Golder Associates Inc.

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

September 11, 2007

0637643

Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Attention: Mr. Scott M. Sheplak, P.E.

RE: MOSAIC FERTILIZER, LLC
PROJECT NO. 0570008-055-AC
BEST AVAILABLE RETROFIT TECHNOLOGY – RIVERVIEW FACILITY
REQUEST FOR ADDITIONAL INFORMATION

Dear Mr. Sheplak:

Mosaic Fertilizer, LLC (Mosaic) has received the Florida Department of Environmental Protection's (FDEP) request for additional information (RAI) dated August 9, 2007, regarding the best available retrofit technology (BART) for the Riverview Facility. Each of the FDEP's requests is answered below, in the same order as they appear in the RAI letter. Please note that information presented in the revised application and in this RAI response supersedes information presented in Mosaic's January 2007 BART Determination Analysis and the first RAI.

Comment 1. **In the Golder Associates Inc. response dated July 9, 2007 to item 1.a., the equation for calculating theoretical absorption (conversion) efficiency was provided. Theoretical absorption efficiencies were calculated using this equation for emission limitations of 3.5 and 4.0 lb SO_2/ton H_2SO_4. Are actual absorption (conversion) efficiencies calculated by each sulfuric acid plant (SAP)? If so, please provide recent values.**

Response: Item No. 1.a. of the response dated July 9, 2007 explained and provided the equation to be used to calculate the conversion efficiency and simply provided two examples – one at 4 pounds of sulfur dioxide per ton of 100-percent sulfuric acid (lb SO_2/ton H_2SO_4) and one at 3.5 lb SO_2/ton H_2SO_4. The actual conversion efficiencies are not calculated or recorded. However, records of daily actual lb SO_2/ton H_2SO_4 are available and the actual conversion efficiency can be calculated from these records using the same equation. Since the actual 24-hour average SO_2 emission rate is always less than 3.5 lb SO_2/ton H_2SO_4, the actual conversion efficiency is always higher than 99.73 percent.

Comment 2. **In the Golder Associates Inc. response dated July 9, 2007 to item 1.d., waste heat at the SAPs is recovered to an extent to generate electricity. What are the nominal electrical generation rates in MW (megawatts) for the generators at each SAP? In the response it was indicated that waste heat recovery reduces plume visibility. Are there any other techniques to further improve waste heat recovery or reduce plume visibility?**

Response: There are two generators at each SAP, rated at 35 kilowatts (KW) and 36 KW, respectively. Waste heat recovery does contribute to reduce plume visibility. However, increasing the efficiency of waste heat recovery will not reduce the plume temperature by much as the system is already operating at optimum design conditions. A reduction of the plume temperature by a few degrees is not

expected to reduce the plume visibility significantly. Also, plume visibility has nothing to do with the regional haze issues or visibility impacts in the Class I areas. In fact, higher plume temperature will be favorable to plume dispersion and reduced pollutant concentration and is directly proportional to reduced visibility impacts in the Class I area. So reducing the plume temperature is not in the best interest of the visibility impacts in the Class I areas.

Comment 3. **To follow up on the comment from the Golder Associates Inc. response dated July 9, 2007 to item 2.a., is the facility proposing to use the installed SO_2 continuous emissions monitoring systems (CEMS) to demonstrate compliance with the SO_2 emission standards and limitations for each SAP?**

Response: The SAPs at the Riverview facility have SO_2 CEMS and the current compliance method for 24-hour average SO_2 emissions is to calculate and keep daily records of average daily lb SO_2/ton H_2SO_4 produced and perform annual stack tests using EPA Method 8. Mosaic proposes to use the same compliance method for the BART 24-hour average SO_2 limit.

Comment 4. **In the Golder Associates Inc, response dated July 9, 2007 to item 2.b., Monsanto was referenced as submitting a cost quote in Appendix D. In Appendix D, a copy of a cost quote was submitted from MECS, Inc. Who is "MECS, Inc."? Please provide a copy of the signed cost quote.**

Response: MECS, Inc. is Monsanto Enviro-Chem Systems Inc. The original cost quote prepared in 2004 for a similar facility is not available. When Monsanto was contacted by the other facility, they sent the letter dated March 14, 2007 confirming the original cost.

Comment 5. **When did the Nos. 3 & 4 MAP Plant and South Cooler, (Emission Unit Identification number (EU ID No.) -022, -023 & -024) shutdown?**

Response: The Nos. 3 and 4 MAP Plants and the South Cooler were shut down in September 2004. A request has been made in the construction permit application dated June 2007 to remove these units from the Title V permit.

Comment 6. **The following are comments to item 10. in the letter from Golder Associates Inc. dated July 9, 2007. In the original BART application the cost effectiveness of installing an ammonia scrubbing system on SAP Nos. 7, 8, & 9 ranged from $2,260 - $2,560 per ton of SO_2 removed. The Department considers this to be very low for a typical BACT determination. In the additional information dated July 9, 2007, a revised cost quote was provided which caused an adjustment of the cost effectiveness to now range from $4,440 - $5,300 per ton of SO_2 removed. The revised range is within a typical BACT determination.**

In the original and revised proposed BART, Golder Associates Inc. on Mosaic's behalf indicated that the addition of retrofit technology is "*not cost effective*" (too expensive) with "*minimal or insignificant visibility improvements.*" In addition, a reduction of the proposed SO_2 emissions 24-hour standard to a 3-hour standard for the SAPs would result in "*a reduction in production rate.*" Also, a reduction in the visible emissions limit for the SAPs from 10% to 5% would leave "*no room for operational flexibility.*"

In the original BART application it was noted that the cost of DAP/MAP would increase by $1.50 per ton because of the installation of an ammonia scrubbing system under the "depressed" market. Market conditions for DAP appear to be very strong now having changed substantially the past 3 months. The price of DAP on the market has increased 37% or by $91 per tonne, up from $247 per tonne to $338 per tonne according to the news release dated July 30, 2007 on Mosaic's web site. A cost increase of $1.50 due to the installation of an ammonia scrubbing system appears to be a fraction of this market price increase.

a. Are there any reconsiderations by Mosaic to the proposed BART because of these recent market conditions?

Response: Although current market conditions are favorable, these conditions are subject to change and may again be depressed, based on the 10-year history of the industry. Based on the revised cost calculation, the annualized cost of control has gone up from $3 million reported before to $5.9–$6.9 million, which is almost $3.5 per ton of production based on a theoretical 2 million tons of annual production. Also, the cost effectiveness in terms of dollar per ton of SO_2 removal is very high, ranging from $4,400 to $5,300. The cost of visibility improvement was also found to be extremely high, between $30 and $32 million per deciview of visibility improvement. Based on these high cost effectiveness figures in terms of dollar per ton of SO_2 removal and dollar per deciview of visibility improvement, Mosaic does not consider an ammonia scrubbing system to be cost-effective for BART. It is also noted that BACT determinations are for a different purpose than BART, and that BACT does not necessarily represent BART. The BART determination is based on factors different than BACT.

In response to item 10., it was indicated that the SAP Nos. 7, 8, & 9 began operations in 1961, 1965 and 1974 respectively. This means these plants are 46, 32 and 23 years old respectively. A remaining useful life of 20 years was used in calculating the annualized costs. A longer remaining useful life would result in a lower annualized cost thus lowering the cost effectiveness numbers, the $ ton pollutant removed.

b. Is it realistic to use a longer "remaining useful life"?

Response: The SAPs 7, 8, and 9 are actually 46, 42, and 33 years old, respectively, according to their start-of-operation dates. The 9.5-year time period was provided to Mosaic by EPA as the appropriate amortization period for BACT analysis in the New Source Review (NSR) enforcement context.

Comment 7. **Comment and response to item 11. in the letter from Golder Associates Inc. dated July 9, 2007. As part of the response a copy of the originally submitted Owner/Authorized Representative Statement [Page 4 of DEP Form No. 62-210.900(1) - Form] dated 01/31/07 and signed by Mr. Jeff Stewart, Environmental Superintendent was resubmitted. The Department requires the Statement for the subject application to be from either a corporate officer or the plant manager or an authorized person. Please submit either the new Statement signed by the plant manager or an authorization letter from the plant manager designating Mr. Stewart.**

Response: Mr. Jeff Stewart is the current authorized representative of the Riverview facility. A letter of designation was submitted to the Department in 2006 (see letter, attached).

Comment 8. **Comment and response to item 12. in the letter from Golder Associates Inc. dated July 9, 2007. Thank you for providing select emission unit information pages of the application form for the affected sulfuric acid plant (SAP) numbers (Nos.) 7, 8 and 9. As previously indicated, additional pages of the application form are required. The following additional pages of the DEP Form No. 62-210.900(1) need to be completed for these emissions units:**

a. Emissions Unit Control Equipment, Page 15;

b. Emissions Unit Capacity Information, Page 16;

c. Visible Emissions Information, Page 23; and,

d. Continuous Monitor Information, Page 24.

The General Facility information page, Page 7, also needs to be submitted.

Response: The requested pages were not originally provided because there are no changes to the information provided in these pages of the application form. Nevertheless, the requested pages are provided in Appendix A.

Comment 9. **Comment and response to item 14. in the letter from Golder Associates Inc. dated July 9, 2007. Thank you for providing the application form (Appendix F) in quadruplicate. An additional 3 copies of Golder Associates Inc. letter dated July 9, 2007 and the supporting documentation specifically, Appendices A - E and Table 5-3 need to be provided.**

Response: The additional requested copies are attached in Appendix B.

Comment 10. **The purpose of the federal BART regulations is to improve visibility in certain areas of the country. By making no actual air pollutant reductions and continuing current operations as they are there are no improvements to visibility from this facility's contributions.**

a. Are there any air pollutant reductions being proposed by the Mosaic-Riverview Facility? If so, please quantify the reductions in tons per year (TPY) and indicate whether they are potential or actual emission reductions.

Response: BART is an important provision of the federal regional haze rule, which is designed to improve visibility in the Class I areas. BART applies only to certain old emissions units and the BART determination is based on several factors – available retrofit control options, existing control equipment, costs of compliance, remaining useful life, energy and non-air-quality environmental impacts, and visibility improvement. All of these factors were considered for the BART determination of the Mosaic Riverview BART-eligible emissions units, and based on either the high cost of compliance or negligible amount of visibility improvement possible, no additional control technology is proposed for these units. The existing emission limits for these units are also proposed as the BART emission limits for these units.

Air Dispersion Modeling Items

Comment 11. Comment and response to item 16. in the letter from Golder Associates Inc. dated July 9, 2007 states that permitted emission limits rather than available CEMs data was used for the BART sulfur dioxide analysis. According to the modeling protocol, if CEMs data is available, that is what should be used. Please use available CEMs data for your sulfur dioxide analysis.

Response: The CEMS data graphs provided with the RAI response letter dated July 9, 2007 for each of the Riverview SAPs clearly show that the 24-hour average SO_2 emissions in lb SO_2/ton H_2SO_4 is less than the permit limit of 3.5 lb SO_2/ton H_2SO_4. Emission rates used in the BART analysis are based on the permit allowable emission rates of 3.5 lb SO_2/ton H_2SO_4. Therefore emission rates higher than the rates allowed for modeling were used, resulting in higher baseline impacts and lower visibility cost effectiveness in terms of dollars per deciview, both of which are on the conservative side. Using the maximum 24-hour average rates from CEMS data, the 8th-highest visibility impacts were determined using the new IMPROVE equation and are presented in Table 1, attached. It can be seen that the visibility impacts have decreased and the cost-effectiveness values for visibility improvement have increased.

Comment 12. Referring to the responses for items 17. and 18. in the letter from Golder Associates Inc. dated July 9, 2007, no electronic spreadsheets have been submitted. Please submit all electronic spreadsheets and any additional modeling files to the Department.

Response: It is our understanding that modeling files were sent directly to Mr. Cleve Holladay. A ZIP file containing the requested spreadsheets and modeling files is attached to the electronic version (e-mail) of this letter.

Thank you for consideration of this information. If you have any questions, please do not hesitate to call me at (352) 336-5600.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff, P.E., Q.E.P.
Principal Engineer

Salahuddin Mohammad
Staff Engineer

SKM/DB/nav

Enclosures

cc: D. Turley, Mosaic
D. Jagiella, Mosaic
D. Jellerson, Mosaic
S. Mohammad, Golder

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Table 1
Mosaic Riverview - Revised Visibility Impacts Based on Actual 24-hr Average SO_2 Emission Rates
8th Highest Impacts of the SAPs

Source	Allowable SO_2 Emission Rate (lb/hr)	Emission Rate Used in BART Modeling (lb/hr)	Actual Emission Rate From CEMS Data [a] (lb/ton H_2SO_4)	(lb/hr)	Modeled Visibility Impact [b] (dv)	Impact Based on Actual Emissions (dv)	95% Reduction in Visibility (dv)	Annualized Cost [c] ($)	Visibility Cost Effectiveness ($/dv)
No. 7 SAP	467.0	467.0	3.33	439.0	0.223	0.206	0.010	$6,518,785	$33,310,092
No. 8 SAP	393.8	393.8	3.42	382.0	0.187	0.174	0.009	$5,904,913	$35,722,402
No. 9 SAP	495.8	495.8	3.36	476.0	0.228	0.220	0.011	$6,914,964	$33,085,952

[a] CEMS data for SAP No. 7, SAP No. 8 and SAP No. 9 are from 10/18/04, 12/19/04, and 4/13/02, respectively.

[b] From Table 3-5, BART Determination Report for Mosaic Riverview, January 31, 2007.

[c] Annualized Cost, Tables 5-3 (Revised 7/5/07), RAI Response Letter dated July 9, 2007.

Mosaic

Mosaic Fertilizer, I
8813 Highway 41 . h
Riverview, FL 33569
www.mosaicco.com

Tel 813-677-9111

Via Certified Mail 7003 2260 0004 7571 3382

June 21, 2006

Ms. Mara Grace Nasca
District Air Program Administrator
Southwest District
Florida Department of Environmental Protection
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

RE: Mosaic Riverview, Facility ID No. 0570008
Responsible Official Notification

Dear Ms. Nasca:

Attached is a completed form adding me as a responsible official for the referenced facility. Other responsible officials and contacts currently on file with the Department are correct.

If you have any questions, please call me at 813-671-6369.

Sincerely,

Jeffrey M Stewart

Jeffrey M. Stewart
Environmental Superintendent

Cc: Diana Lee – EPCHC, Certified 7003 2260 0004 7571 3375
File P-05-01

Department of
Environmental Protection

Division of Air Resource Management

RESPONSIBLE OFFICIAL NOTIFICATION FORM

Note: A responsible official is not necessarily a designated representative under the Acid Rain Program. To become a designated representative, submit a certificate of representation to the U.S. Environmental Protection Agency (EPA) in accordance with 40 CFR Part 72.24.

Identification of Facility

1. Facility Owner/Company Name: Mosaic Fertilizer, LLC	
2. Site Name: Riverview Facility	3. County: Hillsborough
4. Title V Air Operation Permit/Project No. *(leave blank for initial Title V applications)*: 0570008	

Notification Type *(Check one or more)*

☐ **INITIAL:** Notification of responsible officials for an initial Title V application.

☐ **RENEWAL:** Notification of responsible officials for a renewal Title V application.

x **CHANGE:** Notification of change in responsible official(s).
Effective date of change in responsible official(s) Jan. 1, 2006

Primary Responsible Official

1. Name and Position Title of Responsible Official: E. O. Morris, Vice President

2. Responsible Official Mailing Address:
Organization/Firm: Mosaic Fertilizer, LLC,
Street Address: P. O. Box 2000
City: Mulberry State: FL Zip Code: 33860

3. Responsible Official Telephone Numbers:
Telephone: (863) 428 - 6415 Fax: (863) 428 - 2676

4. Responsible Official Qualification *(Check one or more of the following options, as applicable)*:

[x] For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

[ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

[ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

[ ] The designated representative at an Acid Rain source.

5. Responsible Official Statement:

I, the undersigned, am a responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this notification. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this notification are true, accurate and complete. Further, I certify that I have authority over the decisions of all other responsible officials, if any, for purposes of Title V permitting.

Signature Date

Additional Responsible Official

1. Name and Position Title of Responsible Official: Jeffrey M. Stewart, Environmental Superintendent

2. Responsible Official Mailing Address:
Organization/Firm: Mosaic Fertilizer, LLC
Street Address: 8813 U. S. Highway 41, South
City: Riverview State: FL Zip Code: 33569

3. Responsible Official Telephone Numbers:
Telephone: (813) 671 - 6369 Fax: (813) 671 - 6149

4. Responsible Official Qualification *(Check one or more of the following options, as applicable)*:

[x] For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

[ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

[ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

[ ] The designated representative at an Acid Rain source.

Additional Responsible Official

1. Name and Position Title of Responsible Official:

2. Responsible Official Mailing Address:
Organization/Firm:
Street Address:
City: State: Zip Code:

3. Responsible Official Telephone Numbers:
Telephone: ( ) - Fax: ( ) -

4. Responsible Official Qualification *(Check one or more of the following options, as applicable)*:

[ ] For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

[ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

[ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

[ ] The designated representative at an Acid Rain source.

APPENDIX A

FACILITY INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number:
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336-5600** ext.**545** Fax: **(352) 336-6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

   I, the undersigned, hereby certify, except as particularly noted herein, that:*

   (1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

   (2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

   (3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

   (4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

   (5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

   David A. Buff — Signature
   9/12/07 — Date

   (seal)

* Attach any exception to certification statement.
** **Board of Professional Engineers Certificate of Authorization #00001670**

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **362.9** North (km) **3082.5**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **27 / 51 / 28** Longitude (DD/MM/SS) **82 / 23 / 15**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **28**	6. Facility SIC(s): **2874**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Jeff Stewart, Environmental Superintendent**
2. Facility Contact Mailing Address... Organization/Firm: **Mosaic Fertilizer, LLC** Street Address: **8813 U.S. Highway 41 South** City: **Riverview** State: **FL** Zip Code: **33569**
3. Facility Contact Telephone Numbers: Telephone: **(813) 671-6369** ext. Fax: **(813) 671-6149**
4. Facility Contact Email Address: **jeff.stewart@mosaicco.com**

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official Email Address:

EMISSIONS UNIT INFORMATION
Section [1]
BART - SAP No. 7

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Sulfuric Acid Plant - Double Absorption Process

Mist Eliminator - High Velocity

2. Control Device or Method Code(s): **44, 14**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **3,200 TPD 100% H2SO4**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE test using EPA Method 9**	
5. Visible Emissions Comment: **40 CFR 60.83 and Rule 62-296.402(20(a), Permit No. 0570008-025-AC/PSD-FL-250.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE40**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **40** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: **30** min/hour	
4. Method of Compliance: **Annual VE test using EPA Method 9**	
5. Visible Emissions Comment: **Permit No. 0570008-045-AV. Applies to periods of startup only.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **1** of **2**

1. Parameter Code: **EM**	2. Pollutant(s): **SO2**
3. CMS Requirement:	☒ Rule Other
4. Monitor Information... Manufacturer: **Ametek** Model Number: **4600B**	Serial Number: **7566**
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60.84, Title V Permit No. 0570008-045-AV.**	

Continuous Monitoring System: Continuous Monitor **2** of **2**

1. Parameter Code: **EM**	2. Pollutant(s): **O2**
3. CMS Requirement:	☒ Rule Other
4. Monitor Information... Manufacturer: **Ametek** Model Number: **CEM/O2**	Serial Number: **C132271-1**
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Sulfuric Acid Plant - Double Absorption Process

Mist Eliminator - High Velocity

2. Control Device or Method Code(s): **44, 14**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **2,700 TPD 100% H_2SO_4**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE test using EPA Method 9**	
5. Visible Emissions Comment: **40 CFR 60.83 and Rule 62-296.402(20(a), Permit No. 0570008-025-AC/PSD-FL-250.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE40**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **40 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: **30** min/hour	
4. Method of Compliance: **Annual VE test using EPA Method 9**	
5. Visible Emissions Comment: **Permit No. 0570008-045-AV. Applies to periods of startup only.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: **EM**	2. Pollutant(s): **SO2**
3. CMS Requirement:	☒ Rule Other
4. Monitor Information... Manufacturer: **Ametek/Dupont** Model Number: **40/460**	Serial Number: **4502**
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60.84, Title V Permit No. 0570008-045-AV.**	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Sulfuric Acid Plant - Double Absorption Process

Mist Eliminator - High Velocity

2. Control Device or Method Code(s): **44, 14**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **3,400 TPD 100% H2SO4**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE test using EPA Method 9**	
5. Visible Emissions Comment: **40 CFR 60.83 and Rule 62-296.402(20(a), Permit No. 0570008-025-AC/PSD-FL-250.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE40**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **40** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: **30** min/hour	
4. Method of Compliance: **Annual VE test using EPA Method 9**	
5. Visible Emissions Comment: **Permit No. 0570008-045-AV. Applies to periods of startup only.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: **EM**	2. Pollutant(s): **SO2**
3. CMS Requirement:	☒ Rule Other
4. Monitor Information... Manufacturer: **Ametek/Dupont** Model Number: **40/460** Serial Number: **4133**	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60.84, Title V Permit No. 0570008-045-AV.**	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

APPENDIX B

Golder Associates Inc.

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

July 9, 2007

063-7643

Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Attention: Mr. Scott M. Sheplak, P.E.

RE: MOSAIC FERTILIZER, LLC
PROJECT NO. 0570008-055-AC
BEST AVAILABLE RETROFIT TECHNOLOGY-RIVERVIEW FACILITY
REQUEST FOR ADDITIONAL INFORMATION

Dear Mr. Sheplak:

Mosaic Fertilizer, LLC (Mosaic) has received the Florida Department of Environmental Protection's (FDEP) request for additional information (RAI) dated March 1, 2007, regarding the best available retrofit technology (BART) for the Riverview Facility. Each of the FDEP's requests is answered below, in the same order as they appear in the RAI letter. Please note that information presented in the revised application and in this RAI response supersedes information presented in Mosaic's January 2007 BART Determination Analysis.

Comment 1. **The Department finds the applicant proposing the continued use of the double-absorption technology for the sulfuric acid plant (SAP) numbers (Nos.) 7, 8, and 9. All three plants also use a vanadium catalyst in the converters except that in the 4th pass of the SAP Nos. 8 and 9 a cesium promoted catalyst is used.**

a. **What are the current actual SO_2 absorption efficiencies at each SAP? In TABLE 5-2 an estimated efficiency of >99.7% was provided.**

Response: The conversion efficiency is calculated based on the amount of SO_2 emitted per ton of 100 percent H_2SO_4 production. For a 100-percent efficient system, all SO_2 would be converted and the SO_2 emissions would be 0. Therefore, the conversion efficiency is calculated as:

$$1-[SO_2(lb)/2{,}000 \times MW_{H2SO4}/MW_{SO2}] \times 100 \text{ percent}$$

This results in 99.69 percent for a 4-lb/ton 100-percent H_2SO_4 emission rate. For an emission rate of 3.5 lb/ton H_2SO_4, the absorption efficiency is 99.73 percent.

b. **The applicant did not propose using the cesium promoted catalyst in SAP No. 7.**

(i) **Can the cesium promoted catalyst be used in the SAP No. 7? If so, how much would it cost to use cesium promoted catalyst in SAP No. 7 and what would the associated SO_2 reductions be?**

Response: If cesium-promoted catalyst were applied in the fourth pass at SAP No. 7, then the costs would be approximately $7.50/liter for the catalyst itself and about $0.50/liter for labor to remove the old catalyst and to place the new, for a total of $8.00/liter. Cesium could replace standard catalyst up to the entire volume of the 4th catalyst bed, or 208,000 liters. If the full bed was to be replaced, the cost would be approximately $1.7 million.

Theoretically, if cesium-promoted catalyst is used, emissions could be reduced to 1.31 lb/ton. However, in this plant, the cold gas to gas heat exchanger is placed where any internal leakage would send unconverted SO_2 to the stack. Haldor Topsoe (catalyst supplier) modeled a 3-percent leak in this heat exchanger, which is not uncommon. In that case, emissions would be 3.67 lb/ton. In order to stay within permitted emission limits, the plant would have to cut production rate. If the leak were bad enough, a cold outage would have to be taken for repairs. Cold outages are best avoided since they subject equipment to damaging thermal expansion and contraction cycles.

(ii) Please provide detailed information on the current catalyst beds such as: a breakdown of the constituents in the beds; how much catalyst is used, in liters; and, the manufacturer(s) and catalogue number(s) of the catalysts.

Response: Pass 1 is 102,000 liters. Prior to 1999, 64,000 liters of old catalyst was used in this pass, which was likely a mixture of Monsanto and Topsoe catalyst, with perhaps some BASF as well. The 38,000 liters installed in 1999 was new Topsoe VK38. Since then, catalyst installed as makeup for screening losses has also been Topsoe VK38.

Pass 2 is 112,000 liters. In 1999, 71,000 liters were old catalyst of unknown manufacture and 41,000 liters were new Topsoe VK38. Since then, the makeup catalyst has been Topsoe VK38.

Pass 3 is 154,000 liters. In 1999, 75,000 liters were old catalyst of unknown manufacture and 79,000 liters were a mixture of new Topsoe VK48 and Monsanto LP-110. Since then, makeup catalyst has been Topsoe VK48.

Pass 4 is 208,000 liters. In 1999, 172,000 liters were old catalyst of unknown manufacture and 36,000 liters were new Topsoe VK48. Since then, makeup catalyst has been Topsoe VK48.

(iii) Are any other catalysts available besides vanadium and cesium?

Response: Standard vanadium and cesium-promoted vanadium catalysts are believed to be the only viable commercial products at present. Platinum catalyst was used approximately 70 years ago, but is excessively expensive.

c. What type of acid mist removal system does each SAP use?

Response: All three SAPs at the Riverview plant use impaction-type glass fiber collection devices.

d. Do the SAPs recover waste heat? If so, what is the waste heat used for? Does waste heat recovery reduce plume visibility?

Response: All three SAPs at the Riverview plant recover waste heat, in the form of steam. The steam is used to power turbines that drive the process air compressors for the acid plants and electric generators. Low pressure steam exhausted from the turbines is used as a heat source in phosphates processing operations, principally for evaporation and for defluorination of phosphoric acid for animal

feed. Waste heat recovery does contribute somewhat to reduce plume visibility. It does so by cooling the gas entering the absorbing towers, which minimizes shock cooling of the gas and therefore reduces sub-micron mist generation.

e. What techniques are used to minimize emissions during startup, shutdown, and malfunction?

Response: Best operational practices are followed during startup, shutdown, and malfunction to minimize emissions. The *Memorandum of Understanding Regarding Best Operational Startup Practices for Sulfuric Acid Plants* from Title V Permit No. 0570008-045-AV is attached in Appendix A.

f. Please provide current detailed process flow diagrams for each SAP.

Response: Process flow diagrams for each SAP are presented in Appendix B.

Comment 2. The most recent Best Available Control Technology (BACT) issued by the Department in Permit Number PSD-FL-399 (0570005-019-AC) specified an SO_2 emission limit of 3.5 lb/ton 100% sulfuric acid (H_2SO_4) produced on a 3-hour rolling average demonstrated by the continuous emissions monitoring system (CEMS).

a. Are you proposing an SO_2 emission limit of 3.5 lb/ton 100% H_2SO_4 on a 24-hour average for each SAP?

Response: The existing SO_2 emission limit of 3.5 lb/ton 100 percent H_2SO_4 on a 24-hour average basis is proposed as the BART limit for each SAP.

b. Please provide the actual SO_2 emissions in lb/ton 100% H_2SO_4 from the previous 5 recent calendar years, e.g., 2001-2005, for each SAP. Provide the basis for the actual emissions, including the actual tons of 100% H_2SO_4 produced from each SAP and the actual CEMS data summaries in tons per year.

(i) Please include graphical representations of the 5 years of data from each SAP, e.g., actual lb/ton 100% H_2SO_4 with 3-hour & 24-hour averages versus the 4 lb/ton 100% H_2SO_4 3-hr average for each SAP.

Response: Graphs showing actual 3- and 24-hour average SO_2 emissions in lb/ton 100 percent H_2SO_4 and the actual tons of 100 percent H_2SO_4 produced for each SAP for the years since 2002 are presented in Appendix C.

(ii) How does the level of actual emissions in units of lb/ton 100% H_2SO_4 compare to the permit allowable in terms of a percentage (%) form each SAP for the different averaging periods?

Response: The graphs in Appendix C confirm that the actual 24-hour average SO_2 emissions comply with the permit allowable rate of 3.5 lb/ton 100 percent H_2SO_4 for each SAP. At permitted production rates, emissions are near the permit allowable rate. At reduced production rates, emissions are less than the permit allowable rate. As reflected by annual performance tests, emissions at production rates within

90 percent of the production limit from the last 2 years have ranged from 2.9 lb/ton to 3.8 lb/ton. (Table E-1)

(iii) Provide the dates of the turnarounds and the duration of the turnarounds for each SAP.

Response: The turnaround dates for the SAPs are listed below:

- SAP No. 7 – 4/15-4/30/02, 12/1-12/18/04, and mini 8/13-8/21/05.
- SAP No. 8 – 5/26-6/14/03, 8/13-9/12/04, and 4/24-5/7/05.
- SAP No. 9 – 1/14-1/24/02, 11/10-11/26/02, 3/14-4/10/04, and 9/18-9/30/06.

c. Please provide a cost estimate to comply with a 3.5 lb/ton 100% H_2SO_4 on a 3-hour average for each SAP.

Response: Mosaic has not conducted an analysis of the cost estimate to comply with a 3.5 lb/ton 100 percent H_2SO_4 emission limit on 3-hour average period. It would be burdensome to perform such an analysis. The most likely impact would be a reduction in production rate. The incremental cost of achieving such a limit would be high.

All three SAPs at Riverview currently have SO_2 emission limits of 3.5 lb/ton 100 percent H_2SO_4 on a 24-hour averaging time and the visibility impacts for the BART analysis are predicted on a 24-hour average basis. Appendix Y of 40 CFR Part 51, Guidelines for BART Determination the Regional Haze Rule explains that the 24-hour average actual emission rate from the highest emitting day of the meteorological period modeled should be used in the pre-control scenario of BART determination analysis. Therefore, the 24-hour average emission rate should be the focus in BART determination.

Comment 3. Ammonia scrubbing is included as an SO_2 emission control technology evaluated for BART.

a. The cost cited for the installation of one ammonia scrubber on one double absorption SAP is $8 million without a blower, mist eliminator and certain other items on page 5-7 of the application. Provide the ammonia scrubbing cost quote cited from 2004 on page 5-7, which supports the $8 million cited.

The original quote received from Monsanto in 2004 is no longer available and was provided to another company. Monsanto was contacted for verification of the cost figure on behalf of this other company and the response from Monsanto is attached in Appendix D, This shows that the order of magnitude cost for an ammonia scrubber would be about $8 million for a 2,750 TPD SAP.

b. TABLE 5-3 shows a more detailed breakdown of equipment costs. A cost of $9.4 million was referenced for the "absorber + packing + auxiliary equipment" based on the actual costs of ammonia scrubbers on single absorption SAPs at CF Industries as denoted by footnote "[b]". Provide the documentation used to support this actual cost cited. Show how the $9.4 million was calculated.

Response: Based on the revised cost quote from Monsanto, Table 5-3 was updated (see Appendix D). Since ammonia is already used at Riverview, the cost of the ammonia tank has been eliminated. However, included in this cost analysis are provisions for liquid waste storage and off-site disposal. The

ammonia scrubbing process will generate a dilute ammonium sulfate waste stream of about 65-percent water. This ammonium sulfate stream is too dilute to use in the MAP/DAP production due to certain market specifications. In addition, the capital recovery factor is based on the actual cost of money to Mosaic. Note that this cost is not intended to represent an actual cost, only an estimate.

As shown in Table 5-3 (see Appendix D), the cost effectiveness of the ammonia scrubbing option ranges between $4,440 and $5,300 per ton of SO_2 removed. The visibility improvement ranges from $30 million to $33 million per deciview reduction.

Comment 4. Good table, TABLE 5-2, summarizing SO_2 emission control technologies with a ranking by control efficiency. Please create a table to illustrate a summary of the costs in the BART analysis to show for each BART emissions unit: affected pollutant(s); the cost effectiveness to reduce each affected pollutant in $/ton; and, the cost tied to the reduction(s) in visibility in $/deciview (dv).

Response: The overall strategy followed in analyzing the BART control options for the Mosaic Riverview BART-eligible source (combination of all BART-eligible emissions units at the facility) was to follow the BART determination guidelines contained in 40 CFR 51, Appendix Y, in a way that makes the most practical sense with the overall goal of improving visibility.

Rule 62-296.340, F.A.C., requires that a BART evaluation be performed in accordance with the criteria of 40 CFR 51.308(e) and the procedures and guidelines in 40 CFR 51, Appendix Y, Guidelines for BART Determinations Under the Regional Haze Rule. According to the BART requirements, the degree of visibility improvement that would be achieved as a result of emissions reductions achievable from the BART-eligible source must be considered. Appendix Y describes the five basic steps of a BART analysis, where the fifth and final step is the evaluation of visibility impacts (visibility improvement determination). When making this determination, the permitting authority has flexibility in setting absolute thresholds, target levels of improvement, or deminimis levels since the deciview improvement must be weighed among the five factors. The permitting authority is free to determine the weight and significance to be assigned to each factor. (ref. pg. 39170, Federal Register, July 6, 2005.)

The following overall steps were followed in the BART determination analysis for the Mosaic Riverview BART-eligible emissions units:

- Determine the maximum impacts of the individual BART-eligible units and identify the degree of visibility improvement possible from the emissions unit;
- Determine the pollutant contributions to the maximum impact for each BART-eligible emission unit;
- Focus on the pollutant(s) that clearly dominates;
- Identify existing and in-use control technologies;
- For the emission units with significant impacts and for the pollutant that clearly dominates, conduct full-scale top-down BART analysis; and
- Select BART and propose emission rates.

The State of Florida has not set any bright line for visibility improvement from individual emissions units. Nonetheless, some reasonable level of visibility improvement should be deemed to be insignificant, not warranting further evaluation. This is particularly important for BART-eligible sources that have many BART-eligible emissions units, in order to reduce the time and expense of performing

the full BART control technology evaluation. As described further in the BART Control Technology Report, Mosaic has concluded that a control technology evaluation is not warranted for certain emissions units due to the insignificant visibility improvement that would result from applying any control technology.

The maximum visibility impacts of the Riverview source were presented in Table 3-3 of the BART determination report submitted to the FDEP in January 2007, which showed a maximum impact of 0.62 dv at the Chassahowitzka National Wilderness Area. Table 3-5 presented the individual unit visibility impacts and Table 3-6 showed the pollutant contributions for each unit. It can be clearly seen from these two tables that SAP Nos. 8, 9, and 10 are the dominating units and SO_2 is the most dominating pollutant for visibility impacts from these units. Therefore, the BART analyses for these units focused on the possibility of additional SO_2 controls from these units. The recently published "Okefenokee Group Contribution Assessment" by VISTAS also concludes that sulfate particles dominate light extinction most of the days and recommend focusing on reducing SO_2 emissions.

Visibility impacts due to other BART-eligible emission units at the Riverview facility were found to be almost 100 times less than the impacts from each of the SAPs. The maximum visibility impact due to the molten sulfur storage tanks or the pits was found to be 0.003 dv compared to about 0.2 dv from each of the SAPs. For such a small visibility improvement, consideration of any type of control technology after going through the steps of identifying control technologies, analyzing energy and other non-air quality environmental impacts, and analyzing cost of compliance makes little practical sense. It would be an unnecessary use of resources when the final outcome, the degree of visibility improvement, is already known to be so insignificant.

For the SAPs, there are no PM emissions and therefore PM was not addressed for the BART analysis for the SAPs. As presented in Table 2-12 of the BART protocol, SO_2 emissions from the SAPs are significantly higher than the NO_x emissions, and as shown in Table 3-6 of the BART determination report, sulfate particles contribute between 99 and 100 percent of the visibility impacts from the SAPs. As a result, additional control technologies for NO_x emissions from the SAPs were also not considered. Also, based on the low-baseline NO_x emissions and the high cost of post-combustion NO_x control technologies, the average cost effectiveness will be much higher for an insignificant amount of visibility improvement.

Step-by-step BART analysis was conducted for SO_2 emissions from the SAPs and was described in Section 5.1 of the BART determination report submitted in January 2007. A revised Table 5-3 has been included in Appendix D, including the cost effectiveness for each SAP and the $/dv visibility improvement cost effectiveness for each SAP. The revised Table 5-3 uses the current cost estimate of $8 million for an ammonia scrubber for a 2,750 TPD SAP at another facility. As shown in Table 5-3, the annual cost for applying ammonia scrubbing to the SAPs ranges from $30 million to $33 million per deciview reduction.

Comment 5. **Florida has a specific rule regulating Sulfur Storage and Handling Facilities, Rule 62-296.411, Florida Administrative Code. Does this rule contain anything which could presumptively be considered to be BART for the molten sulfur storage tanks and pits identified as BART emission units?**

Response: As explained in Comment 4, maximum visibility impacts due to the molten sulfur storage tanks and pits at the Riverview facility were found to be only 0.003 dv, an insignificant amount compared to the impacts due to the SAPs. Sections 5.3 and 5.4 of the BART determination report described BART strategy for the molten sulfur storage tanks and pits, respectively. As explained in these sections, PM emissions from the pits are already controlled by a wet scrubber. According to Permit No. 0570008-045-AV and per Rule 62-296.411(1)(c), F.A.C., the scrubber has a sulfur particulate emission limit of

0.03 grain per dry standard cubic feet (gr/dscf), which is also proposed as BART PM emissions limit for the tanks. The pits are currently not controlled, although they are equipped with covers. Use of the covers is proposed as BART for the molten sulfur storage pits.

Nitrogen Oxides (NO_x)

Comment 6. Please provide more information on the BART analysis for NO_x on the SAPs. Section 5.2 does not address any proposed specific emission limitations, specific potential control technologies, specific cost effectiveness considerations, and resulting impacts.

Response: As explained in the overall BART analysis strategy in the response to Comment 4, NO_x emissions contributed to less than 1 percent of the visibility impacts for each SAP. As presented in Table 2-12 of the BART determination report, baseline NO_x emissions considered in modeling from the SAPs at Riverview are only between 13.5 and 17 lb/hr. Post combustion NO_x control technologies such as selective catalytic reduction (SCR) or selective non-catalytic reduction (SNCR) are expensive and the average cost effectiveness will be very high to remove such a small quantity of NO_x. Based on the facts that cost effectiveness will be very high, there are no known NO_x control technologies employed at SAPs, and the visibility improvement possible is insignificant, NO_x control technologies were not considered in the BART analysis for SAPs. Proposed BART for NO_x emissions for each of SAP Nos. 7, 8, and 9 is the existing combustion process and good combustion practice. Since no NO_x control technologies are proposed, specific emission limits are also not proposed.

Comment 7. In TABLE 2-12 maximum 24-hour average emission rates were provided for NO_x emissions from each SAP as part of the air modeling protocol. NO_x emissions were estimated to be 16.0, 13.5, and 17.0 lb/hour for SAP Nos. 7, 8, and 9, respectively. Provide an estimate of NO_x emissions in terms of lb/ton 100% H_2SO_4 for each SAP.

Response: NO_x emissions in terms of lb/ton 100 percent H_2SO_4 can be estimated by dividing the NO_x emissions in lb/hr by the production capacity of the respective SAP. NO_x emissions of 16.0, 13.5, and 17.0 lb/hr for SAP Nos. 7, 8, and 9, respectively, can be expressed as 0.12 lb/ton 100 percent H_2SO_4 for each of the SAPs. Production capacity for SAP Nos. 7, 8, and 9 are 3,200 TPD; 2,700 TPD; and 3,400 TPD, respectively.

Particulate Matter less than 10 microns (PM_{10})

Comment 8. Please provide the actual visible emission (VE) test results from the previous 5 recent calendar years, e.g., 2001-2005, for each SAP in a table summary. Include the actual tons of 100% H_2SO_4 produced from each SAP during the VE tests.

a. Please include graphical representations of the 5 years of data from each SAP, e.g., actual VE versus the permit allowable, e.g., 10% opacity for each SAP.

(i) How does the level of actual emissions compare to the permit allowable in terms of a percentage (%) from each SAP?

Response: VE test data for each SAP are presented in Appendix E and because all test results are zero, a graphical representation was not made.

b. Please provide a cost estimate to comply with a 5% VE for each SAP.

Response: Visible emissions (VE) from the SAPs result from SO_2, NO_x, and sulfuric acid mist emissions. As explained in Comment 6, NO_x emissions are small and will not be controlled further. The SO_2 and sulfuric acid emissions are currently controlled to BACT levels. Additional controls of these pollutants are not cost effective as explained in the BART determination report. VE from the SAPs are currently limited to 10 percent. A 5 percent limit is too stringent and leaves no room for operational flexibility. It is also difficult to judge between 5 percent and 10 percent opacity. A cost analysis for a 5-percent VE therefore was not attempted. The VE test data shown for the SAPs in Appendix E show 0 percent opacity for each SAP.

Emission Unit Applicability Items

Comment 9. The list of proposed BART eligible emission units identified in the Department's draft list (copy enclosed) was compared to what was in the application submission. Several emission units were not included in the application, specifically, Nos. 3 & 4 MAP Plant and South Cooler, (Emission Unit Identification number (EU ID No.) -022, -023 & -024), Phosphoric Acid Production System (EU ID No. -073) and Phosphogypsum Stack I (EU ID No. -104). Please explain further.

Response: It was explained in Section 2.0 of the BART determination report that the Nos. 3 and 4 MAP Plants and the South Cooler have been permanently shut down and a request has been made with the FDEP to remove the units from the Title V permit. Therefore, these units were not included in the BART analysis. The Phosphoric Acid Production System (EU ID 073) and the Phosphogypsum Stack I (EU ID 104) are not sources of NO_x, SO_2, or PM emissions, and therefore were not included in the BART analysis.

Comment 10. On page 5-9 of the BART application a remaining useful life of 20 years was used for the BART capital cost recovery. In what year did each SAP begin operations?

Response: SAP Nos. 7 and 8 began operating in approximately 1961 and 1965, respectively. SAP No. 9 began operating in 1974.

Comment 11. The Department requires a properly completed Owner/Authorized Representative Statement [Page 4 of FDEP Form No. 62-210.900(1) – Form]. The Department requires an original signature and date; the submission appeared to be a photocopy. The owner or authorized representative needs to sign this statement. The owner is typically a corporate officer or the plant manager. A letter of authorization may be submitted by the owner to duly designate other persons.

Response: An original of the RO signature page is attached in Appendix F.

Comment 12. The Department requires a properly completed application form for the affected emission units, specifically the Facility Information section and Emissions Unit Information section [see Pages 3, 7-12, and 13-28 of DEP Form No. 62-210.900(1) – Form]. Please submit the completed pages.

Response: The application pages are submitted in Appendix F.

Comment 13. **The detailed calculations for the Riverview Facility could not be located in APPENDIX A of the submission, please provide.**

Response: Appendix A of the BART determination report contains the BART modeling protocol, which is a combined protocol for all the BART-eligible Mosaic facilities. A detailed BART eligibility analysis, stack parameters, and emission rates for the Riverview facility can be found in Tables 2-2, 2-7, and 2-12 of the protocol, respectively.

Comment 14. **Submit any additional updates to the application and supporting documentation in quadruplicate as required by Rule 62-4.050(2), F.A.C.**

Response: Updated application pages from FDEP Form No. 62-210.900(1) are presented in Appendix F.

Air Dispersion Modeling Items

Comment 15. **Section 2.0 of the BART application states that the Nos. 3 and 4 MAP Plants at the South Cooler have been permanently shut down. Does this shutdown include EU ID No. -024, South Cooler?**

Response: Yes, the correct description should have been "Nos. 3 and 4 MAP plants and the South Cooler".

Comment 16. **Section 2.0 of the BART application states that 24-hour emission limits for EU ID Nos. -004, -005, and -006 were used for this BART analysis. Is there CEMS data available for SO_2? According to the modeling protocol, permitted emission limits should only be used if there is no CEMS or stack test data.**

Response: Yes, CEMS data for SO_2 emissions are available, which are presented in Appendix C. Stack test data for the SAPs are presented in Appendix E. The permitted emission units used in the modeling provided conservative impacts.

Comment 17. **The modeling disk submitted to the Department includes spreadsheets for the New IMPROVE equation for the BART Determination modeling results. Please submit these spreadsheets for the base case or exemption cases.**

Response: The IMPROVE spreadsheets are submitted electronically.

Comment 18. **The New IMPROVE spreadsheets include data from CALPOST (Ranked Daily Visibility Change). Please submit the CALPOST files for all units (total) subject to BART for the Determination modeling so Ranked Daily Visibility Change can be verified. The files submitted to the Department only included the base cases.**

Response: The CALPOST files are submitted electronically.

Thank you for consideration of this information. If you have any questions, please do not hesitate to call me at (352) 336-5600.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff

David A. Buff, P.E., Q.E.P.
Principal Engineer

CB/DB/all

Enclosures

cc: D. Turley, Mosaic
D. Jagiella, Mosaic
D. Jellerson, Mosaic
S. Mohammad, Golder

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APPENDIX A

MEMORANDUM OF UNDERSTANDING REGARDING BEST OPERATIONAL START-UP PRACTICES FOR SULFURIC ACID PLANTS

These Sulfuric Acid Plant Best Operation Start-Up Practices will be made available in the control room at all times.

a. Only one sulfuric acid plant at a facility shall be started up and burning sulfur at a time. There are times when it will be acceptable for more than one sulfuric acid plant to be in the start-up mode at the same time, provided the following condition is met. It is not acceptable to initiate sulfur burning at one sulfuric acid plant when another plant at the same facility is emitting SO_2 at a rate in excess of the emission limits imposed by the permit or rule, as determined by the CEMs emission rates for the 20 minutes immediately preceding the initiation of sulfur burning.

b. A plant start-up must be at the lowest practicable operation rate, not to exceed 70 percent of the designated operation rate, until the SO_2 monitor indicates compliance. Because production rate is difficult to measure during start-up, if a more appropriate indicator (such as blower pressure, furnace temperature, gas strength, blower speed, number of sulfur guns operating, etc.) can be documented, tested and validated, the Department will accept this in lieu of directly documenting the operation rate. Implementation requires the development of a suitable list of surrogate parameters to demonstrate and document the reduced operating rate on a plant-by-plant basis. Documentation that the plant is conducting start-up at the reduced rate is the responsibility of the owner or operator.

c. Sulfuric acid plants are authorized to emit excess emissions from start-up for a period of three consecutive hours provided best operational practices, in accordance with this agreement, to minimize emissions are followed. No plant shall be operated (with sulfur as fuel) out of compliance for more than three consecutive hours. Thereafter, the plant shall be shut down. The plant shall be shut down (cease burning sulfur) if, as indicated by the continuous emission monitoring system, the plant is not in compliance within three hours of start-up. Restart may occur as soon as practicable following any needed repairs or adjustments, provided the corrective action is taken and properly documented.

d. Cold Start-Up Procedures.

(1) Converter.

(i) The inlet and outlet temperature at the first two masses of catalyst shall be sufficiently high to provide immediate ignition when SO_2 enters the masses. In no event shall the inlet temperature to the first mass be less than 800°F or the outlet temperature to the first two masses be less than 700°F. These temperatures are the desired temperatures at the time the use of auxiliary fuel is terminated.

(ii) The gas stream entering the converter shall contain SO_2 at a level less than normal, and sufficiently low to promote catalytic conversion to SO_3.

(2) Absorbing Towers.

The concentration, temperature and flow of circulating acid shall be as near to normal conditions as reasonably can be achieved. In no event shall the concentration be less than 96 percent H_2SO_4.

e. Warm Restart.

(1) Converter.

The inlet and outlet temperatures of the first two catalyst masses should be sufficiently high to ensure conversion. One of the following three conditions must be met:

(i) The first two catalyst masses inlet and outlet temperatures must be at a minimum of 700°F; or

(ii) Two of the four inlet and outlet temperatures must be greater than or equal to 800°F; or

(iii) The inlet temperature of the first catalyst must be greater than or equal to 600°F and the outlet temperature greater than or equal to 800°F. Also, the inlet and outlet temperatures of the second catalyst must be greater than or equal to 700°F. Failure to meet one of the above conditions, requires use of cold start-up procedures. To allow for technological improvements or individual plant conditions, alternative conditions will be considered by the Department in appropriate cases.

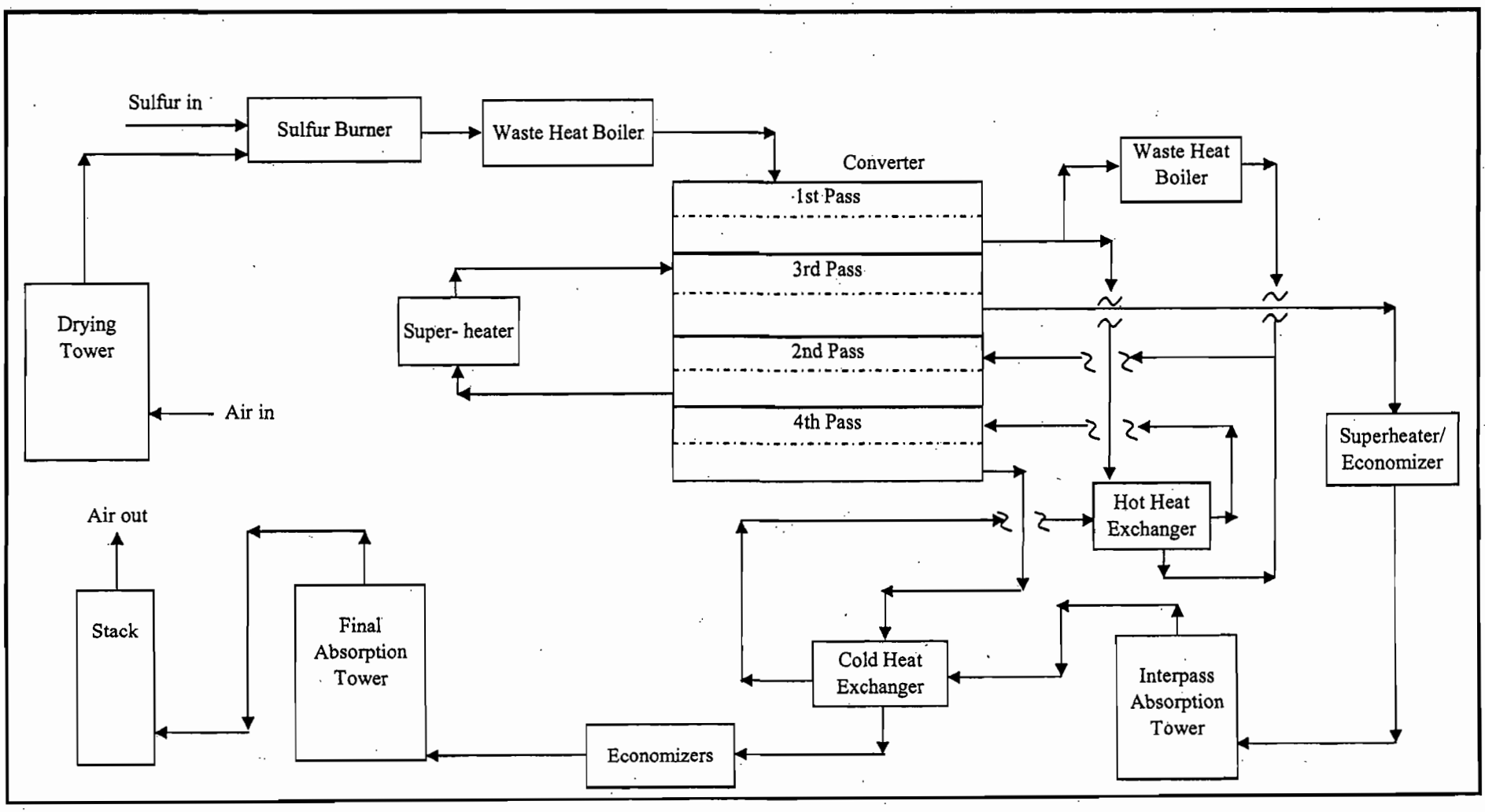
(2) Absorbing Towers.

The concentration, temperature and flow of circulating acid shall be as near to normal conditions as reasonably can be achieved. In no event shall the concentration be less than 96 percent H_2SO_4.

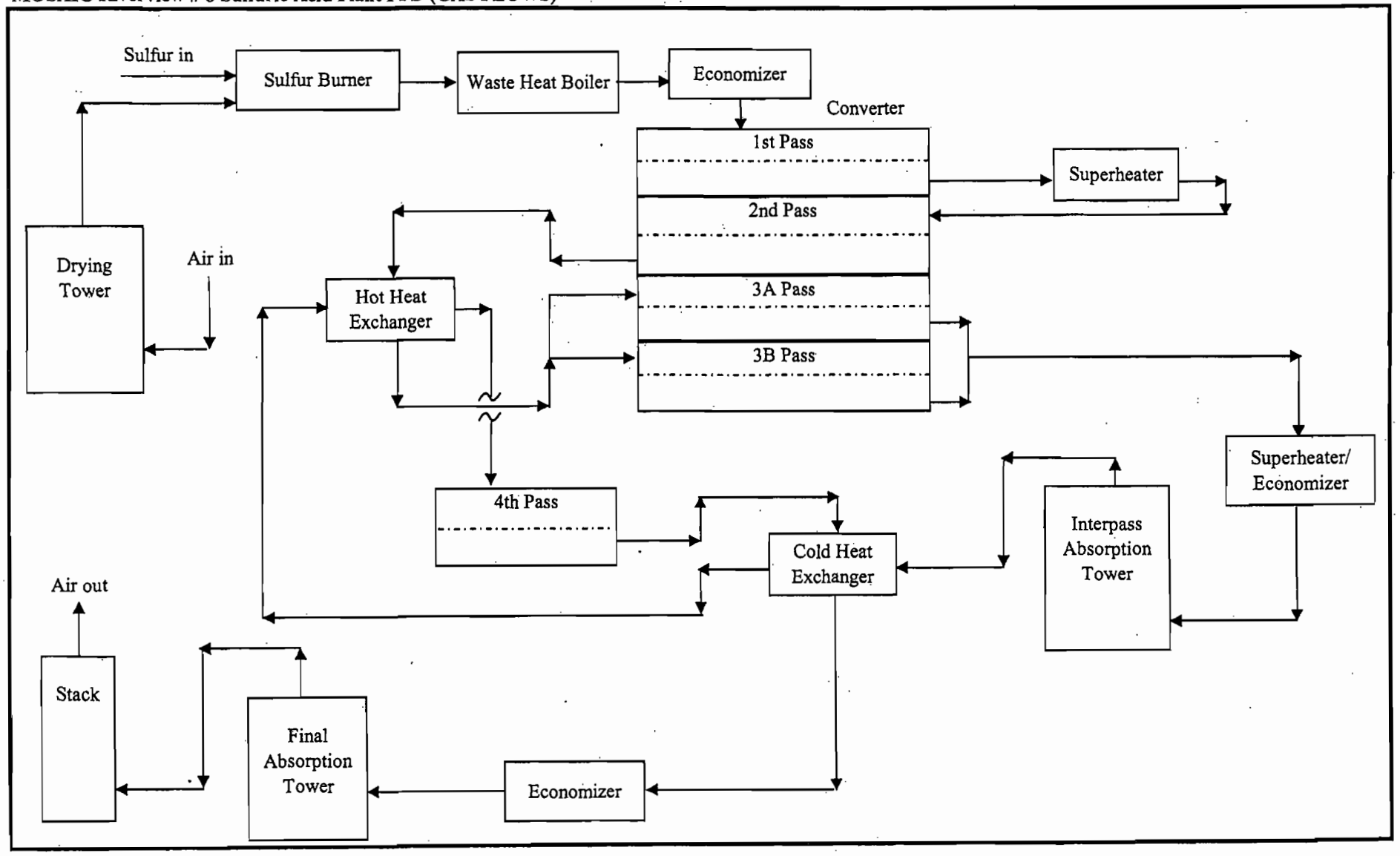
[Air Construction Permits AC29-241660/PSD-FL-209 and 0570008-025-AC/PSD-FL-250]

APPENDIX B

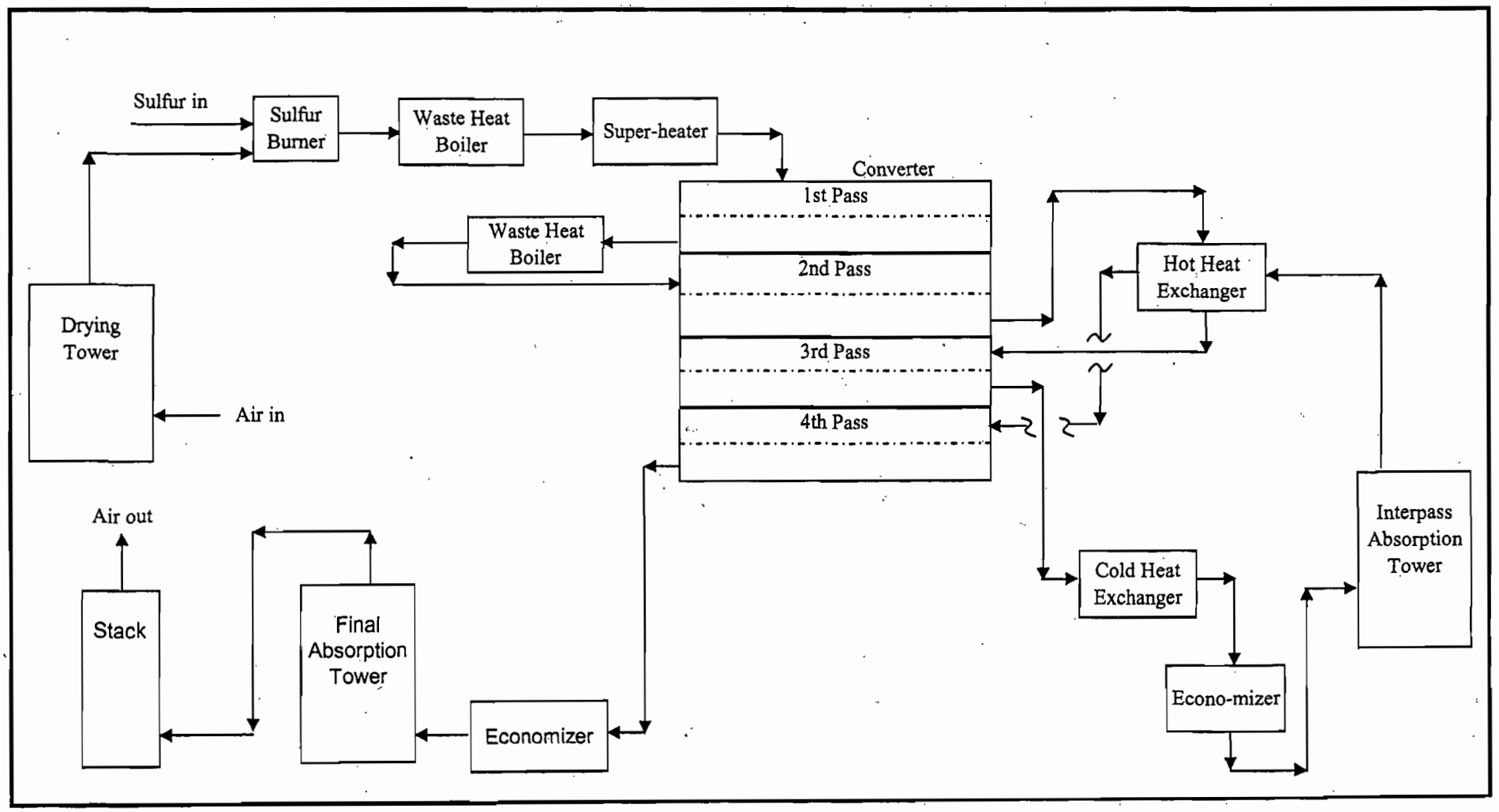
Appendix B-1
MOSAIC Riverview # 7 Sulfuric Acid Plant PFD (GAS FLOWS)



Appendix B-2
MOSAIC Riverview # 8 Sulfuric Acid Plant PFD (GAS FLOWS)



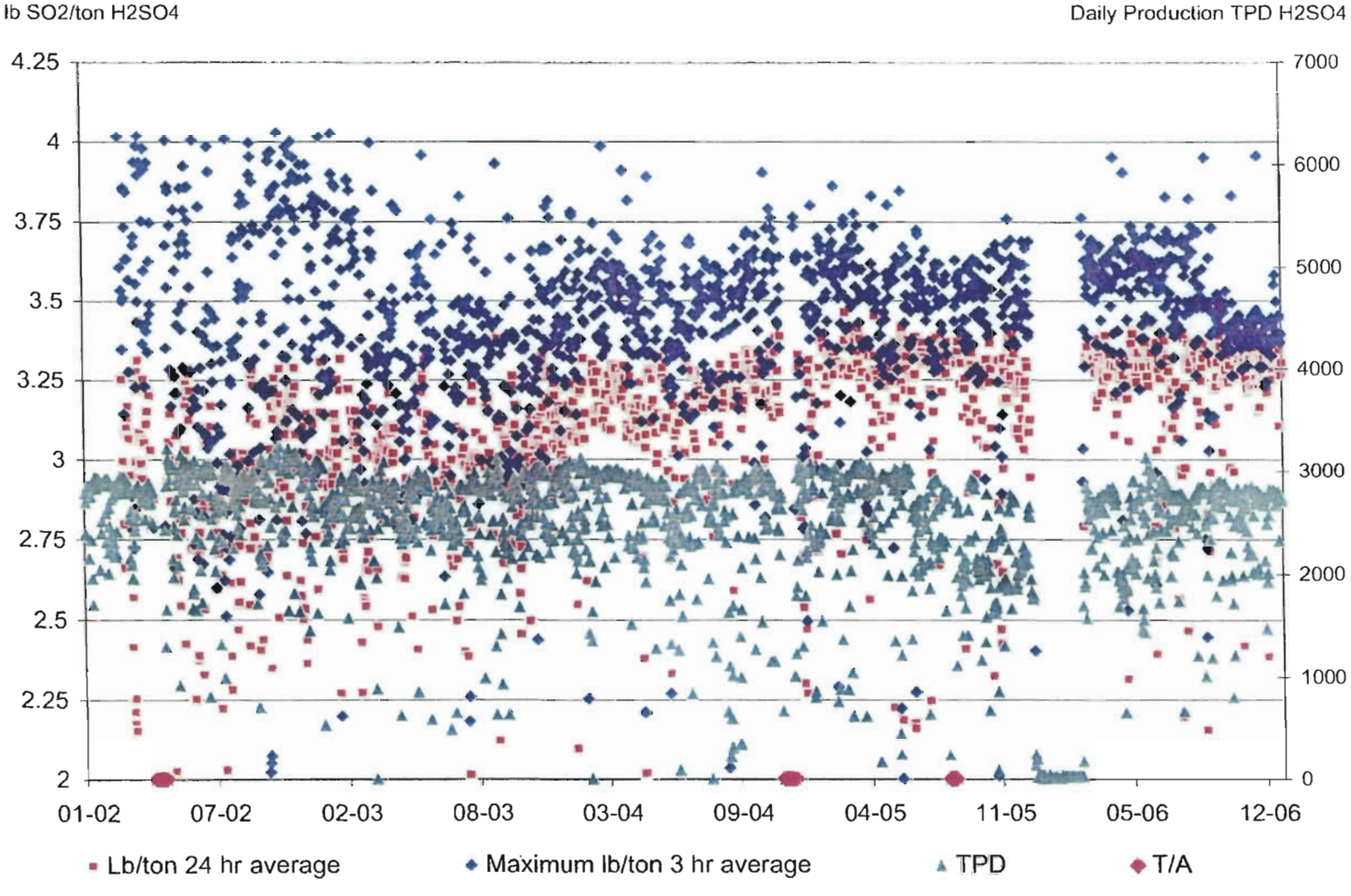
Appendix B-3
MOSAIC Riverview # 9 Sulfuric Acid Plant PFD (GAS FLOWS)



APPENDIX C

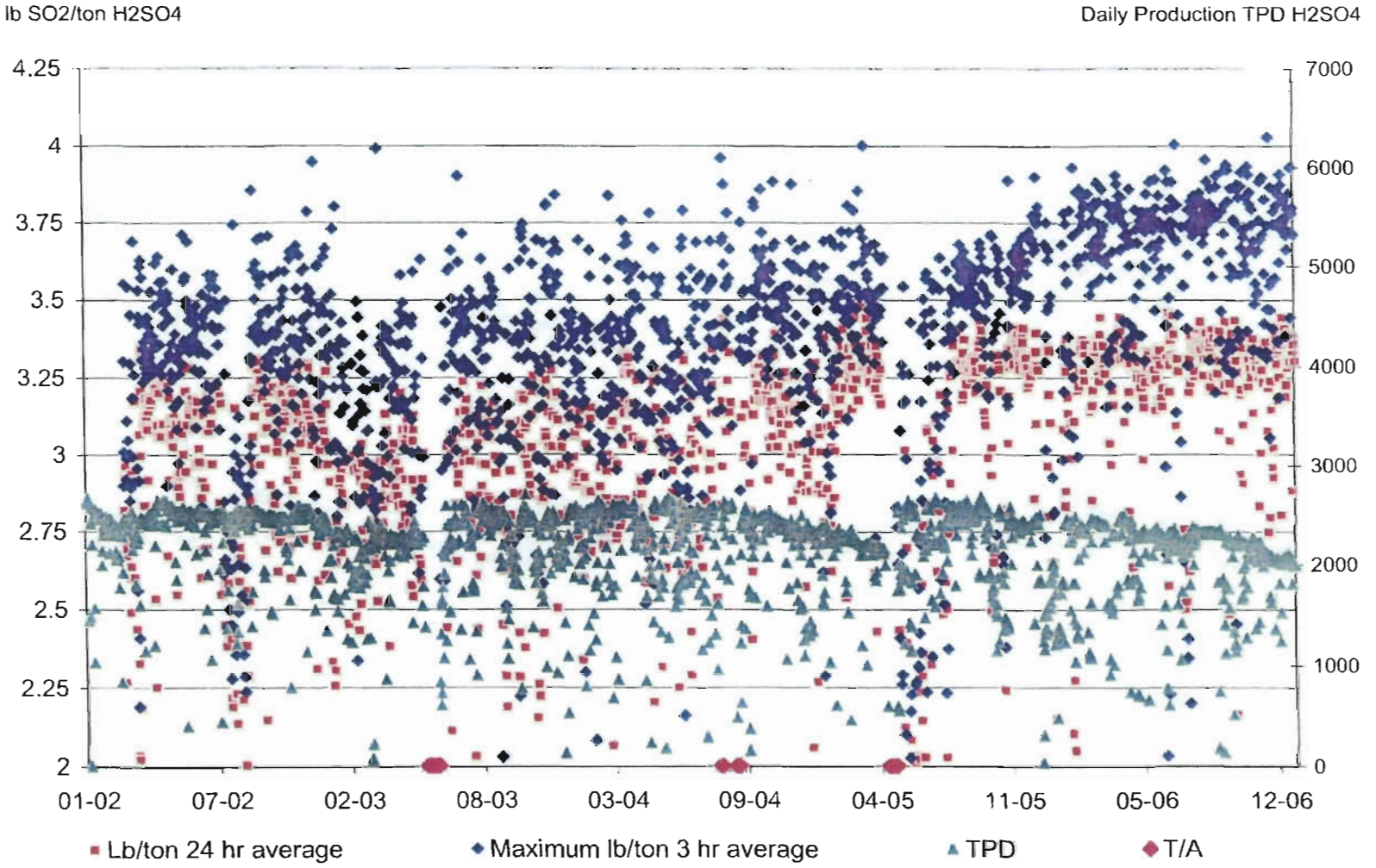
RIVERVIEW SAP 07

24-HR AVERAGE AND 3-HR MAXIMUM LB SO_2/TON H_2SO_4 AND DAILY H_2SO_4 PRODUCTION

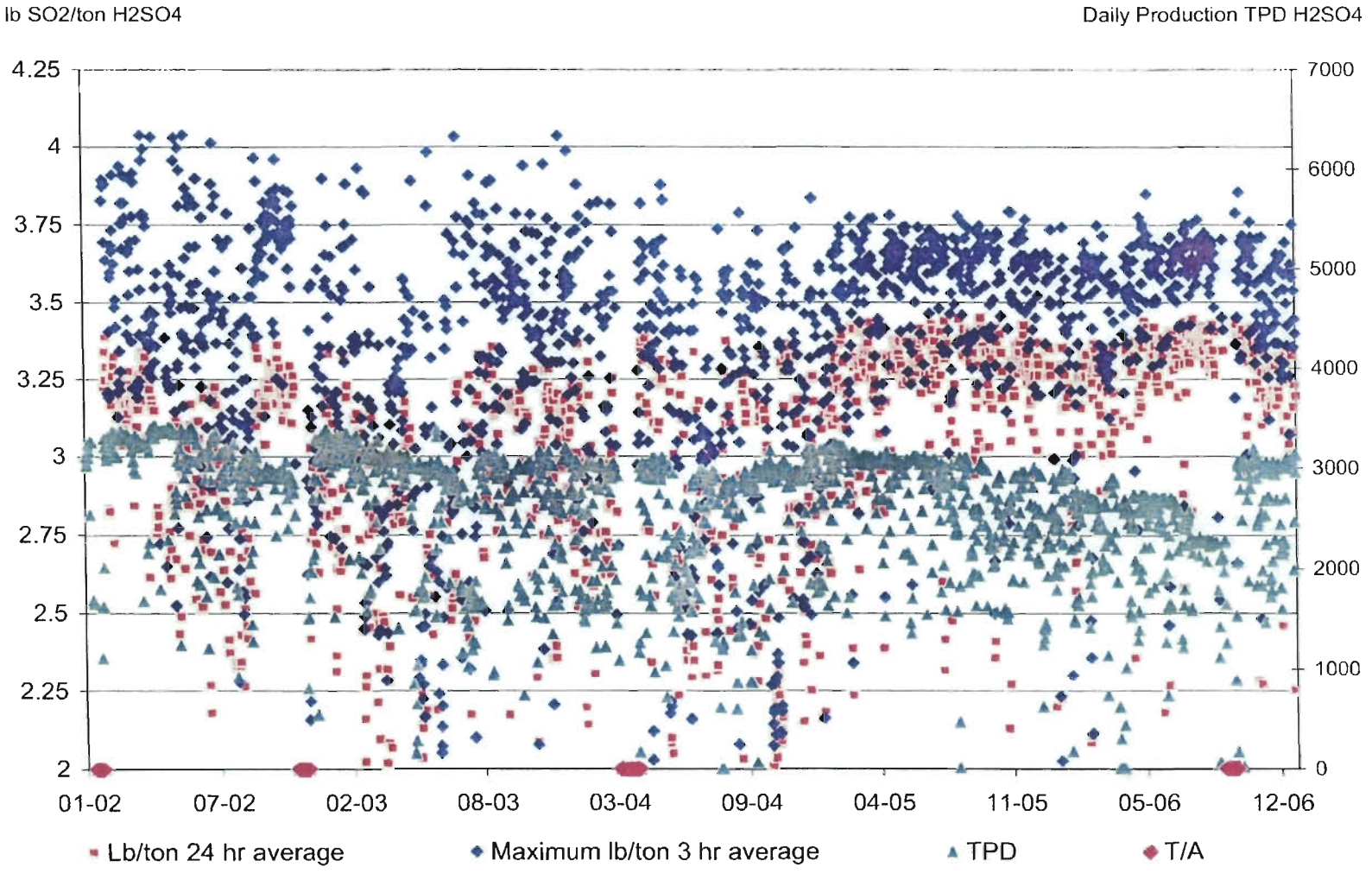


Notes:
TPD: tons per day.
T/A: turn around.

RIVERVIEW SAP 08
24-HR AVERAGE AND 3-HR MAXIMUM LB SO_2/TON H_2SO_4 AND DAILY H_2SO_4 PRODUCTION



RIVERVIEW SAP 09
24-HR AVERAGE AND 3-HR MAXIMUM LB SO_2/TON H_2SO_4 AND DAILY H_2SO_4 PRODUCTION



APPENDIX D

MECS, INC.
14522 South Outer Forty Rd.
Chesterfield, MO 63017
314-275-5700
314-275-5701 FAX
www.mecsglobal.com

March 14, 2007

Mr. Randy Charlot
CF Industries, Inc.
P.O. Drawer "L"
Plant City, FL 33565

Randy,

The OOM for an ammonia scrubber for C or D plant at 2750 STPD would run about $8M per plant. This is just for the scrubber battery limits and does not include any storage or costs for piping the ammonia / ammonia sulfate to and from C or D plant.

Regards,

John Horne
MECS
Office Ph: 314-275-5812
Mobile Ph: 314-616-0082
Fax Ph: 314-275-5918
Email: john.r.horne@mecsglobal.com

TABLE 5-3
ESTIMATED COST EFFECTIVENESS OF AMMONIA SCRUBBING ON MOSAIC RIVERVIEW SAP NOS. 7, 8, OR 9
(Revised 7/5/07)

Cost Items	Cost Factors[a]	Ammonia Scrubber System Cost ($) SAP No. 7	SAP No. 8	SAP No. 9
DIRECT CAPITAL COSTS (DCC):				
Purchased Equipment Cost (PEC)				
Absorber + packing + auxiliary equipment	Vendor quote of $8 MM for 2,750 TPD SAP	9,481,481	8,000,000	10,074,074
New Blower	100,000 SCFM for providing 30"	296,296	250,000	314,815
Mist eliminator	~50 candles	355,556	300,000	377,778
Ammonia storage tank	not necessary	0	0	0
Two ammonium sulfate storage tanks	Vendor quote	600,000	600,000	600,000
Instrumentation	10% of EC	1,073,333	915,000	1,136,667
Freight	5% of EC	536,667	457,500	568,333
Taxes	6.25% Sales Tax	670,833	571,875	710,417
Total PEC:		13,014,167	11,094,375	13,782,083
Direct Installation Costs				
Vendor quote	Included	0	0	0
Items excluded from vendor quote:				
Foundations & Supports	12% of PEC (blower, mist elim., storage tanks)	150,222	138,000	155,111
Handling & Erection	40% of PEC (blower, mist elim., storage tanks)	500,741	460,000	517,037
Piping	30% of PEC (blower, mist elim., storage tanks)	375,556	345,000	387,778
Electrical/Insulation/Painting	3% of PEC (blower, mist elim., storage tanks)	37,556	34,500	38,778
Total Direct Installation Costs		1,064,074	977,500	1,098,704
Total DCC (PEC + Direct Installation):		14,078,241	12,071,875	14,880,787
INDIRECT CAPITAL COSTS (ICC):				
Engineering	10% of PEC	1,301,417	1,109,438	1,378,208
Construction and field expenses	10% of PEC	1,301,417	1,109,438	1,378,208
Contractor Fees	10% of PEC	1,301,417	1,109,438	1,378,208
Startup	1% of PEC	130,142	110,944	137,821
Performance test +	1% of PEC	130,142	110,944	137,821
Total ICC:		4,164,533	3,550,200	4,410,267
PROJECT CONTINGENCY (Retrofit):	25% of DCC+ICC	4,560,694	3,905,519	4,822,763
TOTAL CAPITAL INVESTMENT (TCI):	DCC + ICC + Project Contingencies	22,803,468	19,527,594	24,113,817
DIRECT OPERATING COSTS (DOC):				
(1) Operating Labor				
Operator	12 hr/day, $30/hr, 365 days/yr	131,400	131,400	131,400
Supervisor	15% of operator cost	19,710	19,710	19,710
(2) Maintenance				
Labor	2 hr/shift, $40/hr, 2 shifts/day	58,400	58,400	58,400
Materials	100% of maintenance labor	58,400	58,400	58,400
(3) Operating Materials				
Ammonia	0.53 ton NH_3/ton SO_2, $325/ton	224,097	240,461	254,241
(4) Liquid Waste Disposal [c]	5.9 ton Amm. Sulfate sol./ton SO_2, $77/ton[c]	561,492	602,493	637,019
(5) Electricity - Operating	$0.07/kWh, 700 kW, 8760 hr/yr	429,240	429,240	429,240
Total DOC:		1,482,739	1,540,104	1,588,410
INDIRECT OPERATING COSTS (IOC):				
Overhead	60% of oper. labor & maintenance	295,204	305,023	313,291
Property Taxes	1% of total capital investment	228,035	195,276	241,138
Insurance	1% of total capital investment	228,035	195,276	241,138
Administration	2% of total capital investment	456,069	390,552	482,276
Total IOC:		1,207,343	1,086,126	1,277,843
CAPITAL RECOVERY COSTS (CRC):	CRF of 0.1679 times TCI (9.5 yrs @ 10%)	3,828,702	3,278,683	4,048,710
ANNUALIZED COSTS (AC):	DOC + IOC + CRC	6,518,785	5,904,913	6,914,964
BASELINE SO_2 EMISSIONS (TPY) :	Highest actual emissions in 2002-2003	1,301.0	1,396.0	1,476.0
CONTROLLED SO_2 EMISSIONS (TPY) :	95% Reduction	65.1	69.8	73.8
REDUCTION IN SO_2 EMISSONS (TPY):	Baseline - Controlled	1,236.0	1,326.2	1,402.2
COST EFFECTIVENESS:	$ per ton of SO_2 Removed	5,274	4,453	4,932
BASELINE VISIBILITY IMPACT (dv) :[d]	Table 3-6, Highest from 2001-2003	0.223	0.187	0.228
CONTROLLED VISIBILITY IMPACT (dv) :	Assume 95% based on reduction in SO_2	0.011	0.009	0.011
REDUCTION IN VISIBILITY IMPACT (dv) :	Baseline - Controlled	0.212	0.178	0.217
COST EFFECTIVENESS OF VISIBILITY REDUCTION ($/dv) :	AC/Reduction in visibility	30,770,756	33,239,026	31,925,040

Footnotes:

[a] Unless otherwise specified, factors and cost estimates reflect OAQPS Cost Manual, Section 5, Sixth edition.

[b] Based on Monsanto cost estimate for 2,750 TPD SAPs at CF Industries, FL.

[c] Based on molecular weights, ammonium sulfate MW = 128; SO_2 MW = 64. Solution is 34% ammonium sulfate. 128/63/0.34 = 5.9.

[d] Baseline visibility impacts are from Table 3-6 of the BART determination report (January 2007).

APPENDIX E

TABLE E-1
SUMMARY OF RECENT EMISSION TESTS AT THE SAP PLANTS, MOSAIC RIVERVIEW FACILITY

Unit	Test Date	Average Process Rate (TPH H_2SO_4)	H_2SO_4 Mist Emissions (lb/ton of 100% acid)					SO_2 Emissions (lb/ton of 100% acid)				
			Run 1	Run 2	Run 3	Average	Allowable	Run 1	Run 2	Run 3	Average	Allowable
Sulfuric #7	02/10/00		0.026	0.037	0.032	0.03	0.15	4.0	4.0	4.0	4.0	4
Sulfuric #7	03/08/01	126	0.026	0.021	0.024	0.02	0.15	3.1	2.6	2.5	2.8	4
Sulfuric #7	03/21/02	119	0.030	0.049	0.044	0.04	0.12	2.8	2.6	2.3	2.5	4
Sulfuric #7	06/04/02		0.023	0.022	0.023	0.02	0.12	3.1	3.0	2.5	2.9	4
Sulfuric #7	04/17/03	128	0.028	0.029	0.064	0.04	0.15	2.7	2.9	2.9	2.9	4
Sulfuric #7	05/12/04	122	0.033	0.038	0.037	0.04	0.15	3.9	3.7	3.8	3.8	4
Sulfuric #7	04/14/05	125	0.042	0.036	0.036	0.04	0.12	3.7	3.4	3.6	3.6	4
Sulfuric #7	04/03/06	116	0.018	0.034	0.021	0.02	0.12	3.5	3.7	3.8	3.7	4
Sulfuric #7	07/06/06	119	0.047	0.039	0.047	0.04	0.12	3.4	3.3	3.3	3.3	4
Sulfuric #7	02/22/07	118	0.014	0.015	0.036	0.02	0.12	3.3	3.2	3.2	3.2	4
Sulfuric #8	01/08/02	110	0.028	0.032	0.037	0.03	0.15	3.8	4.0	3.6	3.8	4
Sulfuric #8	01/30/03	98	0.034	0.014	0.043	0.03	0.15	3.3	3.3	3.4	3.3	4
Sulfuric #8	02/06/04	109	0.023	0.023	0.026	0.02	0.15	3.8	3.5	3.4	3.6	4
Sulfuric #8	Feb 9&11/2005	97	0.063	0.063	0.042	0.06	0.15	3.7	3.7	3.7	3.7	4
Sulfuric #8	06/24/05	107	0.050	0.044	0.048	0.05	0.15	3.1	2.8	2.9	2.9	4
Sulfuric #8	01/31/06	110	0.024	0.023	0.035	0.03	0.15	3.7	3.7	2.9	3.4	4
Sulfuric #8	01/24/07	92	0.049	0.051	0.045	0.05	0.15	3.9	4.0	3.5	3.8	4
Sulfuric #9	12/20/00		0.014	0.022	0.024	0.02	0.15	1.3	2.4	2.5	2.1	4
Sulfuric #9	01/10/02	133	0.024	0.033	0.029	0.03	0.15	3.1	3.2	3.2	3.2	4
Sulfuric #9	02/10/03	135	0.013	0.045	0.039	0.03	0.15	2.7	3.0	3.0	2.9	4
Sulfuric #9	05/06/04	131	0.035	0.045	0.035	0.04	0.15	3.4	3.4	3.0	3.3	4
Sulfuric #9	02/09/06	130	0.024	0.018	0.013	0.02	0.15	3.1	2.8	2.7	2.9	4
Sulfuric #9	03/08/07	136	0.015	0.013	0.014	0.01	0.15	3.1	3.1	3.0	3.1	4

TABLE E-2
SUMMARY OF RECENT VISIBILITY EMISSION (VE) TESTS AT THE SAP PLANTS, MOSAIC RIVERVIEW FACILITY

Unit	Test Date	Average Process Rate (TPH H_2SO_4)	Visible Emissions Evaluation					
			Average Opacity for Highest Period, %	Average Opacity for Highest 24 Consecutive Readings, %	Range of Opacity Readings Minimum, %	Range of Opacity Readings Maximum, %	Average Opacity, %	Highest Six Minute Interval, %
Sulfuric #7	2/10/2000		0	0	0	0	0	0
Sulfuric #7	3/8/2001	126	0	0	0	0	0	0
Sulfuric #7	3/21/2002	119	0	0	0	0	0	0
Sulfuric #7	6/4/2002		0	0	0	0	0	0
Sulfuric #7	4/17/2003	128	0	0	0	0	0	0
Sulfuric #7	5/12/2004	122	0	0	0	0	0	0
Sulfuric #7	4/14/2005	125	0	0	0	0	0	0
Sulfuric #7	4/3/2006	116	0	0	0	0	0	0
Sulfuric #7	7/6/2006	119	0	0	0	0	0	0
Sulfuric #7	2/22/2007	118	0	0	0	0	0	0
Sulfuric #8	1/8/2002	110	0	0	0	0	0	0
Sulfuric #8	1/30/2003	98	0	0	0	0	0	0
Sulfuric #8	2/6/2004	109	0	0	0	0	0	0
Sulfuric #8	2/9&11/2005	97	0	0	0	0	0	0
Sulfuric #8	6/24/2005	107	0	0	0	0	0	0
Sulfuric #8	1/31/2006	110	0	0	0	0	0	0
Sulfuric #8	1/24/2007	92	0	0	0	0	0	0
Sulfuric #9	12/20/2000		0	0	0	0	0	0
Sulfuric #9	1/10/2002	133	0	0	0	0	0	0
Sulfuric #9	2/10/2003	135	0	0	0	0	0	0
Sulfuric #9	5/6/2004	131	0	0	0	0	0	0
Sulfuric #9	2/9/2006	130	0	0	0	0	0	0
Sulfuric #9	3/8/2007	136	0	0	0	0	0	0

APPENDIX F

FACILITY INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number:
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336-5600** ext.**545** Fax: **(352) 336-6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

David A. Buff — Signature

7/9/07 — Date

(seal)

* Attach any exception to certification statement.

** **Board of Professional Engineers Certificate of Authorization #00001670**

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

Sulfuric Acid Plant (SAP) No. 7

3. Emissions Unit Identification Number: **004**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Proposed Best Available Retrofit Technology (BART) emissions limits for SAP No 7.

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	044		EL
SAM	014		EL
NO_x			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **533** lb/hour **2,044** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **3.5 lb/ton 100% H2SO4 (24-hour average)** **4.0 lb/ton 100% H2SO4 (3-hour average)** Reference: **Permit No. 0570008-025-AC/PSD-FL-315**	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Hourly (lb/hr) (3-Hr Average) = 4 lb/ton x 3,200 TPD /24 hrs/day = 533 lb/hr** **Hourly (lb/hr) (24-Hr Average) = 3.5 lb/ton x 3,200 TPD /24 hrs/day = 467 lb/hr** **Annual (TPY) = 3.5 lb/ton x 3,200 TPD x 365 days/yr /2,000 lb/ton = 2,044 TPY**	
11. Potential Fugitive and Actual Emissions Comment: **Potential hourly emissions based on 3-hour average.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **4 lb/ton 100% H_2SO_4**	4. Equivalent Allowable Emissions: **533** lb/hour tons/year
5. Method of Compliance: **Annual stack test using EPA Method 8**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on 3-hour average. BACT determination from Permit No. 0570008-025-AC/PSD-FL-250.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **3.5 lb/ton 100% $H_2 2SO_4$**	4. Equivalent Allowable Emissions: **467** lb/hour **2,044** tons/year
5. Method of Compliance: **Annual stack test using EPA Method 8**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on 24-hour average. BACT determination from Permit No. 0570008-025-AC/PSD-FL-250. Based on BART application dated January 2007.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

Sulfuric Acid Plant (SAP) No. 8

3. Emissions Unit Identification Number: **005**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Proposed Best Available Retrofit Technology (BART) emissions limits for SAP No 8.

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	044		EL
SAM	014		EL
NO_x			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **450** lb/hour **1,725** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **3.5 lb/ton 100% H_2SO_4 (24-hour average)** **4.0 lb/ton 100% H_2SO_4 (3-hour average)** Reference: **Permit No. 0570008-036-AC/PSD-FL-315**	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **Hourly (lb/hr) (3-Hr Average) = 4 lb/ton x 2,700 TPD /24 hrs/day = 450 lb/hr** **Hourly (lb/hr) (24-Hr Average) = 3.5 lb/ton x 2,700 TPD /24 hrs/day = 394 lb/hr** **Annual (TPY) = 3.5 lb/ton x 2,700 TPD x 365 days/yr /2,000 lb/ton = 1,725 TPY**	
11. Potential Fugitive and Actual Emissions Comment: **Potential hourly emissions based on 3-hour average.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **4 lb/ton 100% H_2SO_4**	4. Equivalent Allowable Emissions: **450** lb/hour tons/year
5. Method of Compliance: **Annual stack test using EPA Method 8**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on 3-hour average.** **BACT determination from Permit No. 0570008-036-AC/PSD-FL-315.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **3.5 lb/ton 100% $H_2 2SO_4$**	4. Equivalent Allowable Emissions: **394** lb/hour **1,725** tons/year
5. Method of Compliance: **Annual stack test using EPA Method 8**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on 24-hour average.** **BACT determination from Permit No. 0570008-036-AC/PSD-FL-315.** **Based on BART application dated January 2007.**	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

Sulfuric Acid Plant (SAP) No. 9

3. Emissions Unit Identification Number: **006**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Proposed Best Available Retrofit Technology (BART) emissions limits for SAP No 9.

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	044		EL
SAM	014		EL
NO_x			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **567** lb/hour **2,172** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **3.5 lb/ton 100% H_2SO_4 (24-hour average)** **4.0 lb/ton 100% H_2SO_4 (3-hour average)** Reference: **Permit No. 0570008-036-AC/PSD-FL-315**	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly (lb/hr) (3-Hr Average) = 4 lb/ton x 3,400 TPD /24 hrs/day = 567 lb/hr
Hourly (lb/hr) (24-Hr Average) = 3.5 lb/ton x 3,400 TPD /24 hrs/day = 496 lb/hr
Annual (TPY) = 3.5 lb/ton x 3,400 TPD x 365 days/yr /2,000 lb/ton = 2,172 TPY

11. Potential Fugitive and Actual Emissions Comment:
Potential hourly emissions based on 3-hour average.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

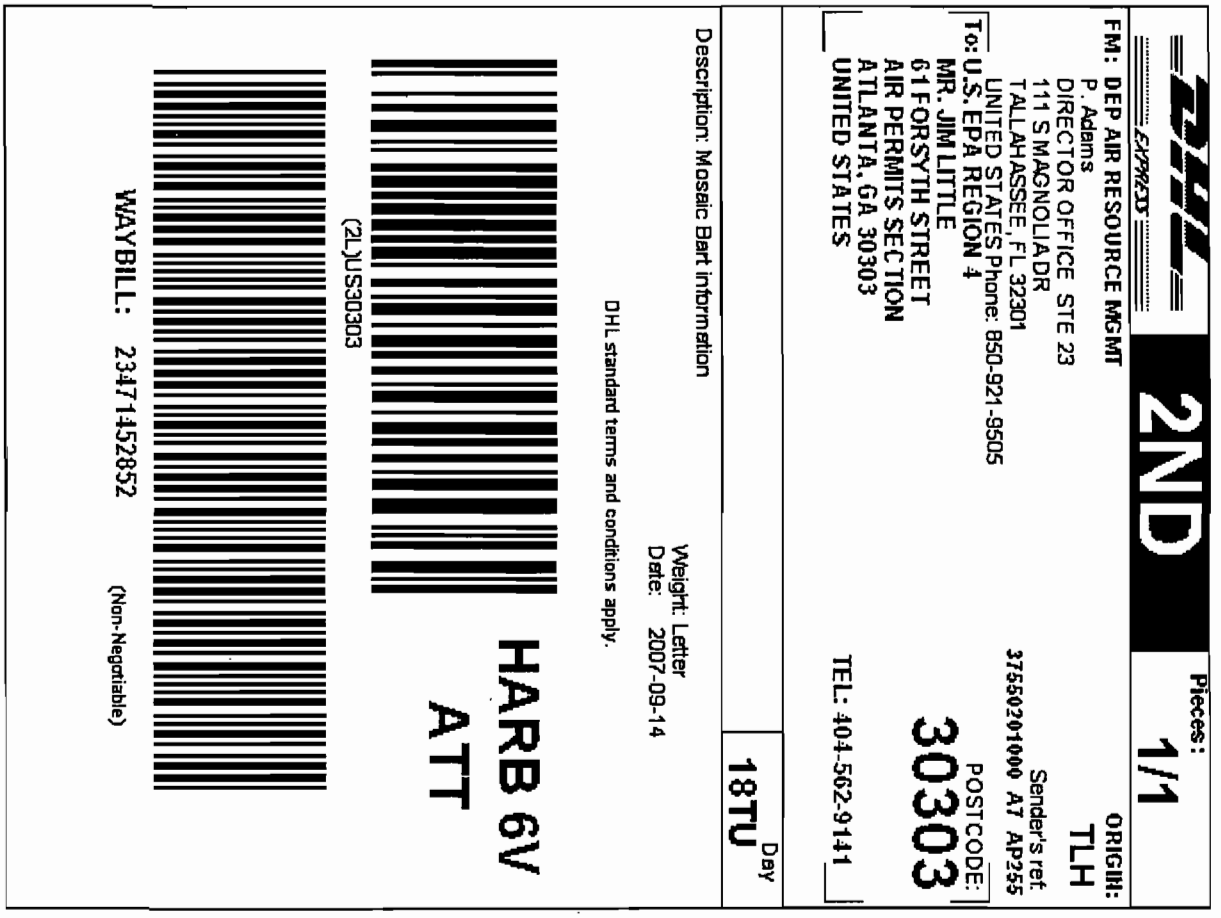
1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **4 lb/ton 100% H_2SO_4**	4. Equivalent Allowable Emissions: **567** lb/hour tons/year
5. Method of Compliance: **Annual stack test using EPA Method 8**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on 3-hour average.** **BACT determination from Permit No. 0570008-036-AC/PSD-FL-315.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **3.5 lb/ton 100% H_2SO_4**	4. Equivalent Allowable Emissions: **496** lb/hour **2,172** tons/year
5. Method of Compliance: **Annual stack test using EPA Method 8**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on 24-hour average.** **BACT determination from Permit No. 0570008-036-AC/PSD-FL-315.** **Based on BART application dated January 2007.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	



PEEL HERE PEEL HERE

Please fold or cut in half

DO NOT PHOTOCOPY

Using a photocopy could delay the delivery of your package and will result in additional shipping charge

SENDER'S RECEIPT
Waybill #: 23471452852

To(Company):
U.S. EPA Region 4
Air Permits Section
61 Forsyth Street

Atlanta, GA 30303
UNITED STATES

Attention To: Mr. Jim Little
Phone#: 404-562-9141

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 3.58
Protection: Not Required
Description: Mosaic Bart information

Weight (lbs.): Letter
Dimensions: 0 x 0 x 0

Ship Ref: 37550201000 A7 AP255
Service Level: 2nd Day (2nd business day by 5 PM)

Special Svc:

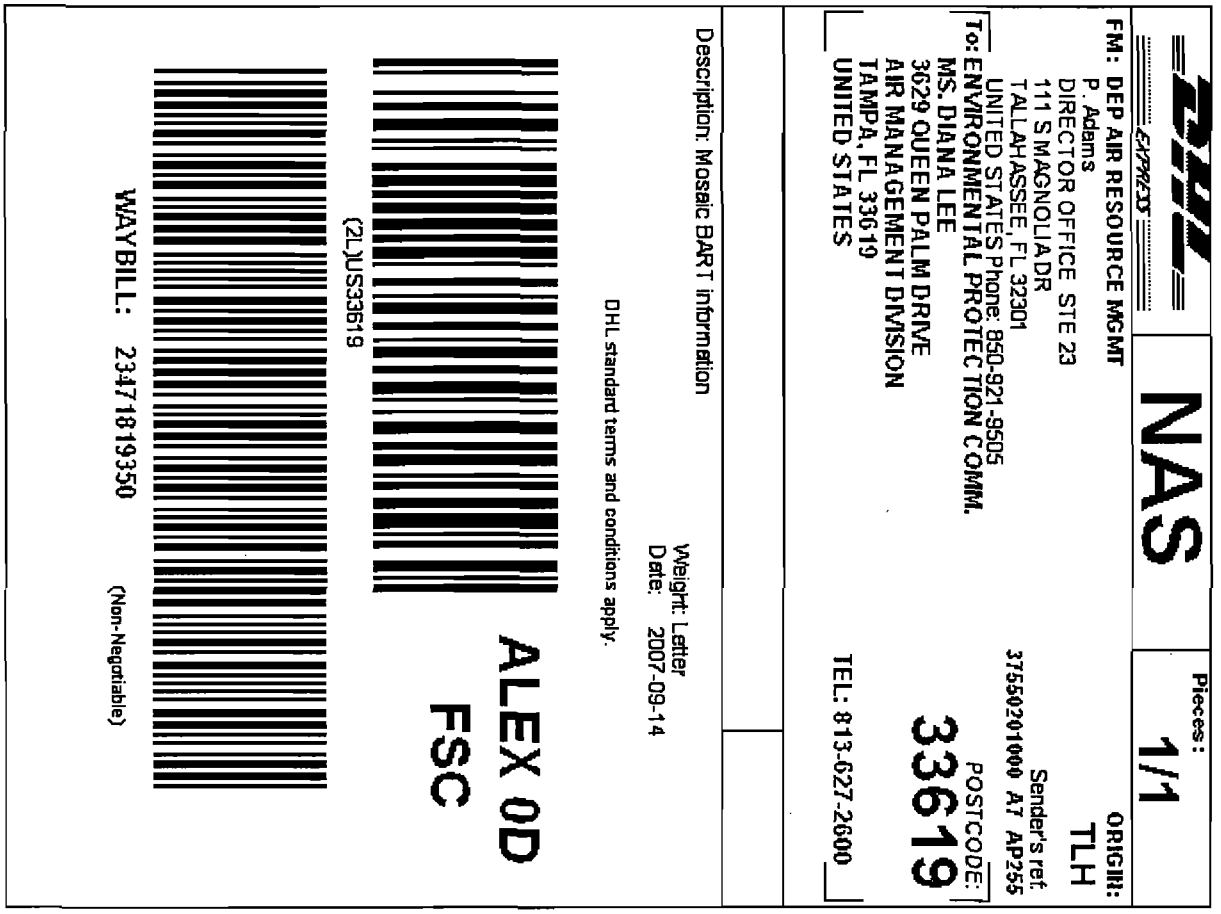
Date Printed: 9/13/2007
Bill Shipment To: Sender
Bill To Acct: 778941286

DHL Signature (optional) _____ Route _____ Date _____ Time _____

For Tracking, please go to www.dhl-usa.com or call 1-800-225-5345

Thank you for shipping with DHL

Create new shipment ▶ View pending shipments Print waybill



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SENDER'S RECEIPT
Waybill #: 23471819350

To(Company):
Environmental Protection Comm.
Air Management Division
3629 Queen Palm Drive

Tampa, FL 33619
UNITED STATES

Attention To: Ms. Diana Lee
Phone#: 813-627-2600

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 5.07
Protection: Not Required
Description: Mosaic BART information

Weight (lbs.): Letter
Dimensions: 0 x 0 x 0

Ship Ref: 37550201000 A7 AP255
Service Level: Next Day 3:00 (Next business day by 3 PM)

Special Svc:

Date Printed: 9/13/2007
Bill Shipment To: Sender
Bill To Acct: 778941286

DHL Signature (optional) _____ Route _____ Date _____ Time _____

For Tracking, please go to www.dhl-usa.com or call 1-800-225-5345

Thank you for shipping with DHL

Create new shipment ▶ View pending shipments **Print waybill**