

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT MODIFICATION

In the Matter of an
Application for Permit Modification


Mulberry Phosphates, Inc.
Post Office Drawer 797
Mulberry, Florida 33860

DRAFT Permit No. 1050048-002-AC
PSD-FL-238
Mulberry Facility
Polk County

Enclosed is a letter that modifies the provisions of construction permit number AC53-85261 (PSD-FL-106), which expired on July 1, 1986, and reissues this permit as Permit No. 1050048-002-AC (PSD-FL-238). This letter modifies the provisions of the original permit to increase the annual hours of operation of their sulfuric acid plant from 8400 per year to 8760 per year. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; 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 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.


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

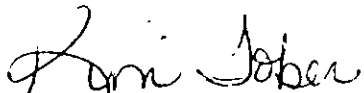
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT MODIFICATION (including the FINAL permit Modification) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 8-6-97 to the person(s) listed:

Mr. Robert Stewart, Mulberry Phosphates, Inc. *
Mr. Steven C. Cullen, P.E.
Mr. Brian Beals, EPA
Mr. John Bunyak, NPS
Mr. Roy Harwood, PCNRD
Mr. Bill Thomas, SWD
Mr. Tom Ellison, SWD

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date,
pursuant to §120.52(7), Florida Statutes, with the designated
Department Clerk, receipt of which is hereby acknowledged.

 8-6-97
(Clerk) (Date)



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:

Mulberry Phosphates, Inc.
Mulberry Facility
Post Office Drawer 797
Mulberry, Florida 33860

FID No.	1050048
PSD No.	PSD-FL-238
Permit No.	1050048-002-AC
SIC No.	2874
Expires:	June 30, 1998

Authorized Representative:
Robert Stewart
Vice President, Operations & Administration

PROJECT AND LOCATION:

Increase in annual hours of operation at 1700 ton per day sulfuric acid plant located on SR 60, 1 mile East of Mulberry, Polk County. UTM coordinates are Zone 17: 406.8 km E, 3085.1 km N.

STATEMENT OF BASIS:

This permit is a reissuance and modification of permit AC53-85261 (PSD-FL-106) dated July 2, 1985. The provisions of permit AC53-85261 are incorporated into this permit except for the changes that follow in Section II Specific Conditions. This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

Attached appendix made a part of this permit:

Appendix BD

BACT Determination

Howard L. Rhodes, Director
Division of Air Resources
Management

AIR CONSTRUCTION PERMIT 1050048-002-AC AND PSD-FL-238

SECTION I. FACILITY INFORMATION

SUBSECTION A. FACILITY DESCRIPTION

This existing facility consists of a sulfuric acid plant, a phosphoric acid plant, an ammonium phosphate (MAP/DAP) plant, and storage, handling, grinding and shipping facilities for phosphate rock, ammonia, sulfur, and fertilizer products. This modification will increase the hours of operation from 8400 hours per year to 8760 hours per year or continuous operation.

EMISSION UNIT

This permit addresses the following emission unit:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
002	Sulfuric Acid Plant

SUBSECTION B. REGULATORY CLASSIFICATION

This industry is listed in Table 62-212.400-1 of Chapter 62-212, F.A.C., "Major Facility Categories." Therefore, stack and fugitive emissions of over 100 tons per year of carbon monoxide, sulfur dioxide, nitrogen oxides, or particulate matter characterize the installation as a major facility subject to the requirements of Rule 62-204.800, F.A.C. This facility is a Title V source because it emits over 100 tons per year of sulfur dioxide. [Rule 62-210.200 (Title V Source), F.A.C.]

SUBSECTION C. PERMIT SCHEDULE:

- (DATE) Petition for an administrative hearing
- 06-19-97 Notice of Intent published in Lakeland Ledger
- 06-11-97 Issued Notice of Intent to issue Permit
- 03-14-97 Application deemed complete

SUBSECTION D. RELEVANT DOCUMENTS:

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

1. Original construction permit (AC53-85261/PSD-FL-106) issued to Royster Company July 2, 1985 by DER
2. Request for hour increase modification received on January 31, 1997
3. Department's letter dated February 28, 1997
4. Company letter dated March 12, 1997; received on March 14, 1997

Mulberry Phosphates, Inc.
Mulberry, FL

Mulberry Plant
Facility ID No. 1050048

SECTION II. SPECIFIC CONDITIONS

SUBSECTION A. SPECIFIC CONDITIONS

- A.1 The following permit supersedes the permit AC53-85261 dated July 2, 1985.
- A.2 The provisions of permit AC53-85261 are incorporated into this permit except for the following modifications:

Specific Conditions:

8. This plant may operate continuously, i.e., 8,760 hours per year.
11. This permit acknowledges that leaks of sulfur dioxide and sulfur trioxide, or other fugitive process emissions that do not pass through a stack, may occur as part of routine operations. Best operational practices to minimize these emissions shall be adhered to and shall include regular inspections and the prompt repair or correction of any leaks or other fugitive emissions. A portable industrial vacuum unit equipped with classification and air filtering equipment or equivalent shall be used to rejuvenate the existing catalyst. Spent catalyst shall be disposed of in an environmentally sound manner.
12. Mulberry Phosphates, Inc. shall submit a complete application for permit to operate the sulfuric acid plant, which must include an emissions test report, to the Southwest District at least 90 days prior to the expiration date of this construction permit. If the compliance tests are conducted at a plant operating rate of less than 90 percent of the permitted capacity (1,700 TPD), then any permit to operate issued for the plant shall restrict maximum production to not more than 10 percent above the production rate that existed during the compliance tests. Mulberry Phosphates may continue to operate this sulfuric acid plant, if it is in compliance with all conditions of this construction permit, until its expiration date or until the expiration date of any permit to operate that is issued for this source.
13. Upon obtaining a permit to operate, Mulberry Phosphates, Inc. will be required to submit quarterly excess emissions reports (40 CFR 60.7) and annual operation reports which shall include, as a minimum, the annual production and a recent emissions test report, to the Southwest District. A copy of the excess emissions report shall be sent to the Bureau of Air Regulation.

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Mulberry Phosphates, Inc.
Mulberry Plant
PSD-FL-238 and 1050048-002-AC
Polk County

The applicant proposes to increase the annual hours of operation of its sulfuric acid plant production from 8400 hours per year to 8760 hours per year. The sulfuric acid plant is permitted to produce 1700 tons per day (TPD) of 100 percent sulfuric acid. The plant is located at Mulberry Phosphate's Mulberry fertilizer manufacturing facility on SR 60, 1 mile east of Mulberry in Polk County, Florida.

The proposed project will increase emissions of sulfur dioxide (SO₂) and sulfuric acid mist (SAM) by more than the applicable Prevention of Significant (PSD) significant emission rates. The project is therefore subject to PSD review in accordance with Rule 62-212.400, Florida Administrative Code (F.A.C.).

The BACT review is part of the PSD review requirements in accordance with Rule 62-212.410, F.A.C.

Date of Receipt of a BACT Application: January 31, 1997.

Date Application Complete: March 14, 1997.

The BACT determination requested by the applicant is presented below:

<u>Control Technology</u>	Double Absorption/Fiber Mist Eliminators
<u>Pollutant</u>	<u>Emission Limits</u>
SO ₂	4 lbs/ton of 100% H ₂ SO ₄ produced
Sulfuric Acid Mist	0.15 lb/ton of 100% H ₂ SO ₄ produced
Visible Emissions	10% opacity

Basis of Review:

This determination was based upon input from the applicant, EPA Region IV, and the Department's Bureau of Air Regulation.

BACT Determination Procedure:

In accordance with Chapter 62-212, F.A.C., Air Pollution, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other state.
- (d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

BACT Determined by the Department:

Control Technology Double Absorption/Fiber Mist Eliminators

Pollutant **Emission Limits**

SO ₂	4.0 lbs/ton of 100% H ₂ SO ₄ produced
Sulfuric Acid Mist	0.15 lb/ton of 100% H ₂ SO ₄ produced
Visible Emissions	10% opacity

BACT Determination Rationale

The Department's BACT determination is the same as that proposed by the applicant, determination completed by other states, and Standards of Performance for Sulfuric Acid Plants, 40 CFR 60 Subpart H, (double absorption process). The process in itself is the control technology for SO₂. The emission limits reflect conversion efficiency of around 99.7% of SO₂ to H₂SO₄. High efficiency mist eliminators are considered BACT for sulfuric acid mist. A review of BACT/LAER Clearinghouse indicates that the double absorption technology and the use of high efficiency mist eliminators is representative of BACT using the top-down approach.

It is possible to achieve lower values by more frequent catalyst screening and replacement. Although such changes are probably feasible for new, refurbished or reconstructed plants, the Department considers such a requirement to be of marginal benefit for a slightly greater than four percent increase in hours of operation at an existing plant.

Environmental Impact Analysis

The impact analysis for the BACT determination is based on the request for continuous operation (8,760 hours/year). The increase in annual hours of operation results in a less than significant increase in annual SO₂ impacts in both the PSD Class II and Class I areas. There will be no increase in short-term SO₂ emission rates.

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Conclusion


The incremental impact and the ambient air quality impact from SO₂ emissions due to the proposed modification is in compliance with all air pollution regulations. The impacts associated with the proposed increase in annual hours of operation support the Department's determination that the emission limits established herein represent BACT.

Details of the Analysis May be Obtained by Contacting:

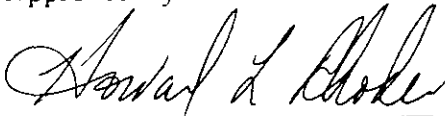
Cleve Holladay, Permit Engineer
A.A. Linero, P.E. Administrator
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

Approved By:



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



Howard L. Rhodes, Director
Division of Air Resources Management

August 6, 1997
Date:

August 6, 1997
Date:

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. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.	
3. Article Addressed to: Robert Stewart Mulberry Phosphates P O Drawer 797 Mulberry, FL 33860		4a. Article Number P 265 659 246	
		4b. Service Type <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified <input type="checkbox"/> Express Mail <input type="checkbox"/> Insured <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> COD	
		7. Date of Delivery 8-8-97	
5. Received By: (Print Name)		8. Addressee's Address (Only if requested and fee is paid)	
6. Signature (Addressee or Agent) X <i>[Signature]</i>			

Thank you for using Return Receipt Service.

PS Form 3811, December 1994 Domestic Return Receipt

P 265 659 246

US Postal Service
Receipt for Certified Mail

No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to	Robert Stewart
City, Street & Number	Mulberry Phosp.
Post Office, State, & ZIP Code	Mulberry, 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	8-6-97
1050048-002-AC PSD-FL-238	

PS Form 3800, April 1995

Memorandum

Florida Department of Environmental Protection

KIM

TO: Howard L. Rhodes

THRU: Clair Fancy *act for CWF*
Al Linero *Ref 7/20*

FROM: Cleve Holladay *CH*

DATE: July 30, 1997

SUBJECT: Mulberry Phosphates, Inc./Mulberry Facility/Sulfuric Acid Plant
Permit No. 1050048-002-AC/PSD-FL-238

Attached for your approval and signature is a letter that will modify the provisions of construction permit number AC53-85261 (PSD-FL-106), which expired on July 1, 1986, and reissue this permit as Permit No. 1050048-002-AC (PSD-FL-238). Mulberry Phosphates, Inc., requested an annual increase in hours of operation of their existing sulfuric acid plant. The proposed modification will increase the hours of operation of this source from 8400 per year to 8760 per year. The annual hours of operation for this sulfuric acid plant have previously been limited to correspond to a typical facility-wide two week annual shut down. However, a well-operated plant now typically operates for more than one year after its periodic maintenance shutdowns. This request for continuous operation of the sulfuric acid plant is similar in nature to other industry wide practices, and will result in a less than significant air quality impact. Because past actual to future potential SO₂ emissions increase by 268 TPY, PSD review was required. The expected increase, however, is only about 42 TPY.

I recommend your approval and signature.