

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

*In the Matter of an  
Application for Permit by:*

Mosaic Fertilizer, LLC  
8813 U.S. Highway 41 South  
Riverview, FL 33569

*Authorized Representative:*  
Alan Lulf, Plant Manager

Air Permit No. 0570008-061-AC  
Mosaic Fertilizer, LLC - Riverview Facility  
BART Exemption Project  
Hillsborough County

Enclosed is the final air construction permit, which specifically requires: (1) federally enforceable reductions of sulfur dioxide (SO<sub>2</sub>) and sulfuric acid mist (SAM) emissions to bring this facility's visibility impact to below the 0.5 deciview (dv) threshold allowing the facility to escape a Best Available Retrofit Technology (BART) determination pursuant to Rule 62-296.340(5)(c), Florida Administrative Code (F.A.C.) {A total of 948 tons per year (TPY) of SO<sub>2</sub> and 96 TPY of SAM emissions are being reduced from the 3 sulfuric acid plants (SAPs). SO<sub>2</sub> emission limits from SAP Nos. 7, 8 & 9 are being reduced to equivalent 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, 2.8 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, and, 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, respectively. SAM emission limits from SAP Nos. 7, 8 & 9 are being reduced to equivalent 0.05 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>}; (2) each sulfuric acid plant (SAP) to demonstrate compliance with the SO<sub>2</sub> standards and limitations on a continuous basis using continuous emissions monitoring system (CEMS) data on a 24-hour (daily) block average; (3) the use of the existing control technology - the double absorption system with increased catalyst loading, replacement of indicated process equipment, and the use of existing acid mist demister pads for SAP Nos. 7, 8 & 9; and, (4) the permittee to follow best operational practices to minimize excess emissions from each SAP.

The proposed work will be conducted at the Riverview Facility, which is located in Hillsborough County at 8813 U.S. Highway 41 South, Riverview, Florida. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief  
Bureau of Air Regulation

TLV/jkh/sms

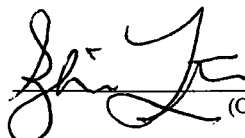
NOTICE OF FINAL PERMIT

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Determination and Final Permit), or a link to these documents available electronically on a publicly accessible server was sent by electronic mail with received receipt requested before the close of business on 4/16/09 to the persons listed below.

- Mr. Alan Lulf, Mosaic Fertilizer, LLC: [Alan.Lulf@mosaicco.com](mailto:Alan.Lulf@mosaicco.com)
- Mr. Jeff Stewart, Mosaic Fertilizer, LLC: [Jeff.Stewart@mosaicco.com](mailto:Jeff.Stewart@mosaicco.com)
- Mr. Rama Iyer, P.E., Mosaic Fertilizer, LLC: [Rama.Iyer@mosaicco.com](mailto:Rama.Iyer@mosaicco.com)
- Mr. David A. Buff, P.E., Golder Associates, Inc.: [dbuff@golder.com](mailto:dbuff@golder.com)
- Mr. Sal Mohammad, Golder Associates, Inc.: [smohammad@golder.com](mailto:smohammad@golder.com)
- Mr. Robert A. Manning, Esq.: [robertm@hgslaw.com](mailto:robertm@hgslaw.com)
- Ms. Diana M. Lee, P.E., EPCHC: [lee@epchc.org](mailto:lee@epchc.org)
- Ms. Katy Forney, EPA Region 4: [Forney.Kathleen@epa.gov](mailto:Forney.Kathleen@epa.gov)
- Mr. Dee Morse, National Park Service: [Dee\\_Morse@nps.gov](mailto:Dee_Morse@nps.gov)
- Ms. Cindy Zhang-Torres, P.E., DEP SWD: [Zhang-Torres@dep.state.fl.us](mailto:Zhang-Torres@dep.state.fl.us)
- Mr. Syed Arif, P.E., DEP NSR: [Syed.Arif@dep.state.fl.us](mailto:Syed.Arif@dep.state.fl.us)
- Mr. Tom Rogers, DEP OPAPM: [Tom.Rogers@dep.state.fl.us](mailto:Tom.Rogers@dep.state.fl.us)
- Ms. Ronda L. Moore, DEP OGC: [Ronni.Moore@dep.state.fl.us](mailto:Ronni.Moore@dep.state.fl.us)
- Ms. Victoria Gibson, DEP BAR: [Victoria.Gibson@dep.state.fl.us](mailto:Victoria.Gibson@dep.state.fl.us) (for reading file)

Clerk Stamp  
**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

  
\_\_\_\_\_  
(Clerk)

4/16/09  
(Date)



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

## PERMITTEE

Mosaic Fertilizer, LLC  
8813 U.S. Highway 41 South  
Riverview, FL 33569

### *Authorized Representative:*

Mr. Alan Lulf, Plant Manager

Air Permit No. 0570008-061-AC  
Expiration Date: June 30, 2013

Riverview Facility  
BART Exemption Project

## PLANT AND LOCATION

The Mosaic Fertilizer, LLC operates the Riverview Facility, which is located at 8813 U.S. Highway 41 South, Riverview in Hillsborough County, Florida. The facility is an existing phosphate fertilizer manufacturer, which is identified by Standard Industrial Classification (SIC) code No. 2874.

## STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). Pursuant to Rule 62-296.340(5)(c) (escape Best Available Retrofit Technology (BART)), F.A.C., the permittee shall install the air pollution control equipment and/or implement the air pollution control measures that are specified by this permit to be exempt from a BART determination.

## EFFECTIVE DATE

Unless otherwise specified by this permit, the affected emissions units shall comply with the conditions of this permit as expeditiously as practicable, but not later than the expiration date of this permit. [Rule 62-296.340(3)(b)2., F.A.C.]

Executed in Tallahassee, Florida

Joseph Kahn, Director  
Division of Air Resource Management

4/15/09

Effective Date

JK/tlv/jkh/sms

# Florida Department of Environmental Protection

## Memorandum

TO: Joseph Kahn, Division of Air Resource Management  
THROUGH: Trina Vielhauer, Bureau of Air Regulation  
Jon Holtom, P.E., Title V Section *J.H.*  
FROM: Scott M. Sheplak, P.E., Title V Section *sms*  
DATE: April 14, 2009  
SUBJECT: Mosaic Fertilizer, LLC - Riverview Facility  
BART Exemption Project  
Final Permit No. 0570008-061-AC, Air Construction Permit

The final permit for this project is attached for your approval and signature.

The applicant initially had originally filed a Best Available Retrofit Technology (BART) determination application. Subsequent to this application, comments from U.S. EPA and meetings with the Department, the applicant submitted an application to escape BART through a BART exemption via a minor source air construction (AC) permit. As part of this application, the applicant performed additional air dispersion modeling at reduced air pollutant emission levels. The modeling at the lower air pollutant levels brings this facility's visibility impact to below the 0.5 deciview (dv) threshold allowing the facility to escape a BART determination pursuant to Rule 62-296.340(5)(c), Florida Administrative Code (F.A.C.). The facility's modeled visibility impact to the nearest Class I area (Chassahowitzka National Wilderness Area) under the BART exemption is 0.494 dv. The visibility impact under the draft BART determination had previously been 0.643 dv.

This is the 1<sup>st</sup> phosphate fertilizer plant in Florida to escape BART through a minor source AC permitting action. The applicant claims to be spending about \$47.5 million on the work associated with this project. A total of 948 tons per year (TPY) of sulfur dioxide (SO<sub>2</sub>) and 96 TPY of sulfuric acid mist (SAM) emissions are being reduced from the 3 sulfuric acid plants (SAPs). SO<sub>2</sub> emission limits from SAP Nos. 7, 8 & 9 are being reduced to equivalent 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub> (sulfuric acid), 2.8 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, and, 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, respectively. SAM emission limits from SAP Nos. 7, 8 & 9 are being reduced to equivalent 0.05 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>.

The attached Final Determination identifies issuance of the draft permit and summarizes the publication process. The applicant withdrew their extension of time in which to file a petition for an administrative hearing on April 13<sup>th</sup>.

I recommend your approval of the attached final permit for this project.

TLV/jkh/sms

Attachments

*We'll see what EPA  
does on our dip... but at  
least this permit is done!!*

## FINAL DETERMINATION

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### PERMITTEE

Mosaic Fertilizer, LLC  
8813 U.S. Highway 41 South  
Riverview, FL 33569

### PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)  
Division of Air Resource Management  
Bureau of Air Regulation, Title V Section  
2600 Blair Stone Road, MS #5505  
Tallahassee, Florida 32399-2400

### PROJECT

Air Permit No. 0570008-061-AC  
Riverview Facility

This project is for a minor source air construction (AC) permit for the Riverview Facility to escape a Best Available Retrofit Technology (BART) determination pursuant to Rule 62-296.340(5)(c), Florida Administrative Code (F.A.C.).

Specifically, the permit requires: (1) federally enforceable reductions of sulfur dioxide (SO<sub>2</sub>) and sulfuric acid mist (SAM) emissions to bring this facility's visibility impact to below the 0.5 deciview (dv) threshold allowing the facility to escape a BART determination pursuant to Rule 62-296.340(5)(c), F.A.C. {A total of 948 tons per year (TPY) of SO<sub>2</sub> and 96 TPY of SAM emissions are being reduced from the 3 sulfuric acid plants (SAPs). SO<sub>2</sub> emission limits from SAP Nos. 7, 8 & 9 are being reduced to equivalent 3.0 lb SO<sub>2</sub>/ton 100% (sulfuric acid) H<sub>2</sub>SO<sub>4</sub>, 2.8 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, and, 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, respectively. SAM emission limits from SAP Nos. 7, 8 & 9 are being reduced to equivalent 0.05 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>}; (2) each sulfuric acid plant (SAP) to demonstrate compliance with the SO<sub>2</sub> standards and limitations on a continuous basis using continuous emissions monitoring system (CEMS) data on a 24-hour (daily) block average; (3) the use of the existing control technology - the double absorption system with increased catalyst loading, replacement of indicated process equipment, and the use of existing acid mist demister pads for SAP Nos. 7, 8 & 9; and, (4) the permittee to follow best operational practices to minimize excess emissions from each SAP.

### PROCESSING SCHEDULE AND RELATED DOCUMENTS

Draft Permit and the TE&PD for BART exemption issued (clerked) on March 3, 2009.  
Public Notice published on March 10, 2009.  
Applicant filed an extension in which to file a petition for an administrative hearing on March 13, 2009.  
Comments dated March 23, 2009 from Mosaic, received on March 24, 2009.  
DEP Order granting request for extension of time up to May 12, 2009, clerked on March 31, 2009.  
Proof of Publication of Public Notice received on April 2, 2009.  
Withdrawal of extension of time in which to file a petition for administrative hearing clerked and received on April 13, 2009.

### NOTICE AND PUBLICATION

The Department distributed a Written Notice of Intent to Issue Permit package on March 3, 2009. The applicant published the Public Notice of Intent to Issue in the Tampa Tribune on March 10, 2009. The permitting authority received the proof of publication on April 2, 2009.

## FINAL DETERMINATION

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### COMMENTS

Comments on the Draft Permit were received from the applicant.

#### Applicant

On March 24, 2009, the Department received comments dated March 23, 2009 from Golder Associates, Inc. on behalf of Mosaic Fertilizer, LLC (Mosaic), the applicant. The following summarizes the comments verbatim and the Department's response to each comment.

Additions to the permit are indicated below by a double underline. Deletions from the permit are indicated below by a ~~strike through~~.

#### Air Construction Permit

1. Page 6, Condition 1: The current TV permit is permit No. 0570008-051-AV.

**Response:** The referenced Title V air operation permit, permit No. 0570008-045-AV, is the 5-year permit which expires May 31, 2011. As indicated, a more recent Title V air operation permit was issued on October 27, 2008, permit No. 0570008-051-AV. This permit also includes emission unit identification numbers (EU ID Nos.) -022, -023 & -024, the Nos. 3 & 4 MAP Plant and the South Cooler.

The permit and effective date cited in specific condition 3.A.1. are changed to read as follows:

1. Permanent Shutdown: The permittee permanently shutdown the Nos. 3 & 4 MAP Plant and the South Cooler (Emission unit identification numbers (EU ID Nos.) -022, -023 & -024) in September 2004. These emissions units are included in the current Title V air operation permit, Permit Number 0570008-045-~~051~~-AV, effective ~~May 31, 2006~~October 27, 2008. As part of this BART exemption determination, these units are not allowed to operate. These units were not included in the applicant's BART analysis. Since these units are deemed to be permanently shutdown, a BART analysis was not required for these units. If any of these units resume operations a BART analysis shall be performed as though they had not been shutdown. Other preconstruction review requirements may apply. [Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's Request dated January 31, 2007]
2. Page 8 of 13: Under descriptions for the EUs, the current catalyst loadings for No. 7 SAP do not correspond to the BART exemption application, which shows 102,000 liters in the 1<sup>st</sup> pass, 112,000 liters in the 2<sup>nd</sup> pass, 155,000 liters in the 3<sup>rd</sup> pass, and 209,000 liters in the 4<sup>th</sup> pass, for a total of 578,000 liters. Also, in the paragraph under Stack Parameters, the second sentence should read "SAP Nos. 7, 8, and 9" (SAP No. 7 is left out).

**Response:** As indicated, the BART exemption application on page 5 of the BART Exemption Analysis document does indicate the total catalyst to be 578,000 liters. Thank you for the individual breakdowns of the catalyst beds. Previous information on file had been slightly different. The second sentence in the paragraph under Stack Parameters should read "SAP Nos. 7, 8 and 9." The requested changes are made.

The emissions unit description on page 8 of Section 3.C. is changed to read as follows:

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EU ID No.	Emissions Unit Description
-004	No. 7 Sulfuric Acid Plant
-005	No. 8 Sulfuric Acid Plant
-006	No. 9 Sulfuric Acid Plant
...	
	<p><i>Air pollution control systems and measures:</i> The control of SO<sub>2</sub> emissions is by the process itself primarily. Currently, a double conversion, double absorption plant efficiently converts SO<sub>2</sub> to SO<sub>3</sub>, then SO<sub>3</sub> reacts in a mixture of water and sulfuric acid to produce sulfuric acid. In a double absorption system, the conversion efficiency from SO<sub>2</sub> to SO<sub>3</sub> is at least 99.7%. All three plants use a vanadium catalyst in the converters except that in the 4<sup>th</sup> pass of the SAP Nos. 9 a cesium promoted catalyst is used. The current catalyst bed volumes in the No. 7 SAP are <del>112,000</del><u>102,000</u> liters in the 1<sup>st</sup> pass, <del>154,000</del><u>112,000</u> liters in the 2<sup>nd</sup> pass, <del>154,000</del><u>155,000</u> liters in the 3<sup>rd</sup> pass, and <del>208,000</del><u>209,000</u> liters in the 4<sup>th</sup> pass; for a total of <del>628,000</del><u>578,000</u> liters. The current total catalyst volume in the No. 8 SAP is 472,000 liters. The current total catalyst volume in the No. 9 SAP is 508,000 liters. Sulfuric acid mist (SAM) emissions are controlled by the use of high efficiency acid mist eliminators (demister pads) or impaction-type glass fiber collection devices. Best operational practices are followed to minimize excess emissions during startup and shutdown.</p>
...	
	<p><i>Stack Parameters:</i> Emissions not absorbed by each double absorption system are vented through each individual SAP's 150 foot stack. The stack exhaust gas characteristics for SAP Nos. <del>7, 8</del> and 9 are: exhaust gas temperatures of 170, 150 &amp; 152 °F; exhaust gas flow rates 122,000, 105,000 &amp; 149,000 acfm; and, stack diameters of 7.5, 8.0 &amp; 9.0 feet.</p>

3. Page 9, Condition 5: Condition 5 references that future catalyst loadings should be stated as “approximately”, per the BART exemption application. The permit should also allow higher catalyst loadings if these are necessary in order to meet the BART emission limits.

**Response:** The Department relied upon the study by the catalyst supplier for reasonable assurances of compliance (Rule 62-4.070(1)&(3), F.A.C. - Reasonable Assurance) with the reduced SO<sub>2</sub> and SAM emission limits. Specific condition number 3.C.6. requires the permittee to use the specific catalyst loadings & types as cited in the study by the permittee’s catalyst supplier in Appendix C of the Application. Requests for other specific catalyst loadings & types must be submitted in writing to the Bureau for review and approval prior to use. The permit allows higher catalyst loadings if they are necessary in order to meet the BART SO<sub>2</sub> emission limits.

Specific condition number 3.C.5. of the permit is clarified as follows:

5. Proposed Work: The applicant is required to perform the following specific work activities under this project in order to escape BART:

SAP No.	Work Activities
7	<ul style="list-style-type: none"> <li>• Increase the catalyst loading ratio from <u>approximately</u> 181 liters per ton H<sub>2</sub>SO<sub>4</sub> per day (L/TPD) to <u>approximately</u> 202 L/TPD {increases the current catalyst loading from approximately 578,000 liters to <u>approximately</u> 647,000 liters}; and,</li> </ul>

**FINAL DETERMINATION**

8	<ul style="list-style-type: none"> <li>• Replace the cold gas-to-gas heat exchanger.</li> <li>• Increase the catalyst loading ratio from <u>approximately 175 L/TPD</u> to <u>approximately 213 L/TPD</u> {increases the current catalyst loading from approximately 472,000 liters to <u>approximately 575,000 liters</u>. The 468,000 liters cited in the study was with the existing converter};</li> <li>• Replace the cold gas-to-gas heat exchanger;</li> <li>• Replace the superheater; and,</li> <li>• Replace the converter with a larger one.</li> </ul> <p>Note: These work activities are permitted under Permit No. 0570008-060-AC.</p>
9	<ul style="list-style-type: none"> <li>• Increase the catalyst loading ratio from <u>approximately 149 L/TPD</u> to <u>approximately 195 L/TPD</u> {increases the current catalyst loading from approximately 508,000 liters to <u>approximately 663,000 liters</u>}; and,</li> <li>• Install a heat recovery system (HRS) to replace the interpass absorption (IPA) tower.</li> </ul>

Additional catalyst may be added as necessary in order to meet the BART SO<sub>2</sub> emission limits. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), and, Proposed by the Applicant in the Application]

4. Page 10, Condition 6: The wording of this condition does not necessarily have to be changed, but Mosaic would like to clarify that this condition does not mean that a specific supplier (i.e., Haldor Topsoe) must be used unless written approval is obtained from FDEP. A specific catalyst supplier should not be specified in the permit. The condition should only refer to the specific catalyst loadings and type of catalyst (i.e., vanadium or cesium-enhanced catalyst).

**Response:** That is correct; a specific catalyst supplier is not specified in the permit.

As previously mentioned, specific condition number 3.C.6. does require the permittee to use the specific catalyst loadings & types as cited in the study by the permittee’s catalyst supplier in Appendix C of the Application. Note, the study did cite in addition to the chemical composition of the catalyst, e.g., vanadium, the size e.g., 12-millimeter (mm), and shape, e.g., daisy, of the specified catalyst. The size and shape of the catalyst affect the performance of the catalyst. Any deviations from the catalyst type described in the study need to be submitted to the Bureau for review and approval prior to use. If another catalyst supplier is used, a written guarantee along with the catalyst product literature will need to be submitted showing that the SO<sub>2</sub> emission limits specified in the permit will be met. No change to the permit is made.

5. Page 10, Conditions 9 and 10. It should be clarified that the 24-hour (daily) block average can start and end at a time selected by the permittee (i.e., the block does not have to be from midnight to midnight; another 24-hour block, i.e., 6 am to 6 am, may be selected).

**Response:** The current BACTs from the PSD permits, PSD-FL-250 (specific conditions 3. and 11.) and PSD-FL-315 (specific conditions 4. and 9.), specify 24-hour “daily” and “block” averages respectively for SO<sub>2</sub> emissions. Both permits do specify that SO<sub>2</sub> emissions are to be calculated on an “operating day” (see specific condition 11. of PSD-FL-250 and specific condition 9. of PSD-FL-315). For consistency with the BACTs, the averaging period must be calculated in the same fashion. No change is made to the permit.

6. Page 12, Condition 19: It should be clarified that the final compliance date for complying with the sulfur dioxide (SO<sub>2</sub>), sulfuric acid mist (SAM), and visible emission limits is June 30, 2013, coinciding with the permit expiration date. Condition C.19 states that the new SAM limits must be



## FINAL DETERMINATION

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met by April 1, 2012 (since initial compliance testing must be conducted); Condition C.21 states that all construction must be completed by December 31, 2012; and Condition C.9 states that the permittee must comply with the new SO<sub>2</sub> limit using continuous emission monitoring systems, but it does not state when. The compliance deadline should be after all construction is complete. Therefore, it is suggested that the initial compliance testing, completion of construction, and compliance with the new limits all be specified as June 30, 2013, which is when the construction permit expires.

**Response:** The April 1, 2012 date had been fixed to ensure a test would be performed and the test results would be submitted well in advance of the permit's expiration date. The permit expiration date was established with a six (6) month buffer before the BART compliance deadline of December 31, 2013. Completion of the compliance test and submittal of the test results two (2) months prior to the permit expiration date encompasses the 45 day test report submittal requirement. An initial compliance test date of April 30, 2013 {June 30, 2013 - 2 months} should provide sufficient time for completion of testing and submittal of the test results prior to the expiration date of the permit.

The initial compliance test date contained in specific condition number 3.C.19. is changed from April 1, 2012 to April 30, 2013 as indicated below:

19. Compliance Test Schedule: In accordance with the following schedule, the permittee shall have stack tests conducted to demonstrate compliance with the emissions standards specified in this permit.
- a. *Initial Test:* On or before April ~~30, 2012~~<sup>30, 2013</sup>, an initial test shall be conducted for SAM emissions from each SAP {~~October 1, 2012 – 6 months. October 1, 2012 being the start of the federal fiscal year in which the expiration date of this permit falls within~~ June 30, 2013 – 2 months.}. The initial compliance test report for SAM shall be submitted within 45 days of completion of testing. [Rules 62-296.340(5)(c) (escape BART) and 62-297.310(7)(a)1, F.A.C.]

...

7. Page 13, Condition 21. There is no date specified for when the Construction Plan has to be submitted. Also, it is not specified when exactly the Progress Reports are due each year.

**Response:** To avoid confusion, specific condition number 3.C.21. is changed to read as follows:

21. Construction Plan & Progress Reports: The permittee shall submit a Construction Plan within sixty (60) days of the effective date of this permit which shall contain the necessary milestones to comply with this permit. The Plan shall include at a minimum the necessary actions and corresponding scheduled due dates to complete those actions to comply with this permit.
- a. The permittee shall submit progress reports based on the anniversary date (one year from the effective date) of this permit regarding the status of the milestones in the Construction Plan to the Department and to the Compliance Authority, no less than annually in 2009 - 2013.
- b. The permittee shall complete all required construction & modifications no later than ~~December 31, 2012~~June 30, 2013 {~~6 months prior to the expiration date of this permit, June 30, 2013 – 6 months~~}.
- [Rules 62-296.340(5)(c) (escape BART), 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]

8. And as discussed previously, Condition 19 requires that SAM testing be performed prior to April 12, 2012, which would require construction to be completed in order to do the testing, but Condition 21.b requires completion of construction by December 31, 2012. These need to be reconciled. It is suggested all these dates be stated as June 30, 2013.

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**Response:** To avoid confusion, specific condition number 3.C.21. is changed to read as follows:

21. Construction Plan & Progress Reports: The permittee shall submit a Construction Plan which shall contain the necessary milestones to comply with this permit. The Plan shall include at a minimum the necessary actions and corresponding scheduled due dates to complete those actions to comply with this permit.

- a. The permittee shall submit progress reports regarding the status of the milestones in the Construction Plan to the Department and to the Compliance Authority, no less than annually in 2009 - 2013.
- b. The permittee shall complete all required construction & modifications no later than ~~December 31, 2012~~ June 30, 2013 ~~{6 months prior to the expiration date of this permit, June 30, 2013 - 6 months}~~.

[Rules 62-296.340(5)(c) (escape BART), 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]

### DEPARTMENT INITIATED CHANGES

Changes initiated by the Department were made in this final permit.

#### Air Construction Permit

The applicant had previously notified the Department of the specific chemical composition of the catalysts in each SAP, i.e., vanadium and/or cesium. As indicated by the applicant, SAP No. 9 has cesium promoted catalyst in the 4<sup>th</sup> bed. The emissions unit description for the SAP Nos. 7, 8 & 9 reflects this, however, specific condition number 3.C.4. did not recognize the cesium catalyst currently in use.

To recognize the current cesium catalyst in use, specific condition number 3.C.4. is clarified to read as follows:

4. SO<sub>2</sub> Controls: This BART exemption determination does require new, modified or additional air pollution control systems for SO<sub>2</sub>. To control emissions of sulfur dioxide (SO<sub>2</sub>) from each SAP, the permittee shall continue the use of the existing double absorption system technology with vanadium and/or cesium catalyst in the converters and the use of good combustion practices & best operational practices to minimize excess emissions during startup and shutdown. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rule 62-210.700(1), F.A.C.; and, Proposed by the Applicant in the Application]

Miscellaneous edits were also made in this final permit.

### CONCLUSION

The final action of the Department is to issue the permit with the minor revisions, corrections, and clarifications as described above.

## SECTION 1. GENERAL INFORMATION

### FACILITY DESCRIPTION

This facility consists of several industrial processes that convert insoluble rock containing phosphorus ore into a soluble form suitable for agricultural use. The processes consist of a molten sulfur storage & handling system, one material handling system, three (3) sulfuric acid plants, one (1) phosphoric acid plant (two trains), two (2) diammonium phosphate (DAP) plants, two (2) monoammonium phosphate (MAP) plants, one auxiliary boiler, and two (2) animal feed plants.

### FACILITY REGULATORY CLASSIFICATIONS

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate emissions units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source pursuant to Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

### AFFECTED EMISSIONS UNITS

This permitting action affects the following emissions units at the plant:

<b>EU ID No.</b>	<b>Brief Description</b>
-022	No. 3 MAP Plant
-023	No. 4 MAP Plant
-024	South Cooler
-063	Molten Sulfur Storage and Handling System -- Storage Tank Nos. 1, 2 and 3
-066	Molten Sulfur Storage and Handling System -- Storage Pit No. 7
-067	Molten Sulfur Storage and Handling System -- Storage Pit No. 8
-068	Molten Sulfur Storage and Handling System -- Storage Pit No. 9
-004	No. 7 Sulfuric Acid Plant
-005	No. 8 Sulfuric Acid Plant
-006	No. 9 Sulfuric Acid Plant

## SECTION 1. GENERAL INFORMATION

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## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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1. Permitting Authority: The **Permitting Authority for this project is the Bureau of Air Regulation** in the Division of Air Resource Management of the Florida Department of Environmental Protection. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.
  2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the **Compliance Authority, the Environmental Protection Commission of Hillsborough County (EPCHC)**. The Compliance Authority's mailing address is:

Environmental Protection Commission Hillsborough County  
3629 Queen Palm Drive  
Tampa, Florida 33619  
Telephone: 813/627-2600, Fax: 813/627-2660
  3. Appendices: The following Appendices are attached as part of this permit: Appendix A (Citation Formats); Appendix B (General Conditions); Appendix C (Standard Testing Requirements); and, Appendix D (Memorandum of Understanding Regarding Best Operational Start-up Practices for Sulfuric Acid Plants).
  4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to the applicable provisions of: Chapter 403, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C.; and the applicable parts and subparts of Title 40, Code of Federal Regulations (CFR). Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
  5. Title V Air Operation Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the **Permitting Authority, the Florida Department of Environmental Protection, Southwest District Office which is different from the Office cited in Condition No. 1** with copies to the Compliance Authority. The mailing address for the Southwest District Office is:

Florida Department of Environmental Protection Southwest District  
13051 North Telecom Parkway  
Temple Terrace, FL 33637-0926  
Telephone: 813/632-7600, Fax: 813/744-6458
- [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]
6. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 (five) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2., F.A.C.]
  7. Annual Operating Report (AOR): The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by May 1, 2009 and April 1<sup>st</sup> of each year, thereafter. [Rule 62-210.370(3), F.A.C.]

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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### NEW & PREVIOUS PERMIT SPECIFIC CONDITIONS

8. Pursuant to Rule 62-296.340(5)(c) (escape BART), F.A.C., the specific terms and conditions of this permit are required in order to escape a Best Available Retrofit Technology Determination. These specific terms and conditions apply to each emissions unit and are in addition to any other applicable standards. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Proposed by the Applicant in the Application; and, Rules 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]
9. A relaxation of the specific terms and conditions of this permit may subject the facility to a BART determination. Any request to change the specific terms and conditions of this permit must be submitted to the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; and, Rules 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]
10. Some of the proposed work under this project to escape a BART determination is also permitted under a PSD avoidance permit, Permit No. 0570008-060-AC. A relaxation of the specific terms and conditions of this permit may subject the facility to a BART and/or a BACT determination. A copy of any request to change the specific terms and conditions of Permit No. 0570008-060-AC must be submitted to the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; and, Rules 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]
11. No emissions unit or facility subject to this permit shall be constructed or modified without obtaining the appropriate air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
12. Source Obligation:
  - (a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit. [Rule 62-212.400(12)(a), F.A.C.]
  - (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification. [Rule 62-212.400(12)(b), F.A.C.]
  - (c) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification. [Rule 62-212.400(12)(c), F.A.C.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**A. No. 3 MAP Plant, No. 4 MAP Plant, South Cooler (EU-022, -023, -024)**

This subsection addresses the following affected emissions units:

<b>EU ID No.</b>	<b>Emissions Unit Description</b>
-022	No. 3 MAP Plant
-023	No. 4 MAP Plant
-024	South Cooler

**PERMANENTLY SHUTDOWN EMISSIONS UNITS**

1. Permanent Shutdown: The permittee permanently shutdown the Nos. 3 & 4 MAP Plant and the South Cooler (Emission unit identification numbers (EU ID Nos.) -022, -023 & -024) in September 2004. These emissions units are included in the current Title V air operation permit, Permit Number 0570008-051-AV, effective October 27, 2008. As part of this BART exemption determination, these units are not allowed to operate. These units were not included in the applicant's BART analysis. Since these units are deemed to be permanently shutdown, a BART analysis was not required for these units. If any of these units resume operations, a BART analysis shall be performed as though they had not been shutdown. Other preconstruction review requirements may apply. [Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's Request dated January 31, 2007]
2. Notification of Removal: The permittee shall notify the Department's Bureau of Air Regulation, SWD Office and the Compliance Authority upon the physical removal of these emissions units from on-site. [Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's Request dated January 31, 2007]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**B. Molten Sulfur Storage and Handling System -- Storage Tank Nos. 1, 2 & 3 (EU-063) and Storage Pit Nos. 7, 8, and 9 (EU-066, -067, -068)**

EU ID No.	Emissions Unit Description
-063	Molten Sulfur Storage and Handling System -- Storage Tank Nos. 1, 2 and 3
-066	Molten Sulfur Storage and Handling System -- Storage Pit No. 7
-067	Molten Sulfur Storage and Handling System -- Storage Pit No. 8
-068	Molten Sulfur Storage and Handling System -- Storage Pit No. 9
<p><i>Descriptions:</i></p> <p>The Molten Sulfur Storage and Handling System consists of storage tank nos. 1, 2 and 3 (capacity of 19,845 tons each), covered storage pit nos. 7, 8 and 9 (capacity of 127 tons, 127 tons, and 160 tons respectively), a ship unloading dock, truck loading station and associated transfer pumps and piping for storage and handling of molten sulfur.</p> <p>Molten sulfur from ships may be transferred to any combination of the three molten sulfur storage tanks at a combined maximum total of 2,277,081 tons of molten sulfur per any consecutive 12-month period. These tanks then transfer molten sulfur to the molten sulfur storage pits at the sulfuric acid plants (SAPs) and also to the molten sulfur truck loading station.</p> <p>The three molten sulfur storage pits are located at the three sulfuric acid plants. The pits receive molten sulfur from the molten sulfur storage tanks and/or by truck. Each of the storage pits may receive molten sulfur at a constant rate of 336 tons per hour. Each storage pit is allowed to transfer molten sulfur to each SAP at a maximum throughput rate of 492,361 tons per consecutive 12-month period.</p> <p>Initial construction of the three molten sulfur storage tanks and three molten sulfur storage pits was before August 7, 1977.</p> <p><i>Air Pollution Control Systems and Measures:</i> A wet scrubber is currently used to control particulate matter (PM) emissions from the molten sulfur storage tank nos. 1, 2 and 3 as well as the truck loading station. Emissions from loading the three molten sulfur storage pits are uncontrolled, although they are equipped with covers.</p> <p><i>Monitoring:</i> The scrubber pressure drop and liquid flow rate are recorded once every 8-hour shift.</p>	

*{Permitting notes: These emissions units are currently regulated under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) PSD-FL-315/0570008-036-AC; Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards; and Rule 62-296.411, F.A.C., Sulfur Storage and Handling Facilities.}*

**ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS**

1. Molten sulfur from ships may be transferred to any combination of the three molten sulfur storage tanks at a combined maximum total not to exceed 2,277,081 tons of molten sulfur per any consecutive 12-month period. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), and, Proposed by the Applicant in the Application]
2. Each storage pit is allowed to transfer molten sulfur to each SAP at a maximum throughput rate of 492,361 tons per consecutive 12-month period. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), and, Proposed by the Applicant in the Application]



**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)**

This subsection addresses the following affected emissions units:

EU ID No.	Emissions Unit Description
-004	No. 7 Sulfuric Acid Plant
-005	No. 8 Sulfuric Acid Plant
-006	No. 9 Sulfuric Acid Plant
<p><i>Descriptions:</i></p> <p>Sulfuric Acid Plants (SAPs) No. 7, No. 8 and No. 9 have a design capacity of 3,200 tons per day (TPD), 2,700 TPD, and 3,400 TPD of 100% sulfuric acid, respectively. Each SAP recovers a portion of the waste heat (steam) for process use and to generate electricity. Waste heat recovery reduces plume visibility. There are two electrical generators at each SAP, rated at 35 kilowatts (kW) and 36 kW for a total of 71 kW. These plants are sulfur burning, double conversion, double absorption plants of Leonard-Monsanto design. Sulfur is burned with dried atmosphere oxygen to produce sulfur dioxide (SO<sub>2</sub>). The sulfur dioxide is catalytically oxidized to sulfur trioxide (SO<sub>3</sub>) over a catalyst bed. The sulfur trioxide is then absorbed in sulfuric acid. The remaining sulfur dioxide, not previously oxidized, is passed over a final converter bed of catalyst and the sulfur trioxide produced is then absorbed in sulfuric acid. SAP Nos. 7, 8 and 9 began operating in 1961, 1965, 1974, respectively.</p> <p><i>Air pollution control systems and measures:</i> The control of SO<sub>2</sub> emissions is primarily by the process itself. Currently, a double conversion, double absorption plant efficiently converts SO<sub>2</sub> to SO<sub>3</sub> then SO<sub>3</sub> reacts in a mixture of water and sulfuric acid to produce sulfuric acid. In a double absorption system, the conversion efficiency from SO<sub>2</sub> to SO<sub>3</sub> is at least 99.7%. All three plants use a vanadium catalyst in the converters, except that in the 4<sup>th</sup> pass of the SAP No. 9 a cesium promoted catalyst is used. The current catalyst bed volumes in the No. 7 SAP are 102,000 liters in the 1<sup>st</sup> pass, 112,000 liters in the 2<sup>nd</sup> pass, 155,000 liters in the 3<sup>rd</sup> pass, and 209,000 liters in the 4<sup>th</sup> pass; for a total of 578,000 liters. The current total catalyst volume in the No. 8 SAP is 472,000 liters. The current total catalyst volume in the No. 9 SAP is 508,000 liters. Sulfuric acid mist (SAM) emissions are controlled by the use of high efficiency acid mist eliminators (demister pads) or impaction-type glass fiber collection devices. Best operational practices are followed to minimize excess emissions during startup and shutdown.</p> <p><i>Monitors:</i> Each SAP is equipped with an existing SO<sub>2</sub> continuous emissions monitoring system (CEMS). The SO<sub>2</sub> CEMS have been required by the circa 1977 Standards of Performance for New Stationary Sources (NSPS). The CEMS installed for SAP No. 7 is an Ametek Model 4600B. SAP Nos. 8 and 9 each have an Ametek/Dupont Model 40/460 CEMS.</p> <p><i>Stack Parameters:</i> Emissions not absorbed by each double absorption system are vented through each individual SAP's 150 foot stack. The stack exhaust gas characteristics for SAP Nos. 7, 8 and 9 are: exhaust gas temperatures of 170, 150 &amp; 152 °F; exhaust gas flow rates 122,000, 105,000 &amp; 149,000 acfm; and, stack diameters of 7.5, 8.0 &amp; 9.0 feet.</p>	

*{Permitting notes: The SAPs are currently regulated under NSPS 40 CFR 60, Subpart H, Standards of Performance for Sulfuric Acid Plants, adopted and incorporated by reference in Rule 62-204.800(7)(b)10., F.A.C.; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), PSD-FL-209 (AC29-241660) - 1<sup>st</sup> BACT for SAP Nos. 8 & 9, PSD-FL-250 (0570008-025-AC) - 1<sup>st</sup> BACT for SAP No. 7, PSD-FL-315 (0570008-*

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)**

036-AC) - 2<sup>nd</sup> BACT for SAP Nos. 8 & 9; Rule 62-296.402, F.A.C., Sulfuric Acid Plants; and, Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards.}

**ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS**

1. **Design Capacity:** The existing design capacity of each SAP shall not be changed as a result of the proposed work under this project, Permit No. 0570008-061-AC. The existing design capacity of each SAP shall not exceed the following:

SAP No.	Design Production Capacity, TPD of 100% H <sub>2</sub> SO <sub>4</sub> (sulfuric acid)
7	3,200
8	2,700
9	3,400

[Rules 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

2. **Design Capacity:** Any request to change the design capacity of each SAP must be submitted to the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. [Rules 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]
3. **Design Capacity & Permitted Production:** The permittee shall submit a statement from the responsible official within 30 days after the completion of all of the proposed work under this project indicating whether or not in fact the design capacity or permitted production of each SAP was changed. [Rules 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

**AIR POLLUTION CONTROL TECHNOLOGIES & MEASURES**

4. **SO<sub>2</sub> Controls:** This BART exemption determination does require new, modified or additional air pollution control systems for SO<sub>2</sub>. To control emissions of sulfur dioxide (SO<sub>2</sub>) from each SAP, the permittee shall continue the use of the existing double absorption system technology with vanadium and/or cesium catalyst in the converters and the use of good combustion practices & best operational practices to minimize excess emissions during startup and shutdown. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rule 62-210.700(1), F.A.C.; and, Proposed by the Applicant in the Application]
5. **Proposed Work:** The applicant is required to perform the following specific work activities under this project in order to escape BART:

SAP No.	Work Activities
7	<ul style="list-style-type: none"><li>• Increase the catalyst loading ratio from approximately 181 liters per ton H<sub>2</sub>SO<sub>4</sub> per day (L/TPD) to approximately 202 L/TPD {increases the current catalyst loading from approximately 578,000 liters to approximately 647,000 liters}; and,</li><li>• Replace the cold gas-to-gas heat exchanger.</li></ul>
8	<ul style="list-style-type: none"><li>• Increase the catalyst loading ratio from approximately 175 L/TPD to approximately 213 L/TPD {increases the current catalyst loading from approximately 472,000 liters to approximately 575,000 liters. The 468,000 liters cited in the study was with the existing converter};</li><li>• Replace the cold gas-to-gas heat exchanger;</li><li>• Replace the superheater; and,</li><li>• Replace the converter with a larger one.</li></ul> <p>Note: These work activities are permitted under Permit No. 0570008-060-AC.</p>

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)**

9	<ul style="list-style-type: none"><li>• Increase the catalyst loading ratio from approximately 149 L/TPD to approximately 195 L/TPD {increases the current catalyst loading from approximately 508,000 liters to approximately 663,000 liters}; and,</li><li>• Install a heat recovery system (HRS) to replace the interpass absorption (IPA) tower.</li></ul>
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Additional catalyst may be added as necessary in order to meet the BART SO<sub>2</sub> emission limits. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), and, Proposed by the Applicant in the Application]

6. **SO<sub>2</sub> Controls:** The permittee shall use the specific catalyst loadings & types as cited in the study by the permittee's catalyst supplier in Appendix C of the Application. The specific catalyst loadings & types in Appendix C of the Application provide the permitting authority reasonable assurances of compliance with this permit. The study confirms that with the proposed modifications to each SAP, the SAPs can achieve the SO<sub>2</sub> emission rates of 2.8 to 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>. Other specific catalyst types may be considered by the Bureau of Air Regulation upon written request. The permittee shall submit a written request for other specific catalyst loadings & types to the Bureau of Air Regulation with a copy to the Compliance Authority for review and approval prior to use. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), F.A.C.; and, Proposed by the Applicant in the Application]
7. **SAM Controls:** This BART exemption determination does not require new, modified or additional air pollution control systems for SAM. By controlling sulfuric acid mist (SAM) emissions PM/PM<sub>10</sub> and visible emissions are minimized. To control emissions of SAM, the permittee shall continue the use of the existing packed-fiber mist eliminators or demister pads to remove SAM. Other SAM control technologies may be considered by the Bureau of Air Regulation upon written request. The permittee shall submit a written request for other SAM control technologies to the Bureau of Air Regulation with a copy to the Compliance Authority for review and approval prior to use. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rule 62-210.700(1), F.A.C.; and, Proposed by the Applicant in the Application]
8. **Circumvention:** The permittee shall not circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

**EMISSION STANDARDS & LIMITATIONS**

9. **SO<sub>2</sub> Emission Standards & Limitations:** This BART determination specifies new SO<sub>2</sub> emission standards. Emissions of SO<sub>2</sub> shall not exceed the following as determined by certified CEMS data:

SAP No.	lb/hour
7	400
8	315
9	425

Emissions of SO<sub>2</sub> shall not exceed 400 pounds per hour for No. 7 SAP, 315 pounds per hour for No. 8 SAP, and 425 pounds per hour for No. 9 SAP based on a 24-hour (daily) block average as determined by CEMS data.

{The equivalent lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub> values for SAP Nos. 7, 8 and 9 at design capacity are: 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>; 2.8 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>; and, 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, respectively. The equivalent lb/ton values corresponding to the lb/hour limits are less than the current existing standards. The equivalent tons per year (TPY) values for SAP Nos. 7, 8 and 9 are: 1,752 TPY; 1,380 TPY; and, 1,862 TPY, respectively. This permit requires CEMS to be used to demonstrate compliance on a continuous basis on a

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)

24-hour (daily) block average. A 24-hour (daily) block average was established based on the emission rate averaging period of 24-hour (daily) used in the air dispersion modeling.}

[Rule 62-296.340(5)(c) (escape BART), F.A.C.; and, Proposed by the Applicant in the Application]

10. SO<sub>2</sub> Continuous Emissions Monitoring System (CEMS): This BART exemption determination requires an SO<sub>2</sub> CEMS to be used to demonstrate continuous compliance with the SO<sub>2</sub> emission standards and limitations specified in this section.

a. In accordance with the NSPS (40 CFR 60, Subpart H) requirements for sulfuric acid plants, the permittee shall continue to properly calibrate, maintain, and operate a CEMS to measure and record emissions of SO<sub>2</sub>. In accordance with PSD-FL-250 & PSD-FL-315, the permittee shall continue to use SO<sub>2</sub> CEMS data to demonstrate compliance.

b. A CEMS shall be properly calibrated, maintained, and operated to comply with: 40 CFR 60 Subpart A, General Provisions; 40 CFR 60 Appendix B, Performance Specification 2; and, 40 CFR 60, Appendix F, Quality Assurance Procedures for Gas CEMS Used for Compliance Determination.

c. The emissions data collected with the certified CEMS shall be used to demonstrate continuous compliance with the standards and limitations specified in this section.

[Rules 62-296.340(5)(c) (escape BART), 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.; and, Proposed by the Applicant in the Application]

11. SAM Emission Standards & Limitations: This BART determination specifies new SAM emission standards. Emissions of SAM shall not exceed the following as demonstrated by stack test data:

SAP No.	lb/hour
7	6.7
8	5.6
9	7.1

Emissions of SAM shall not exceed 6.7 pounds per hour for No. 7 SAP, 5.6 pounds per hour for No. 8 SAP, and 7.1 pounds per hour for No. 9 SAP based on a 3-hour average as determined by stack test data.

{The equivalent lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub> values for SAP Nos. 7, 8 and 9 at design capacity for each SAP is 0.05 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>. The equivalent lb/ton value corresponding to the lb/hour limits is less than the current existing standards. The equivalent tons per year (TPY) values for SAP Nos. 7, 8 and 9 are: 29.3 TPY; 24.5 TPY; and, 31.1 TPY, respectively. This permit requires stack test data to be used to demonstrate compliance. Compliance with the 3-hour average by stack test assures compliance with a numerical standard on a 24-hour (daily) average basis. The air dispersion modeling was performed using a 24-hour (daily) average.}

[Rule 62-296.340(5)(c) (escape BART), F.A.C.; and, Proposed by the Applicant in the Application]

#### EXCESS EMISSIONS

12. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

13. Excess Emissions Allowed: Unless otherwise specified by permit, excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)**

exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

- 14. Excess Emissions Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
- 15. Best Operational Practices to Minimize Excess Emissions:
  - a. The permittee shall follow the best operational practices to minimize excess emissions during startup and shutdown as described in the most recent Title V permit application.
  - b. Best operational practices to minimize excess SO<sub>2</sub> and SO<sub>3</sub> emissions during startup are governed by this condition. The permittee shall follow the best operational practices to minimize excess emissions during startup contained within the attached Appendix D - Memorandum of Understanding Regarding Best Operational Start-up Practices for Sulfuric Acid Plants initially executed on October 25, 1989.  
[Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rule 62-210.700(1), F.A.C.; and, Proposed by the Applicant in the Application]
- 16. Best Operational Practices to Minimize Leaks of SO<sub>2</sub> and SO<sub>3</sub>, or Other Fugitive Process Emissions: Best operational practices to minimize leaks of SO<sub>2</sub> and SO<sub>3</sub>, or other fugitive process emissions shall be adhered to and shall include regular inspections and the prompt repair or correction of any leaks or other fugitive emissions. [Rules 62-4.070(1)&(3) and 62-296.320, F.A.C.]

**EMISSIONS TESTING**

- 17. Test Methods: The following reference methods (or more recent versions) shall be used to conduct any required emissions tests.

Method	Description of Method and Comments
1 - 4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
6 or 6C	Determination of SO <sub>2</sub> Emissions from Stationary Sources
8	Determination of SAM & SO <sub>2</sub> Emissions from Stationary Sources
9	Visual Determination of Opacity from Stationary Sources

EPA Methods 1, 2, 3, 4 and 19 shall be used as necessary to support the other test methods. The above methods are described in 40 CFR 60, Appendix A, which is adopted by reference in Rule 62-204.800, F.A.C. No other methods shall be used without prior written approval from the Permitting Authority. [Rules 62-204.800 and 62-297.100, F.A.C.; and 40 CFR 60, Appendix A]

- 18. Standard Testing Requirements: All required emissions tests shall be conducted in accordance with the requirements specified in Appendix C (Standard Testing Requirements) of this permit. [Rules 62-204.800 and 62-297.100, F.A.C.; and 40 CFR 60, Appendix A]
- 19. Compliance Test Schedule: In accordance with the following schedule, the permittee shall have stack tests conducted to demonstrate compliance with the emissions standards specified in this permit.
  - a. *Initial Test*: On or before April 30, 2013, an initial test shall be conducted for SAM emissions from each SAP {June 30, 2013 -2 months.}. The initial compliance test report for SAM shall be submitted within

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)

45 days of completion of testing. [Rules 62-296.340(5)(c) (escape BART) and 62-297.310(7)(a)1, F.A.C.]

- b. *Initial & Special Test:* A visible emissions (VE) test shall be conducted concurrently with one run of the SAM stack test to demonstrate initial compliance with the existing VE standards after the proposed work has been completed for each SAP. The VE test results shall be submitted with the SAM stack test report. [Rules 62-4.070(1)&(3) and 62-297.310(7)(b), F.A.C.]
- c. *Tests Prior to Renewal:* Within the 12-month period prior to renewing the Title V air operation permit, tests shall be conducted for SAM emissions from each SAP. [Rules 62-296.340(5)(c) (escape BART), and 62-297.310(7)(a)3, F.A.C.]

{Note: Under this permit SO<sub>2</sub> CEMS are required to demonstrate compliance on a continuous basis, therefore, no initial or annual compliance tests are necessary.}

#### RECORDS & REPORTS

- 20. Quarterly Reporting Requirements: The owners or operators of facilities for which monitoring is required shall submit to the Department a written report of emissions in excess of emission limiting standards as set forth in Rule 62-296.402, F.A.C., for each calendar quarter. The nature and cause of the excessive emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of 5 (five) years. {The permittee is required to use SO<sub>2</sub> continuous emissions monitoring systems for continuous compliance demonstrations.} [Rules 62-296.402(5) and 62-213.440(1)(b)2., F.A.C.]
- 21. Construction Plan & Progress Reports: The permittee shall submit a Construction Plan within sixty (60) days of the effective date of this permit which shall contain the necessary milestones to comply with this permit. The Plan shall include at a minimum the necessary actions and corresponding scheduled due dates to complete those actions to comply with this permit.
  - a. The permittee shall submit progress reports based on the anniversary date (one year from the effective date) of this permit regarding the status of the milestones in the Construction Plan to the Department and to the Compliance Authority, no less than annually in 2009 - 2013.
  - b. The permittee shall complete all required construction & modifications no later than June 30, 2013. [Rules 62-296.340(5)(c) (escape BART), 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]

**SECTION 4. APPENDICES**

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## SECTION 4. APPENDIX A

### CITATION FORMATS

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The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

#### REFERENCES TO PREVIOUS PERMITTING ACTIONS

##### Old Permit Numbers

*Example:* Permit No. AC50-123456 or Air Permit No. AO50-123456

*Where:* “AC” identifies the permit as an Air Construction Permit

“AO” identifies the permit as an Air Operation Permit

“123456” identifies the specific permit project number

##### New Permit Numbers

*Example:* Permit Nos. 099-2222-001-AC, 099-2222-001-AO, or 099-2222-001-AV

*Where:* “099” represents the specific county ID number in which the project is located

“2222” represents the specific facility ID number

“001” identifies the specific permit project

“AC” identifies the permit as an air construction permit

“AO” identifies the permit as a minor source air operation permit

“AV” identifies the permit as a Title V Major Source Air Operation Permit

##### PSD Permit Numbers

*Example:* Permit No. PSD-FL-317

*Where:* “PSD” means issued pursuant to the Prevention of Significant Deterioration of Air Quality

“FL” means that the permit was issued by the State of Florida

“317” identifies the specific permit project

#### RULE CITATION FORMATS

##### Florida Administrative Code (F.A.C.)

*Example:* [Rule 62-213.205, F.A.C.]

*Means:* Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

##### Code of Federal Regulations (CFR)

*Example:* [40 CFR 60.7]

*Means:* Title 40, Part 60, Section 7



**SECTION 4. APPENDIX B**  
**GENERAL CONDITIONS**

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The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
  - a. Have access to and copy and records that must be kept under the conditions of the permit;
  - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
  - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
  - a. A description of and cause of non-compliance; and
  - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

**SECTION 4. APPENDIX B**  
**GENERAL CONDITIONS**

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The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
  - a. Determination of Best Available Control Technology (Not Applicable);
  - b. Determination of Prevention of Significant Deterioration (Not Applicable); and
  - c. Compliance with New Source Performance Standards (Not Applicable).
14. The permittee shall comply with the following:
  - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - c. Records of monitoring information shall include:
    - 1) The date, exact place, and time of sampling or measurements;
    - 2) The person responsible for performing the sampling or measurements;
    - 3) The dates analyses were performed;
    - 4) The person responsible for performing the analyses;
    - 5) The analytical techniques or methods used; and
    - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

**SECTION 4. APPENDIX C**  
**STANDARD TESTING REQUIREMENTS**

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Unless otherwise specified by permit, all emissions units that require testing are subject to the following conditions as applicable.

1. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
2. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operating at permitted capacity as defined below. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
  - a. *Combustion Turbines*. (Reserved)
  - b. *All Other Sources*. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit.

[Rule 62-297.310(2), F.A.C.]

3. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
4. Applicable Test Procedures:
  - a. *Required Sampling Time*.
    - 1) Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
    - 2) *Opacity Compliance Tests*. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
      - a) For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation

**SECTION 4. APPENDIX C**  
**STANDARD TESTING REQUIREMENTS**

shall be equal to the duration of the batch cycle or operation completion time.

- b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
- c) The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
- b. *Minimum Sample Volume.* Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.
- c. *Required Flow Rate Range.* For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
- d. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1.
- e. *Allowed Modification to EPA Method 5.* When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

TABLE 297.310-1 CALIBRATION SCHEDULE			
Item	Minimum Frequency	Reference Instrument	Tolerance
Liquid in glass thermometer	Annually	ASTM Hg in glass ref. thermometer or equivalent or thermometric points	± 2%
Bimetallic thermometer	Quarterly	Calib. liq. in glass	5° F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5° F
Barometer	Monthly	Hg barometer or NOAA station	± 1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 & 2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded	Micrometer	± 0.001" mean of at least three readings; maximum deviation between readings, 0.004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, when 5% change observed, annually	Spirometer or calibrated wet test or dry gas test meter	2%
	2. One Point: Semiannually		
	3. Check after each test series	Comparison check	5%

[Rule 62-297.310(4), F.A.C.]

**SECTION 4. APPENDIX C**  
**STANDARD TESTING REQUIREMENTS**

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5. Determination of Process Variables:

- a. *Required Equipment.* The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
- b. *Accuracy of Equipment.* Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

6. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

- a. *Permanent Test Facilities.* The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.
- b. *Temporary Test Facilities.* The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.
- c. *Sampling Ports.*
  - 1) All sampling ports shall have a minimum inside diameter of 3 inches.
  - 2) The ports shall be capable of being sealed when not in use.
  - 3) The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
  - 4) For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
  - 5) On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

**SECTION 4. APPENDIX C**  
**STANDARD TESTING REQUIREMENTS**

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d. *Work Platforms.*

- 1) Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
- 2) On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
- 3) On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
- 4) All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toeboard, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

e. *Access to Work Platform.*

- 1) Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
- 2) Walkways over free-fall areas shall be equipped with safety rails and toeboards.

f. *Electrical Power.*

- 1) A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.
- 2) If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

g. *Sampling Equipment Support.*

- 1) A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.
  - a) The bracket shall be a standard 3 inch × 3 inch × one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.
  - b) A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.
  - c) The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.
- 2) A complete monorail or dualrail arrangement may be substituted for the eyebolt and bracket.
- 3) When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

**SECTION 4. APPENDIX C**  
**STANDARD TESTING REQUIREMENTS**

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7. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
- a. General Compliance Testing.
- 1) The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.
  - 2) For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.
  - 3) The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
    - a) Did not operate; or
    - b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
  - 4) During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
    - a) Visible emissions, if there is an applicable standard;
    - b) Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
    - c) Each NESHAP pollutant, if there is an applicable emission standard.
  - 5) An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
  - 6) For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup.
  - 7) For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to paragraph 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup.
  - 8) Any combustion turbine that does not operate for more than 400 hours per year shall conduct a

**SECTION 4. APPENDIX C**  
**STANDARD TESTING REQUIREMENTS**

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visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.

- 9) The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- 10) An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., F.A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.
- b. Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

8. Test Reports:

- a. The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- b. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- c. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
  - 1) The type, location, and designation of the emissions unit tested.
  - 2) The facility at which the emissions unit is located.
  - 3) The owner or operator of the emissions unit.
  - 4) The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
  - 5) The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
  - 6) The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
  - 7) A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
  - 8) The date, starting time and duration of each sampling run.



**SECTION 4. APPENDIX C**  
**STANDARD TESTING REQUIREMENTS**

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- 9) The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
- 10) The number of points sampled and configuration and location of the sampling plane.
- 11) For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
- 12) The type, manufacturer and configuration of the sampling equipment used.
- 13) Data related to the required calibration of the test equipment.
- 14) Data on the identification, processing and weights of all filters used.
- 15) Data on the types and amounts of any chemical solutions used.
- 16) Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
- 17) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
- 18) All measured and calculated data required to be determined by each applicable test procedure for each run.
- 19) The detailed calculations for one run that relate the collected data to the calculated emission rate.
- 20) The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
- 21) A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

9. Stack: The terms stack and duct are used interchangeably in this rule.

[Rule 62-297.310(9), F.A.C.]

## SECTION 4. APPENDIX D

### 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.

1. Only one sulfuric acid plant at a facility should 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<sub>2</sub> at a rate in excess of the emission limits imposed by the permit or rule, as determined by the CEMs emission rates for the immediately preceding 20 minutes.
2. A plant start-up must be at the lowest practicable operating rate, not to exceed 70 percent of the designated operating rate, until the SO<sub>2</sub> 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 operating 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.
3. 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.
4. Cold Start-Up Procedures.
  - a. Converter.
    - (1) The inlet and outlet temperature at the first two masses of catalyst shall be sufficiently high to provide immediate ignition when SO<sub>2</sub> 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.
    - (2) The gas stream entering the converter shall contain SO<sub>2</sub> at a level less than normal, and sufficiently low to promote catalytic conversion to SO<sub>3</sub>.
  - b. 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<sub>2</sub>SO<sub>4</sub>.
5. Warm Restart.
  - a. Converter.

**SECTION 4. APPENDIX D**

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

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:

- (1) The first two catalyst masses inlet and outlet temperatures must be at a minimum of 700°F; or
- (2) Two of the four inlet and outlet temperatures must be greater than or equal to 800°F; or
- (3) 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.

**b. 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<sub>2</sub>SO<sub>4</sub>.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

MOSAIC FERTILIZER LLC

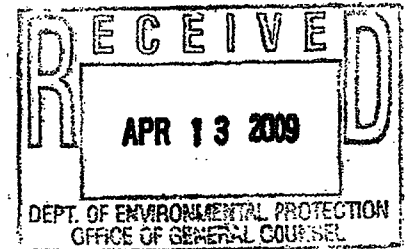
Petitioner,

OCG Case No. 09-0508  
DEP Draft Permit No. 0570008-061-AC  
BART Exemption Project –  
Riverview Facility

vs.

STATE OF FLORIDA, DEPARTMENT OF  
ENVIRONMENTAL PROTECTION,


Respondents.



**WITHDRAWAL OF FIRST  
REQUEST FOR ENLARGEMENT OF TIME**

Pursuant to Sections 120.569 and 120.57, Florida Statutes (F.S.) and Rule 28-106.201, Florida Administrative Code (F.A.C.), Petitioner, Mosaic Fertilizer, LLC ("Mosaic") hereby withdraws its previously-filed Request for Enlargement of Time regarding Draft Permit No. 0570008-061-AC, issued by the Florida Department of Environmental Protection (Department) on or about March 3, 2009.

Mosaic and the Department have agreed on a resolution of the issues involved in this Draft Permit, as reflected in Attachment A. Conditioned on the Department's issuance of a Final Permit in accordance with the agreement in Attachment A, Mosaic hereby withdraws its First Request for Enlargement of Time.

*for*   
Robert A. Manning  
Florida Bar No. 0035173  
HOPPING GREEN & SAMS, P.A.  
123 South Calhoun Street  
Tallahassee, Florida 32301  
Phone: 850-222-7500  
Fax: 850-224-8551  
Email: [robertm@hgslaw.com](mailto:robertm@hgslaw.com)  
Attorneys for Petitioner, Mosaic  
Fertilizer, LLC

**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by hand delivery to Lea Crandall, Agency Clerk, and Jack Chisolm, Deputy General Counsel, Florida Department of Environmental Protection, 3900 Commonwealth Boulevard, Room 659, Tallahassee, Florida 32399-3000, and by electronic mail to Scott Sheplak, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, this 13th day of April, 2009.

  
\_\_\_\_\_  
Attorney

~ FOR SETTLEMENT DISCUSSION PURPOSES ~  
version dated April 8, 2009

**PERMITTEE**

Mosaic Fertilizer, LLC  
8813 U.S. Highway 41 South  
Riverview, FL 33569

*Authorized Representative:*  
Mr. Alan Lulf, Plant Manager

Air Permit No. 0570008-061-AC Expiration Date: June 30, 2013  Riverview Facility BART Exemption Project
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**PLANT AND LOCATION**

The Mosaic Fertilizer, LLC operates the Riverview Facility, which is located at 8813 U.S. Highway 41 South, Riverview in Hillsborough County, Florida. The facility is an existing phosphate fertilizer manufacturer, which is identified by Standard Industrial Classification (SIC) code No. 2874.

**STATEMENT OF BASIS**

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). Pursuant to Rule 62-296.340(5)(c) (escape BART), F.A.C., the permittee shall install the air pollution control equipment and/or implement the air pollution control measures that are specified by this permit to be exempt from a Best Available Retrofit Technology (BART) determination.

**EFFECTIVE DATE**

Unless otherwise specified by this permit, the affected emissions units shall comply with the conditions of this permit as expeditiously as practicable, but not later than the expiration date of this permit. [Rule 62-296.340(3)(b)2., F.A.C.]

Executed in Tallahassee, Florida

\_\_\_\_\_  
Joseph Kahn, Director  
Division of Air Resource Management

\_\_\_\_\_  
Effective Date

JK/tlv/jkh/sms

**ATTACHMENT**  
"A"

## SECTION 1. GENERAL INFORMATION

### FACILITY DESCRIPTION

This facility consists of several industrial processes that convert insoluble rock containing phosphorus ore into a soluble form suitable for agricultural use. The processes consist of a molten sulfur storage & handling system, one material handling system, three (3) sulfuric acid plants, one (1) phosphoric acid plant (two trains), two (2) diammonium phosphate (DAP) plants, two (2) monoammonium phosphate (MAP) plants, one auxiliary boiler, and two (2) animal feed plants.

### FACILITY REGULATORY CLASSIFICATIONS

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate emissions units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source pursuant to Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

### AFFECTED EMISSIONS UNITS

This permitting action affects the following emissions units at the plant:

EU ID No.	Brief Description
-022	No. 3 MAP Plant
-023	No. 4 MAP Plant
-024	South Cooler
-063	Molten Sulfur Storage and Handling System -- Storage Tank Nos. 1, 2 and 3
-066	Molten Sulfur Storage and Handling System -- Storage Pit No. 7
-067	Molten Sulfur Storage and Handling System -- Storage Pit No. 8
-068	Molten Sulfur Storage and Handling System -- Storage Pit No. 9
-004	No. 7 Sulfuric Acid Plant
-005	No. 8 Sulfuric Acid Plant
-006	No. 9 Sulfuric Acid Plant

## **SECTION 1. GENERAL INFORMATION**

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### **CONTENTS**

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Units Specific Conditions

Section 4. Appendices

Appendix A. Citation Formats

Appendix B. General Conditions

Appendix C. Standard Testing Requirements

Appendix D. Memorandum of Understanding Regarding Best Operational Start-up Practices for Sulfuric Acid Plants



## SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. **Permitting Authority:** The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.
2. **Compliance Authority:** All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the **Compliance Authority, the Environmental Protection Commission of Hillsborough County (EPCHC)**. The Compliance Authority's mailing address is:  

Environmental Protection Commission Hillsborough County  
3629 Queen Palm Drive  
Tampa, Florida 33619  
Telephone: 813/627-2600, Fax: 813/627-2660
3. **Appendices:** The following Appendices are attached as part of this permit: Appendix A (Citation Formats); Appendix B (General Conditions); Appendix C (Standard Testing Requirements); and, Appendix D (Memorandum of Understanding Regarding Best Operational Start-up Practices for Sulfuric Acid Plants).
4. **Applicable Regulations, Forms and Application Procedures:** Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to the applicable provisions of: Chapter 403, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.; and the applicable parts and subparts of Title 40, Code of Federal Regulations (CFR). Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. **Title V Air Operation Permit:** This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the **Permitting Authority, the Florida Department of Environmental Protection, Southwest District Office which is different from the Office cited in Condition No. 1** with copies to the Compliance Authority. The mailing address for the Southwest District Office is:  

Florida Department of Environmental Protection Southwest District  
13051 North Telecom Parkway  
Temple Terrace, FL 33637-0926  
Telephone: 813/632-7600, Fax: 813/744-6458

[Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]
6. **Records Retention:** All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 (five) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2., F.A.C.]
7. **Annual Operating Report (AOR):** The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by May 1, 2009 and April 1<sup>st</sup> of each year, thereafter. [Rule 62-210.370(3), F.A.C.]

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

### NEW & PREVIOUS PERMIT SPECIFIC CONDITIONS

8. Pursuant to Rule 62-296.340(5)(c) (escape BART), F.A.C., the specific terms and conditions of this permit are required in order to escape a Best Available Retrofit Technology Determination. These specific terms and conditions apply to each emissions unit and are in addition to any other applicable standards. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Proposed by the Applicant in the Application; and, Rules 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]
9. A relaxation of the specific terms and conditions of this permit may subject the facility to a BART determination. Any request to change the specific terms and conditions of this permit must be submitted to the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; and, Rules 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]
10. Some of the proposed work under this project to escape a BART determination is also permitted under a PSD avoidance permit, Permit No. 0570008-060-AC. A relaxation of the specific terms and conditions of this permit may subject the facility to a BART and/or a BACT determination. A copy of any request to change the specific terms and conditions of Permit No. 0570008-060-AC must be submitted to the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; and, Rules 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]
11. No emissions unit or facility subject to this permit shall be constructed or modified without obtaining the appropriate air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
12. Source Obligation:
  - (a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit. [Rule 62-212.400(12)(a), F.A.C.]
  - (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification. [Rule 62-212.400(12)(b), F.A.C.]
  - (c) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification. [Rule 62-212.400(12)(c), F.A.C.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**A. No. 3 MAP Plant, No. 4 MAP Plant, South Cooler (EU-022, -023, -024)**

This subsection addresses the following affected emissions units:

<b>EU ID No.</b>	<b>Emissions Unit Description</b>
-022	No. 3 MAP Plant
-023	No. 4 MAP Plant
-024	South Cooler

**PERMANENTLY SHUTDOWN EMISSIONS UNITS**

1. **Permanent Shutdown:** The permittee permanently shutdown the Nos. 3 & 4 MAP Plant and the South Cooler (Emission unit identification numbers (EU ID Nos.) -022, -023 & -024) in September 2004. These emissions units are included in the current Title V air operation permit, Permit Number 00570008-051-AV, effective October 27, 2008. As part of this BART exemption determination, these units are not allowed to operate. These units were not included in the applicant's BART analysis. Since these units are deemed to be permanently shutdown, a BART analysis was not required for these units. If any of these units resume operations a BART analysis shall be performed as though they had not been shutdown. Other preconstruction review requirements may apply. [Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's Request dated January 31, 2007]
2. **Notification of Removal:** The permittee shall notify the Department's Bureau of Air Regulation, SWD Office and the Compliance Authority upon the physical removal of these emissions units from on-site. [Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's Request dated January 31, 2007]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**B. Molten Sulfur Storage and Handling System – Storage Tank Nos. 1, 2 & 3 (EU-063) and Storage Pit Nos. 7, 8, and 9 (EU-066, -067, -068)**

EU ID No.	Emissions Unit Description
-063	Molten Sulfur Storage and Handling System – Storage Tank Nos. 1, 2 and 3
-066	Molten Sulfur Storage and Handling System – Storage Pit No. 7
-067	Molten Sulfur Storage and Handling System – Storage Pit No. 8
-068	Molten Sulfur Storage and Handling System – Storage Pit No. 9
<p><i>Descriptions:</i></p> <p>The Molten Sulfur Storage and Handling System consists of storage tank nos. 1, 2 and 3 (capacity of 19,845 tons each), covered storage pit nos. 7, 8 and 9 (capacity of 127 tons, 127 tons, and 160 tons respectively), a ship unloading dock, truck loading station and associated transfer pumps and piping for storage and handling of molten sulfur.</p> <p>Molten sulfur from ships may be transferred to any combination of the three molten sulfur storage tanks at a combined maximum total of 2,277,081 tons of molten sulfur per any consecutive 12-month period. These tanks then transfer molten sulfur to the molten sulfur storage pits at the sulfuric acid plants (SAPs) and also to the molten sulfur truck loading station.</p> <p>The three molten sulfur storage pits are located at the three sulfuric acid plants. The pits receive molten sulfur from the molten sulfur storage tanks and/or by truck. Each of the storage pits may receive molten sulfur at a constant rate of 336 tons per hour. Each storage pit is allowed to transfer molten sulfur to each SAP at a maximum throughput rate of 492,361 tons per consecutive 12-month period.</p> <p>Initial construction of the three molten sulfur storage tanks and three molten sulfur storage pits was before August 7, 1977.</p> <p><i>Air Pollution Control Systems and Measures:</i> A wet scrubber is currently used to control particulate matter (PM) emissions from the molten sulfur storage tank nos. 1, 2 and 3 as well as the truck loading station. Emissions from loading the three molten sulfur storage pits are uncontrolled, although they are equipped with covers.</p> <p><i>Monitoring:</i> The scrubber pressure drop and liquid flow rate are recorded once every 8-hour shift.</p>	

*{Permitting notes: These emissions units are currently regulated under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) PSD-FL-315/0570008-036-AC; Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards; and Rule 62-296.411, F.A.C., Sulfur Storage and Handling Facilities.}*

**ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS**

1. Molten sulfur from ships may be transferred to any combination of the three molten sulfur storage tanks at a combined maximum total not to exceed 2,277,081 tons of molten sulfur per any consecutive 12-month period. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), and, Proposed by the Applicant in the Application]
2. Each storage pit is allowed to transfer molten sulfur to each SAP at a maximum throughput rate of 492,361 tons per consecutive 12-month period. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), and, Proposed by the Applicant in the Application]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)**

This subsection addresses the following affected emissions units:

EU ID No.	Emissions Unit Description
-004	No. 7 Sulfuric Acid Plant
-005	No. 8 Sulfuric Acid Plant
-006	No. 9 Sulfuric Acid Plant
<p><i>Descriptions:</i></p> <p>Sulfuric Acid Plants (SAPs) No. 7, No. 8, and No. 9 have a design capacity of 3,200 tons per day (TPD), 2,700 TPD, and 3,400 TPD of 100% sulfuric acid, respectively. Each SAP recovers a portion of the waste heat (steam) for process use and to generate electricity. Waste heat recovery reduces plume visibility. There are two electrical generators at each SAP, rated at 35 kilowatts (kW) and 36 kW for a total of 71 kW. These plants are sulfur burning, double conversion, double absorption plants of Leonard-Monsanto design. Sulfur is burned with dried atmosphere oxygen to produce sulfur dioxide (SO<sub>2</sub>). The sulfur dioxide is catalytically oxidized to sulfur trioxide (SO<sub>3</sub>) over a catalyst bed. The sulfur trioxide is then absorbed in sulfuric acid. The remaining sulfur dioxide, not previously oxidized, is passed over a final converter bed of catalyst and the sulfur trioxide produced is then absorbed in sulfuric acid. SAP Nos. 7, 8 and 9 began operating in 1961, 1965, 1974, respectively.</p> <p><i>Air pollution control systems and measures:</i> The control of SO<sub>2</sub> emissions is by the process itself primarily. Currently, a double conversion, double absorption plant efficiently converts SO<sub>2</sub> to SO<sub>3</sub>, then SO<sub>3</sub> reacts in a mixture of water and sulfuric acid to produce sulfuric acid. In a double absorption system, the conversion efficiency from SO<sub>2</sub> to SO<sub>3</sub> is at least 99.7%. All three plants use a vanadium catalyst in the converters except that in the 4<sup>th</sup> pass of the SAP Nos. 9 a cesium promoted catalyst is used. The current catalyst bed volumes in the No. 7 SAP are 102,000 liters in the 1<sup>st</sup> pass, 112,000 liters in the 2<sup>nd</sup> pass, 155,000 liters in the 3<sup>rd</sup> pass, and 209,000 liters in the 4<sup>th</sup> pass; for a total of 578,000 liters. The current total catalyst volume in the No. 8 SAP is 472,000 liters. The current total catalyst volume in the No. 9 SAP is 508,000 liters. Sulfuric acid mist (SAM) emissions are controlled by the use of high efficiency acid mist eliminators (demister pads) or impaction-type glass fiber collection devices. Best operational practices are followed to minimize excess emissions during startup and shutdown.</p> <p><i>Monitors:</i> Each SAP is equipped with an existing SO<sub>2</sub> continuous emissions monitoring system (CEMS). The SO<sub>2</sub> CEMS have been required by the circa 1977 Standards of Performance for New Stationary Sources (NSPS). The CEMS installed for SAP No. 7 is an Ametek Model 4600B. SAP Nos. 8 and 9 each have an Ametek/Dupont Model 40/460 CEMS.</p> <p><i>Stack Parameters:</i> Emissions not absorbed by each double absorption system are vented through each individual SAP's 150 foot stack. The stack exhaust gas characteristics for SAP Nos. 7, 8 and 9 are: exhaust gas temperatures of 170, 150, &amp; 152 °F; exhaust gas flow rates 122,000, 105,000, &amp; 149,000 acfm; and, stack diameters of 7.5, 8.0, &amp; 9.0 feet.</p>	

*{Permitting notes: The SAPs are currently regulated under NSPS 40 CFR 60, Subpart H, Standards of Performance for Sulfuric Acid Plants, adopted and incorporated by reference in Rule 62-204.800(7)(b)10., F.A.C.; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), PSD-FL-209 (AC29-241660) - 1<sup>st</sup> BACT for SAP Nos. 8 & 9, PSD-FL-250 (0570008-025-AC) - 1<sup>st</sup> BACT for SAP No. 7, PSD-FL-315 (0570008-*

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)**

*036-AC) - 2<sup>nd</sup> BACT for SAP Nos. 8 & 9; Rule 62-296.402, F.A.C., Sulfuric Acid Plants; and, Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards.}*

**ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS**

1. **Design Capacity:** The existing design capacity of each SAP shall not be changed as a result of the proposed work under this project, Permit No. 0570008-061-AC. The existing design capacity of each SAP shall not exceed the following:

SAP No.	Design Production Capacity, TPD of 100% H <sub>2</sub> SO <sub>4</sub> (sulfuric acid)
7	3,200
8	2,700
9	3,400

[Rules 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

2. **Design Capacity:** Any request to change the design capacity of each SAP must be submitted to the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. [Rules 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]
3. **Design Capacity & Permitted Production:** The permittee shall submit a statement from the responsible official within 30 days after the completion of all of the proposed work under this project indicating whether or not in fact the design capacity or permitted production of each SAP was changed. [Rules 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

**AIR POLLUTION CONTROL TECHNOLOGIES & MEASURES**

4. **SO<sub>2</sub> Controls:** This BART exemption determination does require new, modified or additional air pollution control systems for SO<sub>2</sub>. To control emissions of sulfur dioxide (SO<sub>2</sub>) from each SAP, the permittee shall continue the use of the existing double absorption system technology with vanadium and/or cesium catalyst in the converters and the use of good combustion practices & best operational practices to minimize excess emissions during startup and shutdown. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rule 62-210.700(1), F.A.C.; and, Proposed by the Applicant in the Application]
5. **Proposed Work:** The applicant is required to perform the following specific work activities under this project in order to escape BART:

SAP No.	Work Activities
7	<ul style="list-style-type: none"> <li>• Increase the catalyst loading ratio from approximately 181 liters per ton H<sub>2</sub>SO<sub>4</sub> per day (L/TPD) to approximately 202 L/TPD {increases the current catalyst loading from approximately 578,000 liters to approximately 647,000 liters}; and,</li> <li>• Replace the cold gas-to-gas heat exchanger.</li> </ul>
8	<ul style="list-style-type: none"> <li>• Increase the catalyst loading ratio from approximately 175 L/TPD to approximately 213 L/TPD {increases the current catalyst loading from approximately 472,000 liters to approximately 575,000 liters. The 468,000 liters cited in the study was with the existing converter};</li> <li>• Replace the cold gas-to-gas heat exchanger;</li> <li>• Replace the superheater; and,</li> <li>• Replace the converter with a larger one.</li> </ul> <p>Note: These work activities are permitted under Permit No. 0570008-060-AC.</p>

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)**

9	<ul style="list-style-type: none"><li>• Increase the catalyst loading ratio from approximately 149 L/TPD to approximately 195 L/TPD {increases the current catalyst loading from approximately 508,000 liters to approximately 663,000 liters}; and,</li><li>• Install a heat recovery system (HRS) to replace the interpass absorption (IPA) tower.</li></ul>
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Additional catalyst may be added as necessary in order to meet the BART SO<sub>2</sub> emission limits. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), and, Proposed by the Applicant in the Application].

- SO<sub>2</sub> Controls:** The permittee shall use the specific catalyst loadings & types as cited in the study by the permittee's catalyst supplier in Appendix C of the Application. The specific catalyst loadings & types in Appendix C of the Application provide the permitting authority reasonable assurances of compliance with this permit. The study confirms that with the proposed modifications to each SAP, the SAPs can achieve the SO<sub>2</sub> emission rates of 2.8 to 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>. Other specific catalyst types may be considered by the Bureau of Air Regulation upon written request. The permittee shall submit a written request for other specific catalyst loadings & types to the Bureau of Air Regulation with a copy to the Compliance Authority for review and approval prior to use. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), F.A.C.; and, Proposed by the Applicant in the Application]
- SAM Controls:** This BART exemption determination does not require new, modified or additional air pollution control systems for SAM. By controlling sulfuric acid mist (SAM) emissions PM/PM<sub>10</sub> and visible emissions are minimized. To control emissions of SAM, the permittee shall continue the use of the existing packed-fiber mist eliminators or demister pads to remove SAM. Other SAM control technologies may be considered by the Bureau of Air Regulation upon written request. The permittee shall submit a written request for other SAM control technologies to the Bureau of Air Regulation with a copy to the Compliance Authority for review and approval prior to use. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rule 62-210.700(1), F.A.C.; and, Proposed by the Applicant in the Application]
- Circumvention:** The permittee shall not circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

**EMISSION STANDARDS & LIMITATIONS**

- SO<sub>2</sub> Emission Standards & Limitations:** This BART determination specifies new SO<sub>2</sub> emission standards. Emissions of SO<sub>2</sub> shall not exceed the following as determined by certified CEMS data:

SAP No.	lb/hour
7	400
8	315
9	425

Emissions of SO<sub>2</sub> shall not exceed 400 pounds per hour for No. 7 SAP, 315 pounds per hour for No. 8 SAP, and 425 pounds per hour for No. 9 SAP based on a 24-hour (daily) block average as determined by CEMS data.

{The equivalent lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub> values for SAP Nos. 7, 8, and 9 at design capacity are: 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>; 2.8 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>; and, 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, respectively. The equivalent lb/ton values corresponding to the lb/hour limits are less than the current existing standards. The equivalent tons per year (TPY) values for SAP Nos. 7, 8, and 9 are: 1,752 TPY; 1,380 TPY; and, 1,862 TPY, respectively. This permit requires CEMS to be used to demonstrate compliance on a continuous basis on a

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)**

24-hour (daily) block average. A 24-hour (daily) block average was established based on the emission rate averaging period of 24-hour (daily) used in the air dispersion modeling.}

[Rule 62-296.340(5)(c) (escape BART), F.A.C.; and, Proposed by the Applicant in the Application]

10. SO<sub>2</sub> Continuous Emissions Monitoring System (CEMS): This BART exemption determination requires an SO<sub>2</sub> CEMS to be used to demonstrate continuous compliance with the SO<sub>2</sub> emission standards and limitations specified in this section.

- a. In accordance with the NSPS (40 CFR 60, Subpart H) requirements for sulfuric acid plants, the permittee shall continue to properly calibrate, maintain, and operate a CEMS to measure and record emissions of SO<sub>2</sub>. In accordance with PSD-FL-250 & PSD-FL-315 the permittee shall continue to use SO<sub>2</sub> CEMS data to demonstrate compliance.
- b. A CEMS shall be properly calibrated, maintained, and operated to comply with: 40 CFR 60 Subpart A, General Provisions; 40 CFR 60 Appendix B, Performance Specification 2; and, 40 CFR 60, Appendix F, Quality Assurance Procedures for Gas CEMS Used for Compliance Determination.
- c. The emissions data collected with the certified CEMS shall be used to demonstrate continuous compliance with the standards and limitations specified in this section.

[Rules 62-296.340(5)(c) (escape BART), 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.; and, Proposed by the Applicant in the Application]

11. SAM Emission Standards & Limitations: This BART determination specifies new SAM emission standards. Emissions of SAM shall not exceed the following as demonstrated by stack test data:

SAP No.	lb/hour
7	6.7
8	5.6
9	7.1

Emissions of SAM shall not exceed 6.7 pounds per hour for No. 7 SAP, 5.6 pounds per hour for No. 8 SAP, and 7.1 pounds per hour for No. 9 SAP based on a 3-hour average as determined by stack test data.

{The equivalent lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub> values for SAP Nos. 7, 8, and 9 at design capacity for each SAP is 0.05 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>. The equivalent lb/ton value corresponding to the lb/hour limits is less than the current existing standards. The equivalent tons per year (TPY) values for SAP Nos. 7, 8, and 9 are: 29.3 TPY; 24.5 TPY; and, 31.1 TPY, respectively. This permit requires stack test data to be used to demonstrate compliance. Compliance with the 3-hour average by stack test assures compliance with a numerical standard on a 24-hour (daily) average basis. The air dispersion modeling was performed using a 24-hour (daily) average.}

[Rule 62-296.340(5)(c) (escape BART), F.A.C.; and, Proposed by the Applicant in the Application]

**EXCESS EMISSIONS**

- 12. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
- 13. Excess Emissions Allowed: Unless otherwise specified by permit, excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case



### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)

exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

14. **Excess Emissions Notification:** In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
15. **Best Operational Practices to Minimize Excess Emissions:**
  - a. The permittee shall follow the best operational practices to minimize excess emissions during startup and shutdown as described in the most recent Title V permit application.
  - b. Best operational practices to minimize excess SO<sub>2</sub> and SO<sub>3</sub> emissions during startup are governed by this condition. The permittee shall follow the best operational practices to minimize excess emissions during startup contained within the attached Appendix D - Memorandum of Understanding Regarding Best Operational Start-up Practices for Sulfuric Acid Plants initially executed on October 25, 1989.  
[Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rule 62-210.700(1), F.A.C.; and Proposed by the Applicant in the Application]
16. **Best Operational Practices to Minimize Leaks of SO<sub>2</sub> and SO<sub>3</sub> or Other Fugitive Process Emissions:** Best operational practices to minimize leaks of SO<sub>2</sub> and SO<sub>3</sub>, or other fugitive process emissions shall be adhered to and shall include regular inspections and the prompt repair or correction of any leaks or other fugitive emissions. [Rules 62-4.070(1)&(3) and 62-296.320, F.A.C.]

#### EMISSIONS TESTING

17. **Test Methods:** The following reference methods (or more recent versions) shall be used to conduct any required emissions tests.

Method	Description of Method and Comments
1 - 4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
6 or 6C	Determination of SO <sub>2</sub> Emissions from Stationary Sources
8	Determination of SAM & SO <sub>2</sub> Emissions from Stationary Sources
9	Visual Determination of Opacity from Stationary Sources

EPA Methods 1, 2, 3, 4, and 9 shall be used as necessary to support the other test methods. The above methods are described in 40 CFR 60, Appendix A, which is adopted by reference in Rule 62-204.800, F.A.C. No other methods shall be used without prior written approval from the Permitting Authority. [Rules 62-204.800 and 62-297.100, F.A.C.; and 40 CFR 60, Appendix A]

18. **Standard Testing Requirements:** All required emissions tests shall be conducted in accordance with the requirements specified in Appendix C (Standard Testing Requirements) of this permit. [Rules 62-204.800 and 62-297.100, F.A.C.; and 40 CFR 60, Appendix A]
19. **Compliance Test Schedule:** In accordance with the following schedule, the permittee shall have stack tests conducted to demonstrate compliance with the emissions standards specified in this permit.
  - a. **Initial Test:** On or before April 30, 2013, an initial test shall be conducted for SAM emissions from each SAP {June 30, 2013 -2 months.}. The initial compliance test report for SAM shall be submitted within

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### C. Nos. 7, 8 and 9 Sulfuric Acid Plants (EU-004, -005, -006)

45 days of completion of testing. [Rules 62-296.340(5)(c) (escape BART) and 62-297.310(7)(a)1, F.A.C.]

- b. *Initial & Special Test:* A visible emissions (VE) test shall be conducted concurrently with one run of the SAM stack test to demonstrate initial compliance with the existing VE standards after the proposed work has been completed for each SAP. The VE test results shall be submitted with the SAM stack test report. [Rules 62-4.070(1)&(3) and 62-297.310(7)(b), F.A.C.]
- c. *Tests Prior to Renewal:* Within the 12-month period prior to renewing the Title V air operation permit, tests shall be conducted for SAM emissions from each SAP. [Rules 62-296.340(5)(c) (escape BART), and 62-297.310(7)(a)3, F.A.C.]

{Note: Under this permit SO<sub>2</sub> CEMS are required to demonstrate compliance on a continuous basis, therefore, no initial or annual compliance tests are necessary.}

#### RECORDS & REPORTS

- 20. Quarterly Reporting Requirements: The owners or operators of facilities for which monitoring is required shall submit to the Department a written report of emissions in excess of emission limiting standards as set forth in Rule 62-296.402, F.A.C., for each calendar quarter. The nature and cause of the excessive emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of 5 (five) years. {The permittee is required to use SO<sub>2</sub> continuous emissions monitoring systems for continuous compliance demonstrations.} [Rules 62-296.402(5) and 62-213.440(1)(b)2., F.A.C.]
- 21. Construction Plan & Progress Reports: The permittee shall submit a Construction Plan within sixty (60) days of the effective date of this permit which shall contain the necessary milestones to comply with this permit. The Plan shall include at a minimum the necessary actions and corresponding scheduled due dates to complete those actions to comply with this permit.
  - a. The permittee shall submit progress reports based on the anniversary date (one year from the effective date) of this permit regarding the status of the milestones in the Construction Plan to the Department and to the Compliance Authority, no less than annually in 2009 - 2013.
  - b. The permittee shall complete all required construction & modifications no later than June 30, 2013.[Rules 62-296.340(5)(c) (escape BART), 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]

## FINAL DETERMINATION

~ FOR SETTLEMENT DISCUSSION PURPOSES ~  
version dated April 8, 2009

### PERMITTEE

Mosaic Fertilizer, LLC  
8813 U.S. Highway 41 South  
Riverview, FL 33569

### PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)  
Division of Air Resource Management  
Bureau of Air Regulation, Title V Section  
2600 Blair Stone Road, MS #5505  
Tallahassee, Florida 32399-2400

### PROJECT

Air Permit No. 0570008-061-AC  
Riverview Facility

This project is for a minor source air construction (AC) permit for the Riverview Facility to escape a BART determination pursuant to Rule 62-296.340(5)(c), F.A.C.

Specifically, the permit requires: (1) federally enforceable reductions of SO<sub>2</sub> and SAM emissions to bring this facility's visibility impact to below the 0.5 deciview (dv) threshold allowing the facility to escape a BART determination pursuant to Rule 62-296.340(5)(c), F.A.C. (SO<sub>2</sub> emission limits from SAP Nos. 7, 8 & 9 are reduced to equivalent 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, 2.8 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, and, 3.0 lb SO<sub>2</sub>/ton 100% H<sub>2</sub>SO<sub>4</sub>, respectively. SAM emission limits from SAP Nos. 7, 8 & 9 are reduced to equivalent 0.05 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>); (2) each sulfuric acid plant (SAP) to demonstrate compliance with the SO<sub>2</sub> standards and limitations on a continuous basis using CEMS data on a 24-hour (daily) block average; (3) the use of the existing control technology - the double absorption system with increased catalyst loading, replacement of indicated process equipment, and the use of existing acid mist demister pads for SAP Nos. 7, 8 & 9; and, (4) the permittee to follow best operational practices to minimize excess emissions from each SAP.

### PROCESSING SCHEDULE AND RELATED DOCUMENTS

Draft Permit and the TE&PD for BART exemption issued (clerked) on March 3, 2009.  
Public Notice published on March 10, 2009.  
Applicant filed an extension in which to file a petition for an administrative hearing on March 13, 2009.  
Comments dated March 23, 2009 from Mosaic, received on March 24, 2009.  
DEP Order granting request for extension of time up to May 12, 2009, clerked on March 31, 2009.  
Proof of Publication of Public Notice received on April 2, 2009.

### NOTICE AND PUBLICATION

The Department distributed a Written Notice of Intent to Issue Permit package on March 3, 2009. The applicant published the Public Notice of Intent to Issue in the Tampa Tribune on March 10, 2009. The permitting authority received the proof of publication on April 2, 2009.

### COMMENTS

Comments on the Draft Permit were received from the applicant.

### Applicant

Mosaic Fertilizer, LLC  
Riverview Facility

Final Permit No. 0570008-061-AC  
BART Exemption Project

## FINAL DETERMINATION

On March 24, 2009, the Department received comments dated March 23, 2009 from Golder Associates Inc. on behalf of Mosaic Fertilizer, LLC (Mosaic), the applicant. The following summarizes the comments verbatim and the Department's response to each comment.

Additions to the permit are indicated below by a double underline. Deletions from the permit are indicated below by a ~~strike through~~.

### Air Construction Permit

1. Page 6, Condition I: The current TV permit is permit No. 0570008-051-AV.

**Response:** The referenced Title V air operation permit, permit No. 0570008-045-AV, is the 5-year permit which expires May 31, 2011. As indicated, a more recent Title V air operation permit was issued on October 27, 2008, permit No. 0570008-051-AV. This permit also includes emission unit identification numbers (EU ID Nos.) -022, -023 & -024, the Nos. 3 & 4 MAP Plant and the South Cooler.

The permit and effective date cited in specific condition 3.A.1. are changed to read as follows:

1. **Permanent Shutdown:** The permittee permanently shutdown the Nos. 3 & 4 MAP Plant and the South Cooler (Emission unit identification numbers (EU ID Nos.) -022, -023 & -024) in September 2004. These emissions units are included in the current Title V air operation permit, Permit Number 00570008-045-051-AV, effective ~~May 31, 2006~~ October 27, 2008. As part of this BART exemption determination, these units are not allowed to operate. These units were not included in the applicant's BART analysis. Since these units are deemed to be permanently shutdown, a BART analysis was not required for these units. If any of these units resume operations a BART analysis shall be performed as though they had not been shutdown. Other preconstruction review requirements may apply. [Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's Request dated January 31, 2007]
2. Page 8 of 13: Under descriptions for the EUs, the current catalyst loadings for No. 7 SAP do not correspond to the BART exemption application, which shows 102,000 liters in the 1<sup>st</sup> pass, 112,000 liters in the 2<sup>nd</sup> pass, 155,000 liters in the 3<sup>rd</sup> pass, and 209,000 liters in the 4<sup>th</sup> pass, for a total of 578,000 liters. Also, in the paragraph under Stack Parameters, the second sentence should read "SAP Nos. 7, 8, and 9" (SAP No. 7 is left out).

**Response:** As indicated, the BART exemption application on page 5 of the BART Exemption Analysis document does indicate the total catalyst to be 578,000 liters. Thank you for the individual breakdowns of the catalyst beds. Previous information on file had been slightly different. The second sentence in the paragraph under Stack Parameters should read "SAP Nos. 7, 8, and 9." The requested changes are made.

The emissions unit description on page 8 of Section 3.C. is changed to read as follows:

**FINAL DETERMINATION**

EU ID No.	Emissions Unit Description
-004	No. 7 Sulfuric Acid Plant
-005	No. 8 Sulfuric Acid Plant
-006	No. 9 Sulfuric Acid Plant
	<p>...</p> <p><i>Air pollution control systems and measures:</i> The control of SO<sub>2</sub> emissions is by the process itself primarily. Currently, a double conversion, double absorption plant efficiently converts SO<sub>2</sub> to SO<sub>3</sub>, then SO<sub>3</sub> reacts in a mixture of water and sulfuric acid to produce sulfuric acid. In a double absorption system, the conversion efficiency from SO<sub>2</sub> to SO<sub>3</sub> is at least 99.7%. All three plants use a vanadium catalyst in the converters except that in the 4<sup>th</sup> pass of the SAP Nos. 9 a cesium promoted catalyst is used. The current catalyst bed volumes in the No. 7 SAP are <del>112,000</del>102,000 liters in the 1<sup>st</sup> pass, <del>154,000</del>12,000 liters in the 2<sup>nd</sup> pass, <del>154,000</del>155,000 liters in the 3<sup>rd</sup> pass, and <del>208,000</del>209,000 liters in the 4<sup>th</sup> pass; for a total of <del>628,000</del>578,000 liters. The current total catalyst volume in the No. 8 SAP is 472,000 liters. The current total catalyst volume in the No. 9 SAP is 508,000 liters. Sulfuric acid mist (SAM) emissions are controlled by the use of high efficiency acid mist eliminators (demister pads) or impaction-type glass fiber collection devices. Best operational practices are followed to minimize excess emissions during startup and shutdown.</p> <p>...</p> <p><i>Stack Parameters:</i> Emissions not absorbed by each double absorption system are vented through each individual SAP's 150 foot stack. The stack exhaust gas characteristics for SAP Nos. 7, 8 and 9 are: exhaust gas temperatures of 170, 150, &amp; 152 °F; exhaust gas flow rates 122,000, 105,000, &amp; 149,000 acfm; and, stack diameters of 7.5, 8.0, &amp; 9.0 feet.</p>

3. Page 9, Condition 5. Condition 5 references that future catalyst loadings should be stated as "approximately", per the BART exemption application. The permit should also allow higher catalyst loadings if these are necessary in order to meet the BART emission limits.

**Response:** The Department relied upon the study by the catalyst supplier for reasonable assurances of compliance (Rule 62:4.070(1)&(3), F.A.C. - Reasonable Assurance) with the reduced SO<sub>2</sub> and SAM emission limits. Specific condition number 3.C.6. requires the permittee to use the specific catalyst loadings & types as cited in the study by the permittee's catalyst supplier in Appendix C of the Application. Requests for other specific catalyst loadings & types must be submitted in writing to the Bureau for review and approval prior to use. The permit allows higher catalyst loadings if they are necessary in order to meet the BART SO<sub>2</sub> emission limits.

Specific condition number 3.C.5. of the permit is clarified as follows:

5. Proposed Work: The applicant is required to perform the following specific work activities under this project in order to escape BART:

SAP No.	Work Activities
7	<ul style="list-style-type: none"> <li>• Increase the catalyst loading ratio from <u>approximately</u> 181 liters per ton H<sub>2</sub>SO<sub>4</sub> per day (L/TPD) to <u>approximately</u> 202 L/TPD {increases the current catalyst loading from approximately 578,000 liters to <u>approximately</u> 647,000 liters}; and,</li> </ul>

**FINAL DETERMINATION**

	<ul style="list-style-type: none"> <li>• Replace the cold gas-to-gas heat exchanger.</li> </ul>
8	<ul style="list-style-type: none"> <li>• Increase the catalyst loading ratio from <u>approximately 175 L/TPD</u> to <u>approximately 213 L/TPD</u> {increases the current catalyst loading from approximately 472,000 liters to <u>approximately 575,000</u> liters. The 468,000 liters cited in the study was with the existing converter};</li> <li>• Replace the cold gas-to-gas heat exchanger;</li> <li>• Replace the superheater; and,</li> <li>• Replace the converter with a larger one.</li> </ul> <p>Note: These work activities are permitted under Permit No. 0570008-060-AC.</p>
9	<ul style="list-style-type: none"> <li>• Increase the catalyst loading ratio from <u>approximately 149 L/TPD</u> to <u>approximately 195 L/TPD</u> {increases the current catalyst loading from approximately 508,000 liters to <u>approximately 663,000</u> liters}; and,</li> <li>• Install a heat recovery system (HRS) to replace the interpass absorption (IPA) tower.</li> </ul>

Additional catalyst may be added as necessary in order to meet the BART SO<sub>2</sub> emission limits. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), and, Proposed by the Applicant in the Application]

4. Page 10, Condition 6: The wording of this condition does not necessarily have to be changed, but Mosaic would like to clarify that this condition does not mean that a specific supplier (i.e., Haldor Topsoe) must be used unless written approval is obtained from FDEP. A specific catalyst supplier should not be specified in the permit. The condition should only refer to the specific catalyst loadings and type of catalyst (i.e., vanadium or cesium-enhanced catalyst).

**Response:** That is correct; a specific catalyst supplier is not specified in the permit.

As previously mentioned, specific condition number 3.C.6. does require the permittee to use the specific catalyst loadings & types as cited in the study by the permittee's catalyst supplier in Appendix C of the Application. Note, the study did cite in addition to the chemical composition of the catalyst, e.g., vanadium, the size e.g., 12 millimeter (mm), and shape, e.g., daisy, of the specified catalyst. The size and shape of the catalyst affect the performance of the catalyst. Any deviations from the catalyst type described in the study need to be submitted to the Bureau for review and approval prior to use. If another catalyst supplier is used a written guarantee along with the catalyst product literature will need to be submitted showing that the SO<sub>2</sub> emission limits specified in the permit will be met. No change to the permit is made.

5. Page 10, Conditions 9 and 10. It should be clarified that the 24-hour (daily) block average can start and end at a time selected by the permittee (i.e., the block does not have to be from midnight to midnight; another 24-hour block, i.e., 6 am to 6 am, may be selected).

**Response:** The current BACTs from the PSD permits, PSD-FL-250 (specific conditions 3. and 11.) and PSD-FL-315 (specific conditions 4. and 9.), specify 24-hour "daily" and "block" averages respectively for SO<sub>2</sub> emissions. Both permits do specify that SO<sub>2</sub> emissions are to be calculated on an "operating day" (see specific condition 11. of PSD-FL-250 and specific condition 9. of PSD-FL-315). For consistency with the BACTs, the averaging period must be calculated in the same fashion. No change is made to the permit.

6. Page 12, Condition 19: It should be clarified that the final compliance date for complying with the sulfur dioxide (SO<sub>2</sub>), sulfuric acid mist (SAM), and visible emission limits is June 30, 2013, coinciding with the permit expiration date. Condition C.19 states that the new SAM limits must be

## FINAL DETERMINATION

met by April 1, 2012 (since initial compliance testing must be conducted); Condition C.21 states that all construction must be completed by December 31, 2012; and Condition C.9 states that the permittee must comply with the new SO<sub>2</sub> limit using continuous emission monitoring systems; but it does not state when. The compliance deadline should be after all construction is complete. Therefore, it is suggested that the initial compliance testing, completion of construction, and compliance with the new limits all be specified as June 30, 2013, which is when the construction permit expires.

**Response:** The April 1, 2012 date had been fixed to ensure a test would be performed and the test results would be submitted well in advance of the permit's expiration date. The permit expiration date was established with a six (6) month buffer before the BART compliance deadline of December 31, 2013. Completion of the compliance test and submittal of the test results two (2) months prior to the permit expiration date encompasses the 45 day test report submittal requirement. An initial compliance test date of April 30, 2013 {June 30, 2013 - 2 months} should provide sufficient time for completion of testing and submittal of the test results prior to the expiration date of the permit.

The initial compliance test date contained in specific condition number 3.C.19. is changed from April 1, 2012 to April 30, 2013 as indicated below:

19. **Compliance Test Schedule:** In accordance with the following schedule, the permittee shall have stack tests conducted to demonstrate compliance with the emissions standards specified in this permit.
- a. **Initial Test:** On or before April 30, 2013, an initial test shall be conducted for SAM emissions from each SAP {October 1, 2012 - 6 months. October 1, 2012 being the start of the federal fiscal year in which the expiration date of this permit falls within June 30, 2013 - 2 months}. The initial compliance test report for SAM shall be submitted within 45 days of completion of testing. [Rules 62-296.340(5)(c) (escape BART) and 62-297.310(7)(a), F.A.C.]

7. Page 13, Condition 21. There is no date specified for when the Construction Plan has to be submitted. Also, it is not specified when exactly the Progress Reports are due each year.

**Response:** To avoid confusion, specific condition number 3.C.21. is changed to read as follows:

21. **Construction Plan & Progress Reports:** The permittee shall submit a Construction Plan within sixty (60) days of the effective date of this permit which shall contain the necessary milestones to comply with this permit. The Plan shall include at a minimum the necessary actions and corresponding scheduled due dates to complete those actions to comply with this permit.
- a. The permittee shall submit progress reports based on the anniversary date (one year from the effective date) of this permit regarding the status of the milestones in the Construction Plan to the Department and to the Compliance Authority, no less than annually in 2009 - 2013.
- b. The permittee shall complete all required construction & modifications no later than December 31, 2012/June 30, 2013 {6 months prior to the expiration date of this permit, June 30, 2013 - 6 months}.

[Rules 62-296.340(5)(c) (escape BART), 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]

8. And as discussed previously, Condition 19 requires that SAM testing be performed prior to April 12, 2012, which would require construction to be completed in order to do the testing, but Condition 21.b requires completion of construction by December 31, 2012. These need to be reconciled. It is suggested all these dates be stated as June 30, 2013.

## FINAL DETERMINATION

**Response:** To avoid confusion, specific condition number 3.C.21. is changed to read as follows:

21. **Construction Plan & Progress Reports:** The permittee shall submit a Construction Plan which shall contain the necessary milestones to comply with this permit. The Plan shall include at a minimum the necessary actions and corresponding scheduled due dates to complete those actions to comply with this permit.
  - a. The permittee shall submit progress reports regarding the status of the milestones in the Construction Plan to the Department and to the Compliance Authority, no less than annually in 2009 - 2013.
  - b. The permittee shall complete all required construction & modifications no later than ~~December 31, 2012~~ June 30, 2013 ~~{6 months prior to the expiration date of this permit, June 30, 2013 - 6 months}~~.

[Rules 62-296.340(5)(c) (escape BART), 62-4.070(1)&(3) (Reasonable Assurance), and 62-213.440(1) (Assurance of Compliance), F.A.C.]

### DEPARTMENT INITIATED CHANGES

Changes initiated by the Department were made in this final permit.

#### Air Construction Permit

The applicant had previously notified the Department of the specific chemical composition of the catalysts in each SAP, i.e., vanadium and/or cesium. As indicated by the applicant, SAP No. 9 has cesium promoted catalyst in the 4<sup>th</sup> bed. The emissions unit description for the SAP Nos. 7, 8 & 9 reflects this, however, specific condition number 3.C.4. did not recognize the cesium catalyst currently in use.

To recognize the current cesium catalyst in use, specific condition number 3.C.4. is clarified to read as follows:

4. **SO<sub>2</sub> Controls:** This BART exemption determination does require new, modified or additional air pollution control systems for SO<sub>2</sub>. To control emissions of sulfur dioxide (SO<sub>2</sub>) from each SAP, the permittee shall continue the use of the existing double absorption system technology with vanadium and/or cesium catalyst in the converters and the use of good combustion practices & best operational practices to minimize excess emissions during startup and shutdown. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rule 62-210.700(1), F.A.C.; and, Proposed by the Applicant in the Application]

### CONCLUSION

The final action of the Department is to issue the permit with the minor revisions, corrections, and clarifications as described above.



## Livingston, Sylvia

---

**From:** Livingston, Sylvia  
**Sent:** Thursday, April 16, 2009 8:55 AM  
**To:** 'Alan.Lulf@mosaicco.com'  
**Cc:** 'Jeff.Stewart@mosaicco.com'; 'Rama.Iyer@mosaicco.com'; 'dbuff@golder.com'; 'smohammad@golder.com'; 'robertm@hgslaw.com'; 'lee@epchc.org'; 'Forney.Kathleen@epa.gov'; 'Dee\_Morse@nps.gov'; 'Zhang-Torres@dep.state.fl.us'; Arif, Syed; Rogers, Tom; Moore, Ronni; Gibson, Victoria; Sheplak, Scott; Walker, Elizabeth (AIR)  
**Subject:** MOSAIC FERTILIZER-RIVERVIEW FACILITY; 0570008-061-AC  
**Attachments:** 0570008-061-AC\_Signatures.pdf

Dear Sir/ Madam:

Attached is the official **Notice of Final Permit** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send".

*Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).*

**Click on the following link to access the permit project documents:**

[http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf\\_permit\\_zip\\_files/0570008.061.AC.F\\_pdf.zip](http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0570008.061.AC.F_pdf.zip)

**Owner/Company Name:** MOSAIC FERTILIZER, LLC  
**Facility Name:** MOSAIC FERTILIZER-RIVERVIEW FACILITY  
**Project Number:** 0570008-061-AC  
**Permit Status:** FINAL  
**Permit Activity:** CONSTRUCTION / BART Exemption  
**Facility County:** HILLSBOROUGH  
**Processor:** Scott Sheplak

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Permit project documents addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

Sylvia Livingston  
Bureau of Air Regulation  
Division of Air Resource Management (DARM)  
850/921-9506  
[sylvia.livingston@dep.state.fl.us](mailto:sylvia.livingston@dep.state.fl.us)

Note: The attached document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html>.

## Livingston, Sylvania

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**From:** Lulf, Alan - Riverview [Alan.Lulf@mosaicco.com]  
**Sent:** Friday, April 17, 2009 9:29 AM  
**To:** Livingston, Sylvania  
**Cc:** Stewart, Jeff M - Riverview  
**Subject:** RE: MOSAIC FERTILIZER-RIVERVIEW FACILITY; 0570008-061-AC

I am able to access the documents.

Alan Lulf  
Plant Manager - Riverview  
Mosaic Fertilizer, LLC  
8813 Hwy 41 South  
Riverview, FL 33578

---

**From:** Livingston, Sylvania [mailto:Sylvania.Livingston@dep.state.fl.us]  
**Sent:** Thursday, April 16, 2009 8:55 AM  
**To:** Lulf, Alan - Riverview  
**Cc:** Stewart, Jeff M - Riverview; Iyer, Rama - Pierce; dbuff@golder.com; smohammad@golder.com; robertm@hgslaw.com; lee@epchc.org; Forney.Kathleen@epa.gov; Dee\_Morse@nps.gov; Zhang-Torres@dep.state.fl.us; Arif, Syed; Rogers, Tom; Moore, Ronni; Gibson, Victoria; Sheplak, Scott; Walker, Elizabeth (AIR)  
**Subject:** MOSAIC FERTILIZER-RIVERVIEW FACILITY; 0570008-061-AC

Dear Sir/ Madam:

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[http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf\\_permit\\_zip\\_files/0570008.061.AC.F\\_pdf.zip](http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0570008.061.AC.F_pdf.zip)

**Owner/Company Name:** MOSAIC FERTILIZER, LLC  
**Facility Name:** MOSAIC FERTILIZER-RIVERVIEW FACILITY  
**Project Number:** 0570008-061-AC  
**Permit Status:** FINAL  
**Permit Activity:** CONSTRUCTION / BART Exemption  
**Facility County:** HILLSBOROUGH  
**Processor:** Scott Sheplak

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## Livingston, Sylvia

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**From:** Dee\_Morse@nps.gov  
**Sent:** Thursday, April 16, 2009 9:56 AM  
**To:** Livingston, Sylvia  
**Subject:** Re: MOSAIC FERTILIZER-RIVERVIEW FACILITY; 0570008-061-AC

documents received

Dee Morse  
Environmental Protection Specialist  
Air Resources Division  
Natural Resource Program Center  
National Park Service  
Phone: 303 969-2817  
Fax: 303 969-2822  
e-mail: [dee\\_morse@nps.gov](mailto:dee_morse@nps.gov)