

# Florida Department of Environmental Protection

## Memorandum

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TO: Joseph Kahn, Division of Air Resource Management

THROUGH: Trina Vielhauer, Bureau of Air Regulation *TV*

FROM: Syed Arif, New Source Review Section *Syed Arif 10/28*

DATE: October 28, 2009

SUBJECT: Air Permit No. 0570005-034-AC  
Facility ID No. 0570005  
CF Industries, Inc. (CFI)  
Plant City Phosphate Complex  
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 three emission reduction scenarios A, B and C for the BART-eligible emissions units at the Plant City Phosphate Complex. The Department has indicated to the applicant that only emission reduction scenarios A and B will be approved. Scenario C cannot be approved as it undermines the Best Available Control Technology (BACT) determination for the 'C' and 'D' sulfuric acid plants done in project PSD-FL-339. Therefore, Scenario C was not considered further. The proposed work will be conducted at the Plant City Phosphate Complex, which is located in Hillsborough County at 10608 Paul Buchman Highway, Plant City, Florida.

The Department distributed a Written Notice of Intent to Issue Permit package on September 25, 2009. The applicant published the Public Notice of Intent to Issue in The Tampa Tribune on September 29, 2009. The Department received the proof of publication on October 6, 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:

CF Industries, Inc.  
Post Office Box Drawer L  
Plant City, FL 33564

Air Permit No. 0570005-034-AC  
Facility ID No. 0570005  
Plant City Phosphate Complex  
BART Exemption Project  
Hillsborough County, Florida

*Authorized Representative:*

Mr. Ronald L. Brunk, Superintendent Environmental Affairs

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 Plant City Phosphate Complex. In scenario A, CFI proposes to reduce production rates of C and D Sulfuric Acid Plants (SAPs) from 2,962 tons per day (TPD) to 2,600 TPD and reduce lower daily average sulfur dioxide (SO<sub>2</sub>) emissions rates from the A, B, C and D SAPs. SO<sub>2</sub> emissions from the A and B SAPs will be reduced from the currently permitted 250.0 lb/hr and 233.3 lb/hr to 75.8 lb/hr and 93.3 lb/hr, 24-hour average, respectively. SO<sub>2</sub> emissions from each of the C and D SAPs will be reduced from the currently permitted 401.1 lb/hr to 303.3 lb/hr, 24-hour average. NO<sub>x</sub> reductions would also occur as a result of the production decrease in the C and D SAPs, each reducing from 13.6 lb/hr to 11.9 lb/hr. Similarly, there would be a reduction in sulfuric acid mist (SAM) as a result of the production decrease in these units from 11.4 lb/hr to 10.1 lb/hr, each. CFI is not proposing any changes to the currently permitted particulate matter (PM) emission limits for the A, Z, X and Y Diammonium Phosphate/Monoammonium Phosphate (DAP/MAP) plants or the A and B Shipping Baghouses. In scenario B, CFI proposes to reduce production rates of C and D SAPs from 2,962 TPD to 2,900 TPD and reduce lower daily average SO<sub>2</sub> emissions rates from the A, B, C and D SAPs. SO<sub>2</sub> emissions from the A and B SAPs will be reduced from the currently permitted 250.0 lb/hr and 233.3 lb/hr to 81.3 lb/hr and 100.0 lb/hr, 24-hour average, respectively. SO<sub>2</sub> emissions from each of the C and D SAPs will be reduced from the currently permitted 401.1 lb/hr to 241.7 lb/hr, 24-hour average. As a result of the production decrease, NO<sub>x</sub> emissions in the C and D SAPs are reduced from 13.6 to 13.3 lb/hr and SAM emissions are reduced from 11.4 to 11.2 lb/hr, each. CFI is not proposing any changes to the currently permitted PM emission limits for the A, Z, X and Y DAP/MAP plants or the A and B Shipping Baghouses. The applicant will make a decision to implement scenario A or B no later than June 1, 2010, at which time, the scenario that is not implemented will become obsolete.

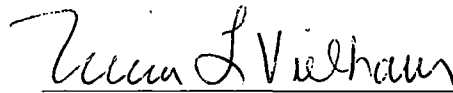
The proposed work will be conducted at the Plant City Phosphate Complex, which is located in Hillsborough County at 10608 Paul Buchman Highway, Plant City, Florida. This permit is issued pursuant to Chapter 403, Florida Statutes (F.S.).

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

**NOTICE OF FINAL PERMIT**

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

10/28/09  
(Date)


**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 10/29/09 to the persons listed below.

- Mr. Ronald L. Brunk, CF Industries, Inc.: [rbrunk@cfifl.com](mailto:rbrunk@cfifl.com)
- Mr. David A. Buff, P.E., Golder Associates Inc.: [dbuff@golder.com](mailto:dbuff@golder.com)
- Mr. Sal Mohammad, Golder Associates Inc.: [smohammad@golder.com](mailto:smohammad@golder.com)
- Ms. Katy Forney, EPA Region 4: [forney.kathleen@epa.gov](mailto:forney.kathleen@epa.gov)
- Ms. Catherine Collins, Fish & Wildlife Service: [catherine\\_collins@fws.gov](mailto:catherine_collins@fws.gov)
- Ms. Cindy Zhang-Torres, P.E., DEP SWD: [zhang-torres@dep.state.fl.us](mailto:zhang-torres@dep.state.fl.us)
- Ms. Diana Lee, P.E., EPCHC: ([lee@epchc.org](mailto:lee@epchc.org))
- Mr. Tom Rogers, DEP OPAPM: [tom.rogers@dep.state.fl.us](mailto:tom.rogers@dep.state.fl.us)
- Ms. Ronda L. Moore, DEP OGC: [ronni.moore@dep.state.fl.us](mailto:ronni.moore@dep.state.fl.us)
- Ms. Victoria Gibson, DEP BAR: [victoria.gibson@dep.state.fl.us](mailto:victoria.gibson@dep.state.fl.us) (for reading file)

Clerk Stamp

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

  
(Clerk)

10/29/09  
(Date)

# Final Determination

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## PERMITTEE

CF Industries, Inc. (CFI)  
P.O. Box Drawer L  
Plant City, FL 33564

## 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. 0570005-034-AC  
Plant City Phosphate Complex

This project is for a minor source air construction (AC) permit for the Plant City Phosphate Complex 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 three emission reduction scenarios A, B and C for the BART-eligible emissions units at the Plant City Phosphate Complex. The Department has indicated to the applicant that only emission reduction scenarios A and B will be approved. Scenario C cannot be approved as it undermines the Best Available Control Technology (BACT) determination for the 'C' and 'D' sulfuric acid plants done in project PSD-FL-339. Therefore, Scenario C was not considered further. 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 0.499 dv and under scenario B is 0.433 dv.

In scenario A, CFI proposes to reduce production rates of C and D Sulfuric Acid Plants (SAPs) from 2,962 tons per day (TPD) to 2,600 TPD and reduce lower daily average sulfur dioxide (SO<sub>2</sub>) emissions rates from the A, B, C and D SAPs. SO<sub>2</sub> emissions from the A and B SAPs will be reduced from the currently permitted 250.0 lb/hr and 233.3 lb/hr to 75.8 lb/hr and 93.3 lb/hr, 24-hour average, respectively. SO<sub>2</sub> emissions from each of the C and D SAPs will be reduced from the currently permitted 401.1 lb/hr to 303.3 lb/hr, 24-hour average. NO<sub>x</sub> reductions would also occur as a result of the production decrease in the C and D SAPs, each reducing from 13.6 lb/hr to 11.9 lb/hr. Similarly, there would be a reduction in sulfuric acid mist (SAM) as a result of the production decrease in these units from 11.4 lb/hr to 10.1 lb/hr, each. CFI is not proposing any changes to the currently permitted particulate matter (PM) emission limits for the A, Z, X and Y Diammonium Phosphate/Monoammonium Phosphate (DAP/MAP) plants or the A and B Shipping Baghouses.

In scenario B, CFI proposes to reduce production rates of C and D SAPs from 2,962 TPD to 2,900 TPD and reduce lower daily average SO<sub>2</sub> emissions rates from the A, B, C and D SAPs. SO<sub>2</sub> emissions from

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the A and B SAPs will be reduced from the currently permitted 250.0 lb/hr and 233.3 lb/hr to 81.3 lb/hr and 100.0 lb/hr, 24-hour average, respectively. SO<sub>2</sub> emissions from each of the C and D SAPs will be reduced from the currently permitted 401.1 lb/hr to 241.7 lb/hr, 24-hour average. As a result of the production decrease, NO<sub>x</sub> emissions in the C and D SAPs are reduced from 13.6 to 13.3 lb/hr and SAM emissions are reduced from 11.4 to 11.2 lb/hr, each. CFI is not proposing any changes to the currently permitted PM emission limits for the A, Z, X and Y DAP/MAP plants or the A and B Shipping Baghouses.

The applicant will make a decision to implement scenario A or B no later than June 1, 2010, at which time, the scenario that is not implemented will become obsolete.

### PROCESSING SCHEDULE AND RELATED DOCUMENTS

Draft Permit package for BART exemption issued (clerked) on September 25, 2009.

Public Notice published on September 29, 2009.

Proof of Publication of Public Notice received on October 6, 2009.

Comments dated October 9, 2009 from CFI, received via e-mail on October 9, 2009.

### NOTICE AND PUBLICATION

The Department distributed a Written Notice of Intent to Issue Permit package on September 25, 2009. The applicant published the Public Notice of Intent to Issue in The Tampa Tribune on September 29, 2009. The permitting authority received the proof of publication on October 6, 2009.

### COMMENTS

Comments on the Draft Permit were received from the applicant.

#### Applicant

On October 9, 2009, the Department received comments dated October 9, 2009 from Golder Associates Inc. on behalf of CF Industries, Inc. (CFI), 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. Comment:** Page 5 of 16, Administrative Requirement 10 in Section 2 - Three emission reduction scenarios were proposed in the BART exemption application dated July 2009 – A, B and C. There is no reference to Scenario C.

**Response:** The Department did refer to three emission reduction scenarios (A, B and C) in the technical evaluation and preliminary determination on page 5 of 25. The Department made it clear that only scenarios A and B will be approved. Scenario C cannot be approved as it undermines the best available control technology (BACT) determination for the 'C' and 'D' sulfuric acid plants (SAPs) done in project PSD-FL-339. Therefore, Scenario C was not considered further.

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**2. Comment:** Page 6 of 16, Specific Condition 1 in Subsection A - It is said that the permittee is required to comply with the BART exemption limits under Scenario A as soon as possible but not later than September 1, 2010. It is our understanding that the limits do not apply until later that date. Please advise if this understanding is incorrect.

**Response:** The Department does not concur with that understanding. The Department expects based on an e-mail received from CFI on August 31, 2009, that the compliance with Scenario A requirements does not require any physical changes but only operational changes for the four sulfuric acid plants. The operational changes can be implemented soon after the applicant makes a decision by June 1, 2010 whether Scenario A will be implemented. Therefore, the Department expects that CFI could comply with Scenario A requirements by June 1, 2010.

**3. Comment:** Page 6 of 16, Specific Condition 2 in Subsection A: The production capacity of EU ID Nos. 010, 011, 012 and 013 are shown in terms of tons per hour (TPH) of diammonium phosphate (DAP) and monoammonium phosphate (MAP). These should be corrected to TPH of DAP or MAP as “phosphorus pentoxide (P<sub>2</sub>O<sub>5</sub>) input”.

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

Specific Condition 2 in Subsection A on page 6 of 16 will be changed as follows:

Production Capacity: The existing production capacity of A and B SAPs, A, Z, X and Y DAP/MAP Plants, A and B Shipping Baghouses shall not be changed as a result of the proposed work under this project, Permit No. 0570005-034-AC. The production capacity of C and D SAPs shall be reduced from the existing production capacity. The production capacity of each of these emissions units shall not exceed the following:

EU ID No.	Plant Description	Production Capacity
-002	A SAP	1,300 TPD (tons per day) of 100% H <sub>2</sub> SO <sub>4</sub> (sulfuric acid)
-003	B SAP	1,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-007	C SAP	2,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-008	D SAP	2,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-010	A DAP/MAP Plant	29.53 TPH (tons per hour of <u>phosphorus pentoxide (P<sub>2</sub>O<sub>5</sub>) input</u> ) <u>for DAP</u> ; 33.30 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for MAP</u>
-011	Z DAP/MAP Plant	48.7 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for DAP</u> ; 55.0 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for MAP</u>
-012	X DAP/MAP Plant	48.7 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for DAP</u> ; 55.0 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for MAP</u>
-013	Y DAP/MAP Plant	48.7 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for DAP</u> ; 55.0 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for MAP</u>
-015	A Shipping Baghouse	250 TPH
-018	B Shipping Baghouse	500 TPH

[Rules 62-296.340(5)(c) (escape BART), 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

## Final Determination

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4. **Comment:** Page 8 of 16, Footnote ‘c’ of Specific Condition 7 in Subsection A: This footnote explains that the SO<sub>2</sub> emission limitations for the sulfuric acid plants are 24-block averages. We are requesting further clarification that the daily averages include non-operating hours (i.e., the BART emissions limits are actually based on lb/day emission rates). The permit should also clarify that the daily averages exclude startup, shutdown or malfunction periods. These periods are excluded from modeling analysis under the BART regulations, and therefore should be excluded from the emission limits.

**Response:** The Department does not concur with the applicant’s request that 24-hour block average shall include non-operating hours. Data taken during periods of startup or when sulfur is not burned in the unit shall be excluded from the 24-hour block average. Data recorded during periods of shutdown, malfunction, load change, and continuous operating periods shall be included in the calculation of the 24-hour block average. These requirements are the same requirements that the sulfuric acid continuous emission monitoring system (CEMS) for the A, B, C and D sulfuric acid plants are complying with presently. The excess emissions requirements allow excess emissions for the first three hours of startup based on ‘Best Operational Startup Practices for Sulfuric Acid Plants’ or two hours of shutdown or malfunction based on Rule 62-210.700, F.A.C. But, the CEMS requirements are as defined above.

5. **Comment:** Pages 9 and 10 of 16, Specific Condition 12 in Subsection A: The initial and annual tests condition requires initial and annual visible emission (VE) compliance testing for each sulfuric acid plant. Please note that this draft permit (0570005-034-AC) requires no VE limitations from the SAPs under “Emission Standards and Limitations”. Therefore, we request that the VE compliance testing requirements be removed from Specific Condition No. 12 in Subsection A. It should be noted that Specific Condition No. B.3 of the current Title V permit No. 0570005-032-AV already limits VE from the SAPs to 10-percent opacity and compliance testing are conducted annually to comply with the requirement.

We also request that the VE test requirement be removed from the condition under “Initial and Special Test” for each SAP for the same reason that this draft permit does not require any VE limit for the SAPs. VE test is currently conducted annually for each SAP and each SAP complies with the existing VE standards.

The “Tests Prior to Renewal” condition requires SAM and NO<sub>x</sub> tests within 12 months prior to renewing the Title V air operation permit. Please note that these tests are already required under the current Title V permit and are conducted as required.

**Response:** The Department will make the changes as proposed by the applicant for the visible emissions testing under the *Initial and Annual Tests* (Condition 12.a). The Department will require the one run visible emission test to be done concurrently with SAM test as listed under *Initial and Special Test* (Condition 12.b). This test is only a one time requirement. The Department will not make any changes to the requirement under *Tests Prior to Renewal* (Condition 12.c). This requirement is not in addition to the Title V testing requirement.

Specific Condition 12 in Subsection A on page 9 of 16 will be changed as follows:

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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 and Annual Tests:* On or before September 1, 2010, an initial test shall be conducted for NO<sub>x</sub>, ~~visible emissions (VE)~~ and SAM emissions from each SAP; PM emissions from A, Z, X and Y DAP/MAP Plants and visible emissions (VE) test for A and B Shipping Baghouses. The initial compliance test report for NO<sub>x</sub>, VE, SAM and PM shall be submitted within 45 days of completion of testing. Thereafter, annual compliance test shall be done for the above pollutants during each federal fiscal year (October 1 – September 30).

[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 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<sub>x</sub> emissions from each SAP.

[Rules 62-296.340(5)(c) (escape BART), and 62-297.310(7)(a)3, F.A.C.]

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

6. **Comment:** Page 11 of 16, Specific Condition 1 in Subsection B: This condition requires CFI to comply with the BART exemption limits for the D SAP under Scenario B no later than January 1, 2012, and for C SAP by September 30, 2013. We propose to comply with the BART exemption limits during the next turnaround for each SAP prior to December 31, 2013. Since the turnaround schedules are subject to change, we propose that the condition be amended to state “BART exemption limits for one of the C and D SAPs shall be complied by December 31, 2012, and for the other SAP by December 31, 2013.

**Response:** The Department does not concur with the applicant that the compliance date for one of the SAPs be changed from January 1, 2012 to December 31, 2012. The Department will extend the date of compliance for the other SAP from September 30, 2013 to December 31, 2013. The Department will also make the change to provide the option to CFI of picking either C or D SAP to comply with the first date of January 1, 2012 and for the other SAP to comply with the later date of December 31, 2013. The Department will also require that CFI notifies the Department by June 30, 2011, the turnaround schedule for the C and D SAPs.

Specific Condition 1 in Subsection B on page 11 of 16 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, EPCHC and the SWD Office through a letter from the responsible official by June 1, 2010 whether Scenario B will be implemented. If Scenario B is implemented, Scenario A becomes obsolete. Under Scenario B, the permittee shall reduce production rates of C and D SAPs from 2,962 TPD to 2,900 TPD and reduce lower daily average SO<sub>2</sub> emissions rates



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from the four SAPs. A and B SAPs shall comply with the new BART exemption limit for SO<sub>2</sub> by September 1, 2010. ~~D SAP shall comply with the new BART exemption limit for SO<sub>2</sub> by January 1, 2012. C SAP shall comply with the new BART exemption limit for SO<sub>2</sub> by September 30, 2013.~~ BART exemption limits for one of the C and D SAPs shall be complied with by January 1, 2012, and for the other SAP by December 31, 2013. The permittee shall notify the Department's Bureau of Air Regulation, EPCHC and the SWD Office through a letter from the responsible official by June 30, 2011, the turnaround schedule for the C and D SAPs.

[Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's approval received via e-mail on September 8, 2009]

7. **Comment:** Page 11 of 16, Specific Condition 2 in Subsection B: The production capacity of EU ID Nos. 010, 011, 012 and 013 are shown in terms of tons per hour (TPH) of diammonium phosphate (DAP) and monoammonium phosphate (MAP). These should be corrected to TPH of DAP or MAP as "phosphorus pentoxide (P<sub>2</sub>O<sub>5</sub>) input".

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

Specific Condition 2 in Subsection B on page 11 of 16 will be changed as follows:

Production Capacity: The existing production capacity of A and B SAPs, A, Z, X and Y DAP/MAP Plants, A and B Shipping Baghouses shall not be changed as a result of the proposed work under this project, Permit No. 0570005-034-AC. The production capacity of C and D SAPs shall be reduced from the existing production capacity. The production capacity of each of these emissions units shall not exceed the following:

EU ID No.	Plant Description	Production Capacity
-002	A SAP	1,300 TPD (tons per day) of 100% H <sub>2</sub> SO <sub>4</sub> (sulfuric acid)
-003	B SAP	1,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-007	C SAP	2,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-008	D SAP	2,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-010	A DAP/MAP Plant	29.53 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for</u> DAP; 33.30 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for</u> MAP
-011	Z DAP/MAP Plant	48.7 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for</u> DAP; 55.0 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for</u> MAP
-012	X DAP/MAP Plant	48.7 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for</u> DAP; 55.0 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for</u> MAP
-013	Y DAP/MAP Plant	48.7 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for</u> DAP; 55.0 TPH of <u>P<sub>2</sub>O<sub>5</sub> input for</u> MAP
-015	A Shipping Baghouse	250 TPH
-018	B Shipping Baghouse	500 TPH

[Rules 62-296.340(5)(c) (escape BART), 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

8. **Comment:** Page 14 of 16, Footnote 'c' of Specific Condition 10 in Subsection B: This footnote explains that the SO<sub>2</sub> emission limitations for the sulfuric acid plants are 24-block

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averages. We are requesting further clarification that the daily averages include non-operating hours (i.e., the BART emissions limits are actually based on lb/day emission rates). The permit should also clarify that the daily averages exclude startup, shutdown or malfunction periods. These periods are excluded from modeling analysis under the BART regulations, and therefore should be excluded from the emission limits.

**Response:** The Department does not concur with the applicant's request that 24-hour block average shall include non-operating hours. Data taken during periods of startup or when sulfur is not burned in the unit shall be excluded from the 24-hour block average. Data recorded during periods of shutdown, malfunction, load change, and continuous operating periods shall be included in the calculation of the 24-hour block average. These requirements are the same requirements that the sulfuric acid CEMS for the A, B, C and D sulfuric acid plants are complying with presently. The excess emissions requirements allow excess emissions for the first three hours of startup based on 'Best Operational Startup Practices for Sulfuric Acid Plants' or two hours of shutdown or malfunction based on Rule 62-210.700, F.A.C. But, the CEMS monitoring requirements are as defined above.

9. **Comment:** Page 15 of 16, Specific Condition 15 in Subsection B: We have the same comments as the "Compliance Test Schedule" under Subsection A. We request that the VE compliance testing requirements be removed from Specific Condition No. 15 in Subsection B because this draft permit (0570005-034-AC) requires no VE limitations from the SAPs.

**Response:** The Department will make the changes as proposed by the applicant for the visible emissions testing under the *Initial and Annual Tests* (Condition 15.a). Additionally, the Department will make the necessary changes for the testing requirements for the C and D SAPs as reflected under the response for Comment 6. The Department will require the one run visible emission test to be done concurrently with SAM test as listed under *Initial and Special Test* (Condition 15.b). This test is only a one time requirement. The Department will not make any changes to the requirement under *Tests Prior to Renewal* (Condition 12.c). This requirement is not in addition to the Title V testing requirement.

Specific Condition 15 in Subsection B on page 15 of 16 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 and Annual Tests:* On or before September 1, 2010, an initial test shall be conducted for NO<sub>x</sub>, ~~VE~~ and SAM emissions from A and B SAPs; PM emissions from A, Z, X and Y DAP/MAP Plants and VE test for A and B Shipping Baghouses. On or before January 1, 2012, an initial test shall be conducted for NO<sub>x</sub>, ~~VE~~ and SAM emissions from one of the C and D SAPs. On or before December 31, 2013, an initial test shall be conducted for NO<sub>x</sub>, ~~VE~~ and SAM emissions from the other ~~C~~ SAP. The initial compliance test report for NO<sub>x</sub>, VE, SAM and PM shall be submitted within 45 days of completion of testing. Thereafter, annual compliance test shall be done for the above pollutants during each federal fiscal year (October 1 – September 30).

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

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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 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 NOx emissions from each SAP.

[Rules 62-296.340(5)(c) (escape BART), and 62-297.310(7)(a)3, F.A.C.]

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

10. The Department will make the necessary changes to Specific Condition 17 in Subsection B on page 16 of 16 to reflect the changes made under Comment 6.

Specific Condition 17 in Subsection B on page 16 of 16 will be changed as follows:

Construction Plan and Progress Reports: The permittee shall submit a Construction Plan within sixty (60) days of June 1, 2010 for C and D SAPs 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 for one of the C and D SAP no later than September 30, 2011.
- c. The permittee shall complete all required construction and modifications for the other SAP no later than ~~June~~ September 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

CF Industries, Inc. (CFI)  
Post Office Box Drawer L  
Plant City, FL 33564

Air Permit No. 0570005-034-AC  
Expiration Date: December 31, 2013  
Plant City Phosphate Complex  
BART Exemption Project

### *Authorized Representative:*

Mr. Ronald L. Brunk, Superintendent Environmental Affairs

## PLANT AND LOCATION

CFI operates the Plant City Phosphate Complex, which is located at 10608 Paul Buchman Highway, Plant City in Hillsborough County, Florida. The facility is an existing phosphate fertilizer manufacturer, which is identified by Standard Industrial Classification (SIC) code No. 2874.

## STATEMENT OF BASIS

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

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

## EFFECTIVE DATE

Unless otherwise specified by this permit, the affected emissions units shall comply with the conditions of this permit as expeditiously as practicable. [Rule 62-296.340(3)(b)2., F.A.C.]

Executed in Tallahassee, Florida

Joseph Kahn, Director  
Division of Air Resource Management

10/29/09

Effective Date

JK/tlv/sa

## SECTION 1. GENERAL INFORMATION

### FACILITY DESCRIPTION

The applicant, CFI, operates an existing phosphate fertilizer manufacturer. The fertilizer complex processes phosphate rock into several different fertilizer products. This is accomplished by reacting the phosphate rock with sulfuric acid to produce phosphoric acid and then converting the phosphoric acid to fertilizer. The facility consists of four sulfuric acid plants (SAPs); two phosphoric acid plants (PAPs); four diammonium/monoammonium phosphate (DAP/MAP) plants; molten sulfur storage and handling operations; product storage and shipping operations; and ancillary equipment.

### 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

CFI 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 No.	Emissions Unit Description
002	A Sulfuric Acid Plant
003	B Sulfuric Acid Plant
007	C Sulfuric Acid Plant
008	D Sulfuric Acid Plant
010	A DAP/MAP Plant
011	Z DAP/MAP Plant
012	X DAP/MAP Plant
013	Y DAP/MAP Plant
015	A Shipping Baghouse
018	B Shipping Baghouse

## SECTION 1. GENERAL INFORMATION

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Section 1. General Information

Section 2. Administrative Requirements

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Section 4. Appendices

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Appendix B. General Conditions

Appendix C. Standard Testing Requirements

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

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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

Environmental Protection Commission of Hillsborough County  
3629 Queen Palm Drive  
Tampa, Florida 33619-1309  
Telephone: 813/627-2600, Fax: 813/627-2660

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

[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 1<sup>st</sup> of each year. [Rule 62-210.370(3), F.A.C.]

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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### 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; 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 Plant City Phosphate Complex. For each of the emissions reduction scenarios, the 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 June 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). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses**

This subsection addresses the following affected emissions units:

<b>EU ID No.</b>	<b>Brief Description</b>
-002	A SAP
-003	B SAP
-007	C SAP
-008	D SAP
-010	A DAP/MAP Plant
-011	Z DAP/MAP Plant
-012	X DAP/MAP Plant
-013	Y DAP/MAP Plant
-015	A Shipping Baghouse
-018	B Shipping Baghouse

**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, EPCHC and the SWD Office through a letter from the responsible official by June 1, 2010 whether Scenario A will be implemented. If Scenario A is implemented, Scenario B becomes obsolete. Under Scenario A, the permittee shall reduce production rates of C and D SAPs from 2,962 TPD to 2,600 TPD and lower daily average SO<sub>2</sub> emissions rates from the four SAPs. The permittee is required to comply with the BART exemption limits under Scenario A as soon as possible but not later than September 1, 2010.

[Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's approval received via e-mail on September 8, 2009]

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

2. Production Capacity: The existing production capacity of A and B SAPs, A, Z, X and Y DAP/MAP Plants, A and B Shipping Baghouses shall not be changed as a result of the proposed work under this project, Permit No. 0570005-034-AC. The production capacity of C and D SAPs shall be reduced from the existing production capacity. The production capacity of each of these emissions units shall not exceed the following:

<b>EU ID No.</b>	<b>Plant Description</b>	<b>Production Capacity</b>
-002	A SAP	1,300 TPD (tons per day) of 100% H <sub>2</sub> SO <sub>4</sub> (sulfuric acid)
-003	B SAP	1,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-007	C SAP	2,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-008	D SAP	2,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-010	A DAP/MAP Plant	29.53 TPH [tons per hour of phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ) input] for DAP; 33.30 TPH of P <sub>2</sub> O <sub>5</sub> input for MAP
-011	Z DAP/MAP Plant	48.7 TPH of P <sub>2</sub> O <sub>5</sub> input for DAP; 55.0 TPH of P <sub>2</sub> O <sub>5</sub> input for MAP
-012	X DAP/MAP Plant	48.7 TPH of P <sub>2</sub> O <sub>5</sub> input for DAP; 55.0 TPH of P <sub>2</sub> O <sub>5</sub> input for MAP
-013	Y DAP/MAP Plant	48.7 TPH of P <sub>2</sub> O <sub>5</sub> input for DAP; 55.0 TPH of P <sub>2</sub> O <sub>5</sub> input for MAP

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### Subsection A (Scenario A). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses

EU ID No.	Plant Description	Production Capacity
-015	A Shipping Baghouse	250 TPH
-018	B Shipping Baghouse	500 TPH

[Rules 62-296.340(5)(c) (escape BART), 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

3. **Methods of Operation - Fuels:** The A, Z, X and Y DAP/MAP Plant dryers shall be primarily fired by natural gas. The dryers can be fired with No. 5 fuel oil or better grade fuel oil (i.e., No. 2, 3 or 4) as a back-up fuel. The maximum heat input rate to the four DAP/MAP Plant dryers shall be as follows:

- A DAP/MAP Plant dryer – 28.5 million British thermal units per hour (MMBtu/hr)
- Z DAP/MAP Plant dryer – 42.75 MMBtu/hr
- X DAP/MAP Plant dryer – 49.7 MMBtu/hr
- Y DAP/MAP Plant dryer – 49.5 MMBtu/hr

[Rules 62-4.070(1)&(3) (Reasonable Assurance) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

#### AIR POLLUTION CONTROL TECHNOLOGIES AND MEASURES

4. **SAP SO<sub>2</sub> Controls:** This BART exemption determination does not require new, modified or additional air pollution control systems for sulfur dioxide (SO<sub>2</sub>). To control emissions of SO<sub>2</sub> from A and B SAPs, the permittee shall continue the use of the single stage absorption system technology followed by the two-stage ammonia scrubber. The permittee shall increase the scrubbing rate to the two-stage ammonia scrubber compared to the existing scrubbing rate in order to reduce the SO<sub>2</sub> emissions from A and B SAPs. To control emissions of SO<sub>2</sub> from C and D SAPs, 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]

5. **SAP Acid Mist Controls:** This BART exemption determination does not 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/PM<sub>10</sub>) and visible emissions are minimized.

[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. **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

7. **PM, NO<sub>x</sub> and SO<sub>2</sub> Standards:** Particulate matter (PM), nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed the following emissions standards.

EU ID No.	Emissions Unit Description	Emissions Standards			
		PM	NO <sub>x</sub>	SAM	SO <sub>2</sub>
-002	A Sulfuric Acid Plant	---	6.5 lb/hr <sup>a</sup>	1.43 lb/hr <sup>b</sup>	75.8 lb/hr <sup>c</sup>
-003	B Sulfuric Acid Plant	---	8.0 lb/hr <sup>a</sup>	1.8 lb/hr <sup>b</sup>	93.3 lb/hr <sup>c</sup>

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**Subsection A (Scenario A). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses**

EU ID No.	Emissions Unit Description	Emissions Standards			
		PM	NOx	SAM	SO <sub>2</sub>
-007	C Sulfuric Acid Plant	---	11.9 lb/hr <sup>a</sup>	10.1 lb/hr <sup>b</sup>	303.3 lb/hr <sup>c</sup>
-008	D Sulfuric Acid Plant	---	11.9 lb/hr <sup>a</sup>	10.1 lb/hr <sup>b</sup>	303.3 lb/hr <sup>c</sup>
-010	A DAP/MAP Plant	13.0 lb/hr (DAP/MAP) & 56.9 TPY (tons per year)	---	---	See Footnote "d"
-011	Z DAP/MAP Plant	15.0 lb/hr(DAP/MAP) & 65.7 TPY	---	---	---
-012	X DAP/MAP Plant	10.62 lb/hr(DAP) 13.75 lb/hr(MAP) & 41.88 TPY(DAP/MAP)	---	---	See Footnote "d"
-013	Y DAP/MAP Plant	15.3 lb/hr(DAP/MAP) & 67 TPY	---	---	See Footnote "d"

- a. Nitrogen oxides (NOx) emissions from A and B Sulfuric Acid Plants (EU-002 and EU-003) shall not exceed 6.5 and 8.0 lb/hr, respectively {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. NOx emissions from C and D Sulfuric Acid Plants (EU-007 and EU-008) shall not exceed 11.9 lb/hr {Permitting Note (for information purposes only): equivalent to 0.11 lb/ton of 100% sulfuric acid at design capacity} based on a 3-hour average as determined by stack test data.
- b. Emissions of SAM for the four SAPs are based on a 3-hour average as determined by stack test data. Permitting note (for information purposes only): The equivalent lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub> values for A and B SAP at design capacity is 0.027 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>. The equivalent lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub> values for C and D SAP at design capacity is 0.093 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>. This permit requires stack test data to be used to demonstrate compliance.
- c. Sulfur dioxide emissions from A and B Sulfuric Acid Plants (EU-002 and EU-003) shall not exceed 75.8 and 93.3 lb/hr based on a 24-hour (daily) block CEMS average. Sulfur dioxide emissions from C and D Sulfuric Acid Plants (EU-007 and EU-008) shall not exceed 303.3 lb/hr based on a 24-hour (daily) block CEMS average. Permitting note (for information purposes only): SO<sub>2</sub> emissions in lb/hour are equivalent to 1.4 lb/ton of 100% sulfuric acid for A and B SAPs at design capacity. SO<sub>2</sub> emissions in lb/hour are equivalent to 2.8 lb/ton of 100% sulfuric acid for C and D SAPs 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.
- d. To control sulfur dioxide emissions from the dryers, natural gas shall be fired as a primary fuel. No. 5 fuel oil or better grade fuel oil (i.e., No. 2, 3 or 4) may be fired as a back-up fuel.  
[Rules 62-4.070(3) and 62-296.340(5)(c) (escape BART), F.A.C.]
8. Opacity Standards: Visible emissions from the A and B Shipping Baghouse exhausts (EU-015 and EU-018) shall not exceed 5% 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]

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### Subsection A (Scenario A). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses

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

#### EMISSIONS TESTING

10. 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 <sub>2</sub> Emissions from Stationary Sources
7E	Determination of NO <sub>x</sub> Emissions from Stationary Sources (Instrumental Analyzer Procedure)
8	Determination of SAM and SO <sub>2</sub> 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]

11. 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]
12. 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.
- Initial and Annual Tests*: On or before September 1, 2010, an initial test shall be conducted for NO<sub>x</sub> and SAM emissions from each SAP; PM emissions from A, Z, X and Y DAP/MAP Plants and visible emissions (VE) test for A and B Shipping Baghouses. The initial compliance test report for NO<sub>x</sub>, VE, SAM and PM shall be submitted within 45 days of completion of testing. Thereafter, annual compliance test shall be done for the above pollutants during each federal fiscal year (October 1 – September 30).
- [Rules 62-296.340(5)(c) (escape BART) and 62-297.310(7)(a)1, F.A.C.]

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### Subsection A (Scenario A). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses

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 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<sub>x</sub> emissions from each SAP.

[Rules 62-296.340(5)(c) (escape BART), and 62-297.310(7)(a)3, F.A.C.]

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

#### RECORDS AND REPORTS

13. Quarterly Reporting Requirements: The owners or operators of facilities for which monitoring is required shall submit to the Department a written report of emissions in excess of emission limiting standards as set forth in Rule 62-296.402, F.A.C., for each calendar quarter. The nature and cause of the excessive emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of 5 (five) years. {The permittee is required to use SO<sub>2</sub> continuous emissions monitoring systems for continuous compliance demonstrations.}

[Rules 62-296.402(5) and 62-213.440(1)(b)2., F.A.C.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**Subsection B (Scenario B). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses**

This subsection addresses the following affected emissions units:

<b>EU ID No.</b>	<b>Brief Description</b>
-002	A SAP
-003	B SAP
-007	C SAP
-008	D SAP
-010	A DAP/MAP Plant
-011	Z DAP/MAP Plant
-012	X DAP/MAP Plant
-013	Y DAP/MAP Plant
-015	A Shipping Baghouse
-018	B Shipping Baghouse

**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, EPCHC and the SWD Office through a letter from the responsible official by June 1, 2010 whether Scenario B will be implemented. If Scenario B is implemented, Scenario A becomes obsolete. Under Scenario B, the permittee shall reduce production rates of C and D SAPs from 2,962 TPD to 2,900 TPD and reduce lower daily average SO<sub>2</sub> emissions rates from the four SAPs. A and B SAPs shall comply with the new BART exemption limit for SO<sub>2</sub> by September 1, 2010. BART exemption limits for one of the C and D SAPs shall be complied with by January 1, 2012, and for the other SAP by December 31, 2013. The permittee shall notify the Department's Bureau of Air Regulation, EPCHC and the SWD Office through a letter from the responsible official by June 30, 2011, the turnaround schedule for the C and D SAPs.

[Rule 62-296.340(5)(c) (escape BART), F.A.C. and Applicant's approval received via e-mail on September 8, 2009]

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

2. Production Capacity: The existing production capacity of A and B SAPs, A, Z, X and Y DAP/MAP Plants, A and B Shipping Baghouses shall not be changed as a result of the proposed work under this project, Permit No. 0570005-034-AC. The production capacity of C and D SAPs shall be reduced from the existing production capacity. The production capacity of each of these emissions units shall not exceed the following:

<b>EU ID No.</b>	<b>Plant Description</b>	<b>Production Capacity</b>
-002	A SAP	1,300 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-003	B SAP	1,600 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-007	C SAP	2,900 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-008	D SAP	2,900 TPD of 100% H <sub>2</sub> SO <sub>4</sub>
-010	A DAP/MAP Plant	29.53 TPH of P <sub>2</sub> O <sub>5</sub> input for DAP; 33.30 TPH of P <sub>2</sub> O <sub>5</sub> input for MAP
-011	Z DAP/MAP Plant	48.7 TPH of P <sub>2</sub> O <sub>5</sub> input for DAP; 55.0 TPH of P <sub>2</sub> O <sub>5</sub> input for MAP
-012	X DAP/MAP Plant	48.7 TPH of P <sub>2</sub> O <sub>5</sub> input for DAP; 55.0 TPH of P <sub>2</sub> O <sub>5</sub> input for MAP

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**Subsection B (Scenario B). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses**

EU ID No.	Plant Description	Production Capacity
-013	Y DAP/MAP Plant	48.7 TPH of P <sub>2</sub> O <sub>5</sub> input for DAP; 55.0 TPH of P <sub>2</sub> O <sub>5</sub> input for MAP
-015	A Shipping Baghouse	250 TPH
-018	B Shipping Baghouse	500 TPH

[Rules 62-296.340(5)(c) (escape BART), 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.]

3. **Methods of Operation - Fuels:** The A, Z, X and Y DAP/MAP Plant dryers shall be primarily fired by natural gas. The dryers can be fired with No. 5 fuel oil or better grade fuel oil (i.e., No. 2, 3 or 4) as a back-up fuel. The maximum heat input rate to the four DAP/MAP Plant dryers shall be as follows:

- A DAP/MAP Plant dryer – 28.5 million British thermal units per hour (MMBtu/hr)
- Z DAP/MAP Plant dryer – 42.75 MMBtu/hr
- X DAP/MAP Plant dryer – 49.7 MMBtu/hr
- Y DAP/MAP Plant dryer – 49.5 MMBtu/hr

[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 to the Department’s Bureau of Air Regulation, EPCHC and the SWD Office 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 SO<sub>2</sub> Controls:** This BART exemption determination does require new, modified or additional air pollution control systems for SO<sub>2</sub>. To control emissions of SO<sub>2</sub> from A and B SAPs, the permittee shall continue the use of the single absorption system technology followed by the two-stage ammonia scrubber. The permittee shall increase the scrubbing rate to the two-stage ammonia scrubber compared to the existing scrubbing rate in order to reduce the SO<sub>2</sub> emissions from A and B SAPs. To control emissions of SO<sub>2</sub> from C and D SAPs, the permittee shall replace the four-stage catalytic converters and 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
-007 (C SAP)	<ul style="list-style-type: none"> <li>• Increase the catalyst loading ratio from approximately 137.3 liters per ton H<sub>2</sub>SO<sub>4</sub> per day (L/TPD) at 2,962 TPD production rate to approximately 200 L/TPD at 2,900 TPD production rate;</li> <li>• Replace the four-stage catalytic converter.</li> </ul>

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### Subsection B (Scenario B). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses

EU ID No.	Work Activities
-008 (D SAP)	<ul style="list-style-type: none"> <li>• Increase the catalyst loading ratio from approximately 140.5 L/TPD at 2,962 TPD production rate to approximately 200 L/TPD at 2,900 TPD production rate;</li> <li>• Replace the four-stage catalytic converter.</li> </ul>

Higher catalyst loadings are allowed by this permit in order to meet the BART exemption SO<sub>2</sub> emission limits. [Rule 62-296.340(5)(c) (escape BART), F.A.C.; Rules 62-4.160(2) and 62-4.070(1)&(3) (Reasonable Assurance), and, Proposed by the Applicant in the Application]

7. **SO<sub>2</sub> Controls:** 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 not require new, modified or additional air pollution control systems for sulfuric acid mist (SAM). By controlling SAM emissions, PM/PM<sub>10</sub> and visible emissions are minimized. [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<sub>x</sub> and SO<sub>2</sub> 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 <sub>x</sub>	SAM	SO <sub>2</sub>
-002	A Sulfuric Acid Plant	---	6.5 lb/hr <sup>a</sup>	1.43 lb/hr <sup>b</sup>	81.3 lb/hr <sup>c</sup>
-003	B Sulfuric Acid Plant	---	8.0 lb/hr <sup>a</sup>	1.8 lb/hr <sup>b</sup>	100.0 lb/hr <sup>c</sup>
-007	C Sulfuric Acid Plant	---	13.3 lb/hr <sup>a</sup>	11.2 lb/hr <sup>b</sup>	241.7 lb/hr <sup>c</sup>
-008	D Sulfuric Acid Plant	---	13.3 lb/hr <sup>a</sup>	11.2 lb/hr <sup>b</sup>	241.7 lb/hr <sup>c</sup>
-010	A DAP/MAP Plant	13.0 lb/hr (DAP/MAP) & 56.9 TPY (tons per year)	---	---	See Footnote "d"
-011	Z DAP/MAP Plant	15.0 lb/hr(DAP/MAP) & 65.7 TPY	---	---	---
-012	X DAP/MAP Plant	10.62 lb/hr(DAP) 13.75 lb/hr(MAP) & 41.88 TPY(DAP/MAP)	---	---	See Footnote "d"



**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**Subsection B (Scenario B). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses**

EU ID No.	Emissions Unit Description	Emissions Standards			
		PM	NOx	SAM	SO <sub>2</sub>
-013	Y DAP/MAP Plant	15.3 lb/hr(DAP/MAP) & 67 TPY	---	---	See Footnote "d"

- a. Nitrogen oxides (NOx) emissions from A and B Sulfuric Acid Plants (EU-002 and EU-003) shall not exceed 6.5 and 8.0 lb/hr, respectively {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. NOx emissions from C and D Sulfuric Acid Plants (EU-007 and EU-008) shall not exceed 13.3 lb/hr {Permitting Note (for information purposes only): equivalent to 0.11 lb/ton of 100% sulfuric acid at design capacity} based on a 3-hour average as determined by stack test data.
- b. Emissions of SAM for the four SAPs are based on a 3-hour average as determined by stack test data.  
Permitting note (for information purposes only): The equivalent lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub> values for A and B SAP at design capacity is 0.027 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>. The equivalent lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub> values for C and D SAP at design capacity is 0.093 lb SAM/ton 100% H<sub>2</sub>SO<sub>4</sub>. This permit requires stack test data to be used to demonstrate compliance.
- c. Sulfur dioxide emissions from A and B Sulfuric Acid Plants (EU-002 and EU-003) shall not exceed 81.3 and 100.0 lb/hr based on a 24-hour (daily) block CEMS average. Sulfur dioxide emissions from C and D Sulfuric Acid Plants (EU-007 and EU-008) shall not exceed 241.7 lb/hr based on a 24-hour (daily) block CEMS average  
Permitting note (for information purposes only): SO<sub>2</sub> emissions in lb/hour are equivalent to 1.5 lb/ton of 100% sulfuric acid for A and B SAPs at design capacity. SO<sub>2</sub> emissions in lb/hour are equivalent to 2.0 lb/ton of 100% sulfuric acid for C and D SAPs 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.
- d. To control sulfur dioxide emissions from the dryers, natural gas shall be fired as a primary fuel. No. 5 fuel oil or better grade fuel oil (i.e., No. 2, 3 or 4) may be fired as a back-up fuel.  
[Rules 62-4.070(3) and 62-296.340(5)(c) (escape BART), F.A.C.]
11. Opacity Standards: Visible emissions from the A and B Shipping Baghouse exhausts (EU-015 and EU-018) shall not exceed 5% 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. SO<sub>2</sub> Continuous Emissions Monitoring System (CEMS): This BART exemption determination requires an SO<sub>2</sub> CEMS to be used to demonstrate continuous compliance with the SO<sub>2</sub> emission standards and limitations specified in this section.
  - a. In accordance with the NSPS (40 CFR 60, Subpart H) requirements for sulfuric acid plants, the permittee shall continue to properly calibrate, maintain, and operate a CEMS to measure and record emissions of SO<sub>2</sub>.
  - 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.

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### Subsection B (Scenario B). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses

[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]

#### EMISSIONS TESTING

13. **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 <sub>2</sub> Emissions from Stationary Sources
7E	Determination of NO <sub>x</sub> Emissions from Stationary Sources (Instrumental Analyzer Procedure)
8	Determination of SAM and SO <sub>2</sub> 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]

14. **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]

15. **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 and Annual Tests:** On or before September 1, 2010, an initial test shall be conducted for NO<sub>x</sub> and SAM emissions from A and B SAPs; PM emissions from A, Z, X and Y DAP/MAP Plants and VE test for A and B Shipping Baghouses. On or before January 1, 2012, an initial test shall be conducted for NO<sub>x</sub> and SAM emissions from one of the C and D SAPs. On or before December 31, 2013, an initial test shall be conducted for NO<sub>x</sub> and SAM emissions from the other SAP. The initial compliance test report for NO<sub>x</sub>, VE, SAM and PM shall be submitted within 45 days of completion of testing. Thereafter, annual compliance test shall be done for the above pollutants during each federal fiscal year (October 1 – September 30). [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<sub>x</sub> emissions from each SAP.

[Rules 62-296.340(5)(c) (escape BART), and 62-297.310(7)(a)3, F.A.C.]

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

#### RECORDS AND REPORTS

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**Subsection B (Scenario B). A, B, C and D SAPs; A, Z, X and Y DAP/MAP Plants; A and B Shipping Baghouses**

16. Quarterly Reporting Requirements: The owners or operators of facilities for which monitoring is required shall submit to the Department a written report of emissions in excess of emission limiting standards as set forth in Rule 62-296.402, F.A.C., for each calendar quarter. The nature and cause of the excessive emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of 5 (five) years. {The permittee is required to use SO<sub>2</sub> continuous emissions monitoring systems for continuous compliance demonstrations.} [Rules 62-296.402(5) and 62-213.440(1)(b)2., F.A.C.]

17. Construction Plan and Progress Reports: The permittee shall submit a Construction Plan within sixty (60) days of June 1, 2010 for C and D SAPs 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 for one of the C and D SAP no later than September 30, 2011.
- c. The permittee shall complete all required construction and modifications for the other SAP no later than September 30, 2013.

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

## **SECTION 4. APPENDICES**

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## SECTION 4. APPENDIX A

### Citation Formats and Glossary of Common Terms

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

#### REFERENCES TO PREVIOUS PERMITTING ACTIONS

##### Old Permit Numbers

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

*Where:* “AC” identifies the permit as an Air Construction Permit  
“AO” identifies the permit as an Air Operation Permit  
“123456” identifies the specific permit project number

##### New Permit Numbers

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

*Where:* “099” represents the specific county ID number in which the project is located  
“2222” represents the specific facility ID number  
“001” identifies the specific permit project  
“AC” identifies the permit as an air construction permit  
“AO” identifies the permit as a minor source air operation permit  
“AV” identifies the permit as a Title V Major Source Air Operation Permit

##### PSD Permit Numbers

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

*Where:* “PSD” means issued pursuant to the Prevention of Significant Deterioration of Air Quality  
“FL” means that the permit was issued by the State of Florida  
“317” identifies the specific permit project

#### RULE CITATION FORMATS

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

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

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

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

*Example:* [40 CFR 60.7]

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

#### GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

µg: microgram

AAQS: Ambient Air Quality Standard

acf: actual cubic feet

acfm: actual cubic feet per minute

ARMS: Air Resource Management System  
(Department’s database)

SECTION 4. APPENDIX A

Citation Formats and Glossary of Common Terms

<b>BACT:</b> best available control technology	<b>MACT:</b> maximum achievable technology
<b>bhp:</b> brake horsepower	<b>MMBtu:</b> million British thermal units
<b>Btu:</b> British thermal units	<b>MSDS:</b> material safety data sheets
<b>CAM:</b> compliance assurance monitoring	<b>MW:</b> megawatt
<b>CEMS:</b> continuous emissions monitoring system	<b>NESHAP:</b> National Emissions Standards for Hazardous Air Pollutants
<b>cfm:</b> cubic feet per minute	<b>NO<sub>x</sub>:</b> nitrogen oxides
<b>CFR:</b> Code of Federal Regulations	<b>NSPS:</b> New Source Performance Standards
<b>CAA:</b> Clean Air Act	<b>O&amp;M:</b> operation and maintenance
<b>CMS:</b> continuous monitoring system	<b>O<sub>2</sub>:</b> oxygen
<b>CO:</b> carbon monoxide	<b>Pb:</b> lead
<b>CO<sub>2</sub>:</b> carbon dioxide	<b>PM:</b> particulate matter
<b>COMS:</b> continuous opacity monitoring system	<b>PM<sub>10</sub>:</b> particulate matter with a mean aerodynamic diameter of 10 microns or less
<b>DARM:</b> Division of Air Resource Management	<b>ppm:</b> parts per million
<b>DEP:</b> Department of Environmental Protection	<b>ppmv:</b> parts per million by volume
<b>Department:</b> Department of Environmental Protection	<b>ppmvd:</b> parts per million by volume, dry basis
<b>dscf:</b> dry standard cubic feet	<b>QA:</b> quality assurance
<b>dscfm:</b> dry standard cubic feet per minute	<b>QC:</b> quality control
<b>EPA:</b> Environmental Protection Agency	<b>PSD:</b> prevention of significant deterioration
<b>ESP:</b> electrostatic precipitator (control system for reducing particulate matter)	<b>psi:</b> pounds per square inch
<b>EU:</b> emissions unit	<b>PTE:</b> potential to emit
<b>F:</b> fluoride	<b>RACT:</b> reasonably available control technology
<b>F.A.C.:</b> Florida Administrative Code	<b>RATA:</b> relative accuracy test audit
<b>F.A.W.:</b> Florida Administrative Weekly	<b>RBLC:</b> EPA's RACT/BACT/LAER Clearinghouse
<b>F.D.:</b> forced draft	<b>SAM:</b> sulfuric acid mist
<b>F.S.:</b> Florida Statutes	<b>scf:</b> standard cubic feet
<b>FGD:</b> flue gas desulfurization	<b>scfm:</b> standard cubic feet per minute
<b>FGR:</b> flue gas recirculation	<b>SIC:</b> standard industrial classification code
<b>ft<sup>2</sup>:</b> square feet	<b>SIP:</b> State Implementation Plan
<b>ft<sup>3</sup>:</b> cubic feet	<b>SNCR:</b> selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
<b>gpm:</b> gallons per minute	<b>SO<sub>2</sub>:</b> sulfur dioxide
<b>gr:</b> grains	<b>TPD:</b> tons/day
<b>HAP:</b> hazardous air pollutant	<b>TPH:</b> tons per hour
<b>Hg:</b> mercury	<b>TPY:</b> tons per year
<b>I.D.:</b> induced draft	<b>TRS:</b> total reduced sulfur
<b>ID:</b> identification	<b>UTM:</b> Universal Transverse Mercator coordinate system
<b>kPa:</b> kilopascals	
<b>lb:</b> pound	

**SECTION 4. APPENDIX A**

**Citation Formats and Glossary of Common Terms**

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**VE:** visible emissions

**VOC:** volatile organic compounds

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

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

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey 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**

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

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

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**STANDARD TESTING REQUIREMENTS**

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

1. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
2. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operating at permitted capacity as defined below. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
  - a. *Combustion Turbines*. (Reserved)
  - b. *All Other Sources*. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit.[Rule 62-297.310(2), F.A.C.]
3. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
4. Applicable Test Procedures:
  - a. *Required Sampling Time*.
    - 1) Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
    - 2) Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
      - a) For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation

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

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

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

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

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

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

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5. Determination of Process Variables:

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

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

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

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

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

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d. *Work Platforms.*

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

e. *Access to Work Platform.*

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

f. *Electrical Power.*

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

g. *Sampling Equipment Support.*

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

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

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

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

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

- 9) The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- 10) An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., F.A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.

b. **Special Compliance Tests.** When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

8. Test Reports:

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

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

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

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

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

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



## SECTION 4. APPENDIX D

### 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 SO<sub>2</sub> at a rate in excess of the emission limits imposed by the permit or rule, as determined by the CEMs emission rates for the immediately preceding 20 minutes.
2. A plant start-up must be at the lowest practicable operating rate, not to exceed 70 percent of the designated operating rate, until the SO<sub>2</sub> monitor indicates compliance. Because production rate is difficult to measure during start-up, if a more appropriate indicator (such as blower pressure, furnace temperature, gas strength, blower speed, number of sulfur guns operating, etc.) can be documented, tested and validated, the Department will accept this in lieu of directly documenting 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 SO<sub>2</sub> enters the masses. In no event shall the inlet temperature to the first mass be less than 800°F or the outlet temperature to the first two masses be less than 700°F. These temperatures are the desired temperatures at the time the use of auxiliary fuel is terminated.
    - (2) The gas stream entering the converter shall contain SO<sub>2</sub> at a level less than normal and sufficiently low to promote catalytic conversion to SO<sub>3</sub>.
  - b. Absorbing Towers.

The concentration, temperature and flow of circulating acid shall be as near to normal conditions as reasonably can be achieved. In no event shall the concentration be less than 96 percent H<sub>2</sub>SO<sub>4</sub>.
5. Warm Restart.
  - a. Converter

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

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- (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 H<sub>2</sub>SO<sub>4</sub>.

## Livingston, Sylvia

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**From:** Livingston, Sylvia  
**Sent:** Thursday, October 29, 2009 3:16 PM  
**To:** 'rbrunk@cfifl.com'  
**Cc:** 'dbuff@golder.com'; 'smohammad@golder.com'; 'forney.kathleen@epa.gov'; 'catherine\_collins@fws.gov'; Zhang-Torres; 'lee@epchc.org'; Rogers, Tom; Moore, Ronni; Gibson, Victoria; Arif, Syed; Walker, Elizabeth (AIR)  
**Subject:** CF INDUSTRIES, INC - PLANT CITY PHOSP COMPLEX; 0570005-034-AC  
**Attachments:** 0570005-034-AC\_Signatures.pdf

Dear Sir/ Madam:

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

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

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[http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf\\_permit\\_zip\\_files/0570005.034.AC.F\\_pdf.zip](http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0570005.034.AC.F_pdf.zip)

**Owner/Company Name:** CF INDUSTRIES, INC., PLANT CITY PHOS

**Facility Name:** CF INDUSTRIES-PLANT CITY PHOSP COMPLEX

**Project Number:** 0570005-034-AC

**Permit Status:** FINAL

**Permit Activity:** CONSTRUCTION / BART Exemption

**Facility County:** HILLSBOROUGH

**Processor:** Syed Arif

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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](mailto:sylvia.livingston@dep.state.fl.us)

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

## Livingston, Sylvia

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**From:** Brunk, Ron [rbrunk@cfifl.com]  
**Sent:** Thursday, October 29, 2009 3:18 PM  
**To:** Livingston, Sylvia  
**Subject:** RE: CF INDUSTRIES, INC - PLANT CITY PHOSP COMPLEX; 0570005-034-AC

received, thanks.

ron

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**From:** Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]  
**Sent:** Thursday, October 29, 2009 3:16 PM  
**To:** Brunk, Ron  
**Cc:** dbuff@golder.com; smohammad@golder.com; forney.kathleen@epa.gov; catherine\_collins@fws.gov; Zhang-Torres; lee@epchc.org; Rogers, Tom; Moore, Ronni; Gibson, Victoria; Arif, Syed; Walker, Elizabeth (AIR)  
**Subject:** CF INDUSTRIES, INC - PLANT CITY PHOSP COMPLEX; 0570005-034-AC

Dear Sir/ Madam:

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**Owner/Company Name:** CF INDUSTRIES, INC., PLANT CITY PHOS  
**Facility Name:** CF INDUSTRIES-PLANT CITY PHOSP COMPLEX  
**Project Number:** 0570005-034-AC  
**Permit Status:** FINAL  
**Permit Activity:** CONSTRUCTION / BART Exemption  
**Facility County:** HILLSBOROUGH  
**Processor:** Syed Arif

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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

## Livingston, Sylvania

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**From:** Buff, Dave [DBuff@GOLDER.com]  
**To:** Livingston, Sylvania  
**Sent:** Thursday, October 29, 2009 6:48 PM  
**Subject:** Read: CF INDUSTRIES, INC - PLANT CITY PHOSP COMPLEX; 0570005-034-AC

Your message

To: [DBuff@GOLDER.com](mailto:DBuff@GOLDER.com)  
Subject:

was read on 10/29/2009 6:48 PM.