWAQM Appendix B
f. = NO_3 times 1.29 from IWAQM Appendix B
g. Based on average RH for highest impact day.
h. From IWAQM Figure B–1.
i. = 3.912 / 65 where 65 is background visual range.
j. = .003 * compound * f(RH) from IWAQM Appendix B
k. = .003 * compound. f(RH) set = 1 for fine PM
l. Delta DV = 10 * ln (1 + bexts/bextb)

APPENDIX 1

Regional Haze Analyses

Use Alumar highest individual 24-hour concentration value in CAFO

Use 62 km for background visual range

b_{ext_b} = background extinction = $\frac{3.912}{62\ km} = 0.063097$

Convert SO_2 value to $SO_4^=$	SO_2	$SO_4^=$	Hours
assume 3%/hour conversion rate	1.58	0.0474	1
	1.5326	0.0459	2
	1.4866	0.0445	3
	⋮	⋮	⋮
	0.7841	0.0235	24
	Total	$SO_4^= = 0.818$	

Calculate Source extinction = b_{ext_s}

IWAQM page B-2 $SO_4^= \times 1.375 = (NH_4)_2(SO_4^=)$

Use Relative Humidity 95% (assume) as R.H. from Met. Data used in modeling SO_2

IWAQM page B-3 #3a + #3b

Determine R.H. Factor - IWAQM page B-4

$$b_{ext_s} = 0.003[(NH_4)_2(SO_4^=)][\text{R.H factor}]$$

$$\text{Change in deciview} = 10\ ln\left(1 + \frac{b_{ext_s}}{b_{ext_b}}\right)$$

$$\Delta dv = \_\_\_\_$$

If Δdv is greater than 1 it is a noticeable change in Regional Haze i.e. approx. a 10% change in extinction

APPENDIX 2

December 15, 1992

MEMORANDUM

To: IWAQM

From: John Vimont

Subject: Estimates of noticeable regional visibility impacts

A Just Noticeable Change (JNC) will generally occur when there is approximately a 5% change in the extinction (NAPAP SOS). Extinction is related to visual range through:

$$V_r = \frac{3.912}{b_{ext}}$$

Where V_r is the visual range and b_{ext} is the extinction coefficient. Thus, if the background visual range or extinction coefficient is known, then the concentration of ammonium sulfate $[(NH_4)_2SO_4]$ which will lead to a JNC in extinction can be calculated through:

$$b_{ext} = 0.003\,[(NH_4)_2SO_4]\,f(RH)$$

Where $f(RH)$ is the relative humidity adjustment factor.

If, as in the screening procedure we have described, we assume that all of the SO_2 is converted to $SO_4^=$, which in turn reacts with NH_3 to form $(NH_4)_2SO_4$ we can plot the SO_2 concentration which will produce a JNC in extinction. This is shown in Figure 1. The $f(RH)$ used in Figure 1 to relate the visual range to the concentration was 2, corresponding to a relative humidity of approximately 68%. This corresponds to an almost dry aerosol with 100% conversion of SO_2 to $SO_4^=$. The chart would look the same if we assumed that only 33% of the SO_2 was converted and that the relative humidity was 90% ($f(RH)$=6).

It should be noted that in our report, it is indicated that we assume that all of the SO_2 is converted and that a relative humidity of 95% should be assumed. This would reduce the JNC concentrations, plotted in Figure 1 by a factor of 5.75.

I talked with Marc Pitchford, and he suggested an alternate measure to the 5% extinction value. This is the "deciview" (d_v).

$$d_v \equiv 10 \ln\left(\frac{b_{ext}}{0.01}\right)$$

where b_{ext} is expressed in km^{-1}

A change in the neighborhood of one to two d_v will yield a noticeable change in a scene. A Δd_v of 1 will correspond to approximately a 10% change in extinction. A plot of SO_2 concentration, which will produce a Δd_v of 1, versus V_z is shown in Figure 2. This is assuming full conversion of SO_2 to $(NH_4)_2SO_4$ and a relative humidity of 68%.

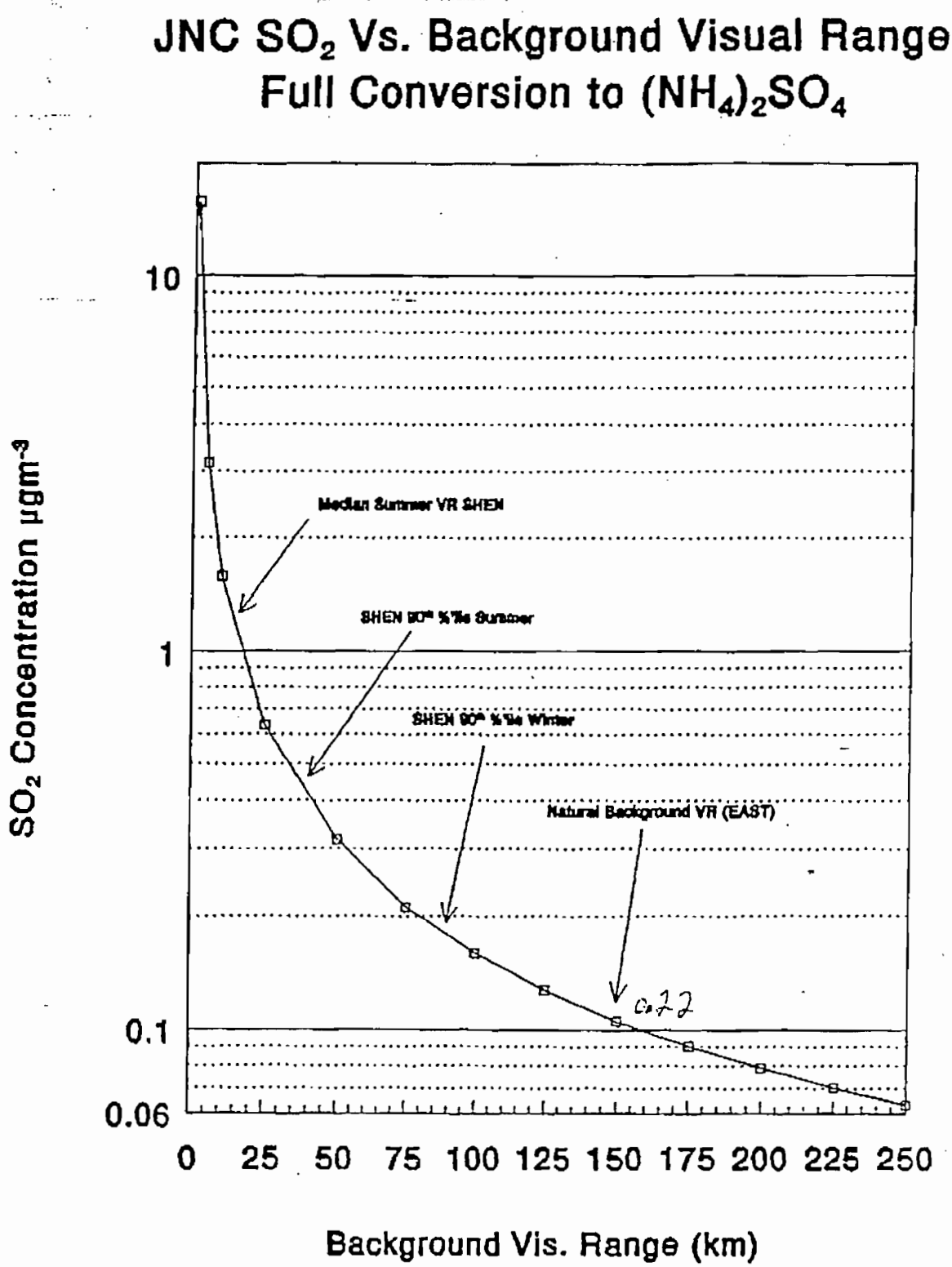

Figure 1 - SO_2 concentrations (as a surrogate for $(NH_4)_2SO_4$) which will produce a Just Noticeable Change in extinction for different background visual ranges. RH of 68%.

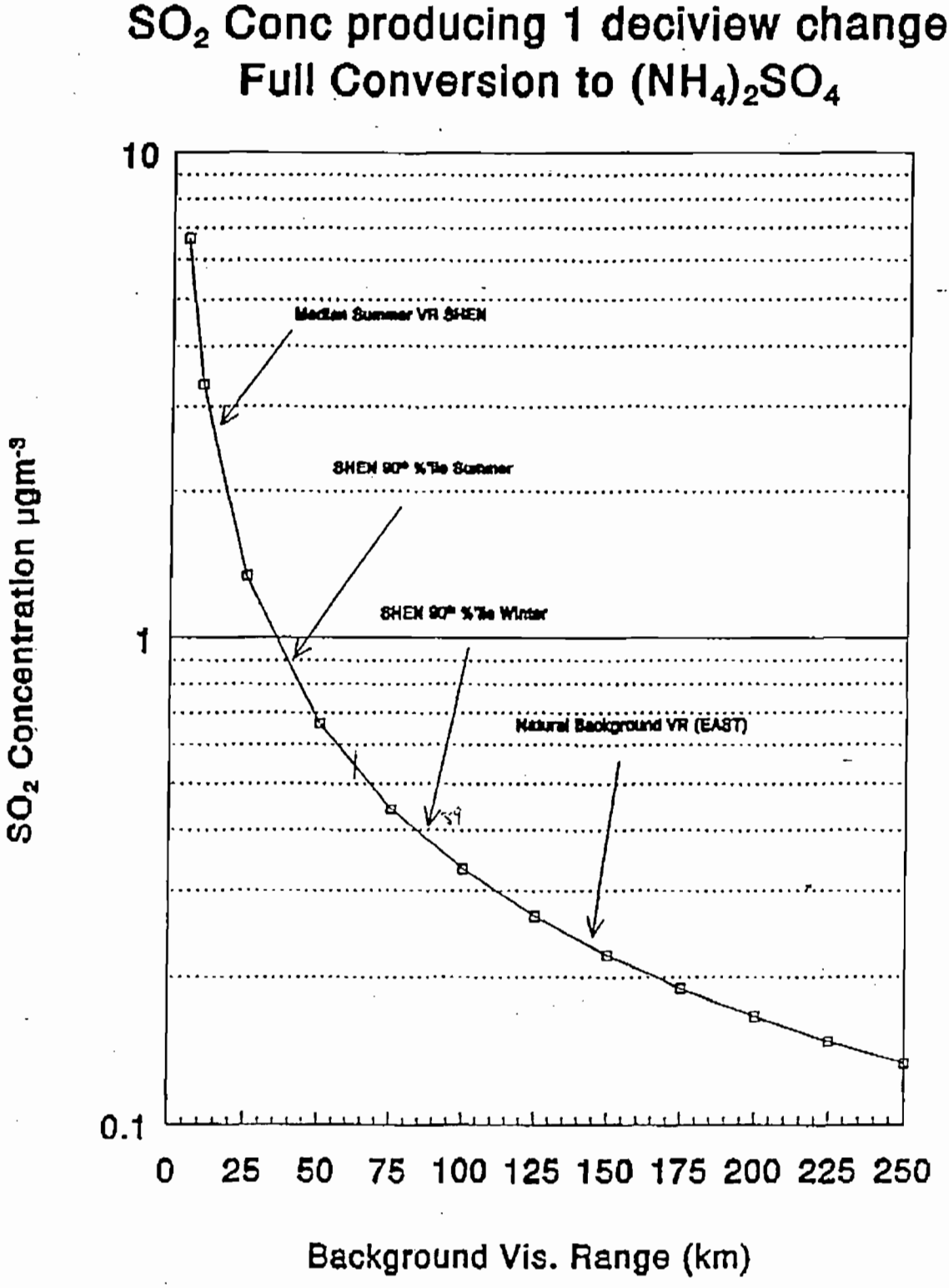

Figure 2 - SO_2 concentrations (as a surrogate for $(NH_4)_2SO_4$) which will produce a Δd_v of 1 for different background visual ranges. RH of 68%.

KBN
A GOLDER ASSOCIATES COMPANY

July 18, 1996

RECEIVED
JUL 19 1996
BUREAU OF
AIR REGULATION

Mr. Cleveland Holladay
Bureau of Air Quality Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Cargill Riverview AFI Plant Expansion
PSD - ISCST3 Modeling Files

Dear Cleve:

Please find enclosed one hard copy and 1 disk copy (on 2 disks) for the above referenced PSD Application. Disk output and summary files are compressed using the utility PKZIP. A sheet describing the contents of each ZIP file is attached and is also included as a READ.ME file on each disk. Should you have any questions about the modeling files, please call me at (904) 336-5600. Thank you.

Sincerely,

Steven R. Marks/RJP

Steven R. Marks
Senior Meteorologist

SRM/arz

cc: David Buff, KBN
File (2)

ASCII

9651074Y/F1/WP/6

6241 Northwest 23rd Street
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Gainesville, Florida 32653-1500
352-336-5600 FAX 352-336-5603

5405 West Cypress Street
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United States Department of the Interior

FISH AND WILDLIFE SERVICE
1875 Century Boulevard
Atlanta, Georgia 30345

JUL 03 1995

IN REPLY REFER TO:

Mr. Clair H. Fancy
Chief, Bureau of Air Regulation
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road, MS 48
Tallahassee, Florida 32399

Dear Mr. Fancy:

We have reviewed the Prevention of Significant Deterioration Application for the proposed increase in production at the Cargill Fertilizer, Inc., Nos. 4, 5, and 6 sulfuric acid (H_2SO_4) production plants in Bartow, Florida. Enclosed are the technical review comments from our Air Quality Branch.

Thank you for giving us the opportunity to comment on this permit application. We appreciate your cooperation in notifying us of proposed projects with the potential to impact the air quality and related resources of our Class I air quality areas. If you have questions, please contact Ms. Ellen Porter of our Air Quality Branch in Denver at telephone number 303/969-2617.

Sincerely yours,

Noreen K. Clough

Noreen K. Clough
Regional Director

Enclosure

Technical Review of Prevention of Significant Deterioration
Permit Application for Cargill Fertilizer, Inc.'s
Proposed Production Rate Increase for
Sulfuric Acid Plants Nos. 4, 5, and 6,
Polk County, Florida
by
Air Quality Branch, Fish and Wildlife Service - Denver

Cargill Fertilizer, Inc., is proposing to increase production at its Nos. 4, 5, and 6 sulfuric acid (H_2SO_4) plants in Bartow, Florida. The Cargill facility is located 105 km south of Chassahowitzka Wilderness Area (WA), a Class I air quality area administered by the U.S. Fish and Wildlife Service. The proposed modification will result in significant increases in emissions of sulfur dioxide (SO_2), H_2SO_4 mist, and nitrogen oxides (NO_x).

Air Quality Modeling Analysis

The applicant used the EPA ISCST2 model to assess the impacts to Chassahowitzka WA from emissions of SO_2 and NO_x. The modeling was performed for five years (1982-1986). We request clarification of the source emission inventory applied in this analysis. Specifically, please clarify whether the North Carolina "20-D" methodology was used or if the analysis included the SO_2 sources found in previous Chassahowitzka WA Class I increment analyses.

The analysis predicted that emissions from the proposed project would not contribute significantly to Class I nitrogen dioxide increment consumption; emissions would significantly contribute to Class I SO_2 increment consumption at Chassahowitzka WA for all averaging periods. Therefore, a cumulative SO_2 increment analysis was performed. This analysis predicted 33 exceedances of the 24-hour Class I SO_2 increment. However, SO_2 emissions from the proposed project would not significantly contribute to the exceedances.

As we have noted in previous comments to you (e.g., Piney Point Phosphates, 5/30/95; Farmland Hydro, 3/29/95; Seminole Electric Hardee Unit 3, 6/22/94; IMC-Agrico, 2/24/94), we are concerned about predicted violations of the short-term Class I SO_2 increments at Chassahowitzka WA. We agree with you that a more refined modeling analysis is needed to assess the status of increment consumption at the wilderness area and determine, if necessary, the causes of increment violations.

The applicant did not model the impacts of H_2SO_4 emissions to Chassahowitzka WA. By ratioing H_2SO_4 emissions to SO_2 emissions, our office calculated that the maximum 24-hour H_2SO_4 impact to Chassahowitzka WA would be 0.022 micrograms per cubic meter. Please require future applicants to address impacts of H_2SO_4 emissions to Class I areas.

Best Available Control Technology (BACT)

The BACT analysis is complete.

Air Quality Related Values (AQRV) Analysis

The AQRV analysis for biological resources is complete. However, the AQRV analysis for visibility is not complete.

The coherent plume impact analysis using the EPA VISCREEN model was not performed correctly. The measured background visual range for Chassahowitzka WA is 65 km, not the 25 km used by the

applicant. Additionally, H_2SO_4 emissions should be included as primary sulfate in the VISCREEN analysis. Please have the applicant perform the VISCREEN analysis using a background visual range of 65 km and including H_2SO_4 emissions.

The applicant did not perform a regional haze analysis. The methodology for regional haze calculations is found in Appendix B of the EPA document Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 1 Report: Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility (EPA-454/R-93-015, April 1993). The applicant should contact our office for updates on these procedures. The measured background visual range of 65 km should be used. In addition, the analysis should use the 24-hour concentrations of SO_2 and H_2SO_4 stack emissions at Chassahowitzka WA.

If you have any questions, please call Ellen Porter of our office at (303) 969-2617.

faxed to you on 7-5-95

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1875 Century Boulevard
Atlanta, Georgia 30345

IN REPLY REFER TO:

JUL 03 1995

RECEIVED
JUL 13 1995
Bureau of Air Regulation

Mr. Clair H. Fancy
Chief, Bureau of Air Regulation
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road, MS 48
Tallahassee, Florida 32399

Dear Mr. Fancy:

We have reviewed the Prevention of Significant Deterioration Application for the proposed increase in production at the Cargill Fertilizer, Inc., Nos. 4, 5, and 6 sulfuric acid (H_2SO_4) production plants in Bartow, Florida. Enclosed are the technical review comments from our Air Quality Branch.

Thank you for giving us the opportunity to comment on this permit application. We appreciate your cooperation in notifying us of proposed projects with the potential to impact the air quality and related resources of our Class I air quality areas. If you have questions, please contact Ms. Ellen Porter of our Air Quality Branch in Denver at telephone number 303/969-2617.

Sincerely yours,

Noreen K. Clough

Noreen K. Clough
Regional Director

Enclosure

cc: B. Arif
C. Halladay
B. Thomas, SW Dist,
J. Novak, Polk Co,
J. Harper, EPA
D. Buff, KBN

Technical Review of Prevention of Significant Deterioration
Permit Application for Cargill Fertilizer, Inc.'s
Proposed Production Rate Increase for
Sulfuric Acid Plants Nos. 4, 5, and 6,
Polk County, Florida
by
Air Quality Branch, Fish and Wildlife Service - Denver

Cargill Fertilizer, Inc., is proposing to increase production at its Nos. 4, 5, and 6 sulfuric acid (H_2SO_4) plants in Bartow, Florida. The Cargill facility is located 105 km south of Chassahowitzka Wilderness Area (WA), a Class I air quality area administered by the U.S. Fish and Wildlife Service. The proposed modification will result in significant increases in emissions of sulfur dioxide (SO_2), H_2SO_4 mist, and nitrogen oxides (NO_x).

Air Quality Modeling Analysis

The applicant used the EPA ISCST2 model to assess the impacts to Chassahowitzka WA from emissions of SO_2 and NO_x. The modeling was performed for five years (1982-1986). We request clarification of the source emission inventory applied in this analysis. Specifically, please clarify whether the North Carolina "20-D" methodology was used or if the analysis included the SO_2 sources found in previous Chassahowitzka WA Class I increment analyses.

The analysis predicted that emissions from the proposed project would not contribute significantly to Class I nitrogen dioxide increment consumption; emissions would significantly contribute to Class I SO_2 increment consumption at Chassahowitzka WA for all averaging periods. Therefore, a cumulative SO_2 increment analysis was performed. This analysis predicted 33 exceedances of the 24-hour Class I SO_2 increment. However, SO_2 emissions from the proposed project would not significantly contribute to the exceedances.

As we have noted in previous comments to you (e.g., Piney Point Phosphates, 5/30/95; Farmland Hydro, 3/29/95; Seminole Electric Hardee Unit 3, 6/22/94; IMC-Agrico, 2/24/94), we are concerned about predicted violations of the short-term Class I SO_2 increments at Chassahowitzka WA. We agree with you that a more refined modeling analysis is needed to assess the status of increment consumption at the wilderness area and determine, if necessary, the causes of increment violations.

The applicant did not model the impacts of H_2SO_4 emissions to Chassahowitzka WA. By ratioing H_2SO_4 emissions to SO_2 emissions, our office calculated that the maximum 24-hour H_2SO_4 impact to Chassahowitzka WA would be 0.022 micrograms per cubic meter. Please require future applicants to address impacts of H_2SO_4 emissions to Class I areas.

Best Available Control Technology (BACT)

The BACT analysis is complete.

Air Quality Related Values (AQRV) Analysis

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applicant. Additionally, H_2SO_4 emissions should be included as primary sulfate in the VISCREEN analysis. Please have the applicant perform the VISCREEN analysis using a background visual range of 65 km and including H_2SO_4 emissions.

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If you have any questions, please call Ellen Porter of our office at (303) 969-2617.

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

June 29, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David A. Buff, P.E.
KBN Engineering and Applied Sciences, Inc.
6241 Northwest 23rd Street, Suite 500
Gainesville, Florida 32653-1500

Re: Cargill Fertilizer, Inc.
Expansion of Sulfuric Acid Plants No. 4, 5, and 6
Permit File No. AC 53-271436, PSD-FL-229

Dear Mr. Buff:

The Department received the application for production increases for sulfuric acid plants Nos. 4, 5, and 6 (2,280 to 2,600 tons per day), and associated throughput rate increases for the molten sulfur storage at Cargill's existing facility in Bartow, Polk County, Florida. The modeling data was received on June 2, 1995. Following are additional modeling questions:

1. In table 2-1, why are the new proposed limits based on a 3-hour average?

2. What are the dimensions of the new 7500 ton storage tank? Please evaluate the ambient impacts from molten sulfur handling system.

3. For the Class I Area impact analyses, see the attached letter from the National Park Service. Please respond to their comments.

Please submit the information requested above to the Department's Bureau of Air Regulation.

We will resume processing this application after we receive the requested information. If you have any questions regarding this matter, please call Cleve Holladay or Katherine Zhang at 904-488-1344.

Sincerely,

A. A. Linero 6/29

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

AAL/kz/t

cc: B. Thomas, SWD
D. Jellerson, Cargill
J. Harper, EPA
J. Bunyak, NPS

DRAFT

Technical Review of Prevention of Significant Deterioration Permit Application for Cargill Fertilizer, Inc.'s Proposed Production Rate Increase for Sulfuric Acid Plants Nos. 4, 5, and 6, Polk County, Florida

by

Air Quality Branch, Fish and Wildlife Service - Denver

Cargill Fertilizer, Inc., is proposing to increase production at its Nos. 4, 5, and 6 sulfuric acid (H_2SO_4) plants in Bartow, Florida. The Cargill facility is located 105 km south of Chassahowitzka Wilderness Area (WA), a Class I air quality area administered by the U.S. Fish and Wildlife Service. The proposed modification will result in significant increases in emissions of sulfur dioxide (SO_2), H_2SO_4 mist, and nitrogen oxides (NO_x).

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The analysis predicted that emissions from the proposed project would not contribute significantly to Class I nitrogen dioxide increment consumption; emissions would significantly contribute to Class I SO_2 increment consumption at Chassahowitzka WA for all averaging periods. Therefore, a cumulative SO_2 increment analysis was performed. This analysis predicted 33 exceedances of the 24-hour Class I SO_2 increment. However, SO_2 emissions from the proposed project would not significantly contribute to the exceedances.

As we have noted in previous comments to you (e.g., Piney Point Phosphates, 5/30/95; Farmland Hydro, 3/29/95; Seminole Electric Hardee Unit 3, 6/22/94; IMC-Agrico, 2/24/94), we are concerned about predicted violations of the short-term Class I SO_2 increments at Chassahowitzka WA. We agree with you that a more refined modeling analysis is needed to assess the status of increment consumption at the wilderness area and determine, if necessary, the causes of increment violations.

The applicant did not model the impacts of H_2SO_4 emissions to Chassahowitzka WA. By ratioing H_2SO_4 emissions to SO_2 emissions, our office calculated that the maximum 24-hour H_2SO_4 impact to Chassahowitzka WA would be 0.022 micrograms per cubic meter. Please require future applicants to address impacts of H_2SO_4 emissions to Class I areas.

Best Available Control Technology (BACT)

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The applicant did not perform a regional haze analysis. The methodology for regional haze calculations is found in Appendix B of the EPA document Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 1 Report: Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility (EPA-454/R-93-015, April 1993). The applicant should contact our office for updates on these procedures. The measured background visual range of 65 km should be used. In addition, the analysis should use the 24-hour concentrations of SO_2 and H_2SO_4 stack emissions at Chassahowitzka WA.

If you have any questions, please call Ellen Porter of our office at (303) 969-2617.

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- Print your name and address on the reverse of this form so that we can return this card to you.
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I also wish to receive the following services (for an extra fee):
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2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
David A. Buff, PE
KBN Engineering + Applied Sc
6241 NW 23rd St, Suite 500
Gainesville, Fl
32653-1500

4a. Article Number
Z 392 979 011

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

7. Date of Delivery
7-3

5. Signature (Addressee)
JNSims

6. Signature (Agent)

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

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

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Receipt for Certified Mail
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UNITED STATES POSTAL SERVICE

PS Form 3800, March 1993

Sent to David Buff	
Street and No. KBN	
P.O., State and ZIP Code (Carsell Fert.)	
Postage Gainesville $, Fl	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 6-29-95	

HC53-271436
PSD-FI-229

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

June 19, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David A. Buff, P.E.
KBN Engineering and Applied Sciences, Inc.
6241 Northwest 23rd Street, Suite 500
Gainesville, Florida 32653-1500

Re: Cargill Fertilizer, Inc.
Nos. 4, 5, and 6 Sulfuric Acid Plants Expansion
Permit File No. AC 53-271436, PSD-FL-229

Dear Mr. Buff:

The Department has received the application for an increase in the Nos. 4, 5, and 6 sulfuric acid plants production rates (2,280 to 2,600 tons per day), and associated throughput rate increases for the molten sulfur storage at your existing facility in Bartow, Polk County, Florida. Based on our initial review of the proposed project, we have determined that additional information is needed in order to continue processing this application package. Please submit the information requested below to the Department's Bureau of Air Regulation.

1. Table 2-3 of the application indicates that the total emissions from 7,500 ton storage tank will be less than emissions from the 3,000 ton storage tank for molten sulfur handling. Please explain the discrepancy.

2. PSD-FL-209 was issued to Cargill Fertilizer for Nos. 8 and 9 sulfuric acid plants production increases in March 1995. Excess sulfuric acid was explained to be for Cargill's Bartow facility. If Nos. 4, 5, and 6 rate increases are for the Bartow facility, please elaborate as to what the outcome will be for the Nos. 8 and 9 sulfuric acid plants rate increases.

3. Please provide the names, addresses and telephone numbers for the persons contacted at Monsanto Enviro-Chem for budgetary quotations and engineering estimates in developing capital and annualized cost estimates for this project.

4. Appendix B of the application contains statistical analysis of the continuous SO_2 emission from the Nos. 4, 5, and 6 sulfuric acid plants. Please redo the analyses, as the Department cannot confirm the numbers obtained by the applicant. Also, based on the analyses, the 95% confidence interval for all three plants violates the new source performance standard (NSPS) of 4 lbs/ton. What assurances can the applicant provide to the Department that with increased production rates the NSPS can be complied with most of the time.

5. Modeling data was received on June 2, 1995. Therefore, after it is reviewed the Department may have additional questions.

We will resume processing this application after we receive the requested information. If you have any questions regarding this matter, please call Syed Arif at 904-488-1344.

Sincerely,

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

AAL/sa/t

cc: B. Thomas, SWD
D. Jellerson, Cargill
J. Harper, EPA
J. Bunyak, NPS

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
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Consult postmaster for fee.

3. Article Addressed to:
David A. Buff, P.E.
KBN Engineering & A.S.
6241 NW 23rd St, 500
Gainesville, FL
32653-1500

4a. Article Number
Z 392 979 046

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

7. Date of Delivery
6-22-95

5. Signature (Addressee)

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

6. Signature (Agent)
M. Reinert

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

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PS Form 3800, March 1993

Sent to David Buff	
Street and No. KBN Eng. & A.S.	
P.O. State and ZIP Code Gainesville, FL	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 6-19-95	

AC 53-271436
PSD-FI-229

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

May 25, 1995

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

RE: Cargill Fertilizer, Inc.
Sulfuric Acid Plant Production Increase
Polk County, PSD-FL-229

Dear Ms. Harper:

Enclosed for your review and comment is the above referenced PSD application. Please forward your comments to the Department's Bureau of Air Regulation as soon as possible. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Al Linero or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patty Adams

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

CHF/pa

Enclosures

Department of
Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

May 25, 1995

Ms. Linda Novak
Polk County Air Quality Program
P. O. Box 39
Bartow, FL 33830

RE: Cargill Fertilizer, Inc.
Sulfuric Acid Plant Production Increase
Polk County, PSD-FL-229

Dear Ms. Novak:

Enclosed for your review and comment is the above referenced PSD application. Please forward your comments to the Department's Bureau of Air Regulation as soon as possible. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Al Linero or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patty Adams

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

CHF/pa

Enclosures

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

May 25, 1995

Mr. John Bunyak, Chief
Policy, Planning and Permit Review Branch
National Park Service-Air Quality Division
P. O. Box 25287
Denver, Colorado 80225

RE: Cargill Fertilizer, Inc.
Sulfuric Acid Plant Production Increase
Polk County, PSD-FL-229

Dear Mr. Bunyak:

Enclosed for your review and comment is the above referenced PSD application. Please forward your comments to the Department's Bureau of Air Regulation as soon as possible. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Al Linero or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patty Adams

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

CHF/pa

Enclosures

7099 3400 0000 1453 2542

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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Article Sent To:
Brian Chatlosh, Mgr.

Postage	$	8/29/00 Lake Worth Gen.
Certified Fee		Postmark Here
Return Receipt Fee (Endorsement Required)		
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Total Postage & Fees	$	

Name (Please Print Clearly) (to be completed by mailer)
Brian Chatlosh, Mgr.
Street, Apt. No.; or PO Box No.
245 Winter St., Ste. 300
City, State, ZIP+4
Waltham, MA 02451

PS Form 3800, July 1999 See Reverse for Instructions

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1. Article Addressed to:

Brian Chatlosh, Manager
Lake Worth Generation, L.L.C.
245 Winter St., Ste 300
Waltham, MA 02451

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*
B. Date of Delivery 9/5/00
C. Signature
X R. Serreville ☐ Agent ☐ Addressee
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

SEP - 5 2000

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☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
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PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

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CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:
Ms. Mallika Muthiah, P.E.

Postage	$
Certified Fee	
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

SENDER: *COMPLETE THIS SECTION*

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- Attach this card to the back of the mailpiece, or on the front if space permits.

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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* S SALAS
B. Date of Delivery 8/23/00

C. Signature
X
☐ Agent
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
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PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3400 0000 1453 2696

Article Sent To: David B. Jellerson

Postage	$ 8/16/00
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

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

...ctions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
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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

A. Received by *(Please Print Clearly)*: K Pickard
B. Date of Delivery: 08-21-00

C. Signature: X K Pickard ☒ Agent ☐ ~~Addressee~~

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If YES, enter delivery address below: ☒ No

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4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
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PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

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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

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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. David B. Jellerson
Cargill Fertilizer
P O Box 9002
Bartow, Fl 33831

4a. Article Number: Z 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

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

* 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	James Jenkins
Street & Number	Rinker Materials
Post Office, State, & ZIP Code	Miami 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	6-30-99

0250014-002-AC

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

☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery: 12/9/98

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*

X

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

Thank you for using Return Receipt Service.

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Z 333 612 573

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Melody Russo	
Street & Number Carsill 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 12-18-98	

PS Form 3800, April 1995

1050046-001-AC
PSO-FL-229
SAP 4,5,6

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

4a. Article Number
Z 333 612 573

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

7. Date of Delivery
12-21-98

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X

PS Form 3811, December 19[illegible] Return Receipt

Thank you for using Return Receipt Service.

Z 333 612 490

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Melody Russo	
Street & Number Carsill 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 10-29-98 SAP 4,5+6 PSO-Fl-229	

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:
Ms. Melody Russo
Carsill Fertilizer
PO Box 9002
Bartow, Fl 33831

4a. Article Number
Z 333 612 490

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

7. Date of Delivery
NOV - 2 1998

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*
X 900 27 -

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 Return Receipt

Thank you for using Return Receipt Service.

P 265 659 346

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to David B 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 #6 5-6-98 PSO-Fl-229	

PS Form **3800**, April 1995

[redacted]

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:
David B. Jellerson
Cargill Fertilizer
P O Box 9002
Bartow, Fl 33830

4a. Article Number
P 265 659 346

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

7. Date of Delivery
5/12/98

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*
X 9002

6. Signature: *(Addressee or Agent)*
X K Pickard

PS Form **3811**, December 1994 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- 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:
David D. Jellerson
Cargill Fertilizer
PO Box 9002
Bartow, Fl 33830

4a. Article Number
Z 127 632 573

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

7. Date of Delivery
11/20/95

5. Signature (Addressee)

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

6. Signature (Agent)
K Pickard

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 127 632 573

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to: David Jellerson	
Street and No.: Cargill Fert	
P.O., State and 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, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 11-16-95	

AC53-271436
PSD-Fl-229

PS Form 3800, March 1993

Is your RETURN ADDRESS completed on the reverse side?

- [illegible]
- 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.

[illegible] to receive the [illegible] services (for an extra fee):

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

Consult postmaster for fee.

3. Article Addressed to:
David B. Jellerson, ES
Cargill Fertilizer, Inc.
PO Box 9002
Bartow, Fl 33831

4a. Article Number
Z 127 632 554

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

7. Date of Delivery
10/27/95

5. Signature (Addressee)

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

6. Signature (Agent)
K Pickard

RECEIPT

Thank you for using Return Receipt Service.

Z 127 632 554

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to: David B. Jellerson	
Street and No.: Cargill Fertilizer	
P.O., State and 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, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	10-25-95

AC53-271436
PSD-FL-229

PS Form 3800, March 1993

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- 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:
David A. Buff, PE
KBN Engineering & Applied Sc
6241 NW 23rd St, Suite 500
Gainesville, Fl
32653-1500

4a. Article Number
Z 392 979 011

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

7. Date of Delivery
7-3

5. Signature (Addressee)
J M Sims

6. Signature (Agent)

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

Thank you for using Return Receipt Service.

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Z 392 979 011

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

PS Form **3800**, March 1993

Sent to David Buff	
Street and No. KBN	
P.O., State and ZIP Code (Cargill Fert.)	
Postage Gainesville, Fl	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 6-29-95	

AC53-271436
PSD-FL-229

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- 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:
David A. Buff, P.E.
KBN Engineering & A.S.
6241 NW 23rd St, 500
Gainesville, Fl
32653-1500

4a. Article Number
Z 392 979 046

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

7. Date of Delivery
6-22-95

5. Signature (Addressee)

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

6. Signature (Agent)
M. Reinert

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 392 979 046

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

PS Form **3800**, March 1993

Sent to: David Buff	
Street and No.: KBN Eng. & A.S.	
P.O., State and ZIP Code: Gainesville, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	6-19-95

AC53-271436
PSD-Fl-229

Check Sheet

Company Name: Cargill Fertilizer
Permit Number: AC 53-271436 - PSD 046-001
PSD Number: 229
Permit Engineer:

Application:

- [x] Initial Application
  - [x] Incompleteness Letters
  - [x] Responses
  - [ ] Waiver of Department Action
  - [ ] Department Response
  - [ ] Other

Cross References:

- [ ]
- [ ]
- [ ]

Intent:

- [x] Intent to Issue
- [x] Notice of Intent to Issue
- [x] Technical Evaluation
- [x] BACT Determination
- [ ] Unsigned Permit

Correspondence with:

- [ ] EPA
- [ ] Park Services
- [ ] Other

- [x] Proof of Publication
  - [ ] Petitions - (Related to extensions, hearings, etc.)
  - [ ] Waiver of Department Action
  - [ ] Other

Final Determination:

- [x] Final Determination
- [x] Signed Permit
- [x] BACT Determination
  - [ ] Other

Post Permit Correspondence:

- [x] Extensions/Amendments/Modifications
  - [ ] Other