



Florida Department of Environmental Protection

Memorandum

TO: Joseph Kahn, Division of Air Resource Management

THROUGH: Trina Vielhauer, Bureau of Air Regulation 

FROM: Syed Arif, New Source Review Section 

DATE: July 30, 2009

SUBJECT: Air Permit No. 1050059-061-AC
Facility ID No. 1050059
Mosaic Fertilizer, LLC
New Wales Facility
BART Exemption Project

The Final Permit for this project is attached for your approval and signature, which requires lower air pollutant levels to bring this facility's visibility impact to below the 0.5 deciview (dv) threshold allowing the facility to escape a Best Retrofit Available Technology (BART) determination pursuant to Rule 62-296.340(5)(c), Florida Administrative Code (F.A.C.). The applicant has proposed two emission reduction scenarios A and B for the BART-eligible emissions units at the New Wales facility. The proposed work will be conducted at the New Wales facility, which is located in Polk County at 3095 Highway 640, Mulberry, Florida.

The Department distributed a Written Notice of Intent to Issue Permit package on May 28, 2009. The applicant published the Public Notice of Intent to Issue in the Lakeland Ledger on June 2, 2009. The Department received the proof of publication on June 9, 2009. The applicant filed an extension of time to petition for an administrative hearing, which was granted until August 3, 2009. The applicant withdrew the extension of time on July 30, 2009. No comments on the Draft Permit were received from the public, Environmental Protection Agency or the Southwest District Office. The applicant submitted comments on the draft permit, which the Department responded to in the Final Determination.

I recommend your approval of the attached Final Permit for this project.

Attachments

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Mosaic Fertilizer, LLC
Post Office Box 2000
Mulberry, FL 33860

Air Permit No. 1050059-061-AC
Facility ID No. 1050059
New Wales Facility
BART Exemption Project
Polk County, Florida

Authorized Representative:

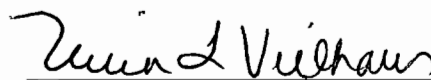
Mr. David B. Jellerson, Assistant Vice President, Environmental

Enclosed is the final air construction permit, which specifically requires lower air pollutant levels to bring this facility's visibility impact to below the 0.5 deciview (dv) threshold allowing the facility to escape a Best Retrofit Available Technology (BART) determination pursuant to Rule 62-296.340(5)(c), Florida Administrative Code (F.A.C.). The applicant has proposed two emission reduction scenarios A and B for the BART-eligible emissions units at the New Wales facility. In scenario A, Mosaic proposes to: reduce sulfuric acid mist emissions (SAM) from each Sulfuric Acid Plant (SAP) Nos. 1, 2, and 3 from 14.0 to 7.1 lbs/hr; fire only natural gas in Diammonium Phosphate (DAP) plant No. 1 and Animal Feed Ingredient (AFI) plant dryers; shut-down multifos plant kilns A and B; reduce particulate matter (PM) emissions from DAP plant No. 1 from 28.6 to 15 lbs/hr; and reduce PM emissions from Monoammonium Phosphate (MAP) plant from 15 to 7 lbs/hr. In scenario B, Mosaic proposes to: reduce SAP Nos. 1, 2 and 3 production rates from 3,400 tons per day (TPD) of sulfuric acid (H₂SO₄) to 3,200 TPD of H₂SO₄; reduce sulfur dioxide (SO₂) emissions from each SAP from 496 to 400 lbs/hr; reduce SAM emissions from each SAP from 14.0 to 6.7 lbs/hr; reduce nitrogen oxides (NOx) emissions from each SAP from 17 to 16 lbs/hr; fire only natural gas in DAP plant No. 1, AFI plant and multifos A and B kilns dryers; reduce PM emissions from multifos A and B kilns dryers from 29.8 to 25 lbs/hr; reduce SO₂ emissions from the multifos A and B kilns from 316 to 25 lbs/hr; reduce PM emissions from DAP plant No. 1 from 28.6 to 15 lbs/hr; and reduce PM emissions from MAP plant from 15 to 7 lbs/hr. The applicant will make a decision to implement scenario A or B no later than January 1, 2010.

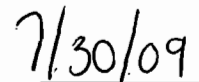
The proposed work will be conducted at the New Wales facility, which is located in Polk County at 3095 Highway 640, Mulberry, Florida. This permit is issued pursuant to Chapter 403, Florida Statutes (F.S.).

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., 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



(Date)

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 the 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 7/30/09 to the persons listed below.

Mr. David B. Jellerson, Mosaic Fertilizer, LLC: david.jellerson@mosaicco.com

Mr. David Turley, Mosaic Fertilizer, LLC: david.turley@mosaicco.com

Mr. Rama Iyer, Mosaic Fertilizer, LLC: rama.iyer@mosaicco.com

Mr. David A. Buff, P.E., Golder Associates Inc.: dbuff@golder.com

Mr. Sal Mohammad, Golder Associates Inc.: smohammad@golder.com

Ms. Katy Forney, EPA Region 4: forney.kathleen@epa.gov

Ms. Catherine Collins, Fish & Wildlife Service: catherine_collins@fws.gov

Ms. Cindy Zhang-Torres, P.E., DEP SWD: zhang-torres@dep.state.fl.us

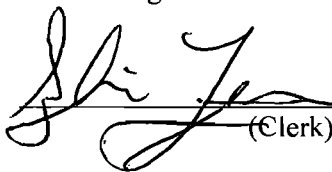
Mr. Tom Rogers, DEP OPAPM: tom.rogers@dep.state.fl.us

Ms. Ronni Moore, DEP OGC: ronni.moore@dep.state.fl.us

Ms. Victoria Gibson, DEP BAR: 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)

7/30/09
(Date)

Final Determination

PERMITTEE

Mosaic Fertilizer, LLC
P.O. Box 2000
Mulberry, FL 33860

PERMITTING AUTHORITY

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

PROJECT

Air Permit No. 1050059-061-AC
New Wales 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.).

The applicant has proposed two emission reduction scenarios A and B for the BART-eligible emissions units at the New Wales facility. As part of this application, the applicant performed additional modeling under both scenarios at reduced air pollutant emission levels. The air dispersion modeling at the lower air pollutant levels brings this facility's visibility impact to below the 0.5 deciview (dv) threshold under both scenarios allowing the facility to escape a BART determination pursuant to Rule 62-296.340(5)(c), F.A.C. The facility's modeled visibility impact to the nearest Class I area (Chassahowitzka National Wilderness Area) under the BART exemption for scenario A is 0.490 dv and under scenario B is 0.496 dv.

In scenario A, Mosaic proposes to: reduce sulfuric acid mist emissions (SAM) from each Sulfuric Acid Plant (SAP) Nos. 1, 2, and 3 from 14.0 to 7.1 lbs/hr; fire only natural gas in Diammonium Phosphate (DAP) plant No. 1 and Animal Feed Ingredient (AFI) plant dryers; shut-down multifos plant kilns A and B; reduce particulate matter (PM) emissions from DAP plant No. 1 from 28.6 to 15 lbs/hr; and reduce PM emissions from Monoammonium Phosphate (MAP) plant from 15 to 7 lbs/hr.

In scenario B, Mosaic proposes to: reduce SAP Nos. 1, 2 and 3 production rates from 3,400 tons per day (TPD) of sulfuric acid (H_2SO_4) to 3,200 TPD of H_2SO_4 ; reduce sulfur dioxide (SO_2) emissions from each SAP from 496 to 400 lbs/hr; reduce SAM emissions from each SAP from 14.0 to 6.7 lbs/hr; reduce nitrogen oxides (NO_x) emissions from each SAP from 17 to 16 lbs/hr; fire only natural gas in DAP plant No. 1, AFI plant and multifos A and B kilns dryers; reduce PM emissions from multifos A and B kilns dryers from 29.8 to 25 lbs/hr; reduce SO_2 emissions from the multifos A and B kilns from 316 to 25 lbs/hr; reduce PM emissions from DAP plant No. 1 from 28.6 to 15 lbs/hr; and reduce PM emissions from MAP plant from 15 to 7 lbs/hr. The applicant will make a decision to implement scenario A or B no later than January 1, 2010.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Draft Permit and the TE&PD for BART exemption issued (clerked) on May 28, 2009.

Public Notice published on June 2, 2009.

Proof of Publication of Public Notice received on June 9, 2009.

Applicant filed an extension of time to petition for an administrative hearing on June 11, 2009.

Comments dated June 11, 2009 from Mosaic, received on June 12, 2009.

DEP Order granting request for extension of time up to August 3, 2009, clerked on June 17, 2009.

Mosaic Fertilizer, LLC
New Wales Facility

Final Permit No. 1050059-061-AC
BART Exemption Project

Final Determination

Applicant withdrew extension of time to petition for an administrative hearing request on July 30, 2009.

NOTICE AND PUBLICATION

The Department distributed a Written Notice of Intent to Issue Permit package on May 28, 2009. The applicant published the Public Notice of Intent to Issue in the Lakeland Ledger on June 2, 2009. The permitting authority received the proof of publication on June 9, 2009.

COMMENTS

Comments on the Draft Permit were received from the applicant.

Applicant

On June 12, 2009, the Department received comments dated June 11, 2009 from Golder Associates Inc. on behalf of Mosaic Fertilizer, LLC (Mosaic), the applicant. The following summarizes the comments 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, Administrative Requirement 9 of Section 2: Please delete the reference to Best Available Control Technology (BACT). Since this BART permit is not a Prevention of Significant Deterioration (PSD) permit, nor a BACT determination, the references to BACT should be deleted.

Response: The Department does not concur with the request as the relaxation of specific terms and conditions of the permit could trigger emissions increases that are greater than significant emission rates, thus subjecting the project to PSD and BACT review.

2. Page 6, Administrative Requirement 12 of Section 2: Since this is not a PSD permit, the source obligation requirements under 62-212.400 are not applicable.

Response: The Department will remove (a) and (c) of Condition 12. These two requirements do not apply for this project. The Department will retain (b) of Condition 12 as this requirement is included in all minor source air construction permits. This requirement is needed as explained in Item 1.

Administrative Requirement 12 of Section 2 on page 6 will be changed as follows:

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

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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.]~~

3. Page 7, Specific Condition 1 of Subsection A: Mosaic requests that the January 1, 2010 deadline for deciding if Scenario A will be implemented be changed to July 1, 2010. The final BART exemption permit will likely not be issued for a month or two, and this will allow Mosaic additional time to make this important decision. This change, however, will not affect the other dates in the permit.

Please delete the phrase “as expeditiously as practicable”. This scenario is for the Multifos A and B Kilns to shutdown by a specific date, yet to be determined. The shutdown date can be no later than June 30, 2013, the date which all construction and modifications must be completed under the permit.

Response: The Department does not concur with the request of changing the January 1, 2010 deadline date to July 1, 2010 for deciding which scenario will be implemented. The January 1, 2010 deadline date was included in the public notice. The Department is making every effort to issue the final BART exemption permit as soon as possible. In addition, Mosaic’s decision making process on which scenario to implement is independent of the timing of issuance of the final permit.

The Department will not delete the phrase “as expeditiously as practicable” as the BART rule contains that language.

4. Pages 8 and 9, Specific Condition 9 of Subsection A: It is suggested to show proper footnote symbols in the table. Wording has been revised to be consistent with wording in the Riverview BART permit.

Response: The Department will make the change of the footnote designation in the table. The applicant also requested some changes in the footnotes language which will not be changed but a permitting note will be added to show equivalence of emission rates between lb/hr and lb/ton. This change will make it clear that the lb/ton emission rate is only for information purposes.

The changes to Footnote b in terms of deleting the CEMS average and deleting the 24 hour daily block averaging period based on air dispersion modeling will not be done. “No stack testing is required” will not be removed as requested by the applicant. A permitting note will be added to clarify that it is for information purpose only.

Specific Condition 9 of Subsection A on pages 8 and 9 will be changed as follows:

PM, NO_x and SO₂ Standards: Particulate matter, nitrogen oxides and sulfur dioxide emissions shall not exceed the following emissions standards.

EU ID No.	Emissions Unit Description	Emissions Standards		
		PM	NO _x	SO ₂
-002	No.1 Sulfuric Acid Plant	---	17 lb/hour ^a , a	496 lb/hour ^b , b
-003	No. 2 Sulfuric Acid Plant	---	17 lb/hour ^a , a	496 lb/hour ^b , b
-004	No. 3 Sulfuric Acid Plant	---	17 lb/hour ^a , a	496 lb/hour ^b , b
-009	DAP Plant No.1	15 lb/hour	---	See Footnote “c”
-011	MAP Plant	7 lb/hour	---	---

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EU ID No.	Emissions Unit Description	Emissions Standards		
		PM	NO _x	SO ₂
-027	AFI Plant	36.8 lb/hour	---	<u>See Footnote "c"</u>

- a. Nitrogen oxides (NO_x) emissions from Nos. 1, 2, and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) shall not exceed 17 lb/hour {Permitting note (for information purposes only): equivalent to 0.12 lb/ton of 100% sulfuric acid at design capacity} based on a 3-hour average as determined by stack test data.
- b. Sulfur dioxide emissions from Nos. 1, 2, and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) shall not exceed 496 lb/hour based on a 24-hour (daily) block CEMS average.
Permitting note (for information purposes only): SO₂ emissions in lb/hour are equivalent to 3.5 lb/ton of 100% sulfuric acid at design capacity. 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. No stack testing is required.
- c. To control sulfur dioxide emissions from the dryers, only natural gas shall be fired as a fuel. During periods of natural gas curtailments, No. 6 fuel oil or better grade fuel oil (as defined in Condition CC.20 in Permit 1050059-045-AV) may be fired as a fuel.

[Rules 62-4.070(3) and 62-296.340(5)(c) (escape BART), F.A.C.]

5. Page 9, Specific Condition 10 of Subsection A: The opacity limit should be removed as it is not a BART pollutant. The Riverview BART permit did not contain an opacity limit.

Response: The Department did not add any additional testing that the facility was not already conducting. The recent Title V permit renewal (1050059-045-AV) requires in Condition A.5 to conduct this test. Therefore, the Department will leave this testing requirement. The initial testing requirement for this permit can be used to comply with the annual testing requirement for the Title V permit.

6. Pages 10 and 11, Specific Condition 16 of Subsection A: Correction made to refer to Title V permit instead of "proposed by the applicant in the application". "Application" should also be deleted from the end of Condition 16.a.

Response: The Department will make the changes as proposed by the applicant.

Specific Condition 16 of Subsection A on pages 10 and 11 will be changed as follows:

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 SO₂ and sulfur trioxide (SO₃) 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~~ Title V Permit No. 1050059-045-AV]

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7. Page 11, Specific Condition 18 of Subsection A: Method 19 is not necessary to support the other test methods. Method 19 is a data reduction method and is not referenced by the other test methods.

Response: The Department will make the changes as proposed by the applicant.

Specific Condition 18 of Subsection A on page 11 will be changed as follows:

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
5	Determination of PM Emissions from Stationary Sources
6 or 6C	Determination of SO ₂ Emissions from Stationary Sources
7E	Determination of NO _x Emissions from Stationary Sources (Instrumental Analyzer Procedure)
8	Determination of SAM and SO ₂ Emissions from Stationary Sources
9	Visual Determination of Opacity from Stationary Sources

EPA Methods 1, 2, 3, ~~and 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]

8. Page 11, Specific Condition 20.a of Subsection A: The initial testing should be completed before April 30, 2013 (consistent with Riverview BART permit).

Response: The Department does not concur with the request of changing the initial testing date from April 30, 2012 to April 30, 2013. Under Scenario A, there will be no physical changes made to the SAP, DAP, MAP and the AFI Plants. The existing design capacity for these plants will stay the same; therefore, the Department feels that April 30, 2012 provides sufficient time to the permittee to do initial testing on these plants.

9. Pages 11 and 12, Specific Condition 20.c of Subsection A: Delete this condition, as annual compliance testing requirements are not necessary in a construction permit. This is also consistent with the Riverview BART permit.

“Tests Prior To Renewal” has been added with language consistent with the Riverview BART permit. Annual testing should not be required for NO_x, since there is no control device for NO_x emissions, and NO_x emissions from SAPs are known to be very consistent. Testing for NO_x prior to Title V permit renewal is also consistent with the current Title V permit for New Wales.

Response: The Department concurs with the applicant’s request and will make the necessary changes as proposed by the applicant. The Title V permit includes the annual testing requirement for SAM and VE.

Specific Condition 20.c of Subsection A on pages 11 and 12 will be changed as follows:

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, an initial test shall be conducted for NO_x and SAM emissions from each SAP and PM emissions from DAP Plant No. 1, MAP Plant and the AFI Plant.

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The initial compliance test report for NO_x, SAM and PM 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.]

b. *Initial and 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.]

e. ~~*Annual Compliance Tests:* During each federal fiscal year (October 1st to September 30th), the permittee shall conduct the following compliance tests:~~

~~(i). The permittee shall conduct NO_x, SAM and visible emissions tests on the Nos. 1, 2 and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) in accordance with EPA Methods 7E, 8 and 9 to demonstrate compliance with the NO_x, SAM and opacity standard, respectively.~~

~~(ii). To demonstrate compliance with the PM standards, the permittee shall conduct tests in accordance with EPA Method 5 on DAP Plant No. 1 (EU-009), MAP Plant (EU-011) and the AFI Plant (EU-027).~~

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 and NO_x 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 SO₂ CEMS are required to demonstrate compliance on a continuous basis, therefore, no initial or annual compliance test for SO₂ is necessary on the SAPs.}

10. Page 12, Specific Condition 22 and 22.a of Subsection A: It was agreed for Riverview to allow 60 days to submit the Construction Plan.

The first report would be due in 2010, as the submittal is based on the anniversary date of this permit, which is 1 year from its effective date.

Response: The Department will make the changes as proposed by the applicant. Additionally, the Department will revise the condition to allow for submittal of the Construction Plan within sixty days of Mosaic's January 1, 2010 deadline for the notification to the Department of the scenario chosen.

Specific Condition 22 of Subsection A on page 12 will be changed as follows:

Construction Plan and Progress Reports: The permittee shall submit a Construction Plan within ~~thirty~~ sixty (360) days of ~~the effective date of this permit January 1, 2010~~ 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~~2010 - 2013.

b. The permittee shall complete all required construction and 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.]

11. Page 13, Specific Condition 1 of Subsection B: As for Scenario A, Mosaic requests that the January 1, 2010 deadline for deciding if Scenario B will be implemented be changed to July 1, 2010. This change, however, will not affect the other dates in the permit.

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Compliance date should be June 30, 2013, which is the last date to complete all construction and modifications.

Response: The Department's response is the same as in Item 3 for changing the deadline date of selecting Scenario B as the option. The Department concurs with the other two changes requested by the applicant concerning the compliance dates.

Specific Condition 1 of Subsection B on page 13 will be changed as follows:

Emission Reductions under Scenario B: This subsection deals with emission reductions for the above affected emissions units under Scenario B. The permittee shall notify the Department's Bureau of Air Regulation and the SWD Office through a letter from the responsible official by January 1, 2010 whether Scenario B will be implemented. Under Scenario B, the permittee shall reduce production rates of SAP Nos. 1, 2 and 3 from 3,400 TPD to 3,200 TPD and reduce lower daily average of SO₂ and SAM emissions rates from the three SAPs. The SAPs shall comply with the new BART exemption limits for SO₂ and SAM by April 30, 2012³. Multifos A and B Kilns (EU-036) will continue to operate with lower SO₂ and PM emission rates. A new scrubber will be installed to meet the lower SO₂ emission limits for Multifos A and B Kilns. The Multifos A and B Kilns shall comply with the new BART exemption limits for SO₂ and PM as expeditiously as practicable after January 1, 2010, but no later than June 30, 2013. [Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's Request received October 3, 2008]

12. Page 14, Specific Condition 6 of Subsection B: Change the word "required" to "authorized", since not all of these changes may be necessary in order to meet the BART limits, i.e., sulfur furnace, drying tower, etc.

Consistent with Riverview, remove the wording stating that additional catalyst can only be used for SO₂ emission reductions. Also, only the A and B Kilns would be scrubbed, not the dryer and blending operations.

Response: The Department will not replace the word "required" with "authorized" as it would imply all the work that needs to be done for reasonable assurance in complying with the BART exemption limits as optional, like increasing the catalyst loading, installing Brownian diffusion-type candles in the final absorption tower for SAM control, etc. The same language was used in the Riverview permit. The Department will clarify on work activities that are not necessary for reasonable assurance in complying with the BART exemption limits as optional work in the work activities column.

The Department will remove the wording stating that additional catalyst can only be used for emission reductions, and that only A and B Kilns would be scrubbed, not the dryer and blending operations. The dryer and blending operations have their own venturi scrubber for control of particulates.

Specific Condition 6 of Subsection B on page 14 will be changed as follows:

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

EU ID No.	Work Activities
-002	<ul style="list-style-type: none"> • Increase the catalyst loading ratio from approximately 147 liters per ton H₂SO₄ per day (L/TPD) at 3,400 TPD production rate to approximately 190 L/TPD at 3,200 TPD production rate {increases the current catalyst loading from approximately 498,400 liters to 610,000 liters}; • Install a heat recovery system (HRS) to replace the interpass absorption (IPA) tower <u>(If necessary, install/replace)</u>;

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	<ul style="list-style-type: none"> • Replace the sulfur furnace (<u>If necessary, install/replace</u>); • Replace the drying tower (<u>If necessary, install/replace</u>); and • Install Brownian diffusion-type candles in the final absorption tower for SAM control.
-003	<ul style="list-style-type: none"> • Increase the catalyst loading ratio from approximately 147 L/TPD at 3,400 TPD production rate to approximately 213 L/TPD at 3,200 TPD production rate {increases the current catalyst loading from approximately 498,400 liters to 610,000 liters}; • Install HRS to replace the IPA tower (<u>If necessary, install/replace</u>); • Replace the sulfur furnace (<u>If necessary, install/replace</u>); • Replace the drying tower (<u>If necessary, install/replace</u>); and • Install Brownian diffusion-type candles in the final absorption tower for SAM control.
-004	<ul style="list-style-type: none"> • Increase the catalyst loading ratio from approximately 157 L/TPD at 3,400 TPD production rate to approximately 190 L/TPD at 3,200 TPD production rate {increases the current catalyst loading from approximately 535,200 liters to 610,000 liters}.
-036	<ul style="list-style-type: none"> • Install caustic scrubber for each of the Multifos A and B Kilns, Dryer and Blending Operation.

Higher catalyst loadings are allowed by this permit in order to meet the BART SO₂ emission limits. ~~However, additional catalyst can only be used for SO₂ emissions reductions.~~ The Brownian diffusion-type candles will be installed in the IPA tower which will become the final absorption tower after the reconfiguration. The candles will lower SAM emission rates from the two SAPs. A caustic scrubber is required for each Multifos A and B Kilns, ~~Dryer and Blending Operation~~ to meet the lower SO₂ 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]

13. Pages 15 and 16, Specific Condition 10, 10a and 10b of Subsection B: Wording has been revised to be consistent with wording in Riverview BART permit.

It is suggested to show proper footnote symbols in the table.

Response: The Department will make the change of the footnote designation in the table. The applicant also requested some changes in the footnotes language which will not be changed but a permitting note will be added to show equivalence of emission rates between lb/hr and lb/ton. This change will make it clear that the lb/ton emission rate is only for information purposes.

The changes to Footnote b in terms of deleting the CEMS average and deleting the 24 hour daily block averaging period based on air dispersion modeling will not be done. "No stack testing is required" will not be removed as requested by the applicant. A permitting note will be added to clarify that it is for information purpose only.

Specific Condition 10, 10a and 10b of Subsection B on pages 15 and 16 will be changed as follows:

PM, NO_x and SO₂ Standards: Particulate matter, nitrogen oxides and sulfur dioxide emissions shall not exceed the following emissions standards.

EU ID No.	Emissions Unit Description	Emissions Standards		
		PM	NO _x	SO ₂
-002	No.1 Sulfuric Acid Plant	---	16 lb/hour ^a , a	400 lb/hour ^b , b

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EU ID No.	Emissions Unit Description	Emissions Standards		
		PM	NOx	SO ₂
-003	No. 2 Sulfuric Acid Plant	---	16 lb/hour ^a , a	400 lb/hour ^b , b
-004	No. 3 Sulfuric Acid Plant	---	16 lb/hour ^a , a	400 lb/hour ^b , b
-009	DAP Plant No.1	15 lb/hour	---	<u>See Footnote "c"</u>
-011	MAP Plant	7 lb/hour	---	---
-027	AFI Plant	36.8 lb/hour	---	<u>See Footnote "c"</u>
-036	Multifos A and B Kilns, Dryer and Blending Operation	25 lb/hour	---	25 lb/hour ^c , e

- a. Nitrogen oxides (NOx) emissions from Nos. 1, 2, and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) shall not exceed 16 lb/hour {Permitting note (for information purposes only): equivalent to 0.12 lb/ton of 100% sulfuric acid at design capacity} based on a 3-hour average as determined by stack test data.
- b. Sulfur dioxide emissions from Nos. 1, 2, and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) shall not exceed 400 lb/hour based on a 24-hour (daily) block CEMS average.
Permitting note (for information purposes only): SO₂ emissions in lb/hour are equivalent to 3.0 lb/ton of 100% sulfuric acid at design capacity. 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. No stack testing is required.
- c. To control sulfur dioxide emissions from the dryers, only natural gas shall be fired as a fuel. During periods of natural gas curtailments, No. 6 fuel oil or better grade fuel oil (as defined in Condition CC.20 in Permit 1050059-045-AV) may be fired as a fuel.

[Rules 62-4.070(3) and 62-296.340(5)(c) (escape BART), F.A.C.]

14. Page 16, Specific Condition 11 of Subsection B: The opacity limit should be removed as it is not a BART pollutant. The Riverview BART permit did not contain an opacity limit.

Response: The Department did not add any additional testing that the facility was not already conducting. The recent Title V permit renewal (1050059-045-AV) requires in Condition A.5 to conduct this test. Therefore, the Department will leave this testing requirement. The initial testing requirement for this permit can be used to comply with the annual testing requirement for the Title V permit.

15. Page 17, Specific Condition 17 of Subsection B: Correction made to refer to Title V permit instead of "proposed by the applicant in the application". Also, delete "application" from the end of condition 17.a.

Response: The Department will make the changes as proposed by the applicant.

Specific Condition 17 of Subsection B on page 17 will be changed as follows:

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~~.

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- b. Best operational practices to minimize excess SO₂ and sulfur trioxide (SO₃) 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~~ Title V Permit No. 1050059-045-AV]

16. Pages 17 and 18, Specific Condition 19 of Subsection B: Method 19 is not necessary to support the other test methods. Method 19 is a data reduction method and is not referenced by the other test methods.

Response: The Department will make the changes as proposed by the applicant.

Specific Condition 19 of Subsection B on pages 17 and 18 will be changed as follows:

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
5	Determination of PM Emissions from Stationary Sources
6 or 6C	Determination of SO ₂ Emissions from Stationary Sources
7E	Determination of NO _x Emissions from Stationary Sources (Instrumental Analyzer Procedure)
8	Determination of SAM and SO ₂ Emissions from Stationary Sources
9	Visual Determination of Opacity from Stationary Sources

EPA Methods 1, 2, 3, and 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]

17. Page 18, Specific Condition 21a of Subsection B: The initial testing should be completed before April 30, 2013 (consistent with Riverview BART permit).

Response: The Department concurs with the request of changing the initial testing completion date to April 30, 2013. Under Scenario B, there will be physical changes made to the SAP and the Multifos A and B Kilns. The physical changes required for the Multifos A and B Kilns and the SAP plants do require additional time, therefore the Department will extend the initial compliance testing date.

Specific Condition 21a of Subsection B on page 18 will be changed as follows:

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~~3~~, an initial test shall be conducted for NO_x and SAM emissions from each SAP and PM emissions from DAP Plant No. 1, MAP Plant and the AFI Plant. On or before ~~June~~ April 30, 201~~1~~~~3~~, an initial test shall be conducted for SO₂ and PM emissions from Multifos A and B Kilns, Dryer and Blending Operation. The initial compliance test report for NO_x,

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SO₂, SAM and PM 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.]

18. Page 18, Specific Condition 21.c of Subsection B: Delete this condition, as annual compliance testing requirements are not necessary in a construction permit. This is also consistent with the Riverview BART permit.

“Tests Prior To Renewal” has been added with language consistent with the Riverview BART permit. Annual testing should not be required for NO_x, since there is no control device for NO_x emissions, and NO_x emissions from SAPs are known to be very consistent. Testing for NO_x prior to Title V permit renewal is also consistent with the current Title V permit for New Wales.

Response: The Department concurs with the applicant’s request and will make the necessary changes as proposed by the applicant. The Title V permit includes the annual testing requirement for SAM and VE.

Specific Condition 21.c of Subsection B on page 18 will be changed as follows:

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.

~~e. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the permittee shall conduct the following compliance tests.~~

~~(i). The permittee shall conduct NO_x, SAM and visible emissions tests on the Nos. 1, 2 and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) in accordance with EPA Methods 7E, 8 and 9 to demonstrate compliance with the NO_x, SAM and opacity standard, respectively.~~

~~(ii). To demonstrate compliance with the PM standards, the permittee shall conduct tests in accordance with EPA Method 5 on DAP Plant No. 1 (EU-009), MAP Plant (EU-011) and the AFI Plant (EU-027).~~

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 and NO_x 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 SO₂ CEMS are required to demonstrate compliance on a continuous basis, therefore, no initial or annual compliance test for SO₂ is necessary on the SAPs.}

19. Pages 18 and 19, Specific Condition 23 of Subsection B: It was agreed for Riverview to allow 60 days to submit Construction Plan.

The first report would be due in 2010, as the submittal is based on the anniversary date of this permit, which is 1 year from its effective date.

Response: The Department will make the changes as proposed by the applicant. Additionally, the Department will revise the condition to allow for submittal of the Construction Plan within sixty days of Mosaic’s January 1, 2010 deadline for the notification to the Department of the scenario chosen.

Specific Condition 23 of Subsection B on pages 18 and 19 will be changed as follows:

Construction Plan and Progress Reports: The permittee shall submit a Construction Plan within ~~thirty-sixty~~ (360) days of the effective date of this permit January 1, 2010 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.

Final Determination

- 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~~2010 - 2013.
- b. The permittee shall complete all required construction and 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.]

CONCLUSION

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



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
Post Office Box 2000
Mulberry, FL 33860

Air Permit No. 1050059-061-AC
Expiration Date: June 30, 2013
New Wales Facility
BART Exemption Project

Authorized Representative:

Mr. David B. Jellerson, Assistant Vice President - Environmental

PLANT AND LOCATION

The Mosaic Fertilizer, LLC operates the New Wales facility, which is located at 3095 Highway 640, Mulberry in Polk 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

7/30/09

Effective Date

JK/tlv/sa

SECTION 1. GENERAL INFORMATION

FACILITY DESCRIPTION

The applicant, Mosaic Fertilizer, LLC, operates an existing phosphate fertilizer manufacturer. The fertilizer complex processes phosphate rock into several different fertilizer products and animal feed ingredients. This is accomplished by reacting the phosphate rock with sulfuric acid to produce phosphoric acid and then converting the phosphoric acid to fertilizer and animal feed ingredient products. The facility consists of five double absorption sulfuric acid plants (SAP); three phosphoric acid plants (PAP); a phosphoric acid clarification and storage area; three diammonium phosphate (DAP) plants; a monoammonium phosphate (MAP) plant; a granular monoammonium phosphate (GMAP) plant; an animal feed ingredients (AFI) plant; a multifos production plant; a molten sulfur storage and handling system; a limestone storage silo/rock grinding operation and a phosphogypsum stack.

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

Mosaic Fertilizer, LLC submitted an application to escape the BART determination requirements of Rule 62-296.340(5)(c) (escape BART), F.A.C., which addresses the following emissions units with the potential to emit at least 50 tons per year (TPY) or more of a visibility-impairing pollutant:

EU ID No.	Brief Description
-002	SAP No. 1
-003	SAP No. 2
-004	SAP No. 3
-009	DAP Plant No. 1
-011	MAP Plant
-027	AFI Plant
-036	Multifos A and B Kilns, Dryer and Blending Operations

The rest of the BART-eligible emissions units at the New Wales facility are sources with relatively low particulate matter (PM) emissions (less than 5 lb/hr each). They are as follows:

EU ID No.	Brief Description
-015	AFI truck loadout system
-023	AFI storage silos - north side
-024	AFI railcar loadout system

SECTION 1. GENERAL INFORMATION

-025	AFI limestone storage silos
-026	AFI silica storage bin
-028	AFI storage silos – south side
-030	Multifos soda ash unloading
-031	Multifos soda ash conveying
-032	Multifos A kiln cooler
-033	Multifos B kiln cooler
-034	Multifos A and B kilns milling and sizing – West baghouses
-035	Multifos A and B kilns milling and sizing – East baghouses
-038	Multifos A and B kilns milling and sizing – surge bin
-052	AFI limestone feed bin
-055	MAP plant cooler
-063	1,500-Ton truck unloading sulfur pit
-066	200-Ton molten sulfur transfer pit
-067	1,500-Ton truck unloading sulfur pit – front vents
-068	1,500-Ton truck unloading sulfur pit – rear vents

Except for the molten sulfur pits (EUs-063, -066, -067 and -068), all of these emissions units emit only PM. The molten sulfur pits each emit 0.2 lb/hr or less of PM and 0.3 lb/hr or less of sulfur dioxide (SO₂).

SECTION 1. GENERAL INFORMATION

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Section 4. Appendices

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Appendix B. General Conditions

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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, Southwest District (SWD) Office**. The Compliance Authority's mailing address is:

Florida Department of Environmental Protection Southwest District
13051 N. Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813/632-7600, Fax: 813/632-7665

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**.
[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 April 1st of each year. [Rule 62-210.370(3), F.A.C.]

NEW AND 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;

SECTION 2. ADMINISTRATIVE REQUIREMENTS

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 and/or a Best Available Control Technology (BACT) 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. The applicant has proposed two emission reduction scenarios A and B for the BART-eligible emissions units at the New Wales facility. For each of the emissions reduction scenarios, the New Wales facility is exempt from BART because its contribution to visibility impairment does not exceed 0.5 deciview (dv) above natural conditions in any Class I area. Emissions Unit Specific Conditions in Section 3 of the permit will address both the emission reduction scenarios under different subsections. The applicant will make a decision to implement scenario A or B no later than January 1, 2010, at which time the scenario that was not selected will become obsolete. [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:
 - (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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection A (Scenario A). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

This subsection addresses the following affected emissions units:

EU ID No.	Brief Description
-002	SAP No. 1
-003	SAP No. 2
-004	SAP No. 3
-009	DAP Plant No. 1
-011	MAP Plant
-027	AFI Plant
-036	Multifos A and B Kilns, Dryer and Blending Operation

ADMINISTRATIVE REQUIREMENTS

1. Emission Reductions under Scenario A: This subsection deals with emission reductions for the above affected emissions units under Scenario A. The permittee shall notify the Department's Bureau of Air Regulation and the SWD Office through a letter from the responsible official by January 1, 2010 whether Scenario A will be implemented. Under Scenario A, the permittee shall shutdown EU-036 (Multifos A and B Kilns including associated coolers) as expeditiously as practicable after January 1, 2010, but no later than June 30, 2013. [Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's Request received October 3, 2008]

{Note: The dryer and blending operations under EU-036 will not be shut down as it is part of a mixed feed system that feeds Kiln C. The Multifos A and B Kiln coolers will be shut down and are designated as EU-032 and EU-033, respectively.}
2. Notification of Shutdown: The permittee shall notify the Department's Bureau of Air Regulation, SWD Office and the Compliance Authority upon the shutdown of the EU-036 (Multifos A and B Kilns including associated coolers). If these emission 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 received October 3, 2008]

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

3. Design Capacity: The existing design capacity of each SAP, DAP Plant No. 1, MAP Plant and the AFI Plant shall not be changed as a result of the proposed work under this project, Permit No. 1050059-061-AC. The existing design capacity of each of these emissions units shall not exceed the following:

EU ID No.	Plant Description	Design Production Capacity
-002	SAP No. 1	3,400 TPD (tons per day) of 100% H ₂ SO ₄ (sulfuric acid)
-003	SAP No. 2	3,400 TPD of 100% H ₂ SO ₄
-004	SAP No. 3	3,400 TPD of 100% H ₂ SO ₄
-009	DAP Plant No. 1	150 TPH (tons per hour) of MAP or DAP
-011	MAP Plant	50 TPH of MAP
-027	AFI Plant	120 TPH

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

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection A (Scenario A). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

4. Methods of Operation - Fuels: The DAP Plant No. 1 and the AFI Plant dryers shall be fired by natural gas. The two dryers can be fired with No. 6 fuel oil or better grade fuel oil (as defined in Condition CC.20 in Permit 1050059-045-AV) only during periods of natural gas curtailment. The permittee shall submit an official document from the natural gas pipeline vendor to the SWD Office for verification of natural gas curtailments. [Rules 62-4.070(1)&(3) (Reasonable Assurance) and Rule 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]
5. Design Capacity and 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. [Rules 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

AIR POLLUTION CONTROL TECHNOLOGIES AND MEASURES

6. SAP SO₂ Controls: This BART exemption determination does not require new, modified or additional air pollution control systems for sulfur dioxide (SO₂). To control emissions of SO₂ 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 and 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]
7. SAP Acid Mist Controls: This BART exemption determination does require new, modified or additional air pollution control systems for sulfuric acid mist (SAM). By controlling SAM emissions, particulate matter/particulate matter less than 10 microns (PM/PM₁₀) and visible emissions are minimized. To control emissions of SAM, the permittee shall install Brownian diffusion-type candles on SAPs 1 and 2, similar to the one employed on SAP No. 3. 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 AND LIMITATIONS

9. PM, NO_x and SO₂ Standards: Particulate matter, nitrogen oxides and sulfur dioxide emissions shall not exceed the following emissions standards.

EU ID No.	Emissions Unit Description	Emissions Standards		
		PM	NO _x	SO ₂
-002	No.1 Sulfuric Acid Plant	---	17 lb/hour ^a	496 lb/hour ^b
-003	No. 2 Sulfuric Acid Plant	---	17 lb/hour ^a	496 lb/hour ^b
-004	No. 3 Sulfuric Acid Plant	---	17 lb/hour ^a	496 lb/hour ^b
-009	DAP Plant No.1	15 lb/hour	---	See Footnote "c"
-011	MAP Plant	7 lb/hour	---	---
-027	AFI Plant	36.8 lb/hour	---	See Footnote "c"

- a. Nitrogen oxides (NO_x) emissions from Nos. 1, 2, and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004)

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection A (Scenario A). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

shall not exceed 17 lb/hour {Permitting Note (for information purposes only): equivalent to 0.12 lb/ton of 100% sulfuric acid at design capacity} based on a 3-hour average as determined by stack test data.

- b. Sulfur dioxide emissions from Nos. 1, 2, and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) shall not exceed 496 lb/hour based on a 24-hour (daily) block CEMS average.
Permitting note (for information purposes only): SO₂ emissions in lb/hour are equivalent to 3.5 lb/ton of 100% sulfuric acid at design capacity. 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. No stack testing is required.
- c. To control sulfur dioxide emissions from the dryers, only natural gas shall be fired as a fuel. During periods of natural gas curtailments, No. 6 fuel oil or better grade fuel oil (as defined in Condition CC.20 in Permit 1050059-045-AV) may be fired as a fuel.

[Rules 62-4.070(3) and 62-296.340(5)(c) (escape BART), F.A.C.]
- 10. Opacity Standards: Visible emissions from the Nos. 1, 2 and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) shall not exceed 10% opacity as determined by EPA Method 9. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; and 40 CFR 60.83(a)2 and 40 CFR 60, Appendix A, Method 9]
- 11. SO₂ Continuous Emissions Monitoring System (CEMS): This BART exemption determination requires an SO₂ CEMS to be used to demonstrate continuous compliance with the SO₂ emission standards and limitations specified in this section.
 - a. In accordance with the New Source Performance Standards (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 SO₂.
 - 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]

- 12. SAM Emission Standards and 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
1	7.1
2	7.1
3	7.1

Emissions of SAM shall not exceed 7.1 pounds per hour for each of the three SAPs based on a 3-hour average as determined by stack test data.

{The equivalent lb SAM/ton 100% H₂SO₄ values for SAP Nos. 1, 2, and 3 at design capacity for each SAP is 0.05 lb SAM/ton 100% H₂SO₄. 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. 1, 2, and 3 is 31.1 TPY. This permit requires stack test data to be used to demonstrate compliance. Compliance with the 3-hour average

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection A (Scenario A). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

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

13. 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.]
14. 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 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.]
15. 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.]
16. 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.
 - b. Best operational practices to minimize excess SO₂ and sulfur trioxide (SO₃) 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, Title V Permit No. 1050059-045-AV]
17. Best Operational Practices to Minimize Leaks of SO₂ and SO₃, or Other Fugitive Process Emissions: Best operational practices to minimize leaks of SO₂ and SO₃, 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

18. 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
5	Determination of PM Emissions from Stationary Sources
6 or 6C	Determination of SO ₂ Emissions from Stationary Sources
7E	Determination of NO _x Emissions from Stationary Sources (Instrumental Analyzer Procedure)

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection A (Scenario A). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

Method	Description of Method and Comments
8	Determination of SAM and SO ₂ Emissions from Stationary Sources
9	Visual Determination of Opacity from Stationary Sources

EPA Methods 1, 2, 3 and 4 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]

19. 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]
20. 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, an initial test shall be conducted for NO_x and SAM emissions from each SAP and PM emissions from DAP Plant No. 1, MAP Plant and the AFI Plant. The initial compliance test report for NO_x, SAM and PM 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.]
 - b. *Initial and 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 and NO_x 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 SO₂ CEMS are required to demonstrate compliance on a continuous basis, therefore, no initial or annual compliance test for SO₂ is necessary on the SAPs.}

RECORDS AND REPORTS

21. 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 SO₂ continuous emissions monitoring systems for continuous compliance demonstrations.} [Rules 62-296.402(5) and 62-213.440(1)(b)2., F.A.C.]
22. Construction Plan and Progress Reports: The permittee shall submit a Construction Plan within sixty (60) days of January 1, 2010 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 2010 - 2013.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection A (Scenario A). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

- b. The permittee shall complete all required construction and 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 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection B (Scenario B). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

This subsection addresses the following affected emissions units:

EU ID No.	Brief Description
-002	SAP No. 1
-003	SAP No. 2
-004	SAP No. 3
-009	DAP Plant No. 1
-011	MAP Plant
-027	AFI Plant
-036	Multifos A and B Kilns, Dryer and Blending Operation

ADMINISTRATIVE REQUIREMENTS

1. Emission Reductions under Scenario B: This subsection deals with emission reductions for the above affected emissions units under Scenario B. The permittee shall notify the Department's Bureau of Air Regulation and the SWD Office through a letter from the responsible official by January 1, 2010 whether Scenario B will be implemented. Under Scenario B, the permittee shall reduce production rates of SAP Nos. 1, 2 and 3 from 3,400 TPD to 3,200 TPD and reduce lower daily average of SO₂ and SAM emissions rates from the three SAPs. The SAPs shall comply with the new BART exemption limits for SO₂ and SAM by April 30, 2013. Multifos A and B Kilns (EU-036) will continue to operate with lower SO₂ and PM emission rates. A new scrubber will be installed to meet the lower SO₂ emission limits for Multifos A and B Kilns. The Multifos A and B Kilns shall comply with the new BART exemption limits for SO₂ and PM as expeditiously as practicable after January 1, 2010, but no later than June 30, 2013. [Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's Request received October 3, 2008]

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

2. Design Capacity: The design capacity of each SAP, DAP Plant No. 1, MAP Plant, AFI Plant and the Multifos A and B Kilns shall not exceed the following:

EU ID No.	Plant Description	Design Production Capacity
-002	SAP No. 1	3,200 TPD of 100% H ₂ SO ₄
-003	SAP No. 2	3,200 TPD of 100% H ₂ SO ₄
-004	SAP No. 3	3,200 TPD of 100% H ₂ SO ₄
-009	DAP Plant No. 1	150 TPH of MAP or DAP
-011	MAP Plant	50 TPH of MAP
-027	AFI Plant	120 TPH
-036	Multifos A and B Kilns, Dryer and Blending Operation	15 TPH process input rate to each Kiln and 150,000 tons per year (TPY) of multifos from both Kilns combined

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

3. Methods of Operation - Fuels: The DAP Plant No. 1, AFI Plant and the Multifos A and B Kilns dryers shall be fired by natural gas. The dryers can be fired with No. 6 fuel oil or better grade fuel oil (as defined in

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection B (Scenario B). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

Condition CC.20 in Permit 1050059-045-AV) only during periods of natural gas curtailment. The permittee shall submit an official document from the natural gas pipeline vendor to the SWD Office for verification of natural gas curtailments. [Rules 62-4.070(1)&(3) (Reasonable Assurance) and Rule 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

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

AIR POLLUTION CONTROL TECHNOLOGIES AND MEASURES

5. SAP SO₂ Controls: This BART exemption determination does require new, modified or additional air pollution control systems for SO₂. To control emissions of sulfur dioxide (SO₂) 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 and 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]
6. Proposed Work: The applicant is required to perform the following specific work activities under this project in order to escape BART:

EU ID No.	Work Activities
-002	<ul style="list-style-type: none"> • Increase the catalyst loading ratio from approximately 147 liters per ton H₂SO₄ per day (L/TPD) at 3,400 TPD production rate to approximately 190 L/TPD at 3,200 TPD production rate {increases the current catalyst loading from approximately 498,400 liters to 610,000 liters}; • Install a heat recovery system (HRS) to replace the interpass absorption (IPA) tower (If necessary, install/replace); • Replace the sulfur furnace (If necessary, install/replace); • Replace the drying tower (If necessary, install/replace); and • Install Brownian diffusion-type candles in the final absorption tower for SAM control.
-003	<ul style="list-style-type: none"> • Increase the catalyst loading ratio from approximately 147 L/TPD at 3,400 TPD production rate to approximately 213 L/TPD at 3,200 TPD production rate {increases the current catalyst loading from approximately 498,400 liters to 610,000 liters}; • Install HRS to replace the IPA tower (If necessary, install/replace); • Replace the sulfur furnace (If necessary, install/replace); • Replace the drying tower (If necessary, install/replace); and • Install Brownian diffusion-type candles in the final absorption tower for SAM control.
-004	<ul style="list-style-type: none"> • Increase the catalyst loading ratio from approximately 157 L/TPD at 3,400 TPD production rate to approximately 190 L/TPD at 3,200 TPD production rate {increases the current catalyst loading from approximately 535,200 liters to 610,000 liters}.
-036	<ul style="list-style-type: none"> • Install caustic scrubber for each of the Multifos A and B Kilns.

Higher catalyst loadings are allowed by this permit in order to meet the BART SO₂ emission limits. The Brownian diffusion-type candles will be installed in the IPA tower which will become the final absorption tower after the reconfiguration. The candles will lower SAM emission rates from the two SAPs. A caustic scrubber is required for each Multifos A and B Kilns to meet the lower SO₂ emission limits. [Rule 62-

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection B (Scenario B). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

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]

7. **SO₂ Controls:** The permittee shall use the specific catalyst loadings and types as cited in the study by the permittee’s catalyst supplier in Appendix C of the Application. The specific catalyst loadings and 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 SO₂ emission rates of 3.0 lb SO₂/ton 100% H₂SO₄. 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 and 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]
8. **SAP Acid Mist Controls:** This BART exemption determination does require new, modified or additional air pollution control systems for sulfuric acid mist (SAM). By controlling SAM emissions, PM/PM₁₀ and visible emissions are minimized. To control emissions of SAM, the permittee shall install Brownian diffusion-type candles on SAPs 1 and 2, similar to the one employed on SAP No. 3. 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]
9. **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 AND LIMITATIONS

10. **PM, NO_x and SO₂ Standards:** Particulate matter, nitrogen oxides and sulfur dioxide emissions shall not exceed the following emissions standards.

EU ID No.	Emissions Unit Description	Emissions Standards		
		PM	NO _x	SO ₂
-002	No.1 Sulfuric Acid Plant	---	16 lb/hour ^a	400 lb/hour ^b
-003	No. 2 Sulfuric Acid Plant	---	16 lb/hour ^a	400 lb/hour ^b
-004	No. 3 Sulfuric Acid Plant	---	16 lb/hour ^a	400 lb/hour ^b
-009	DAP Plant No.1	15 lb/hour	---	See Footnote “c”
-011	MAP Plant	7 lb/hour	---	---
-027	AFI Plant	36.8 lb/hour	---	See Footnote “c”
-036	Multifos A and B Kilns, Dryer and Blending Operation	25 lb/hour	---	25 lb/hour ^c

- a. Nitrogen oxides (NO_x) emissions from Nos. 1, 2, and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) shall not exceed 16 lb/hour {Permitting Note (for information purposes only): equivalent to 0.12 lb/ton of 100% sulfuric acid at design capacity} based on a 3-hour average as determined by stack test data.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection B (Scenario B). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

- b. Sulfur dioxide emissions from Nos. 1, 2, and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) shall not exceed 400 lb/hour {Permitting Note (for information purposes only): equivalent to 3.0 lb/ton of 100% sulfuric acid at design capacity} based on a 24-hour (daily) block CEMS average.
Permitting note (for information purposes only): SO₂ emissions in lb/hour are equivalent to 3.0 lb/ton of 100% sulfuric acid at design capacity. 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. No stack testing is required.
- c. To control sulfur dioxide emissions from the dryers, only natural gas shall be fired as a fuel. During periods of natural gas curtailments, No. 6 fuel oil or better grade fuel oil (as defined in Condition CC.20 in Permit 1050059-045-AV) may be fired as a fuel. [Rules 62-4.070(3) and 62-296.340(5)(c) (escape BART), F.A.C.]
11. Opacity Standards: Visible emissions from the Nos. 1, 2 and 3 Sulfuric Acid Plants (EU-002, EU-003 and EU-004) shall not exceed 10% opacity as determined by EPA Method 9. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; and 40 CFR 60.83(a)2 and 40 CFR 60, Appendix A, Method 9]
12. SO₂ Continuous Emissions Monitoring System (CEMS): This BART exemption determination requires an SO₂ CEMS to be used to demonstrate continuous compliance with the SO₂ 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 SO₂.
- 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]
13. SAM Emission Standards and 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
1	6.7
2	6.7
3	6.7

Emissions of SAM shall not exceed 6.7 pounds per hour for each of the three SAPs based on a 3-hour average as determined by stack test data.

{The equivalent lb SAM/ton 100% H₂SO₄ values for SAP Nos. 1, 2, and 3 at design capacity for each SAP is 0.05 lb SAM/ton 100% H₂SO₄. 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. 1, 2, and 3 is 29.3 TPY. 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.}

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection B (Scenario B). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

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

EXCESS EMISSIONS

14. 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.]
15. 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 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.]
16. 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.]
17. 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.
 - b. Best operational practices to minimize excess SO₂ and SO₃ 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, Title V Permit No. 1050059-045-AV]
18. Best Operational Practices to Minimize Leaks of SO₂ and SO₃, or Other Fugitive Process Emissions: Best operational practices to minimize leaks of SO₂ and SO₃, 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

19. 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
5	Determination of PM Emissions from Stationary Sources
6 or 6C	Determination of SO ₂ Emissions from Stationary Sources
7E	Determination of NO _x Emissions from Stationary Sources (Instrumental Analyzer Procedure)
8	Determination of SAM and SO ₂ Emissions from Stationary Sources
9	Visual Determination of Opacity from Stationary Sources

EPA Methods 1, 2, 3 and 4 shall be used as necessary to support the other test methods. The above methods

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Subsection B (Scenario B). SAP Nos. 1, 2 and 3, DAP Plant No. 1, MAP Plant, AFI Plant and Multifos A and B Kilns, Dryer and Blending Operation

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]

20. 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]
21. 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 NO_x and SAM emissions from each SAP and PM emissions from DAP Plant No. 1, MAP Plant and the AFI Plant. On or before April 30, 2013, an initial test shall be conducted for SO₂ and PM emissions from Multifos A and B Kilns, Dryer and Blending Operation. The initial compliance test report for NO_x, SO₂, SAM and PM 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.]
 - b. *Initial and 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 and NO_x 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 SO₂ CEMS are required to demonstrate compliance on a continuous basis, therefore, no initial or annual compliance test for SO₂ is necessary on the SAPs.}

RECORDS AND REPORTS

22. 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 SO₂ continuous emissions monitoring systems for continuous compliance demonstrations.} [Rules 62-296.402(5) and 62-213.440(1)(b)2., F.A.C.]
23. Construction Plan and Progress Reports: The permittee shall submit a Construction Plan within sixty (60) days of January 1, 2010 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 2010 - 2013.
 - b. The permittee shall complete all required construction and 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
CONTENTS

Appendix A. Citation Formats

Appendix B. General Conditions

Appendix C. Standard Testing Requirements

Appendix D. Best Operational Start-Up Practices for Sulfuric Acid Plants

SECTION 4. APPENDIX A
CITATION FORMATS

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

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 and 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

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

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

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

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

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

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

- 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

BEST OPERATIONAL START-UP PRACTICES FOR SULFURIC ACID PLANTS

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 SO₂ 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 SO₂ 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 of the 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 (cease burning sulfur) if, as indicated by the continuous emission monitoring system, the plant is not in compliance within three hours of startup. 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 SO₂ 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 SO₂ at a level less than normal and sufficiently low to promote catalytic conversion to SO₃.
 - 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 H₂SO₄.
5. Warm Restart.
 - a. Converter

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

 - (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

SECTION 4. APPENDIX D

BEST OPERATIONAL START-UP PRACTICES FOR SULFURIC ACID PLANTS

- (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 technologies 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 H₂SO₄.

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Thursday, July 30, 2009 4:32 PM
To: david.jellerson@mosaicco.com
Cc: david.turley@mosaicco.com; rama.iyer@mosaicco.com; dbuff@golder.com; smohammad@golder.com; forney.kathleen@epa.gov; catherine_collins@fws.gov; Zhang-Torres; Rogers, Tom; Moore, Ronni; Gibson, Victoria; Arif, Syed; Walker, Elizabeth (AIR)
Subject: MOSAIC FERTILIZER - NEW WALES FACILITY; 1050059-061-AC

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 documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1050059.061.AC.F_pdf.zip

Owner/Company Name: MOSAIC FERTILIZER LLC
Facility Name: MOSAIC FERTILIZER - NEW WALES FACILITY
Project Number: 1050059-061-AC
Permit Status: FINAL
Permit Activity: CONSTRUCTION
Facility County: POLK
Processor: Syed Arif

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Access these documents by clicking on the link provided above, or search for other project documents using the "*Air Permit Documents Search*" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.


Project documents that are 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

Livingston, Sylvia

From: Jellerson, David - Pierce [David.Jellerson@mosaicco.com]
Sent: Thursday, July 30, 2009 4:56 PM
To: Livingston, Sylvia
Subject: RE: MOSAIC FERTILIZER - NEW WALES FACILITY; 1050059-061-AC

Thank-you, I am able to view access and view the documents.

 **David Jellerson | Assistant Vice President, Environmental**
Mosaic Fertilizer, LLC | P.O. Box 2000 | 5000 Old Hwy 37 S. | Mulberry, Florida 33860
P: 863.428.6480 | C: 813.781.2029 | E: david.jellerson@mosaicco.com | W: www.mosaicco.com

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From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Thursday, July 30, 2009 4:32 PM
To: Jellerson, David - Pierce
Cc: Turley, Charles D - New Wales; Iyer, Rama - Pierce; dbuff@golder.com; smohammad@golder.com; forney.kathleen@epa.gov; catherine_collins@fws.gov; Zhang-Torres; Rogers, Tom; Moore, Ronni; Gibson, Victoria; Arif, Syed; Walker, Elizabeth (AIR)
Subject: MOSAIC FERTILIZER - NEW WALES FACILITY; 1050059-061-AC

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 documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1050059.061.AC.F_pdf.zip

Owner/Company Name: MOSAIC FERTILIZER LLC

Facility Name: MOSAIC FERTILIZER - NEW WALES FACILITY

Project Number: 1050059-061-AC

Permit Status: FINAL

Permit Activity: CONSTRUCTION

Facility County: POLK