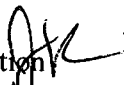



Florida Department of
Environmental Protection

Memorandum

To: Trina Vielhauer, Bureau of Air Regulation 
From: Jeff Koerner, New Source Review Section 
Date: June 3, 2010
Subject: Project No. 0570040-028-AC (PSD-FL-301D), Draft Air Construction Permit Revision
Project No. 0570040-029-AV, Draft/Proposed Title V Air Permit Revision
Tampa Electric Company, H.L. Culbreath Bayside Power Station
Miscellaneous Revisions, Excess Emissions

The H.L. Culbreath Bayside Power Plant is an existing electrical generating plant located in Hillsborough County at 3602 Port Sutton Road in Tampa, Florida. This project is a concurrent revision of underlying air construction permits and the Title V air operation permit. Permit No. 0570040-019-AC (PSD-FL-301C) for existing combined cycle Units 1 and 2 is primarily being revised to clarify excess emissions during warm and cold steam turbine startups. For the new simple cycle peaking Units 3 through 6, Permit No. 0570040-026-AC is being revised primarily to address the exclusion of CO emissions during combustion turbine tuning. These changes are not expected to result in an actual emissions increase and the project is not subject to PSD preconstruction review. The project will also concurrently revise existing Title V air operation Permit No. 0570040-027-AV to incorporate the newly constructed simple cycle peaking units and the new revisions made in the draft air construction permit revision. Finally, the Title V air operation permit revision is being processed as both a draft and proposed permit package for parallel review by the Environmental Protection Agency (EPA).

I recommend your approval of the attached Draft/Proposed Permit package.

Attachments

TLV/jfk

P.E. CERTIFICATION STATEMENT

PERMITTEE

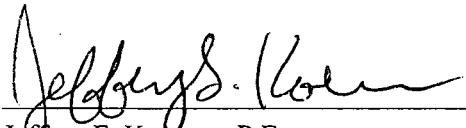
Tampa Electric Company
P.O. Box 111
Tampa, Florida 33601-0111

H.L. Culbreath Bayside Power Station
Project No. 0570040-028-AC (PSD-FL-301D)
Draft Air Construction Permit Revision
Project No. 0570040-029-AV
Draft/Proposed Title V Air Permit Revision
Concurrent Projects with Parallel EPA Review

PROJECT DESCRIPTION

Tampa Electric operates the existing H.L. Culbreath Bayside Power Station, which is located in Hillsborough County at 3602 Port Sutton Road in Tampa, Florida. This project is a concurrent revision of underlying air construction permits and the Title V air operation permit. Permit No. 0570040-019-AC (PSD-FL-301C) for existing combined cycle Units 1 and 2 is primarily being revised to clarify excess emissions during warm and cold steam turbine startups. For the new simple cycle peaking Units 3 through 6, Permit No. 0570040-026-AC is being revised primarily to address the exclusion of CO emissions during combustion turbine tuning. These changes are not expected to result in an actual emissions increase and the project is not subject to PSD preconstruction review. The project will also concurrently revise existing Title V air operation Permit No. 0570040-027-AV to incorporate the newly constructed simple cycle peaking units and the new revisions made in the draft air construction permit revision. Finally, the Title V air operation permit revision is being processed as both a draft and proposed permit package for parallel review by the Environmental Protection Agency (EPA). The Department's full review of the project and rationale for issuing the draft permit is provided in the Technical Evaluation and Preliminary Determination.

I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify any other aspects of the proposal (including, but not limited to, the electrical, mechanical, structural, hydrological, geological, and meteorological features).



Jeffery F. Koerner, P.E.
Registration Number 49441

6-3-10

(Date)



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

June 8, 2010

Sent by Electronic Mail – Received Receipt Requested .

Mr. Frank Busot, Director
H.L. Culbreath Bayside Power Station (Bayside Power Station)
Tampa Electric Company
P.O. Box 111
Tampa, Florida 33601-0111

Re: Bayside Power Station
Project No. 0570040-028-AC (PSD-FL-301D), Draft Air Construction Permit Revision
Project No. 0570040-029-AV, Draft/Proposed Title V Air Operation Permit Revision
Concurrent Projects with Parallel EPA Review

Dear Mr. Busot:

Enclosed is a draft/proposed permit package for the existing Bayside Power Plant, which is located in Hillsborough County at 3602 Port Sutton Road in Tampa, Florida. This project incorporates the air construction permit requirements for the newly constructed aero-derivative simple cycle units into revised Title V air operation Permit No. 0570040-029-AV. It also revises existing permit conditions related to excess emissions and corrects and clarifies some reporting requirements. Some of the changes required revisions to underlying air construction permits, which are made in Permit No. 0570040-028-AC being concurrently processed with the Title V permit. The Title V air operation permit revision is being processed as both a draft and proposed permit package for parallel review by the Environmental Protection Agency.

The permit package includes the following documents: Written Notice of Intent to Issue Air Permits (combined); Public Notice of Intent to Issue Air Permits (combined); Technical Evaluation and Preliminary Determination; Draft Air Construction Permit Revision; Statement of Basis; and Draft/Proposed Title V Air Operation Permit Revision with Appendices. If you have any questions, please contact the project engineer, Jeff Koerner, at 850/921-9536.

Sincerely,

Trina Vielhaber, Chief
Bureau of Air Regulation

FUF

Enclosures

TLV/jfk

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMITS

*In the Matter of an
Application for Air Permits by:*

Tampa Electric Company
P.O. Box 111
Tampa, Florida 33601-0111

Authorized Representative:
Frank Busot, Director
Bayside Power Station

Project No. 0570040-028-AC (PSD-FL-301D)
Draft Air Construction Permit Revision
Project No. 0570040-029-AV
Draft/Proposed Title V Air Permit Revision
Concurrent Projects with Parallel EPA Review
Bayside Power Station
Miscellaneous Revisions, Excess Emissions
Hillsborough County, Florida

Facility Location: The existing Bayside Power Station is located in Hillsborough County at 3602 Port Sutton Road in Tampa, Florida.

Project: This project incorporates the air construction permit requirements for the newly constructed aero-derivative simple cycle units into revised Title V air operation Permit No. 0570040-029-AV. It also revises existing permit conditions related to excess emissions and corrects and clarifies some reporting requirements. Some of the changes required revisions to underlying air construction permits, which are made in Permit No. 0570040-028-AC being concurrently processed with the Title V permit. The changes do not result in significant net emissions increases and the project is not subject to preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality. The Title V air operation permit revision is being processed as both a draft and proposed permit package for parallel review by the Environmental Protection Agency. A detailed review of the projects is provided in the attached Technical Evaluation and Preliminary Determination and the Statement of Basis.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). Applications for Title V air operation permits are subject to review in accordance with the provisions of Chapter 403, F.S. and Chapters 62-4, 62-210, 62-212, 62-213 and 62-214, F.A.C. The projects are not exempt from the permitting procedures for air construction or Title V air operation permits. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making the permit determinations for this project. The Bureau of Air Regulation's physical address is 111 South Magnolia Drive, Suite 4, Tallahassee, Florida and the mailing address is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Bureau of Air Regulation's phone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the physical address indicated above for the Permitting Authority. The complete project file includes the Draft/Proposed Permits, the Technical Evaluation and Preliminary Determination, the Statement of Basis, the application and information submitted by the applicant (exclusive of confidential records under Section 403.111, F.S.). Interested persons may contact the Permitting Authority's project engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web site:
<http://www.dep.state.fl.us/air/emission/apds/default.asp>.

Notice of Intent to Air Issue Permits with Parallel Review by EPA: The Permitting Authority gives notice of its intent to issue a Draft Air Construction Permit Revision and a concurrent Draft/Proposed Title V Air Operation Permit Revision for the projects described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact air quality and that the project will comply with all applicable provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296 and 62-297, F.A.C. The permitting authority will issue final permits in accordance with the conditions of the Draft/Proposed Permits

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMITS

unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permits (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at the address or phone number listed above. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: For a period of 30 days from the date of publication of the Public Notice, the Permitting Authority will accept written comments and requests for a public meeting concerning the Draft Air Construction Permit Revision and the Draft Title V Air Operation Permit Revision. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date and location in the Florida Administrative Weekly. Written comments must be received by the appropriate Permitting Authority by close of business (5:00 p.m.) on or before the end of this 30-day period. In addition, if a public meeting is requested within the 30-day comment period and conducted by the Permitting Authority, any oral and written comments received during the public meeting will also be considered by the Permitting Authority. If timely received comments result in a significant change to a Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decisions may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permits. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within 14 days of receipt of this Written Notice of Intent to Issue Air Permits, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number (Project No.), if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMITS

agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

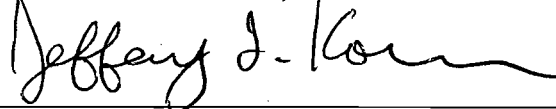
Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permits. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

EPA Review: The EPA has agreed to treat the Draft Title V Air Operation Permit Revision as a Proposed Title V Air Operation Permit Revision and to perform its 45-day review provided by the law and regulations concurrently with the public comment period (parallel review). Although EPA's 45-day review period will be performed concurrently with the public comment period, the deadline for submitting a citizen petition to object to the EPA Administrator will be determined as if EPA's 45-day review period is performed after the public comment period has ended. The Final Title V Air Operation Permit will be issued after the conclusion of the 45-day EPA review period so long as no adverse comments are received that result in a different decision or significant change of terms or conditions. The status regarding EPA's 45-day review of this project and the deadline for submitting a citizen petition can be found at the following website address: <http://www.epa.gov/region4/air/permits/Florida.htm>.

Objections: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 days of the expiration of the Administrator's 45-day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any Title V Air Operation Permit. Any petition shall be based only on objections to the Title V Air Operation Permit that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any Title V Air Operation Permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding objections, visit EPA's Region 4 web site at: <http://epa.gov/region4/air/permits/Florida.htm>.

Executed in Tallahassee, Florida.



Trina Vielhauer, Chief
Bureau of Air Regulation

FOR

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMITS

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Written Notice of Intent to Issue Air Permits package (including the Written Notice of Intent to Issue Air Permits, the Public Notice of Intent to Issue Air Permits, the Technical Evaluation and Preliminary Determination, the Draft Air Construction Permit Revision, the Statement of Basis, and the Draft/Proposed Title V Air Operation Permit Revision with Appendices) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on 6/9/10 to the persons listed below.

- Mr. Frank Busot, TECO, Director, Bayside Power Plant (flbusot@tecoenergy.com)
- Mr. Byron Burrows, TECO, Manager-Air Programs, P.E. (btburrows@tecoenergy.com)
- Ms. Laurie Pence, TECO, Environmental Specialist (lapence@tecoenergy.com)
- Ms. Cindy Zhang-Torres, DEP SWD Office (cindy.zhang-torres@dep.state.fl.us)
- Ms. Dianna Lee, Hillsborough County EPC (lee@epchc.org)
- Mr. Mike Halpin, DEP Siting Office (mike.halpin@dep.state.fl.us)
- Ms. Katy Forney, U.S. EPA Region 4 (forney.kathleen@epamail.epa.gov)
- Ms. Ana Oquendo, U.S. EPA Region 4 (oquendo.ana@epamail.epa.gov)
- Ms. Barbara Friday, DEP BAR for posting with U.S. EPA Region 4 (barbara.friday@dep.state.fl.us)
- Ms. Victoria Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)

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.

Barbara J. Friday 6/9/10
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection
Division of Air Resource Management, Bureau of Air Regulation

Project No. 0570040-028-AC (PSD-FL-301D), Draft Air Construction Permit Revision
Project No. 0570040-029-AV, Draft/Proposed Title V Air Permit Revision

EPA Parallel Review Package

Tampa Electric Company, H.L. Culbreath Bayside Power Station
Hillsborough County, Florida

Applicant: The applicant for this project is Tampa Electric Company. The applicant's authorized representative and mailing address is: Frank Busot, Director, Bayside Power Station, Tampa Electric Company, H.L. Culbreath Bayside Power Station, P.O. Box 111, Tampa, Florida 33601-0111.

Facility Location: Tampa Electric Company operates the existing H.L. Culbreath Bayside Power Station, which is located in Hillsborough County at 3602 Port Sutton Road in Tampa, Florida.

Project: This project is a concurrent revision of underlying air construction permits and the Title V air operation permit. Permit No. 0570040-019-AC (PSD-FL-301C) for existing combined cycle Units 1 and 2 is primarily being revised to clarify excess emissions during warm and cold steam turbine startups. For the new simple cycle peaking Units 3 through 6, Permit No. 0570040-026-AC is being revised primarily to address the exclusion of carbon monoxide emissions data collected during combustion turbine tuning. These changes are not expected to result in an actual emissions increase and the project is not subject to preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality. The project will also concurrently revise existing Title V air operation Permit No. 0570040-027-AV to incorporate the newly constructed simple cycle peaking units and the new revisions made in the draft air construction permit revision. Finally, the Title V air operation permit revision is being processed as both a draft and proposed permit package for parallel review by the Environmental Protection Agency (EPA).

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212, F.A.C. Applications for Title V air operation permits are subject to review in accordance with the provisions of Chapter 403, F.S. and Chapters 62-4, 62-210, 62-212, 62-213 and 62-214, F.A.C. The projects are not exempt from the permitting procedures for air construction or Title V air operation permits. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making the permit determinations for this project. The Bureau of Air Regulation's physical address is 111 South Magnolia Drive, Suite 4, Tallahassee, Florida and the mailing address is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Bureau of Air Regulation's phone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the physical address indicated above for the Permitting Authority. The complete project file includes the Draft/Proposed Permits, the Technical Evaluation and Preliminary Determination, the Statement of Basis, the application and information submitted by the applicant (exclusive of confidential records under Section 403.111, F.S.). Interested persons may contact the Permitting Authority's project engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web site:

<http://www.dep.state.fl.us/air/emission/apds/default.asp>.

Notice of Intent to Air Issue Permits with Parallel Review by EPA: The Permitting Authority gives notice of its intent to issue a Draft Air Construction Permit Revision and a concurrent Draft/Proposed Title V Air Operation Permit Revision for the projects described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact air quality and that the project will comply with all applicable provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296 and 62-297, F.A.C. The permitting authority will issue final permits in accordance with the conditions of the Draft/Proposed Permits

(Public Notice to be Published in the Newspaper)

unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: For a period of 30 days from the date of publication of this Public Notice, the Permitting Authority will accept written comments and requests for a public meeting concerning the Draft Air Construction Permit Revision and the Draft Title V Air Operation Permit Revision. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location in the Florida Administrative Weekly. Written comments must be received by the appropriate Permitting Authority by close of business (5:00 p.m.) on or before the end of this 30-day period. In addition, if a public meeting is requested within the 30-day comment period and conducted by the Permitting Authority, any oral and written comments received during the public meeting will also be considered by the Permitting Authority. If timely received comments result in a significant change to a Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number (Project No.), if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permits. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

(Public Notice to be Published in the Newspaper)

EPA Review: The EPA has agreed to treat the Draft Title V Air Operation Permit Revision as a Proposed Title V Air Operation Permit Revision and to perform its 45-day review provided by the law and regulations concurrently with the public comment period. Although EPA's 45-day review period will be performed concurrently with the public comment period, the deadline for submitting a citizen petition to object to the EPA Administrator will be determined as if EPA's 45-day review period is performed after the public comment period has ended. The Final Title V Air Operation Permit will be issued after the conclusion of the 45-day EPA review period so long as no adverse comments are received that result in a different decision or significant change of terms or conditions. The status regarding EPA's 45-day review of this project and the deadline for submitting a citizen petition can be found at the following website address:
<http://www.epa.gov/region4/air/permits/Florida.htm>.

Objections: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 days of the expiration of the Administrator's 45-day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any Title V Air Operation Permit. Any petition shall be based only on objections to the Title V Air Operation Permit that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any Title V Air Operation Permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding objections, visit EPA's Region 4 web site at: <http://epa.gov/region4/air/permits/Florida.htm>.



**TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION**

APPLICANT

Tampa Electric Company
P.O. Box 111
Tampa, FL 33601

H.L. Culbreath Bayside Power Station
ARMS Facility ID No. 0570040

PROJECT

Project No. 0570040-028-AC
Application for Air Construction Permit Revision
Miscellaneous Changes to Excess Emissions

COUNTY

Hillsborough, Florida

PERMITTING AUTHORITY

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

June 3, 2010

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial activities. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Facility Description and Location

The H. L. Culbreath Bayside Power Station is an electric power plant consisting of combined cycle Units 1 and 2. Unit 1 (EU 020 – 022) is a “3-on-1” combined cycle combustion turbine system with a nominal generating capacity of 746 MW, which consists of three combustion turbines (169 megawatt (MW) each) and one steam-electrical generator (239 MW). Unit 2 (EU 023 – 026) is a “4-on-1” combined cycle combustion turbine system with a nominal generating capacity of 1090 MW, which consists of four combustion turbines (169 MW each) and one steam-electrical generator (414 MW). These units fire natural gas as the exclusive fuel and employ selective catalytic reduction (SCR) to reduce emissions of nitrogen oxides.

The facility is an electric power plant, which is categorized under Standard Industrial Classification Code No. 4911. The facility is located in Hillsborough County at 3602 Port Sutton Road in Tampa, Florida. The UTM coordinates of the existing facility are Zone 17, 361.1 km East, and 3087.5 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has 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 in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility operates units subject to a NESHAP in Part 63, Title 40, CFR.
- The facility operates units subject to a NSPS in Part 60, Title 40, CFR.

PSD Permit History

- In 2001, the Department issued Permit No. PSD-FL-301 (Project 0570040-013-AC), authorizing the construction of seven new combined cycle gas turbines, Bayside Units 1 and 2 (EU 20 – 26), with heat recovery steam generators (HRSG) to re-power the existing steam-electric turbines of Gannon Units 5 and 6 (EU 005 – 006) increasing the nominal electrical production capacity to 1742 MW. All existing coal-fired boilers of Gannon Units 1 – 6 were shutdown.

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- In 2002, Permit PSD-FL-301A (Project No. 0570040-015-AC) revised the original permit to include four additional new combined cycle gas turbines, Bayside Units 3 - 4 (EU 27 – 30), with HRSG to re-power the existing steam-electric turbines of Gannon Units 3 and 4 (EU 003 – 006) increasing the nominal electrical production capacity to 2845 MW.
- In 2004, Permit No. PSD-FL-301B (Project No. 0570040-021-AC) authorized revisions to Specific Condition 17 regarding startups, shutdowns, malfunctions, low load operation, DLN tuning, compressor blade drying, and over speed trip testing. This permit was processed simultaneously with the Title V renewal (Permit 0570040-23-AV), which included the new Bayside Units 1 and 2 (PSD-FL-301) and revised conditions of this project (PSD-FL-301B).
- In 2005, Permit No. PSD-FL-301C (Project No. 0570040-019-AC) revised the original permit authorizing a phase of simple cycle operations for Bayside Units 3A and 3B with distillate oil as a restricted alternate fuel during simple cycle operation and when converted to combine cycle operation as an emergency backup fuel.
- On September 29, 2008, Project No. 0570040-024-AC authorized construction of the following: eight simple cycle combustion turbine (SCCT) peaking units with four associated electrical generators (EU 031 – 034); and two emergency diesel engine/generator sets (EU 35 and 36). The project was a minor source air construction permit and was not subject to Prevention of Significant Deterioration (PSD) preconstruction review.
- Issued on January 16, 2009, Project No. 0570040-026-AC authorized the following minor changes to Project No. 0570040-024-AC:
 - Removed the existing 14 MW SCCT; and an eight million gallon distillate oil storage tank and the use of distilled fuel oil serving as the backup fuel from the facility description.
 - Reduce the number of emergency diesel engines/generators from two 800 kilowatt (kW) emergency diesel engine/generator sets to one 1,000 kW emergency diesel engine/generator set and increase the maximum total ultra low sulfur diesel (ULSD) fuel oil usage from 11,440 to 12,700 gallon/year from the project description.
 - In Section III, Subsection B. Emissions Unit ARMS ID and Description, Re-assigned the eight SCCT peaking units and four associated electrical generators (EU 031 – 034) individual emission unit numbers (EU 031 – 038), and delete the emission unit numbers for the two emergency diesel engine/generator sets (EU 035 – 036) and assign the single emergency diesel engine/generator set a new emission unit number (EU 039).
 - In Specific Conditions 9, revised the emission and compliance standards table for particulate matter (PM), sulfur dioxide (SO₂) and sulfuric acid mist (SAM) and remove the initial demonstration of compliance requirements for PM and SO₂.
 - In Specific Condition 12, removed EPA Test Methods 5, 6 or 6C, and 8 and included EPA Test Method 18 to be used (optionally) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured volatile organic compound VOC emissions.

Processing Schedule

- 09/30/09 Received application to revise the Title V air operation permit;
- 12/15/09 Received additional information related to excess emissions;
- 01/21/10 Received revised application for a concurrent air construction permit revision; and
- 03/30/10 Received updated and corrected Acid Rain and CAIR, complete.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 5 tons per year or more of lead;
- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_x); sulfur dioxide (SO₂); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM₁₀); volatile organic compounds (VOC); lead (Pb); fluorides (F); sulfuric acid mist (SAM); hydrogen sulfide (H₂S); total reduced sulfur (TRS), including H₂S; reduced sulfur compounds, including H₂S; and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 µg/m³, 24-hour average.

If potential emissions exceed the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

The project revises individual permit conditions and is not expected to result in any actual emissions increases; therefore, the project is not subject to PSD preconstruction review.

3. PROJECT REVIEW

Permit No. 0570040-019-AC (PSD-FL-301C)

The applicant requested the following revisions to Permit No. 0570040-019-AC (PSD-FL-301C), which affects

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Bayside combined cycle Units 1 (EU-020 through 022) and 2 (EU-023 through 026).

- *Subsection III.A, Condition 17:* The applicant requested clarification that more than one gas turbine can be used to complete a cold steam turbine startup. The applicant also requested specific clarification that, “In the event of a cold steam turbine startup and-gas turbine/HRSG startups, shutdowns and/or malfunctions within the same 24-hour period, a total of sixteen 1-hour CEMS emissions averages may be excluded with no more than four of those sixteen 1-hour CEMS emissions averages being excluded due to gas turbine/HRSG startups, shutdowns, and/or malfunctions (total).” In addition, the applicant requested removal of the requirement to notify the Compliance Authority of cold steam turbine startups, which are reported in the semiannual reports. *Response:* As shown in the draft air construction permit revision, the requirements were clarified.
- *Subsection III.A, Condition 17:* The applicant requested that “Steam Turbine Startup Following an Unplanned Forced Outage” be replaced with “Warm Steam Turbine Startup”, which occurs when the steam turbine is offline for less than 24 hours. This will prevent the plant from delaying a steam turbine startup, which would then be a cold steam turbine startup. The applicant also requested specific clarification that, “In the event of a warm steam turbine startup and-gas turbine/HRSG startups, shutdowns and/or malfunctions within the same 24-hour period, a total of eight 1-hour CEMS emissions averages may be excluded with no more than four of those eight 1-hour CEMS emissions averages being excluded due to gas turbine/HRSG startups, shutdowns, and/or malfunctions (total).” In addition, the applicant requested removal of the requirement to notify the Compliance Authority of warm steam turbine startups, which are reported in the semiannual reports. *Response:* As shown in the draft air construction permit revision, the requirements were clarified.
- *Subsection III.A, Condition 17:* The Department notes that this condition was also rearranged and clarified to make it easier to understand.
- *Subsection III.A, Condition 23(f):* The applicant requested the following revision, “The quarterly Data Assessment Report required in Condition 23e above shall be used to demonstrate monitor availability and shall be reported with the Semiannual CEMS Report.” *Response:* This sentence was revised.
- *Subsection III.A, Condition 25:* The applicant requested the addition of the following sentence, “The data assessment report required by Condition 23e shall be submitted in conjunction with the Semiannual CEMS Report.” *Response:* This sentence was added.

Permit No. 0570040-026-AC

The applicant requested the following revisions to Permit No. 0570040-026-AC, which affects Bayside simple cycle peaking Units 3 (EU-031 and 032), 4 (EU-033 and 034), 5 (EU-035 and 036) and 6 (EU-037 and 038).

- *Subsection III, Condition 9:* The Department clarified that separate compliance stack tests for CO and NO_x emissions are not required. The permittee is to demonstrate compliance with the mass-based emissions standards (lb/hour) with data collected during the annual Relative Accuracy Test Audit (RATA), which is to be submitted with the semiannual report. The Department also revised the SO₂ standard in the emissions table from “6 lb/MWhr/SCCT” to 0.06 lb/MMBtu, which is consistent with the NSPS Subpart KKKK requirement.
- *Subsection III, Condition 13:* Consistent with Condition 9, the Department clarified that the permittee is to demonstrate compliance with the mass-based emissions standards (lb/hour) with data collected during the annual Relative Accuracy Test Audit (RATA), which is to be submitted with the semiannual report.
- *Subsection IV, Appendix E, Condition 17:* The applicant requested authorization to exclude from the compliance average CO emissions data collected when “tuning” the combustion turbine. *Response:* To maintain the units in proper working order with low emission levels, the combustion turbines occasionally

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need to be tuned, which requires stepping the unit through a variety of low-load levels. The Department added tuning and rearranged some of the text to make the condition easier to understand.

- *Subsection IV, Appendix E, Condition 17:* For emissions in excess of a standard, the applicant requested notification within one working day of discovery rather than occurrence. *Response:* The Department made the revision.

This project is being processed concurrently with Project No. 0570040-29-AV, which will revise Title V Air Operation Permit No. 0570040-27-AV to incorporate the air construction permit requirements for the simple cycle peaking units as well as the construction permit revisions.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

DRAFT PERMIT REVISION

PERMITTEE

Tampa Electric Company
P.O. Box 111
Tampa, Florida 33601-0111

Air Permit No. 0570040-028-AC
H.L. Culbreath Bayside Power Station
ARMS ID No. 0570040
Miscellaneous Permit Revisions

Authorized Representative:

Mr. Frank Busot, Director, Bayside Power Station

PROJECT AND LOCATION

This permit authorizes miscellaneous revisions to previously issued air construction permits. The proposed work will be conducted at the H.L. Culbreath Bayside Power Station, which is an electric generating utility (Standard Industrial Classification No. 4911). The existing power plant is located at 3602 Port Sutton Road, Tampa, in Hillsborough County. UTM Coordinates are Zone 17, 360.1 km East and 3087.5 km North.

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.). This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

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- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Unit Specific Conditions
- Section 4. Appendices

Executed in Tallahassee, Florida

(DRAFT)

Joseph Kahn, Director
Division of Air Resource Management

(Date)

DRAFT PERMIT REVISION

CERTIFICATE OF SERVICE

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

- Mr. Frank Busot, TECO, Director, Bayside Power Plant (flbusot@tecoenergy.com)
- Mr. Byron Burrows, TECO, Manager-Air Programs, P.E. (btburrows@tecoenergy.com)
- Ms. Laurie Pence, TECO, Environmental Specialist (lapence@tecoenergy.com)
- Ms. Cindy Zhang-Torres, DEP SWD Office (cindy.zhang-torres@dep.state.fl.us)
- Ms. Dianna Lee, Hillsborough County EPC (lee@epchc.org)
- Mr. Mike Halpin, DEP Siting Office (mike.halpin@dep.state.fl.us)
- Ms. Katy Forney, U.S. EPA Region 4 (forney.kathleen@epamail.epa.gov)
- Ms. Ana Oquendo, U.S. EPA Region 4 (oquendo.ana@epamail.epa.gov)
- Ms. Barbara Friday, DEP BAR for posting with U.S. EPA Region 4 (barbara.friday@dep.state.fl.us)
- Ms. Victoria Gibson, DEP BAR Reading file (victoria.gibson@dep.state.fl.us)

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.

(DRAFT)

(Clerk)

(Date)

SECTION 1. GENERAL INFORMATION (DRAFT)

FACILITY DESCRIPTION

The existing facility is an electric generating station, which consists of the following emissions units and activities: The H. L. Culbreath Bayside Power Station is an electric power plant consisting of six primary electrical generating units. Unit 1 (EU 020 – 022) is a “3-on-1” combined cycle gas turbine system with a nominal generating capacity of 746 MW, which consists of three gas turbines (169 megawatt (MW) each) and one steam-electrical generator (239 MW). Unit 2 (EU 023 – 026) is a “4-on-1” combined cycle gas turbine system with a nominal generating capacity of 1090 MW, which consists of four gas turbines (169 MW each) and one steam-electrical generator (414 MW). These units fire natural gas as the exclusive fuel and employ selective catalytic reduction (SCR) to reduce emissions of nitrogen oxides (NO_x). Emissions of carbon monoxide (CO) and NO_x are monitored with continuous emissions monitoring systems (CEMS).

Units 3 through 6 (EU 031 - 038) consist of four Pratt & Whitney Model No. FT8-3 SwiftPac® aero-derivative simple cycle combustion turbine-electrical generator sets to operate in simple cycle mode. For each SwiftPac®, two combustion turbines are coupled to one common electrical generator set having a total nominal gross generation capacity of 62 MW. Each unit fires natural gas, controls NO_x emissions with water injection and CO emissions with catalytic oxidation. Emissions of CO and NO_x are monitored with continuous emissions monitoring systems (CEMS).

FACILITY REGULATORY CLASSIFICATION

Title III: The facility is not identified as a major source of hazardous air pollutants (HAP).

Title IV: The gas turbines are subject to Phase II of the acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a major stationary source of air pollution in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

NESHAP: The facility operates units subject to National Emissions Standards for Hazardous Air Pollutants (NESHAP) in Part 63, Title 40, Code of Federal Regulations (CFR).

NSPS: The facility operates units subject to New Source Performance Standards (NSPS) in Part 60, Title 40, CFR.

PROPOSED PROJECT

This project revises several conditions in underlying air construction permits primarily related to authorized excess emissions and reporting requirements.

SECTION 2. PERMIT REVISIONS (DRAFT)

The following permit conditions are revised as indicated. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight.

Permit Being Modified: Permit No. 0570040-019-AC (PSD-FL-301C)

Affected Emissions Units: EU-020 through EU-026

Subsection III.A, Specific Condition 17: This condition is revised as follows.

17. Alternative Standards and CEMS Data Exclusion: As provided by the authority in Rule 62-210.700(5), F.A.C., the above requirements are established in lieu of the provisions of Rule 62-210.700(1), F.A.C. The following permit conditions establish alternative standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, ~~and malfunction~~ and other limited-use operations. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such incidents.

a. *Definitions:* The following terms are defined in Rule 62-210.200, F.A.C. “Shutdown” means the cessation of the operation of an emissions unit for any purpose. “Malfunction” means any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. “Startup” means the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.

ab. *Alternative Opacity During Startup and Shutdown.* During startup and shutdown, the opacity of the exhaust gases shall not exceed 10%, except for up to ten 6-minute averaging periods in a calendar day during which the opacity shall not exceed 20%. Data for each 6-minute averaging period shall be exclusive from other 6-minute averaging periods.

bc. *Low Load Operation.* ~~Excluding Except for other authorized periods of low-load operation startup, shutdown, malfunction, DLN tuning, compressor blade drying, and over speed trip tests,~~ each gas turbine may operate below 50% base load providing: the gas turbine is firing natural gas and operating in full dry low-NOx combustion mode; the CO and NOx CEMS are functioning properly during such periods and recording valid emissions data within the span range of the monitors; and the gas turbine remains in compliance with the CO and NOx emissions standards (24-hour block averages).

ed. *CEMS Data Exclusion.* For the following specified operational periods, CO and NOx emissions data may be excluded from the 24-hour block compliance averages in accordance with the corresponding requirements.

~~(1) *Definitions.* Rule 62-210.200, F.A.C. “shutdown” is defined as the cessation of the operation of an emissions unit for any purpose. “Malfunction” is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. “Startup” is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.~~

~~(12) *Standard Gas Turbine/HRSG Startups, Shutdowns, and Malfunctions.*~~ For each gas turbine, no more than four 1-hour CEMS emission averages shall be excluded from any 24-hour block compliance average due to standard gas turbine/HRSG startups, shutdowns, and malfunctions (total).

~~(23) *Cold Steam Turbine Startup.*~~ “Cold steam turbine startup” means a startup after the steam turbine has been offline for 24 hours or more, or the first stage turbine metal temperature is 250° F or less.

SECTION 2. PERMIT REVISIONS (DRAFT)

More than one gas turbine may be used to complete a cold steam turbine startup, however, to minimize emissions, no more than one gas turbine per Bayside Unit at a time shall be operated during a cold steam turbine startup. For a given cold steam turbine startup, no more than sixteen 1-hour CEMS emission averages for all participating gas turbines shall be excluded from the 24-hour block compliance averages due to a cold steam turbine startup. In addition, for a gas turbine used during a cold steam turbine startup, no more than a total of sixteen 1-hour CEMS emission averages shall be excluded from any 24-hour block compliance average due to any combination of cold steam turbine startups and gas turbine/HRSG startups, shutdowns and malfunctions. In the event of a cold steam turbine startup and gas turbine/HRSG standard startups, shutdowns and/or malfunctions within the same 24-hour period, a total of sixteen 1-hour CEMS emissions averages may be excluded with no more than four of those sixteen 1-hour CEMS emissions averages being excluded due to standard gas turbine/HRSG startups, shutdowns, and/or malfunctions (total). This condition applies only to the gas turbine being used for the cold steam turbine startup. The permittee shall notify the Compliance Authority no later than 24 hours after beginning a cold steam turbine startup. Notification may be by phone, facsimile, email, or letter.

(3) *Warm Steam Turbine Startup*: “Warm steam turbine startup” means a startup after the steam turbine has been offline for less than 24 hours and the first stage turbine metal temperature is 250° F or more. More than one gas turbine may be used to complete a warm steam turbine startup; however, to minimize emissions, no more than one gas turbine per Bayside Unit at a time shall be operated during a warm steam turbine startup. For a given warm steam turbine startup, no more than eight 1-hour CEMS emission averages for all participating gas turbines shall be excluded from the compliance averages. For a gas turbine used during a warm steam turbine startup, no more than eight 1-hour CEMS emission averages shall be excluded from any compliance average in a 24-hour block period due to any combination of warm steam turbine startups and gas turbine/HRSG startups, shutdowns and malfunctions. In the event of a warm steam turbine startup and gas turbine/HRSG startups, shutdowns and/or malfunctions within the same 24-hour period, a total of eight 1-hour CEMS emissions averages may be excluded with no more than four of those eight 1-hour CEMS emissions averages being excluded due to gas turbine/HRSG startups, shutdowns, and/or malfunctions (total).

(4) *Steam Turbine Startup Following an Unplanned Forced Outage*: “Steam turbine startup following unplanned, forced outage” means startup when the first stage turbine metal temperature is 250° F or more and occurs within 24 hours after either (1) the steam turbine inadvertently trips offline, or (2) the plant is forced to take the steam turbine offline for repair. To minimize emissions, no more than one gas turbine per Bayside Unit shall be operated during a steam turbine startup following an unplanned forced outage. No more than eight 1-hour CEMS emissions averages shall be excluded from the 24-hour block compliance averages due to a steam turbine startup following an unplanned forced outage. In addition, no more than eight 1-hour CEMS emission averages shall be excluded from any 24-hour block compliance average due to steam turbine startups following an unplanned forced outage. In the event of a startup following an unplanned forced outage and standard startups, shutdowns and/or malfunctions within the same 24-hour period, a total of eight 1-hour CEMS emissions averages may be excluded with no more than four of those eight 1-hour CEMS emissions averages being excluded due to standard startups, shutdowns, and malfunctions (total). This condition applies only to the gas turbine being used for steam turbine startup following an unplanned forced outage. The permittee shall notify the Compliance Authority no later than 24 hours after beginning a steam turbine startup following an unplanned forced outage. Notification may be by phone, facsimile, email, or letter and shall include the reason for the unplanned forced outage.

(4) *Other Limited-Use Operations*: CEMS data collected during any of the following limited use

SECTION 2. PERMIT REVISIONS (DRAFT)

~~operational periods may be excluded from the compliance averages.~~

- (a5) *DLN Tuning.* “DLN Tuning” means operating the gas turbine at intermittent loads throughout the full load range in order to adjust and tune the dry low-NO_x (DLN) combustion system. DLN tuning shall be conducted in accordance with manufacturer’s recommendations ~~(or industry standards)~~. ~~Emissions data collected during DLN tuning may be excluded from the 24-hour block compliance averages.~~ {Permitting Note: For example, a major tuning session would occur after combustor change-out.}
- (b6) *Compressor Blade Drying.* Following a compressor blade wash in accordance with the manufacturer’s recommendations ~~(or industry standards)~~, the permittee may operate a gas turbine at very low loads to heat and dry the compressor blades. {Permitting Note: A gas turbine would typically operate at approximately 10% of base load or less to perform compressor blade drying.}
- (c7) *Over Speed Trip Test.* As a periodic maintenance practice, the permittee may perform over speed trip tests in accordance with the manufacturer’s recommendations ~~(or industry standards)~~. ~~Emissions data collected while conducting over speed trip tests may be excluded from the 24-hour block compliance averages.~~ {Permitting Note: During this test, the gas turbine is operated at full speed, no load (FSNL) for approximately 5 to 6 hours. The unit is gradually accelerated to 110% speed (3960 rpm) to initiate a trip and then coasts down normally. Over speed trip tests are typically performed after a long outage or a major component overhaul.}

To the extent practicable, the permittee shall minimize the amount and duration of emissions during periods of startup, shutdown, malfunction ~~and other limited-use operations, DLN tuning, compressor blade drying, and over speed trip testing.~~ If a CEMS reports emissions in excess of an emissions standard ~~(24-hour block)~~, the permittee shall notify the Compliance Authority within one working day with a preliminary report of: the nature, extent and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Compliance Authority may request a written summary report of the incident. All emissions data allowed for exclusion shall be summarized in the Semiannual CEMS Report required in Condition 0 of this subsection.

- ~~d.~~ *Startup and Shutdown Plan.* The permittee shall maintain on site a “Startup and Shutdown Plan” that describes procedures for startup and shutdown of the Bayside Units.

As provided by the authority in Rule 62-210.700(5), F.A.C., the above requirements are established in lieu of the provisions of Rule 62-210.700(1), F.A.C.

{Permitting Note: The durations for a warm and cold steam turbine startups and a steam turbine startup following an unplanned forced outage are not typical for combined cycle units. The Bayside Units utilize the existing Gannon steam turbines. Operating procedures require one gas turbine to operate at low loads for extended periods to gradually warm the main and hot reheat steam lines to the steam turbine as well as the steam turbine. Some steam lines are in excess of 1700 feet. Such startups are expected to occur infrequently.} [Design; Rules 62-4.130, 62-210.700(5), and 62-212.400 (BACT), F.A.C.; Permit No. PSD-FL-301B]

Subsection III.A, Specific Condition 23: Paragraph (f) of this condition is revised as follows.

- f. *Monitor Availability.* Monitor availability shall not be less than 95% in any calendar quarter. The ~~quarterly Data Assessment Report~~ required in Condition 23e above shall be used to demonstrate monitor availability ~~and shall be reported with the Semiannual CEMS Report.~~ In the event 95% availability is not achieved, the permittee shall provide the Compliance Authority with a report

SECTION 2. PERMIT REVISIONS (DRAFT)

identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

Subsection III.A, Specific Condition 25: This condition is revised as follows.

25. Semiannual CEMS Report: In addition to the reports required pursuant to 40 CFR 60.7, the permittee shall submit semiannual reports for each gas turbine summarizing the CEMS data and equipment. For each calendar quarter, the report shall include: the 24-hour block compliance averages for each day of operation; the number of 1-hour emission averages excluded from each 24-hour compliance average; the emissions rate of the excluded monitoring data; the reason for excluding monitoring data; the hours of missing data due to monitor downtime; the reason for any monitor downtime; unusual maintenance or repair of the CEMS; and a summary of any RATA tests performed. Based on operational data, the permittee shall also update the general range of ammonia flow rates required to meet NOx emissions limitations over the range of gas turbine load conditions. A report covering operations from January through June shall be submitted by July 30th of each year. A report covering operations from July through December shall be submitted by January 30th of each year. The data assessment report required by Condition 23e shall be submitted in conjunction with the Semiannual CEMS Report. The report due dates may be modified by the Title V permit. [Permit No. PSD-FL-301; Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

Permits Being Modified: Permit Nos. 0570040-026-AC

Affected Emissions Units: EU-031 through EU-038

Subsection III, Specific Condition 9: This condition is revised as follows.

9. Emission Standards: Emissions from each SCCT peaking unit shall not exceed the following standards.

Pollutant	Emission Standard ^e	Averaging Time	Compliance Method	Basis
NOx ^a	25.0 ppmvd @ 15% O ₂	4-hr rolling avg. ^f	CEMS	NSPS Subpart KKKK
	32.0 lb/hr/SCCT 56.0 tons/yr/SCCT	3 1-hr runs	Annual RATA Stack Test	Rule 62-4.070(3), F.A.C.
CO ^b	21.0 ppmvd @ 15% O ₂	3-hr rolling avg.	CEMS	ESCPSD Rule 62-212.400(12), F.A.C.
	9.1 lb/hr/SCCT 8.2 tons/yr/SCCT	3 1-hr runs	Annual RATA Stack Test	
VOC ^b	5.1 lb/hr/SCCT	3 1-hr runs	Surrogate is CO One-Time Stack Test	ESCPSD Rule 62-212.400(12), F.A.C.
Visible Emissions	<20 % Opacity	6-minute block	Visible Emissions Test	Rule 62-296.320(4)(b)1., F.A.C.
PM ^c	2 gr S/100 scf of gas	N/A	Recordkeeping Firing pipeline quality natural gas	Vendor data
SO ₂ ^d	2 gr S/100 scf of gas 6 lb/MWhr/SCCT <u>0.06 lb/MMBtu</u>	N/A	Recordkeeping Firing pipeline quality natural gas	ESCPSD Rule 62-212.400(12), F.A.C. NSPS Subpart KKKK

SECTION 2. PERMIT REVISIONS (DRAFT)

Pollutant	Emission Standard ^e	Averaging Time	Compliance Method	Basis
SAM ^d	2 gr S/100 scf of gas	N/A	Recordkeeping Firing pipeline quality natural gas	ESCPSD Rule 62-212.400(12), F.A.C.

- a. Continuous compliance with the 4-hr rolling average NO_x standards shall be demonstrated based on data collected by the required Continuous Emissions Monitoring System (CEMS). ~~During an annual Relative Accuracy Test Audit (RATA) on the NO_x CEMS, the permittee shall demonstrate compliance with the individual mass-based (lb/hour) standards. The initial and annual EPA Method 7E or Method 20 tests associated with demonstration of compliance with 40 CFR 60, Subpart KKKK or certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas during the time of those tests.~~
- b. Continuous compliance with the 3-hour rolling average CO standards shall be demonstrated based on data collected by the required CEMS. ~~The initial and annual EPA Method 10 tests associated with the certification of the CEMS instruments shall also be used to demonstrate compliance with the standard for natural gas. During an annual RATA on the CO CEMS, the permittee shall demonstrate compliance with the individual mass-based (lb/hour) standards.~~ An oxidation catalyst shall be installed on each SCCT peaking unit to minimize the emissions of CO and VOC. CO will be used as a surrogate for VOC emissions as a demonstration of good combustion. For an initial demonstration of compliance with the VOC mass limit, a one-time compliance test using EPA Method 25A, 40 CFR 60, Appendix A, shall be conducted on only one SCCT peaking unit; in addition and optionally, EPA Method 18 may also be performed concurrently with EPA Method 25A to deduct emissions of methane and ethane.
- c. The sulfur fuel specification combined with the efficient combustion design and operation of the gas turbine should minimize PM emissions (PM emissions are a surrogate for PM₁₀ emissions) as well as visible emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.
- d. The fuel sulfur specification effectively limits the potential emissions of SO₂ and sulfuric acid mist (SAM) from each SCCT peaking unit. ~~The application's SO₂ potential emissions are 1.9 lb/hr (0.06 lb/MW hr), based on 2 gr/100 scf of natural gas, equivalent to 0.0055 lb/MMBtu and is much less than the 40 CFR 60, Subpart KKKK standard of 0.060 lb/MMBtu.~~ Compliance with the fuel sulfur specifications shall be the use of pipeline-quality natural gas. *{Permitting Note: Based on the fuel sulfur specification, potential SO₂ emissions are 1.9 lb/hour (0.03 lb/MW hr), which is equivalent to 0.0055 lb/MMBtu and is less than the Subpart KKKK standard of 0.060 lb/MMBtu.}*
- e. The mass emission rate standards are based on a turbine inlet temperature condition of 59 °F, evaporative cooling on, and using the HHV of the fuel. Mass emission rates may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.
- f. 40 CFR 60, Subpart KKKK as described in 40 CFR 60.4350(g).

{Permitting Note: In combination with the annual restriction on hours of operation, the above emissions standards effectively limit annual potential emissions from the SCCT peaking units.}

[Rules 62-4.070(3), 62-210.200(Definitions-PTE) and 62-212.400(PSD), F.A.C.; and 40 CFR 60, Subpart KKKK]

SECTION 2. PERMIT REVISIONS (DRAFT)

Subsection III, Specific Condition 13: This condition is revised as follows.

13. **Testing Requirements:** Initial tests shall be conducted between 90% and 100% of permitted capacity; otherwise, this permit shall be modified to reflect the true maximum capacity as constructed. Subsequent annual tests shall be conducted between 90% and 100% of permitted capacity in accordance with the requirements of Rule 62-297.310(2), F.A.C. An initial compliance test shall be conducted for each pollutant that is limited. For each run during tests for visible emissions, emissions of CO recorded by the CEMS shall also be reported. Data collected ~~from the reference method~~ during the required CEMS quality assurance relative accuracy test audit (RATA) ~~may substitute for~~ shall be used to demonstrate annual compliance tests for with the NO_x and CO mass-based (lb/hour) standards, provided the owner or operator indicates this intent in the submitted test protocol, and obtains approval prior to testing. If the RATA is conducted at less than permitted capacity, and the data is used for annual compliance, the requirements of ~~Rule 62-297.310(2)(Operating Rate During Testing), F.A.C., still apply.~~ Results of each RATA shall be submitted with the semiannual report. The mass emission rate standards are based on a turbine inlet condition of 59°F and 100 percent full load operation. Mass emission rate may be adjusted from actual test conditions in accordance with the performance curves and/or equations on file with the Department. [Rules 62-297.310(2) and (7)(a), F.A.C.; 40 CFR 60.8; and Appendix D of this permit]

Section IV, Appendix E, Condition 17: This condition is revised as follows.

17. **Allowable SIP CO and NO_x Data Exclusion:** ~~Provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized, CO and NO_x CEMS data collected during periods of startup, shutdown and malfunction may be excluded from the 3-hr rolling average and 4-hr rolling average, respectively, for compliance demonstrations only in accordance with the following requirements. All periods of data excluded shall be consecutive for each such episode and only data obtained during the described episodes (startup, shutdown and malfunction) may be excluded. As provided by the authority in Rule 62-210.700(5), F.A.C., the following conditions replace the provisions in Rule 62-210.700(1), F.A.C. Excess CO Emissions Allowed – SIP: If excess CO emissions occur due to startup, shutdown, malfunction or tuning, CEMS data collected during such periods may be excluded from the compliance averages in accordance with the following requirements provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized. All periods of excluded data shall be consecutive for each such episode and only data obtained during the described episodes (startup, shutdown, malfunction and tuning) may be excluded.~~
- a. *Excess Emissions.* For purposes of SIP-based permit limits, excess emissions data collected during periods of startup, shutdown and malfunction may be excluded as follows:
1. *Startup:* In accordance with the procedures described in the CEMS Data Requirements of this section, no more than the first 10 minutes of CEMS data shall be excluded for each gas turbine startup. For startups of less than 10 minutes in duration, only those minutes attributable to startup shall be excluded.
 2. *Shutdown:* In accordance with the procedures described in the CEMS Data Requirements of this section, no more than the first 10 minutes of CEMS data shall be excluded for each gas turbine shutdown. For shutdowns less than 10 minutes in duration, only those minutes attributable to shutdown shall be excluded.
 3. *Malfunction:* In accordance with the procedures described in the CEMS Data Requirements of this section, no more than 120 minutes of CEMS data shall be excluded in a 24-hour period for each gas turbine due to malfunctions. Within one (1) working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data.

SECTION 2. PERMIT REVISIONS (DRAFT)

4. *Tuning*: "Tuning" means adjusting the combustors in accordance with the manufacturer's recommendations (or industry standards) or modifying the water-to-fuel ratio to affect a change in the post-combustion air emissions. Such tuning sessions are infrequent. Excess CEMS emissions data collected during tuning may be excluded from the compliance averages.

As provided by the authority in Rule 62-210.700(5), F.A.C., the above conditions replace the provisions in Rule 62-210.700(1), F.A.C. All valid emissions data (including data collected during startup, shutdown, malfunction and tuning) shall be used to report annual emissions for the Annual Operating Report. The permittee shall notify the Compliance Authority within one working day of discovering any emissions in excess of a CEMS standard subject to the specified averaging period. All such reasonably preventable emissions shall be included in any CEMS compliance determinations. All valid emissions data (including data collected during startup, shutdown and malfunction) shall be used to report annual emissions for the Annual Operating Report.

- b. *Limiting Data Exclusion*. If the compliance calculation using all valid CEMS emission data (as defined in this Appendix) indicates that the emission unit is in compliance, then no CEMS data shall be excluded from the compliance demonstration.
- c. *Event Driven Exclusion*. The excess emissions must occur due to an underlying event (startup or shutdown). If there is no underlying event, then no data may be excluded.
- d. *Continuous Exclusion*. Data shall be excluded on a continuous basis per event. Data from discontinuous periods shall not be excluded for the same underlying event.
- e. *Reporting Excluded Data*. These procedures for excluding SIP-based excess emissions from compliance calculations are not necessarily the same procedures used for "excess emissions" as defined by federal rules. Semiannual reports required by this permit shall indicate the duration of data excluded from SIP compliance calculations as well as the number of excess emissions as defined in the applicable federal rules.

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}

[Rules 62-4.070(3), 62-210.200, 62-210.370(3) and 62-210.700(4), F.A.C.]