


MEMORANDUM

To: Trina Vielhauer
Through: Al Linero
From: Teresa Heron 
Date: September 14, 2007
Re: City of Vero Beach Municipal Utilities
DRAFT Title V Operation Permit Renewal No. 0610029-007-AV

Attached is the intent-to-issue package to renew the City of Vero Beach Title V Permit. The facility consists of four conventional units that range from 13 to 56 megawatts (MW) and use a range of fuel oil grades and natural gas. Only the largest one is an NSPS unit (40 CFR 60, Subpart D).

There is also a 38 MW distillate and natural gas-fired combined cycle unit that is subject to 40 CFR 60 Subpart GG.

We contacted the Central District regarding compliance status and were advised by the main inspector and the head of compliance that there are no outstanding issues related to this facility.

There are no significant changes in the Draft renewal permit compared with the previous renewal permit. The only changes are related to topics covered by the latest version of 40 CFR Subpart GG. Their ability to rely on the updated rule makes it possible to delete the previously approved custom fuel monitoring schedule.

The application was received on June 28, 2007. Today is approximately day 76. We recommend your approval of the intent to issue documents.

P.E. CERTIFICATION STATEMENT

PERMITTEE

City of Vero Beach Municipal Utilities
100 17th Street – P.O. Box 1389
Vero Beach, Florida 32961-1389

City of Vero Beach Power Plant
DEP File No. 0610029-007-AV
Title V Operation Permit Renewal

PROJECT DESCRIPTION

The applicant proposes to renew the Vero Beach Power Plant Title V Operation Permit. The plant is located at 100 17th Street, Vero Beach, Indian River County.

The facility consists of four conventional units (Units 1, 2, 3 and 4) that range from 13 to 56 megawatts (MW) and use a range of fuel oil grades and natural gas. Only the largest one (Unit 4) is subject to a New Source Performance Standard at 40 Code of Federal Regulations (CFR), Part 60, Subpart D – Standards of Performance for Fossil Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971.

There is also a 38 MW distillate and natural gas-fired combined cycle unit (Unit 5) that is subject to 40 CFR 60 Subpart GG - Standards of Performance for New Stationary Combustion Turbines (Subpart GG).

There has been no construction and there have been no new application requirements for this facility since the previous Title V Permit.

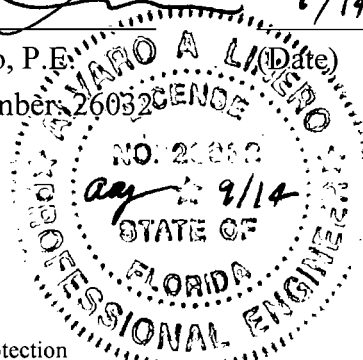
The only meaningful changes between the Draft Permit Renewal and the current permit relate to using the features available under the most recent version of Subpart GG as revised on July 8, 2004. These provide specific procedures within the rule for maintaining records on fuel characteristics thus providing for deletion of a “custom fuel monitoring schedule” (Appendix M in the previous permit).

Otherwise, the renewal is basically a duplicate of the previous Title V Operation Permit. According to the Central District who are the compliance authority for the facility, there are no compliance or enforcements issues at this time.

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 aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

 9/14/07

Alvaro A. Linero, P.E.
Registration Number 26032





Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor
Jeff Kottkamp
Lt. Governor
Michael W. Sole
Secretary

September 19, 2007

Electronically Sent – Received Receipt Requested

jlee@covb.org

Mr. John Lee
Acting, Utilities Director
City of Vero Beach Municipal Utilities
100 17th Street - P.O. Box 1389
Vero Beach, Florida 32961-1389

Re: Title V Air Operation Permit Renewal
DRAFT Permit Project No. 0610029-007-AV
City of Vero Beach Municipal Utilities

Dear Mr. Lee:

On June 28, 2007, you submitted an application for a Title V Air Operation Permit Renewal for the City of Vero Beach Municipal Utilities, located at 100 17th Street, Vero Beach, Indian River County. Enclosed are the following documents: "Statement of Basis", "DRAFT Permit", "Written Notice of Intent to Issue Title V Air Operation Permit", and "Public Notice of Intent to Issue Title V Air Operation Permit".

The "Statement of Basis" summarizes the Permitting Authority's technical review of the application and provides the rationale for making the preliminary determination to issue a DRAFT Permit. The proposed "DRAFT Permit" includes specific conditions that regulate the emissions units at this facility.

The "Written Notice of Intent to Issue Title V Air Operation Permit" provides important information regarding: the Permitting Authority's intent to issue a Title V air operation permit (DRAFT Permit); the requirements for publishing a Public Notice of the Permitting Authority's intent to issue the DRAFT Permit; the procedures for submitting comments on the DRAFT Permit; the requirements for requesting a public meeting; the requirements for filing a petition for an administrative hearing; and the availability of mediation.

The "Public Notice of Intent to Issue Title V Air Operation Permit" is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

If you have any questions, please contact the Project Engineer, Teresa Heron, at 850-921-9529.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/aal/tmh
Enclosures

**WRITTEN NOTICE OF INTENT TO ISSUE
TITLE V AIR OPERATION PERMIT**

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

City of Vero Beach
100 17th Street
Vero Beach, FL 32961-1389

Title V Operation Permit Renewal
DRAFT Permit Project No.: 0610029-007-AV
City of Vero Beach Municipal Utilities
Indian River County

Facility Location: The City of Vero Beach Municipal Utilities is located at 100 17th Street, Vero Beach, Indian River County.

Project: On June 28, 2007, the applicant applied to the Permitting Authority for a Title V Air Operation Permit Renewal. Details of the project are provided in the application and the enclosed "Statement of Basis" that summarizes the emissions units regulated by the Title V permit.

Permitting Authority: Applications for Title V air operation permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-213 and 62-214 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to operate the facility. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination regarding this project. The Permitting Authority's physical address is: Bureau of Air Regulation at 111 S. Magnolia, Suite 4; Tallahassee, FL 32301. The Permitting Authority's mailing address is: Bureau of Air Regulation, MS 5505, 2600 Blair Stone Road, Tallahassee, FL 32399-2400. The telephone number is 850/488-0114 and facsimile 850/921-9533.

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 address indicated above for the Permitting Authority. The complete project file includes the DRAFT Permit, the Statement of Basis, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the DRAFT Permit by visiting the following website: <http://www.dep.state.fl.us/air/eproducts/ards/>. A copy of the complete project file is also available at the Florida Department of Environmental Protection Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. Telephone: 407/894-7555. Fax: 407/897-2966.

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue a permit to the applicant for the project 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 appropriate 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 a PROPOSED Permit and subsequent FINAL Permit in accordance with the conditions of the DRAFT Permit unless a response received in accordance with the following procedures 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 Title V Air Operation Permit" (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 above address or phone number. Pursuant to Rule 62-110.106(5), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within seven (7) days of publication. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form presented in Section 50.051, F.S., to the office of the Department issuing the permit. 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: The Permitting Authority will accept written comments concerning the DRAFT Permit for a period of thirty (30) days from the date of publication of this Public Notice. Written comments must be post-marked, and all e-mail or facsimile comments must be received by the close of business (5 pm), on or before the end of this 30-day

City of Vero Beach Municipal Utilities
Indian River County

Title V Permit Renewal
Draft Air Permit No. 0610029-007-AV

**WRITTEN NOTICE OF INTENT TO ISSUE
TITLE V AIR OPERATION PERMIT RENEWAL**

period by the Permitting Authority at the above address, email or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Florida Administrative Weekly (FAW) website at <http://faw.dos.state.fl.us> and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Permit, the Permitting Authority will issue a Revised 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 Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this Written Notice of Intent to Issue Title V Air Operation Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen (14) days of publication of the attached Public Notice or within fourteen (14) days of receipt of this Written Notice of Intent to Issue Title V Air Operation Permit, 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 fourteen (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, 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 how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (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 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 Title V Air Operation Permit. 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.

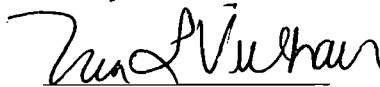
Objections: Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within sixty (60) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit.

Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the

**WRITTEN NOTICE OF INTENT TO ISSUE
TITLE V AIR OPERATION PERMIT RENEWAL**

thirty (30) day public comment period provided in the Public 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 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 EPA review and objections, visit EPA's web site at: www.epa.gov/region4/air/permits/Florida.htm.

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this "Written Notice of Intent to Issue Air Permit" package (including the Public Notice, the Statement of Basis, and the DRAFT Permit) was sent by electronic mail before the close of business on 9/21/01 to the persons listed below:

John Lee, City of Vero Beach: jlee@covb.org
Kennard F. Kosky, P.E., Golder Associates, Inc: kkosky@golder.com
James Stevens, City of Vero Beach: JStevens@covb.org
Jim Little, EPA Region 4: little.james@epamail.epa.gov
Kathy Forney, EPA Region 4: forney.kathleen@epamail.epa.gov
James Bradner, DEP: james.bradner@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.


(Clerk) Friday 9/21/01 (Date)

**PUBLIC NOTICE OF INTENT TO ISSUE
TITLE V AIR OPERATION PERMIT RENEWAL**

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Permit Project No. 0610029-007-AV
City of Vero Beach Municipal Utilities

Applicant: The applicant for this project is the City of Vero Beach Municipal Utilities. The applicant's responsible official is Mr. John Lee, Acting Utilities Director, City of Vero Beach, 100 17th Street, Vero Beach, Florida 32961-1389.

Facility Location: The applicant operates the City of Vero Beach Municipal Utilities facility, which is located at 100 17th Street, Vero Beach, Indian River County.

Project: The applicant submitted an application for a Title V Air Operation Permit Renewal. This facility is an electric power generating plant located adjacent to a wastewater treatment facility and consists of four oil and gas-fired fossil fuel steam generating units (Units 1, 2, 3 and 4) rated at 13, 17, 34 and 56 megawatts respectively and a 38 MW combined cycle gas turbine (Unit 5). Also included in this permit are miscellaneous unregulated or insignificant emissions units or activities. This permitting action will also revise some specific conditions and will update the Federal Acid Rain Program allowances starting in the year 2010.

Permitting Authority: Applications for Title V air operation permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-213 and 62-214 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to operate the facility. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination regarding this project. The Permitting Authority's physical address is: Bureau of Air Regulation at 111 S. Magnolia, Suite 4, Tallahassee, Florida. The Permitting Authority's mailing address is: Bureau of Air Regulation, MS 5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. The telephone number is (850)488-0114 and facsimile (850)921-9533.

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 address indicated above for the Permitting Authority. The complete project file includes the DRAFT Permit, the Statement of Basis, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the DRAFT Permit by visiting the following website: <http://www.dep.state.fl.us/air/eproducts/ards/>. A copy of the complete project file is also available at the Florida Department of Environmental Protection Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. Telephone: 407/894-7555. Fax: 407/897-2966.

Notice of Intent to Issue a Permit: The Permitting Authority gives notice of its intent to issue a permit to the applicant for the project 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 appropriate 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 a PROPOSED Permit and subsequent FINAL Permit in accordance with the conditions of the DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the DRAFT Permit for a period of thirty (30) days from the date of publication of this Public Notice. Written comments must be post-marked and all e-mail or facsimile comments must be received by the close of business (5 pm) on or before the end of this 30-day period by the Permitting Authority at the above address, email or facsimile. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Florida Administrative Weekly (FAW) website at <http://faw.dos.state.fl.us> and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the DRAFT Permit, the Permitting Authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

(Public Notice to be publish in the newspaper)

**PUBLIC NOTICE OF INTENT TO ISSUE
TITLE V AIR OPERATION PERMIT RENEWAL**

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 at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen (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 fourteen (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, 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 rights will be affected by the agency determination; (c) A statement of how and when the petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (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 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. 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 for this proceeding.

Objections: In addition to the above right to petition, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within sixty (60) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V air operation permit. Any petition shall be based only on objections to the Permit that were raised with reasonable specificity during the thirty (30) day public comment period provided in the Public 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 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 EPA review and objections, visit EPA's Region 4 web site at www.epa.gov/region4/air/permits/Florida.htm .

STATEMENT OF BASIS

City of Vero Beach
City of Vero Beach Municipal Utilities
Facility ID No.: 0610029
Indian River County

DRAFT Permit Project No. 0610029-007-AV
Title V Operation Permit Renewal

The application is for a routine renewal of the 5 year Title V Operation Permit (Permit Renewal) for the City of Vero Beach power plant. There are few significant changes in the present renewal compared with the previous one. The changes made are described below.

This Title V Permit Renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

The facility consists of four conventional units (Units 1, 2, 3 and 4) that range from 13 to 56 megawatts (MW) and use a range of fuel oil grades and natural gas. Only the largest one (Unit 4) is subject to a New Source Performance Standard at 40 Code of Federal Regulations (CFR), Part 60, Subpart D – Standards of Performance for Fossil Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971.

There is also a 38 MW distillate and natural gas-fired combined cycle unit (Unit 5) that is subject to 40 CFR 60 Subpart GG - Standards of Performance for New Stationary Combustion Turbines (Subpart GG).

Compliance assurance monitoring (CAM) plans were not required for Units 1-4 because they do not have add-on control equipment. CAM applies to Unit 5 when using water injection while burning oil. The CAM requirements from the present Title V Permit are rolled into the present Renewal as Appendix CAM.

The only significant changes between the Draft Permit Renewal and the current permit relate to using the features available under the most recent version of Subpart GG as revised on July 8, 2004. These provide specific procedures within the rule for maintaining records on fuel characteristics thus providing for deletion of a “custom fuel monitoring schedule” (Appendix M in the previous permit).

Acid Rain Allowances are revised for the year 2010 increasing them from 315 to 316 tons (E.U.003); from 107 to 116 tons (E.U.004) and 317 to 318 tons (E.U. 005). In addition, applicable requirements of the updated Subpart GG will be attached as Appendix GG to the permit.

Based on the Title V permit application received June 28, 2007, this facility is a major source of hazardous air pollutants (HAP).

Permittee:

City of Vero Beach
PO Box 1389
Vero Beach, FL 32961-1389

DRAFT Permit No.: 0610029-007-AV
Facility ID No.: 0610029
SIC Nos.: 49,4931
Project: Title V Air Operation Permit Renewal

This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

Appendix U-1, List of Unregulated Emissions Units and/or Activities
Appendix I-1, List of Insignificant Emissions Units and/or Activities
Appendix TV-6, Title V Conditions (version dated 06/23/06)
Appendix SS-1, Stack Sampling Facilities (version dated 10/07/96)
Table 297.310-1, Calibration Schedule (version dated 10/07/96)
Figure 1 - Summary Report-Gaseous And Opacity Excess Emission And Monitoring System
Performance Report (version dated 7/96)
Phase II Acid Rain Application/Compliance Plan received September 3, 2002
Alternate Sampling Procedure: ASP Number 97-B-01
BACT Determination dated June 28, 1991
Appendix CAM, Continuous Assurance Monitoring
Appendix GG, New Source Performance Standards, Subpart GG, Stationary Gas Turbines

Effective Date: January 1, 2008

Renewal Application Due Date: July 5, 2012

Expiration Date: December 31, 2012

Joseph Kahn, Director
Division of Air Resource
Management

TLV/aal/tmh

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

E.U. ID No.	Brief Description
001	Fossil Fuel Steam Generator, Unit 1, rated at 13 MW, 202 mmBtu/hr for natural gas and 140 mmBtu/hr for fuel oil, capable of burning any combination of natural gas and numbers 2, 4 and 6 fuel oil, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 002.
002	Fossil Fuel Steam Generator, Unit 2, rated at 17 MW, 248 mmBtu/hr for natural gas and 243 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 001.
003	Fossil Fuel Steam Generator, Unit 3, rated at 34 MW, 417 mmBtu/hr for natural gas and 410 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
004	Fossil Fuel Steam Generator, Unit 4, rated at 56 MW, 685 mmBtu/hr, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
005	Combined Cycle Gas Turbine, Unit 5, rated at 38 MW, 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas, capable of burning any combination of, number 2 fuel oil, and natural gas, with emissions exhausted through a 125 ft. stack.

Unregulated Emissions Units and/or Activities, See Appendix U-1

006	Fuel oil, gasoline and lube oil storage tanks.
007	Waste water treatment plant.

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers

Appendix H-1, Permit History/ID Number Changes

Table 1-1, Summary of Air Pollutant Standards and Terms

Table 2-1, Summary of Compliance Requirements

Statement of Basis

These documents are on file with the permitting authority and the USEPA:

Title V Permit Renewal Application received July 1, 2002

Additional Information Request dated August 14, 2002

Additional Information Response received September 3, 2002

The Responsible Official has certified that the Risk Management Plan was submitted to the RMP Reporting Center (on USEPA files)

Subsection D. Miscellaneous.

The use of "Permitting Notes" throughout this permit are for informational purposes only and are not permit conditions.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-6, TITLE V CONDITIONS, is a part of this permit.
{Permitting Notes: APPENDIX TV-6, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}
2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]
3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rule 62-296.320(4)(b)1. & 4, F.A.C.]
4. Prevention of Accidental Releases (Section 112(r) of CAA).
 - a. As required by Section 112(r)(7)(B)(iii) of the CAA and 40 CFR 68, the owner or operator shall submit an updated Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center.
 - b. As required under Section 252.941(1)(c), F.S., the owner or operator shall report to the appropriate representative of the Department of Community Affairs (DCA), as established by department rule, within one working day of discovery of an accidental release of a regulated substance from the stationary source, if the owner or operator is required to report the release to the United States Environmental Protection Agency under Section 112(r)(6) of the CAA.
 - c. The owner or operator shall submit the required annual registration fee to the DCA on or before April 1, in accordance with Part IV, Chapter 252, F.S., and Rule 9G-21, F.A.C.

Any required written reports, notifications, certifications, and data required to be sent to the DCA, should be sent to:

Department of Community Affairs
Division of Emergency Management
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
Telephone: 850/413-9921, Fax: 850/488-1739

Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 1515
Lanham-Seabrook, Maryland 20703-1515
Telephone: 301/429-5018

Any required reports to be sent to the National Response Center, should be sent to:

National Response Center
EPA Office of Solid Waste and Emergency Response
USEPA (5305 W)
401 M Street, SW
Washington, D.C. 20460
Telephone: 1/800/424-8802

Send the required annual registration fee using approved forms made payable to:

Cashier
Department of Community Affairs
State Emergency Response Commission
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2149

[Part IV, Chapter 252, F.S.; and, Rule 9G-21, F.A.C.]

5. Unregulated Emissions Units and/or Activities. Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit.

[Rule 62-213.440(1), F.A.C.]

6. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.

[Rules 62-213.440(1), 62-213.430(6), and 62-4.040(1)(b), F.A.C.]

7. Reserved.

8. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

- a. Tightly cover or close all VOC or OS containers when they are not in use.
- b. Tightly cover all open tanks which contain VOC or OS when they are not in use.
- c. Maintain all pipes, valves, fittings, etc., which handle VOC or OS in good operating condition.
- d. Immediately confine and clean up VOC or OS spills and make sure wastes are placed in closed containers for reuse, recycling or proper disposal.

[Rule 62-296.320(1)(a), F.A.C.]

9. Reasonable Precautions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility may include:

- a. Maintenance of paved areas as needed.
- b. Regular mowing of grass and care of vegetation.
- c. Limiting access to plant property by unnecessary vehicles.
- d. Care in handling and use of bagged chemical products.

[Rule 62-296.320(4)(c)2., F.A.C.; Items a, b, c, and d proposed by applicant in the renewal Title V permit application received June 28, 2007]

{Permitting note: This condition implements the requirements of Rules 62-296.320(4)(c)1., 3., & 4., F.A.C. (see Condition No. 57. of APPENDIX TV-6, TITLE V CONDITIONS).}

10. Timely Recording, Monitoring and Reporting: When appropriate, any recording, monitoring or reporting requirements that are time-specific shall be in accordance with the effective date of this permit, which defines day one.

[Rule 62-213.440, F.A.C.]

11. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.

[Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of APPENDIX TV-6, TITLE V CONDITIONS).}

12. State Compliance Authority: The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Central District office:

Department of Environmental Protection, Central District Office
Air Section
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767
Phone: 407/894-7555
Fax: 407/897-2966

13. EPA Compliance Authority: Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch, Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303
Telephone: 404/562-9155, Fax: 404/562-9164

14. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.

[Rule 62-213.420(4), F.A.C.]

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Section III. Emissions Units and Conditions.

Subsection A. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
001	Fossil Fuel Steam Generator, Unit 1, rated at 13 MW, 202 mmBtu/hr for natural gas and 140 mmBtu/hr for fuel oil, capable of burning any combination of natural gas and numbers 2, 4 and 6 fuel oil, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 002.

{Permitting Notes: The emissions unit is regulated under Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with Less than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 1 began commercial operation in 1961.}

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum operation heat input rate is as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
001	202	Natural Gas
	140	Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.406, F.A.C.]

A.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **F.14.**

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

A.3. Methods of Operation. Fuels. The only fuels allowed to be burned are any combination of natural gas and numbers 2, 4 and 6 fuel oil.

[Rule 62-213.410, F.A.C.]

Emission Limitations and Standards

{Permitting note: Unless otherwise specified, the averaging time for conditions **A.4. - A.5.** are based on the specified averaging time of the applicable test method.}

A.4. Visible Emissions. Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent.

[Rule 62-296.406(1), F.A.C.]

A.5. Visible emissions - Soot Blowing and Load Change. Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

[Rule 62-210.700(3), F.A.C.]

A.6. Particulate Matter. Particulate matter emissions shall be controlled by the firing of natural gas and/or fuel oil with a sulfur content as limited by specific condition **A.7** of this permit.
[Rule 62-296.406(2), F.A.C., BACT Determination 2/14/91]

A.7. Sulfur Dioxide - Sulfur Content. The fuel oil sulfur content shall not exceed 1.5 percent, by weight.
[Rule 62-296.406(3), F.A.C., BACT Determination 2/14/91]

Test Methods and Procedures

A.8. Sulfur Dioxide - Sulfur Content. The permittee shall demonstrate compliance with the liquid fuel sulfur limit by the vendor providing a fuel analysis upon each fuel delivery.
[Rules 62-213.440 and 62-296.406(3), F.A.C.]

A.9. The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using one of ASTM D2622-94, ASTM D4294-90(95), ASTM D1552-95, ASTM D1266-91, or both ASTM D4057-88 and ASTM D129-95 or latest editions.
[Rules 62-213.440, 62-296.406(3) and 62-297.440, F.A.C.]

Monitoring of Operations

A.10. Annual Tests Required - VE. Except as provided in specific conditions **F.6** through **F.8** of this permit, emission testing for visible emissions shall be performed annually, no later than August 1st of each year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. Testing shall be conducted while burning number 6 fuel oil.
[Rules 62-4.070(3) and 62-213.440, F.A.C.]

Common Conditions

A.11. This emissions unit is also subject to conditions **F.1** through **F.18** contained in **Subsection F. Common Conditions.**

Subsection B. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
002	Fossil Fuel Steam Generator, Unit 2, rated at 17 MW, 248 mmBtu/hr for natural gas and 243 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 001.

{Permitting Notes: The emissions unit is regulated under Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with Less than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 2 began commercial operation in 1964.}

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The maximum operation heat input rate is as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
002	248	Natural Gas
	243	Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.406, F.A.C.]

B.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **F.14.**

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

B.3. Methods of Operation. Fuels. The only fuels allowed to be burned are any combination of natural gas and numbers 2, 4 and 6 fuel oil. Propane may be used as an ignitor fuel.

[Rule 62-213.410, F.A.C.]

Emission Limitations and Standards

{Permitting note: Unless otherwise specified, the averaging time for conditions **B.4. - B.5.** are based on the specified averaging time of the applicable test method.}

B.4. Visible Emissions. Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent.

[Rule 62-296.406(1), F.A.C.]

B.5. Visible emissions - Soot Blowing and Load Change. Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

[Rule 62-210.700(3), F.A.C.]

B.6. Particulate Matter. Particulate matter emissions shall be controlled by the firing of natural gas and/or fuel oil with a sulfur content as limited by specific condition **B.7** of this permit. [Rules 62-4.070(3) and 62-296.406(2), F.A.C., BACT for this source will be the same as that of the BACT Determination of 2/14/91 for EU 001]

B.7. Sulfur Dioxide - Sulfur Content. The fuel oil sulfur content shall not exceed 1.5 percent, by weight. [Rules 62-4.070(3) and 62-296.406(3), F.A.C., BACT for this source will be the same as that of the BACT Determination of 2/14/91 for EU 001]

Test Methods and Procedures

B.8. Sulfur Dioxide - Sulfur Content. The permittee shall demonstrate compliance with the liquid fuel sulfur limit by the vendor providing a fuel analysis upon each fuel delivery. [Rules 62-213.440 and 62-296.406(3), F.A.C.]

B.9. The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using one of ASTM D2622-94, ASTM D4294-90(95), ASTM D1552-95, ASTM D1266-91, or both ASTM D4057-88 and ASTM D129-95 or latest editions. [Rules 62-213.440, 62-296.406(3) and 62-297.440, F.A.C.]

Monitoring of Operations

B.10. Annual Tests Required - VE. Except as provided in specific conditions **F.6** through **F.8** of this permit, emission testing for visible emissions shall be performed annually, no later than August 1st of each year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. Testing shall be conducted while burning number 6 fuel oil. [Rules 62-4.070(3) and 62-213.440, F.A.C.]

Common Conditions

B.11. This emissions unit is also subject to conditions **F.1** through **F.18** contained in **Subsection F. Common Conditions.**

Subsection C. This section addresses the following emissions unit.

003	Fossil Fuel Steam Generator, Unit 3, rated at 34 MW, 417 mmBtu/hr for natural gas and 410 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
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{Permitting Notes: The emissions unit is regulated under Acid Rain, Phase II and Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 3 began commercial operation in 1971.}

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

C.1. Permitted Capacity. The maximum operation heat input rates are as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
003	417	Natural Gas
	410	Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.405, F.A.C.]

C.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **F.14**.
 [Rule 62-297.310(2), F.A.C.]

C.3. Methods of Operation. Fuels. The only fuels allowed to be burned are any combination of natural gas and numbers 2, 4 and 6 fuel oil. Propane may be used as an ignitor fuel.
 [Rule 62-213.410, F.A.C.]

Emission Limitations and Standards

{Permitting note: Unless otherwise specified, the averaging time for conditions **C.4.** - **C.5.** are based on the specified averaging time of the applicable test method.}

C.4. Visible Emissions. Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent. Emissions units governed by this visible emissions limit shall compliance test for particulate matter emissions annually and as otherwise required by Chapter 62-297, F.A.C.
 [Rule 62-296.405(1)(a), F.A.C.]

C.5. Visible Emissions - Soot Blowing and Load Change. Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

Visible emissions above 60 percent opacity shall be allowed for not more than 4, six (6)-minute periods, during the 3-hour period of excess emissions allowed by this condition.
 [Rule 62-210.700(3), F.A.C., Note: Unit 3 has an operational continuous opacity monitor.]

C.6. Particulate Matter. Particulate matter emissions shall not exceed 0.1 pound per million Btu heat input, as measured by applicable compliance methods.
[Rule 62-296.405(1)(b), F.A.C.]

C.7. Particulate Matter - Soot Blowing and Load Change. Particulate matter emissions shall not exceed an average of 0.3 pound per million Btu heat input during the 3-hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.
[Rule 62-210.700(3), F.A.C.]

C.8. Sulfur Dioxide. When burning liquid fuel, sulfur dioxide emissions shall not exceed 2.75 pounds per million Btu heat input, as measured and determined in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D. Any calculations used to demonstrate compliance shall be based solely on the Btu value and the percent sulfur of the liquid fuel being burned.
[Rules 62-213.440 and 62-296.405(1)(c)1.j., F.A.C.]

Test Methods and Procedures

C.9. Particulate Matter. The test methods for particulate emissions shall be EPA Methods 17, 5, 5B, or 5F, incorporated by reference in Chapter 62-297, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5 may be used with filter temperature no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. The owner or operator may use EPA Method 5 to demonstrate compliance. EPA Method 3 or 3A with Orsat analysis shall be used when the oxygen based F-factor, computed according to EPA Method 19, is used in lieu of heat input. Acetone wash shall be used with EPA Method 5 or 17.
[Rules 62-213.440, 62-296.405(1)(e)2., and 62-297.401, F.A.C.]

C.10. Sulfur Dioxide. **The permittee elected to demonstrate compliance with the sulfur dioxide limitation using fuel sampling and analysis in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D.** This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization device. See specific conditions C.11 and C.12.
[Rule 62-296.405(1)(f)1.b., F.A.C.]

C.11. Sulfur Dioxide. The test methods for sulfur dioxide emissions shall be EPA Methods 6, 6A, 6B, or 6C, incorporated by reference in Chapter 62-297, F.A.C. Fuel sampling and analysis may be used as an alternate sampling procedure if such a procedure is incorporated into the operation permit for the emissions unit. If the emissions unit obtains an alternate procedure under the provisions of Rule 62-297.620, F.A.C., the procedure shall become a condition of the emissions unit's permit. The Department will retain the authority to require EPA Method 6 or 6C if it has reason to believe that exceedences of the sulfur dioxide emissions limiting standard are occurring. Results of an approved fuel sampling and analysis program shall have the same effect as EPA Method 6 test results for purposes of demonstrating compliance or noncompliance with sulfur dioxide standards. **The permittee may use the EPA test methods, referenced above, to demonstrate compliance; however, as an alternate sampling procedure**

authorized by permit, the permittee elected to demonstrate compliance using fuel sampling and analysis. See specific condition **C.12**.

[Rules 62-213.440, 62-296.405(1)(e)3. and 62-297.401, F.A.C.]

C.12. Compliance with the sulfur dioxide emission limitation shall be determined using fuel sampling and analysis in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D.

[Rules 62-213.440, 62-296.405(1)(e)3., 62-296.405(1)(f)1.b. and 62-297.440, F.A.C.]

Monitoring of Operations

C.13. Annual Tests Required - PM and VE. Except as provided in specific conditions **F.6** through **F.8** of this permit, emission testing for particulate matter emissions and visible emissions shall be performed annually, no later than August 1st of each year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. Testing shall be conducted while burning number 6 fuel oil.

[Rules 62-4.070(3) and 62-213.440, F.A.C.]

Record Keeping and Reporting Requirements

C.14. Excess Emissions for Sulfur Dioxide - Report. The owner or operator shall submit to the Central District Air Section a written report of emissions in excess of emission limiting standards for sulfur dioxide as set forth in this permit, for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations.

[Rules 62-213.440 and 62-296.405(1)(g), F.A.C., and 0610029-004-AC (PSD-FL-152C)]

Common Conditions

C.15. This emissions unit is also subject to conditions **F.1** through **F.18** contained in **Subsection F. Common Conditions.**

Subsection D. This section addresses the following emissions unit.

004	Fossil Fuel Steam Generator, Unit 4, rated at 56 MW, 685 mmBtu/hr, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
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{Permitting Notes: The emissions unit is regulated under Acid Rain, Phase II, and Rule 62-210.300, F.A.C., Permits Required and is subject to 40 CFR 60 Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971. The affected facility to which this subpart applies is fossil fuel steam generator, Unit 4, emissions unit 004. Fossil fuel fired steam generator Unit 4 began commercial operation in 1976.}

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

D.1. Permitted Capacity. The maximum operation heat input rates are as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
004	685	Natural Gas
	685	Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE)]

D.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **F.14**.
 [Rule 62-297.310(2), F.A.C.]

D.3. Methods of Operation. Fuels. The only fuels allowed to be burned are any combination of natural gas and numbers 2, 4 and 6 fuel oil. Propane may be used as an ignitor fuel.
 [Rule 62-213.410, F.A.C., AO 31-229058, and applicant request in Title V application received June 14, 1996]

Emission Limitations and Standards

{Permitting note: Unless otherwise specified, the averaging time for conditions **D.4. - D.6.** are based on the specified averaging time of the applicable test method.}

D.4. Pursuant to 40 CFR 60.42 Standard For Particulate Matter.

(a) No owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which:

- (1) Contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel.
- (2) Exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

[40 CFR 60.42(a)(1) & (2)]

D.5. Pursuant to 40 CFR 60.43 Standard For Sulfur Dioxide.

(a) No owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of:

- (1) 340 nanograms per joule heat input (0.80 lb per million Btu) derived from liquid fossil fuel.
(c) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.
[40 CFR 60.43(a) & (c)]

D.6. Pursuant to 40 CFR 60.44 Standard For Nitrogen Oxides.

(a) On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60, Subpart D, shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides, expressed as NO₂ in excess of:

- (1) 86 nanograms per joule heat input (0.20 lb per million Btu) derived from gaseous fossil fuel.
(2) 129 nanograms per joule heat input (0.30 lb per million Btu) derived from liquid fossil fuel
(b) When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) is determined by proration using the following formula:

$$PS_{NO_x} = (86x + 130y) / (x + y)$$

where:

PS_{NO_x} = is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired;

x = is the percentage of total heat input derived from gaseous fossil fuel; and,

y = is the percentage of total heat input derived from liquid fossil fuel.

[40 CFR 60.44(a) & (b)]

Test Methods and Procedures

D.7. Sulfur Dioxide. Pursuant to 40 CFR 60.45(b)(2), the owner or operator elected to use fuel sampling and analysis in lieu of installing a continuous monitoring system for SO₂.

This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization device. Compliance with the sulfur dioxide emission limitation shall be determined in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D.

[Rule 62-213.440, F.A.C., and 40 CFR 60.45(b)(2)]

D.8. Pursuant to 40 CFR 60.46 Test methods and Procedures.

(a) When conducting emissions tests, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in 40 CFR 60.46, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in 40 CFR 60.46(d).

(b) The owner or operator shall determine compliance with the particulate matter, SO₂, and NO_x standards in 40 CFR 60.42, 60.43, and 60.44 as follows:

(1) The emission rate (E) of particulate matter, SO₂, or NO_x shall be computed for each run using the following equation:

$$E = C F_d (20.9) / (20.9 - \% O_2)$$

E = emission rate of pollutant, ng/J (1b/million Btu).

C = concentration of pollutant, ng/dscm (1b/dscf).

% O₂ = oxygen concentration, percent dry basis.

F_d = factor as determined from Method 19.

(2) Method 5 shall be used to determine the particulate matter concentration (C) at affected facilities without wet flue-gas-desulfurization (FGD) systems and Method 5B shall be used to determine the particulate matter concentration (C) after FGD systems.

(i) The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train may be set to provide a gas temperature no greater than 160 ± 14 °C (320 ± 25 °F).

(ii) The emission rate correction factor, integrated or grab sampling and analysis procedure of Method 3B shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the O₂ concentration for the run shall be the arithmetic mean of all the individual O₂ sample concentrations at each traverse point.

(iii) If the particulate run has more than 12 traverse points, the O₂ traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O₂ traverse points.

(3) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.

(4) Method 6 shall be used to determine the SO₂ concentration.

(i) The sampling site shall be the same as that selected for the particulate sample. The sampling location in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). The sampling time and sample volume for each sample run shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Two samples shall be taken during a 1-hour period, with each sample taken within a 30-minute interval.

(ii) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be taken simultaneously with, and at the same point as, the SO₂ sample. The SO₂ emission rate shall be computed for each pair of SO₂ and O₂ samples. The SO₂ emission rate (E) for each run shall be the arithmetic mean of the results of the two pairs of samples.

(5) Method 7 shall be used to determine the NO_x concentration.

(i) The sampling site and location shall be the same as for the SO₂ sample. Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals.

(ii) For each NO_x sample, the emission rate correction factor, grab sampling and analysis procedure of Method 3B shall be used to determine the O₂ concentration (%O₂). The sample shall be taken simultaneously with, and at the same point as, the NO_x sample.

(iii) The NO_x emission rate shall be computed for each pair of NO_x and O₂ samples. The NO_x emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples.

(c) When combinations of fossil fuels are fired, the owner or operator (in order to compute the prorated standard as shown in 40 CFR 60.43(b) and 60.44(b)) shall determine the percentage (x or y) of the total heat input derived from each type of fuel as follows:

(1) The heat input rate of each fuel shall be determined by multiplying the gross calorific value of each fuel fired by the rate of each fuel burned.

(2) ASTM Methods D 240-76 (liquid fuels), or D 1826-77 (gaseous fuels) (incorporated by reference-see 40 CFR 60.17) shall be used to determine the gross calorific values of the fuels.

(3) Suitable methods shall be used to determine the rate of each fuel burned during each test period, and a material balance over the steam generating system shall be used to confirm the rate.

(d) The owner or operator may use the following as alternatives to the reference methods and procedures in 40 CFR 60.46 or in other sections as specified:

(1) The emission rate (E) of particulate matter, SO₂ and NO_x may be determined by using the F_c factor, provided that the following procedure is used:

(i) The emission rate (E) shall be computed using the following equation:

$$E = C F_c (100 / \%CO_2)$$

where:

E = emission rate of pollutant, ng/J (lb/million Btu).

C = concentration of pollutant, ng/dscm (lb/dscf).

%CO₂ = carbon dioxide concentration, percent dry basis.

F_c = factor as determined in appropriate sections of Method 19.

(ii) If and only if the average F_c factor in Method 19 is used to calculate E and either E is from 0.97 to 1.00 of the emission standard or the relative accuracy of a continuous emission monitoring system is from 17 to 20 percent, then three runs of Method 3B shall be used to determine the O₂ and CO₂ concentration according to the procedures in 40 CFR 60.46(b) (2)(ii), (4)(ii), or (5)(ii). Then if F_o (average of three runs), as calculated from the equation in Method 3B, is more than ± 3 percent than the average F_o value, as determined from the average values of F_d and F_c in Method 19, i.e., F_{oa} = 0.209 (F_{da} / F_{ca}), then the following procedure shall be followed:

(A) When F_o is less than 0.97 F_{oa}, then E shall be increased by that proportion under 0.97 F_{oa}, e.g., if F_o is 0.95 F_{oa}, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the emission standard.

(B) When F_o is less than 0.97 F_{oa} and when the average difference (\bar{d}) between the continuous monitor minus the reference methods is negative, then E shall be increased by that proportion under 0.97 F_{oa}, e.g., if F_o is 0.95 F_{oa}, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(C) When F_o is greater than 1.03 F_{oa} and when \bar{d} is positive, then E shall be decreased by that proportion over 1.03 F_{oa}, e.g., if F_o is 1.05 F_{oa}, E shall be decreased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(2) For Method 5 or 5B, Method 17 may be used at facilities with or without wet FGD systems if the stack gas temperature at the sampling location does not exceed an average temperature of 160 °C (320 °F). The procedures of sections 2.1 and 2.3 of Method 5B may be used with Method 17 only if it is used after wet FGD systems. Method 17 shall not be used after wet FGD systems if the effluent gas is saturated or laden with water droplets.

(3) Particulate matter and SO₂ may be determined simultaneously with the Method 5 train provided that the following changes are made:

(i) The filter and impinger apparatus in sections 2.1.5 and 2.1.6 of Method 8 is used in place of the condenser (section 2.1.7) of Method 5.

(ii) All applicable procedures in Method 8 for the determination of SO₂ (including moisture) are used:

(4) For Method 6, Method 6C may be used. Method 6A may also be used whenever Methods 6 and 3B data are specified to determine the SO₂ emission rate, under the conditions in 40 CFR 60.46(d)(1).

(5) For Method 7, Method 7A, 7C, 7D, or 7E may be used. If Method 7C, 7D, or 7E is used, the sampling time for each run shall be at least 1 hour and the integrated sampling approach shall be used to determine the O₂ concentration (%O₂) for the emission rate correction factor.

(6) For Method 3, Method 3A or 3B may be used.

(7) For Method 3B, Method 3A may be used.

[40 CFR 60.46(a), (b), (c) & (d)]

Monitoring of Operations

D.9. Annual Tests Required - PM, VE, SO₂ and NO_x. Except as provided in specific conditions F.6 through F.8 of this permit, emission testing for particulate matter emissions, visible emissions, sulfur dioxide and nitrogen oxides shall be performed annually, no later than August 1st of each year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. [Rules 62-4.070(3) and 62-213.440, F.A.C.]

D.10. Pursuant to 40 CFR 60.45 Emission and Fuel Monitoring.

CMS for Opacity and NO_x are Required, No CMS for SO₂ Required.

(a) Each owner or operator shall install, calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, nitrogen oxides emissions, and either oxygen or carbon dioxide except as provided in 40 CFR 60.45(b).

(b) Certain of the continuous monitoring system requirements under 40 CFR 60.45(a) do not apply to owners or operators under the following conditions:

(2) For a fossil fuel-fired steam generator that does not use a flue gas desulfurization device, a continuous monitoring system for measuring sulfur dioxide emissions is not required if the owner or operator monitors sulfur dioxide emissions by fuel sampling and analysis under 40 CFR 60.45(d).

The owner or operator may comply with the applicable emission and fuel monitoring requirements of 40 CFR 60 by complying with the applicable emission and fuel monitoring requirements of 40 CFR 75.

[40 CFR 60.45(a) & (b); Request of applicant in comments on Draft permit received August 18, 1997]

Excess Emission Reports.

(g) Excess emission reports shall be submitted to the Department for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. Each excess emission report shall include the information required in 40 CFR 60.7(c). Periods of excess emissions that shall be reported are defined as follows:

(1) Opacity. Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.

(3) Nitrogen oxides. Excess emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards under 40 CFR 60.44.

[40 CFR 60.45(g)]

Other NSPS Subpart D Conditions

D.11. Pursuant to 40 CFR 60.41 Definitions. As used in 40 CFR 60 Subpart D, all terms not defined in 40 CFR 60.41 shall have the meaning given them in the Act, and in Subpart A of 40 CFR 60.

Common Conditions

D.12. This emissions unit is also subject to conditions **F.1** and **F.4** through **F.18** contained in **Subsection F. Common Conditions**.

D.13. These emissions units are also subject to conditions **G.1** through **G.6** contained in **Subsection G. NSPS Common Conditions**.

Subsection E. This section addresses the following emissions unit.

005	Combined Cycle Gas Turbine, Unit 5, rated at 38 MW, 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas, capable of burning any combination of, number 2 fuel oil, and natural gas, with emissions exhausted through a 125 ft. stack.
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{Permitting Notes: This emissions unit is regulated under Acid Rain, Phase II and Rule 62-210.300, F.A.C., Permits Required and is subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. The affected facility to which this subpart applies is the combined cycle gas turbine, Unit 5. This unit underwent a BACT Determination dated June 28, 1991. BACT Limits were incorporated into the subsequent PSD permits including 0610029-004-AC (PSD-FL-152C). Exhaust is vented through the heat recovery steam generator that is not equipped with duct burners and then through a 125 ft. stack. Emissions are controlled by dry low-NOx burners when firing natural gas, and by water injection when firing fuel oil. This unit is subject to CAM when using water injection. An evaporative cooling system was installed at the compressor inlet of Unit 5 in accordance with Permit No. 0610029-004-AC (PSD-FL-152C). The system cools the inlet air to the turbine, which increases turbine output and decreases heat rate. The system may be operated at any time that Unit 5 is in operation. The turbine exhaust may also be vented through a bypass stack for simple cycle operation. The turbine began commercial operation in 1992.}

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

E.1. Permitted Capacity. The maximum operation heat input rates are as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
005	414*	Natural Gas
	455*	No. 2 Fuel Oil

* Based on 101.3 kilopascals pressure, 288 Kelvin and 60% relative humidity (ISO standard day conditions), and lower heating value of the fuel fired.
 [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., and 0610029-004-AC (PSD-FL-152C)]

E.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **E.10**.
 [Rule 62-297.310(2), F.A.C.]

E.3. Methods of Operation - Fuels. Any combination of only natural gas and number 2 fuel oil shall be fired in the combustion turbine. See specific conditions **E.4** and **E.6** of this permit. {Note: The limitations of specific conditions **E.4** and **E.6** are more stringent than the NSPS sulfur dioxide limitation and thus assure compliance with 40 CFR 60.333 and 60.334.}
 [Rule 62-213.410, F.A.C.]

E.4. Fuel Oil Consumption Limits. The permitted fuel oil utilization rates for this emissions unit are:

- a. Maximum annual consumption of number 2 fuel oil shall not exceed 10,000,000 gal./yr.
- b. Maximum annual firing using number 2 fuel oil shall not exceed 33% of the annual capacity factor.

[Rules 62-4.070(3) and 62-213.440, F.A.C., and 0610029-004-AC (PSD-FL-152C)]

Emission Limitations and Standards

{Permitting note: Unless otherwise specified, the averaging time for conditions **E.5.** - **E.7.** are based on the specified averaging time of the applicable test method.}

E.5. Visible Emissions Visible emissions shall not exceed 10% opacity.
 [0610029-004-AC (PSD-FL-152C)]

E.6. Sulfur Dioxide - Sulfur Content. The No. 2 fuel oil sulfur content shall not exceed 0.25 percent, by weight. See specific conditions **E.11 and E.12** of this permit. The natural gas sulfur content shall not exceed 10 grains per hundred cubic feet (standard conditions). See specific condition **E.15** of this permit.

{Note: The limitations of specific conditions **E.4** and **E.6** are more stringent than the NSPS sulfur dioxide limitation and thus assure compliance with 40 CFR 60.333 and 60.334. The sulfur limitation on natural gas has been added to assure compliance with 40 CFR 60.333.}
 [Rules 62-4.070(3) and 62-213.440, F.A.C., and 0610029-004-AC (PSD-FL-152C)]

E.7. The maximum allowable emissions from Unit 5 shall not exceed the emission limitations listed below.

Pollutant	Emission Limits			Basis
	Gas	Number 2 Fuel Oil	Tons/Year ^{a, b}	
NOx ^c	25 ppmvd at 15% oxygen on a dry basis	42 ppmvd at 15% oxygen on a dry basis	243.7	BACT
SO ₂	Natural gas as fuel	0.25% S by weight	178.2	BACT
PM ₁₀	0.006 lb/mmBtu	0.025 lb/mmBtu	23.7	BACT
VOC	0.0112 lb/mmBtu	0.0113 lb/mmBtu	21.0	PSD-FL-152C
CO	0.0224 lb/mmBtu	0.0226 lb/mmBtu	42.1	PSD-FL-152C

- a Tons per year based on 67% capacity factor for natural gas firing, 33% capacity factor number 2 fuel oil firing.
- b Based on 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas.
- c NOx emission limit during co-firing of natural gas and number 2 fuel oil shall be determined by the following:

$$\text{NOx Limit} = \frac{(\text{Lg} \times \text{Qg}) + (\text{Lo} \times \text{Qo})}{\text{Qg} + \text{Qo}}$$

where:

- Lg = Emission limit for natural gas
- Qg = Heat input of natural gas
- Lo = Emission limit for fuel oil
- Qo = Heat input of fuel oil

{Note: The limitations of specific condition **E.7** are more stringent than the NSPS nitrogen oxides limitation and thus ensure compliance with 40 CFR 60.332 and 60.334.}
 [0610029-004-AC (PSD-FL-152C) and requested by applicant in the initial Title V permit application received June 14, 1996]

Test Methods and Procedures

E.8. Annual Compliance Tests. Except as provided in specific conditions F.6 and F.8 of this permit, emission testing for visible emissions and nitrogen oxides shall be performed annually, no later than August 1st of each year, in accordance with specific condition E.10, with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests shall be conducted using the following EPA reference methods in accordance with 40 CFR 60, Appendix A:

- a. Method 9 for VE;
- b. Method 20 for NO_x.

If the unit is not operating because of scheduled maintenance outages and emergency repairs, it will be tested within thirty days of returning to service.

[Rules 62-4.070(3) and 62-213.440, F.A.C., and 0610029-004-AC (PSD-FL-152C)]

E.9. Testing for PM, CO, VOC. Except as provided in specific condition F.6 of this permit, emission testing for emissions of particulate matter and carbon monoxide shall be performed in the year prior to renewal of this permit, in accordance with specific condition E.10, while burning fuel oil. Emission testing for emissions of VOC shall be performed only if the CO test does not demonstrate compliance with the emissions limitation of specific condition E.7 of this permit. Particulate matter tests shall be conducted using EPA test methods 5 or 17. Carbon monoxide tests shall be conducted using EPA test method 10. VOC tests, if required, shall be conducted using EPA test method 25A.

[Rules 62-4.070(3) and 62-213.440, F.A.C., and 0610029-004-AC (PSD-FL-152C)]

E.10. Additional Test Requirements. Test results shall be the average of three valid runs. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity, which is defined as 95-100 percent of the maximum heat input rate allowed by this permit, achievable for the average ambient air temperature during the test. If it is impracticable to test at permitted capacity, the emissions unit may be tested at less than permitted capacity. In such cases, subsequent operation is limited by adjusting downward the entire heat input vs. inlet temperature curve by the increment equal to the difference between the maximum permitted heat input value and 105 percent of the value reached during the test. Once the emissions 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. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report.

[0610029-004-AC (PSD-FL-152C)]

E.11. Sulfur Dioxide - Sulfur Content. The permittee shall demonstrate compliance with the liquid fuel sulfur limit by fuel sampling and analysis. See specific conditions E.6 and E.12. The permittee shall demonstrate compliance with the gaseous fuel sulfur limit via record keeping. See specific condition E.15.

[Rules 62-4.070(3) and 62-213.440, F.A.C.]

E.12. Fuel Sampling & Analysis - Sulfur. Compliance with the liquid fuel sulfur limit shall be determined using fuel sampling and analysis in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D.
[Rule 62-213.440, F.A.C., and , and 0610029-004-AC (PSD-FL-152C)]

Monitoring of Operations

E.13. Continuous Monitoring Required. A continuous monitoring system shall be maintained to record fuel consumption. A continuous monitoring system shall be maintained to record emissions of nitrogen oxides in accordance with the requirements of 40 CFR 75.
[0610029-004-AC (PSD-FL-152C) and requested by applicant in the initial Title V permit application received June 14, 1996]

E.14.1. Excess Emissions by CEMS. The CEMS for NO_x shall be used to determine periods of excess emissions. Excess emissions are defined for this emissions unit as any 60-minute period during which the average emissions exceed the emission limits of specific condition E.7 of this permit. Periods of startup, shutdown, malfunction shall be monitored, recorded and reported with excess emissions following the format and requirements of 40 CFR 60.7.
{Note: The requirements of specific condition E.14 are more stringent than the NSPS monitoring provisions and thus assure compliance with 40 CFR 60.334 and 60.335.}
[Rules 62-4.070(3) and 62-213.440, F.A.C.]

Compliance Assurance Monitoring (CAM) Requirements

E.14.2. Compliance Assurance Monitoring (CAM). This emissions unit is subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C..
[40 CFR 64; and, Rules 62-204.800 and 62-213.440(4)(b)4., F.A.C.]

Record Keeping and Reporting Requirements

E.15. Natural Gas Sulfur Content Records Required. The owner or operator shall monitor the sulfur content of natural gas in accordance with 40 CFR 60.334 (h)(3)(i).
[Rules 62-4.070(3) and 62-213.440, F.A.C.]

E.16. Additional Reports Required. The owner or operator shall report the following with the Air Operating Report (AOR): sulfur content, by weight, and lower heating value of the fuel oil fired in the previous year; sulfur content of natural gas in accordance with 40 CFR 60.334 (h)(3)(i) or 40 CFR 60.334 (h)(3)(ii); annual fuel consumption of number 2 fuel oil and natural gas; and hours of operation per fuel usage (single fired and co-fired).
[Rule 62-210.370(3), F.A.C., and, 0610029-004-AC (PSD-FL-152C)]

Other Conditions

E.17. This emissions unit is also subject to conditions **F.1** through **F.18**, except for **F.2**, **F.3**, **F.7** and **F.8**, contained in **Subsection F. Common Conditions**.

E.18. This emissions unit is also subject to condition **G.1** through **G.6** contained in **Subsection G. NSPS Common Conditions**.

Subsection F. Common Conditions.

E.U. ID No.	Brief Description
001	Fossil Fuel Steam Generator, Unit 1
002	Fossil Fuel Steam Generator, Unit 2
003	Fossil Fuel Steam Generator, Unit 3
004	Fossil Fuel Steam Generator, Unit 4
005	Combined Cycle Gas Turbine, Unit 5

The following conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

F.1. Hours of Operation. These emissions units may operate continuously, i.e., 8,760 hours/year.

[Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting Notes: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

Excess Emissions

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

F.2. (This condition is not applicable to emissions units 004 and 005.) Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

F.3. (This condition is not applicable to emissions units 004 and 005.) Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.

[Rule 62-210.700(2), F.A.C.]

F.4. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

F.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.]

F.6. 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.

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 Rule 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 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

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.

8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a 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.

(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 may 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.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; SIP approved]

F.7. (This condition is not applicable to emissions unit 005.) When PM Tests Not Required. Annual and permit renewal compliance testing for particulate matter emissions is not required for these emissions units while burning:

- a. only gaseous fuel(s); or
- b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
- c. only liquid fuel(s) for less than 400 hours per year.

[Rules 62-297.310(7)(a)3. & 5., F.A.C.; and, ASP Number 97-B-01.]

F.8. (This condition is not applicable to emissions unit 005.) When VE Tests Not Required. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

- a. only gaseous fuel(s); or
- b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
- c. only liquid fuel(s) for less than 400 hours per year.

[Rule 62-4.070(3), F.A.C.]

Test Methods and Procedures

{Permitting Notes: The attached Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

F.9. Visible Emissions - Boiler 4, Turbine. The test method for visible emissions for emissions units 004 (Unit 4) and 005 (Turbine, Unit 5) shall be EPA Method 9, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C.

[Rules 62-204.800 and 62-297.401, F.A.C.]

F.10. Visible Emissions - Boilers, Units 1, 2 and 3. The test method for visible emissions for emissions units 001 (Unit 1), 002 (Unit 2) and 003 (Unit 3) shall be DEP Method 9, incorporated

in Chapter 62-297, F.A.C. A transmissometer may be used and calibrated according to Rule 62-297.520, F.A.C. See specific condition **F.11**.
[Rules 62-296.405(1)(e)1. and 62-297.401, F.A.C.]

F.11. DEP Method 9. The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.
2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:
 - a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.
 - b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value.
[Rule 62-297.401, F.A.C.]

F.12. 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 the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

F.13. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

F.14. Operating Rate During Testing. Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions 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.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

F.15. 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:

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.

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

F.16. Required Stack Sampling Facilities. When a mass emissions stack test is required, the owner or operator shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

Record Keeping and Reporting Requirements

F.17. Malfunctions - Notification. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Central District Air Section in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Central District Air Section.

[Rule 62-210.700(6), F.A.C.]

F.18. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Central District Air Section on the results of each such test.
- (b) The required test report shall be filed with the Central District Air Section 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 Central District Air Section 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.
 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.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

Subsection G. NSPS Common Conditions.

E.U. ID No.	Brief Description
004	Fossil Fuel Steam Generator, Unit 4
005	Combined Cycle Gas Turbine, Unit 5

{Permitting Notes: The emissions units above are subject to the following conditions from 40 CFR 60 Subpart A, General Provisions. The affected facilities to which this subpart applies are fossil fuel steam generator, Unit 4 and the combined cycle gas turbine, Unit 5. To the extent allowed by law, the Administrator shall mean the Department.}

The following conditions apply to the NSPS emissions units listed above:

G.1. Pursuant to 40 CFR 60.7 Notification And Record Keeping.

(a) Any owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification as follows:

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(b) The owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(c) The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form (see 40 CFR 60.7(d)) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(d) The summary report form shall contain the information and be in the format shown in Figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

[See Attached Figure 1-Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance]

(e)(1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For one full year (e.g., four quarterly or twelve monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under 40 CFR 60 continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all record keeping and monitoring requirements specified in this subpart and the applicable standard; and

(iii) The Administrator does not object to reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required record keeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (e)(1) and (e)(2) of this section.

(f) The owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records.
[40 CFR 60.7 and Rule 62-213.440(1)(b)2.b., F.A.C.]

G.2. Pursuant to 40 CFR 60.8 Performance Tests.

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart, except as otherwise authorized by an approved alternative method.

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8]

G.3. Pursuant to 40 CFR 60.11 Compliance With Standards And Maintenance Requirements.

(a) Compliance with standards in 40 CFR 60, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

(b) **(This paragraph is only applicable to emissions unit 004.)** Compliance with opacity standards in 40 CFR 60 shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of 40 CFR 60, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5).

(c) **(This paragraph is only applicable to emissions unit 004.)** The opacity standards set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may

include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(e)(5) **(This paragraph is only applicable to emissions unit 004.)** The owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under 40 CFR 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under 40 CFR 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under 40 CFR 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine opacity compliance.

[40 CFR 60.11]

G.4. Pursuant to 40 CFR 60.12 Circumvention.

No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[40 CFR 60.12]

G.5. Pursuant to 40 CFR 60.13 Monitoring Requirements.

(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he/she shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of 40 CFR 60 before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of 40 CFR 60. The

owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 40 CFR 60.8 and as described in 40 CFR 60.11(e)(5), shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in 40 CFR 60.13(c) at least 10 days before the performance test required under 40 CFR 60.8 is conducted.

(2) Except as provided in 40 CFR 60.13(c)(1), the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(d)(1) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of 40 CFR 60 shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emissions, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments except that for systems using automatic zero adjustments. The optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photo detector assembly.

(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(2) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of 40 CFR 60 shall be used.

(g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g.,

multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

(h) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorder during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non reduced form (e.g., ppm pollutant and percent O₂ or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

[40 CFR 60.13]

Section IV. This section is the Acid Rain Part.

Operated by: City of Vero Beach
ORIS code: 0693

Subsection A. This subsection addresses Acid Rain, Phase II.

The emissions units listed below are regulated under Acid Rain, Phase II.

E.U. ID No.	Brief Description
003	Fossil Fuel Steam Generator, Unit 3
004	Fossil Fuel Steam Generator, Unit 4
005	Combined Cycle Gas Turbine, Unit 5

A.1. The Phase II permit application(s) submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain unit(s) must comply with the standard requirements and special provisions set forth in the application(s) listed below:

a. DEP Form No. 62-210.900(1)(a), dated July 3, 2007.
 [Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

A.2. Sulfur dioxide (SO₂) allowance allocations for each Acid Rain unit are as follows:

E.U. ID No.	EPA ID	Year	2008	2009	2010	2011	2012
003	3	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	315*	315*	316*	316*	316*
004	4	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	107*	107*	116*	116*	116*
005	**5	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	317*	317*	318*	318*	318*

* The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 or 3 of 40 CFR 73.

A.3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

1. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.
2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
3. Allowances shall be accounted for under the Federal Acid Rain Program.
[Rule 62-213.440(1)(c), F.A.C.]

A.4. Fast-Track Revisions of Acid Rain Parts. Those Acid Rain sources making a change described at Rule 62-214.370(4), F.A.C., may request such change as provided in Rule 62-213.413, F.A.C.
[Rules 62-213.413 and 62-214.370(4), F.A.C.]

A.5. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400, F.A.C.
[Rule 62-213.440(1)(c)1., F.A.C.]

A.6. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Administrator.
[40 CFR 70.6(a)(1)(ii); and, Rule 62-210.200, Definitions - Applicable Requirements, F.A.C.]

Appendix I-1, List of Insignificant Emissions Units and/or Activities

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C.; if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Brief Description of Emissions Units and/or Activities

1. Startup generator diesel engine associated with Unit 5.
2. Vapor extractor rooftop vents, one each for Units 1-4.
3. Cooling tower.
4. Diesel fuel tank for vehicles and gasoline fuel tank for vehicles (500 gal. capacity each).
5. 750 kW diesel generator used 4 hrs/month at wastewater treatment plant.

Appendix H-1, Permit History/ID Number Changes

Permit History and ID Number Changes (for tracking purposes):

E.U. ID No.	Description	Permit No.	Issue Date	Expiration Date	Revised Date(s)
Unit 1	Fossil Fuel Steam Generator, Unit 1	AO31-184320	12/28/90	12/25/95	2/14/91
Unit 2	Fossil Fuel Steam Generator, Unit 2	AO31-226295	11/29/93	5/30/98	
Unit 3	Fossil Fuel Steam Generator, Unit 3	AO31-224290	11/2/93	2/25/98	
Unit 4	Fossil Fuel Steam Generator, Unit 4	AO31-229058	10/13/93	6/30/98	
		AC31-2182	10/11/73	11/1/75	
Unit 5	Combined Cycle Gas Turbine, Unit 5	AC31-184928	6/28/91	12/31/93	
		AC31-184928/ PSD-FL-152	7/1/91	9/30/94	1/13/94, 4/5/94, 7/12/94
		AC31-184928A/ PSD-FL-152A	3/27/95	7/31/95	10/6/93, 10/4/94, 1/31/95
Unit 5	Combined Cycle Gas Turbine, Unit 5	0610029-004-AC/ PSD-FL-152C*	4/04/01		9/27/95
		AO31-227564	10/7/93	9/30/98	

* 0610029-004-AC/PSD-FL-152C effectively superseded the previous construction permits.

Permit No. 0610029-002-AV
 Initial Title V permit.

Permit No. 0610029-004-AC (PSD-FL-152C)
 Authorization to install an evaporative cooling system at the compressor inlet of Unit 5.

Permit No. 0610029-005-AV
 Title V Permit Revision to include an evaporative cooling system installed at the compressor inlet of Unit 5.

Permit No. 0610029-006-AV
 Title V Permit Renewal. Effective Date January 1, 2003.

Permit No. 0610029-007-AV
 Title V Permit Renewal. Effective Date January 1, 2008.

Notes:

- 1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.
- 2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.
 {Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}

Appendix U-1, List of Unregulated Emissions Units and/or Activities

Unregulated Emissions Units and/or Activities. An emissions unit which emits no “emissions-limited pollutant” and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither ‘regulated emissions units’ nor ‘insignificant emissions units’.

E.U. ID

No.	Brief Description of Emissions Units and/or Activity
006	Fuel oil and lube oil storage tanks. Tanks are: Tank 1 (1,560,000 gal. capacity) fuel oil; Tank 2 (3,108,000 gal. capacity) fuel oil; Diesel tank for Unit 5 startup generator; Lube oil tanks and vents, one each for Units 1 - 5.
007	Waste water treatment plant, including headworks, liquid treatment processes and storage tanks.

Table 1-1, Summary of Air Pollutant Emission Standards

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emissions Unit		Brief Description							
001		Fossil Fuel Steam Generator, Unit 1, rated at 13 MW.							
002		Fossil Fuel Steam Generator, Unit 2, rated at 17 MW.							
			Allowable Emissions			Equivalent Emissions ¹			
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lb/hour	TPY	lb/hour	TPY	Regulatory Citations	See Permit Condition(s)
VE Steady State	Oil, Natural Gas	8760	20% opacity, except for 40% for 2 min. each hour					Rule 62-296.406(1), F.A.C.	A.4, B.4
VE Soot Blowing or Load Change	Oil, Natural Gas	8760	60% opacity					Rule 62-210.700(3), F.A.C.	A.5, B.5
PM, SO₂ Unit 1	Oil	8760	1.5% S by weight, fuel oil			230.2*	1008*	Rule 62-296.406(2), F.A.C., & BACT	A.6 & A.7
PM, SO₂ Unit 2	Oil	8760	1.5% S by weight, fuel oil			399.5*	1750*	Rules 62-4.070(3) & 62-296.406(2), F.A.C., & BACT	B.6 & B.7

Notes for EU 001 & 002:

* Lb/hour and TPY values are for SO₂ emissions using fuel oil.

Table 1-1, Continued

Emissions Unit		Brief Description							
003		Fossil Fuel Steam Generator, Unit 3, rated at 34 MW.							
Pollutant	Fuel(s)	Hours per Year	Allowable Emissions			Equivalent Emissions ¹		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lb/hour	TPY	lb/hour	TPY		
VE Steady State	Oil, Natural Gas	8760	20% opacity, except for 40% for 2 min. each hour					Rule 62-296.405(1)(a), F.A.C.	C.4
VE Soot Blowing or Load Change	Oil, Natural Gas	8760	60 % opacity (>60% opacity for not more than 4, six-minute periods)					Rule 62-210.700(3), F.A.C.	C.5
PM Steady State	Oil, Natural Gas	8760	0.1 lb/mmBtu			41*	179.6*	Rule 62-296.405(1)(b), F.A.C.	C.6
PM Soot Blowing or Load Change	Oil, Natural Gas	8760	0.3 lb/mmBtu			123*	67.3*	Rule 62-210.700(3), F.A.C.	C.7
SO ₂	Oil, Natural Gas	8760	2.75 lb/mmBtu			1127.5**	4938**	Rules 62-213.440, & 62-296.405(1)(c)1.j. F.A.C.	C.8

Notes for EU 003:

- * Lb/hour and TPY values are for PM emissions using fuel oil.
- ** Lb/hour and TPY values are for SO₂ emissions using fuel oil.

Table 1-1, Continued

Emissions Unit		Brief Description							
004		Fossil Fuel Steam Generator, Unit 4, rated at 56 MW.							
Pollutant	Fuel(s)	Hours per Year	Allowable Emissions			Equivalent Emissions ¹		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lb/hour	TPY	lb/hour	TPY		
VE	Oil, Natural Gas	8760	20% opacity, except for 27% for 6 min. each hour					40 CFR 60.42(a)(2)	D.4
PM	Oil, Natural Gas	8760	0.10 lb/mmBtu			68.5*	300*	40 CFR 60.42(a)(1)	D.4
SO ₂	Oil, Natural Gas	8760	0.80 lb/mmBtu			548	2400	40 CFR 60.43(a)(1)	D.5
NO _x	Natural Gas	8760	0.20 lb/mmBtu			137	600.1	40 CFR 60.44(a)(1)	D.6
NO _x	Oil	8760	0.30 lb/mmBtu			205.5*	900.1*	40 CFR 60.44(a)(2)	D.6

Notes for EU 004:

* Lb/hour and TPY values for PM and NO_x emissions based on using number 4 fuel oil for total heat input.

Table 1-1, Continued

Emissions Unit		Brief Description							
005		Combined Cycle Gas Turbine, Unit 5, rated at 38 MW.							
			Allowable Emissions			Equivalent Emissions ¹			
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lb/hour	TPY ^a	lb/hour ^b	TPY ^b	Regulatory Citations	See Permit Condition(s)
VE	No. 2 Fuel Oil, Natural Gas	8760	10 % opacity					0610029-004-AC (PSD-FL-152C)	E.5
SO ₂	"	8760	0.25% S by weight, fuel oil 10 gr S/ccf, natural gas		178.2	123	177	0610029-004-AC (PSD-FL-152C)	E.6
NO _x	No. 2 Fuel Oil	8760	42 ppmvd at 15% oxygen on a dry basis		243.7	79	114.2	0610029-004-AC (PSD-FL-152C)	E.7
NO _x	Natural Gas	8760	25 ppmvd at 15% oxygen on a dry basis		243.7	44.3	194	0610029-004-AC (PSD-FL-152C)	E.7
PM ₁₀	No. 2 Fuel Oil	8760	0.025 lb/mmBtu		23.7	11.4	16.4	0610029-004-AC (PSD-FL-152C)	E.7
PM ₁₀	Natural Gas	8760	0.006 lb/mmBtu		23.7	2.5	10.9	0610029-004-AC (PSD-FL-152C)	E.7

Table 1-1, Continued

Emissions Unit		Brief Description							
005		Combined Cycle Gas Turbine, Unit 5, rated at 38 MW.							
			Allowable Emissions			Equivalent Emissions ¹			
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lb/hour	TPY ^a	lb/hour ^b	TPY ^b	Regulatory Citations	See Permit Condition(s)
VOC	No. 2 Fuel Oil	8760	0.0113 lb/mmBtu		21.0	5.1	7.4	0610029-004-AC (PSD-FL-152C)	E.7
VOC	Natural Gas	8760	0.0112 lb/mmBtu		21.0	4.6	20.3	0610029-004-AC (PSD-FL-152C)	E.7
CO	No. 2 Fuel Oil	8760	0.0226 lb/mmBtu		42.1	10.3	14.9	0610029-004-AC (PSD-FL-152C)	E.7
CO	Natural Gas	8760	0.0224 lb/mmBtu		42.1	9.3	40.6	0610029-004-AC (PSD-FL-152C)	E.7

Notes for EU 005:

a, b Tons per year and equivalent emissions based on 67% capacity factor for natural gas firing, 33% capacity factor number 2 fuel oil firing, based on 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas.

Notes:

¹ The "Equivalent Emissions" listed are for informational purposes only. [Rule 62-213.205, F.A.C.]

NA = not applicable

Table 2-1, Summary of Compliance Requirements

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emissions Unit		Brief Description					
001		Fossil Fuel Steam Generator, Unit 1, rated at 13 MW.					
002		Fossil Fuel Steam Generator, Unit 2, rated at 17 MW.					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date ¹	Minimum Compliance Test Duration	CMS ²	See Permit Condition(s)
VE	Oil, Natural Gas	DEP Method 9	Annual	August 1st	1 hour	No	A.10, B.10
PM, SO₂	Oil	Fuel Sampling & Analysis	As Received			No	A.8 & A.9, B.8 & B.9

Emissions Unit		Brief Description					
003		Fossil Fuel Steam Generator, Unit 3, rated at 34 MW.					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date ¹	Minimum Compliance Test Duration	CMS ²	See Permit Condition(s)
VE	Oil, Natural Gas	DEP Method 9	Annual	August 1st	1 hour	No	C.13
PM	Oil, Natural Gas	EPA Test Methods 17, 5, 5B, or 5F	Annual	August 1st	3 hours	No	C.9, C.13
SO₂	Oil, Natural Gas	Fuel Sampling & Analysis	Per 40 CFR 75, Appendix D			No	C.10, C.11, C.12

Table 2-1, Continued

Emissions Unit		Brief Description					
004		Fossil Fuel Steam Generator, Unit 4, rated at 56 MW.					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date ¹	Minimum Compliance Test Duration	CMS ²	See Permit Condition(s)
VE	Oil, Natural Gas	EPA Method 9	Annual	August 1st	1 hour	Yes	D.8
PM	Oil, Natural Gas	EPA Test Methods 5 or 17	Annual	August 1st	3 hours	No	D.8
SO ₂	Oil, Natural Gas	Fuel Sampling & Analysis	Per 40 CFR 75, Appendix D			No	D.7
NO _x	Oil, Natural Gas	EPA Test Methods 7, 7A, 7C, 7D, or 7E	Annual	August 1st	3 hours	Yes	D.8

Table 2-1, Continued

Emissions Unit		Brief Description					
005		Combined Cycle Gas Turbine, Unit 5, rated at 38 MW.					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date ¹	Minimum Compliance Test Duration	CMS ²	See Permit Condition(s)
VE	No 2 Fuel Oil, Natural Gas	EPA Method 9	Annual	August 1st	1 hour	No	E.8
SO ₂	"	Fuel Sampling & Analysis	Per 40 CFR 75, Appendix D			Yes*	E.11, E.12
NO _x	"	EPA Test Method 20	Annual	August 1st	3 hours	Yes	E.8
PM ₁₀	"	EPA Test Methods 5 or 17	Prior to Renewal		3 hours	No	E.9
VOC	"	EPA Test Method 25A	Only if CO test fails			No	E.9
CO	"	EPA Test Method 10	Prior to Renewal			No	E.9

Notes for EU 005:

* Continuous monitoring of fuel consumption required.

Notes:

¹ Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.

² CMS = continuous monitoring system

See also Section F for general testing requirements.

City of Vero Beach
City of Vero Beach Municipal Utilities
Facility ID No.: 0610029
Indian River County

COMPLIANCE ASSURANCE MONITORING PLAN

Unit 5 Combined Cycle Gas Turbine

Emissions Unit -005

005	Combined Cycle Gas Turbine, Unit 5, rated at 38 MW, 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas, capable of burning any combination of, number 2 fuel oil, and natural gas, with emissions exhausted through a 125 ft. stack.
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I. Background

A. Emissions Unit

Description:	Combined Cycle Gas Turbine
Identification:	Emission Unit ID No. 005
Stack designation:	HRSO Stack
Facility ID No.	0610029
Facility:	City of Vero Beach Municipal Utilities Vero Beach, Florida

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	BACT
Regulated pollutants:	Nitrogen Oxides (NO _x)
Emission limit:	42 ppmvd at 15% O ₂
Monitoring requirements in permit:	40 CFR Part 75 CEM

C. Control Technology: Water Injection

II. Monitoring Approach

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table 1.

III. Monitoring Approach Justification

A. Background

This facility consists of 5 regulated emission units that consist of 4 fossil fuel steam generators (Units 1-4) and a combined cycle gas turbine (Unit 5). Unit 5 is rated at a 38 MW with heat inputs of 414 MMBtu/hr when firing natural gas and 455 MMBtu/hr when firing distillate oil. Emissions of NOx are controlled using dry low-NOx (DLN) combustors when firing natural gas and water injection when firing fuel oil. The NOx emission limits are 25 ppmvd corrected to 15% oxygen when firing natural gas and 42 ppmvd corrected to 15% oxygen when firing distillate oil. The emission unit is authorized to co-fire natural gas and distillate oil with a prorated emission rate based on heat input of fuel. The use of DLN when firing only natural gas is an inherent process control and not a "control device" defined under the CAM regulations in 40 CFR Part 64, Section 64.1. The use of water injection when firing oil, or using water injection when co-firing natural gas and oil, is considered a control device under the Part 64 regulations and CAM would apply. This CAM Plan applies to the use of water injection.

B. Rationale for Selection of Performance Indicators

The emission unit is equipped with a CEM meeting the performance requirements of 40 CFR Part 75. Pursuant to 40 CFR 64.3(d) the use of CEMs to meet the requirements of 40 CFR Part 64 is required if a CEM is required pursuant to other authority under the Act or state law. Since a CEM to meet the requirements of 40 CFR Part 75 has been installed and is also required to provide monitoring data pursuant to the Title V permit. A 40 CFR Part 75 CEM presumptively meets the requirements of 40 CFR Part 64.

C. Rationale for Selection of Indicator Ranges

The indicator ranges and averaging times proposed for the indicator ranges are consistent with the emission limiting standards and monitoring requirements. The indicator range will be NOx emissions of 42 ppmvd corrected to 15% oxygen when firing distillate oil. If co-firing natural gas with distillate oil, a prorated, value calculated based on the heat input of natural gas and distillate oil will be used as the indicator range.

TABLE 1. COMPLIANCE ASSURANCE MONITORING APPROACH, UNIT 5 CITY OF VERO BEACH

	Indicator No. 1	
I. Indicator Measurement Approach	NOx emission rate.	
	NOx emission rate will be monitored by 40 CFR Part 75 CEM.	
II. Indicator Range	An excursion is defined as a NOx emission rate of 42 ppmvd corrected to 15% oxygen on a one-hour average basis, excluding periods of startup, shutdown and malfunction; excursions trigger an inspection and corrective action. The NOx emission rate will be prorated if co-firing occurs.	
III. Performance Criteria	The CEMs is located in the exhaust stack and provides a direct measurement of the NOx concentration.	
A. Data Representativeness		
B. Verification of Operational Status	Not applicable	
C. QA/QC Practices and Criteria	QA/QC practices will follow the requirements of 40 CFR Part 75	
D. Monitoring Frequency	Measured continuously.	
Data Collection Procedure	Recorded pursuant to 40 CFR Part 75.	
Averaging Period	One-hour average.	

APPENDIX CAM

Compliance Assurance Monitoring Requirements

Compliance Assurance Monitoring Requirements

Pursuant to Rule 62-213.440(1)(b)1.a., F.A.C., the CAM plans that are included in this appendix contain the monitoring requirements necessary to satisfy 40 CFR 64. Conditions 1. – 17. are generic conditions applicable to all emissions units that are subject to the CAM requirements. Specific requirements related to each emissions unit are contained in the attached tables, as submitted by the applicant and approved by the Department.

40 CFR 64.6 Approval of Monitoring.

1. The attached CAM plan(s), as submitted by the applicant, is/are approved for the purposes of satisfying the requirements of 40 CFR 64.3.
[40 CFR 64.6(a)]
2. The attached CAM plan(s) include the following information:
 - (i) The indicator(s) to be monitored (such as temperature, pressure drop, emissions, or similar parameter);
 - (ii) The means or device to be used to measure the indicator(s) (such as temperature measurement device, visual observation, or CEMS); and
 - (iii) The performance requirements established to satisfy 40 CFR 64.3(b) or (d), as applicable.[40 CFR 64.6(c)(1)]
3. The attached CAM plan(s) describe the means by which the owner or operator will define an exceedance of the permitted limits or an excursion from the stated indicator ranges and averaging periods for purposes of responding to (see **CAM Conditions 5. - 9.**) and reporting exceedances or excursions (see **CAM Conditions 10. – 14.**).
[40 CFR 64.6(c)(2)]
4. The permittee is required to conduct the monitoring specified in the attached CAM plan(s) and shall fulfill the obligations specified in the conditions below (see **CAM Conditions 5. - 17.**).
[40 CFR 64.6(c)(3)]

40 CFR 64.7 Operation of Approved Monitoring.

5. Commencement of operation. The owner or operator shall conduct the monitoring required under this appendix upon the effective date of this Title V permit.
[40 CFR 64.7(a)]
6. Proper maintenance. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

[40 CFR 64.7(b)]

7. Continued operation. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR 64.7(c)]

8. Response to excursions or exceedances.
 - a. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions, if allowed by this permit). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
 - b. Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

[40 CFR 64.7(d)(1) & (2)]

9. Documentation of need for improved monitoring. If the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring

changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[40 CFR 64.7(e)]

40 CFR 64.8 Quality Improvement Plan (QIP) Requirements.

10. Based on the results of a determination made under **CAM Condition 8.a.**, above, the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with **CAM Condition 4.**, an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, may require the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.

[40 CFR 64.8(a)]

11. Elements of a QIP:

a. The owner or operator shall maintain a written QIP, if required, and have it available for inspection.

b. The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:

(i) Improved preventive maintenance practices.

(ii) Process operation changes.

(iii) Appropriate improvements to control methods.

(iv) Other steps appropriate to correct control performance.

(v) More frequent or improved monitoring (only in conjunction with one or more steps under **CAM Condition 11.b(i)** through **(iv)**, above).

[40 CFR 64.8(b)]

12. If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the permitting authority if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

[40 CFR 64.8(c)]

13. Following implementation of a QIP, upon any subsequent determination pursuant to **CAM Condition 8.b.**, the permitting authority may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:

a. Failed to address the cause of the control device performance problems; or

b. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[40 CFR 64.8(d)]

14. Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.
[40 CFR 64.8(e)]

40 CFR 64.9 Reporting And Recordkeeping Requirements.

15. General reporting requirements.

- a. On and after the date specified in **CAM Condition 5.** by which the owner or operator must use monitoring that meets the requirements of this appendix, the owner or operator shall submit monitoring reports semi-annually to the permitting authority in accordance with Rule 62-213.440(1)(b)3.a., F.A.C.
- b. A report for monitoring under this part shall include, at a minimum, the information required under Rule 62-213.440(1)(b)3.a., F.A.C., and the following information, as applicable:
- (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
 - (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
 - (iii) A description of the actions taken to implement a QIP during the reporting period as specified in **CAM Conditions 10.** through **14.** Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 CFR 64.9(a)]

16. General recordkeeping requirements.

- a. The owner or operator shall comply with the recordkeeping requirements specified in Rule 62-213.440(1)(b)2., F.A.C. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to **CAM Conditions 10.** through **14.** and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).
- b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 CFR 64.9(b)]

40 CFR 64.10 Savings Provisions.

17. It should be noted that nothing in this appendix shall:
- a. Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this appendix shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under Title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.
 - b. Restrict or abrogate the authority of the Administrator or the permitting authority to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.
 - c. Restrict or abrogate the authority of the Administrator or permitting authority to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.

[40 CFR 64.10]

Updated 4/27/06

Source [44 FR 52798, Sept. 10, 1979, as amended at 52 FR 42434, Nov. 5, 1987; 65 FR 61759, Oct. 17, 2000; 69 FR 41346, July 8, 2004]

Subpart GG-Standards of Performance for Stationary Gas Turbines

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, based on the lower heating value of the fuel fired.

(b) Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of this part except as provided in paragraphs (e) and (j) of § 60.332.

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Stationary gas turbine* means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.

(b) *Simple cycle gas turbine* means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.

(c) *Regenerative cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine.

(d) *Combined cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.

(e) *Emergency gas turbine* means any stationary gas turbine which operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation.

(f) *Ice fog* means an atmospheric suspension of highly reflective ice crystals.

(g) *ISO standard day conditions* means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(h) *Efficiency* means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.

APPENDIX GG

- (i) *Peak load* means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.
- (j) *Base load* means the load level at which a gas turbine is normally operated.
- (k) *Fire-fighting turbine* means any stationary gas turbine that is used solely to pump water for extinguishing fires.
- (l) *Turbines employed in oil/gas production or oil/gas transportation* means any stationary gas turbine used to provide power to extract crude oil/natural gas from the earth or to move crude oil/natural gas, or products refined from these substances through pipelines.
- (m) A *Metropolitan Statistical Area* or *MSA* as defined by the Department of Commerce.
- (n) *Offshore platform gas turbines* means any stationary gas turbine located on a platform in an ocean.
- (o) *Garrison facility* means any permanent military installation.
- (p) *Gas turbine model* means a group of gas turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.
- (q) *Electric utility stationary gas turbine* means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.
- (r) *Emergency fuel* is a fuel fired by a gas turbine only during circumstances, such as natural gas supply curtailment or breakdown of delivery system, that make it impossible to fire natural gas in the gas turbine.
- (s) *Unit operating hour* means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.
- (t) Excess emissions means a specified averaging period over which either:
- (1) The NO_x emissions are higher than the applicable emission limit in Sec. 60.332;
 - (2) The total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in Sec. 60.333; or
 - (3) The recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.
- (u) *Natural gas* means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Equivalents of this in other units are as follows: 0.068 weight percent total sulfur, 680 parts per million by weight (ppmw) total sulfur, and 338 parts per million by volume (ppmv) at 20 degrees Celsius total sulfur. Additionally, natural gas must either be composed of at least 70 percent methane by

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volume or have a gross calorific value between 950 and 1100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

(v) *Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

(w) *Lean premix stationary combustion turbine* means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture for combustion in the combustor. Mixing may occur before or in the combustion chamber. A unit which is capable of operating in both lean premix and diffusion flame modes is considered a lean premix stationary combustion turbine when it is in the lean premix mode, and it is considered a diffusion flame stationary combustion turbine when it is in the diffusion flame mode.

(x) *Diffusion flame stationary combustion turbine* means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition. A unit which is capable of operating in both lean premix and diffusion flame modes is considered a lean premix stationary combustion turbine when it is in the lean premix mode, and it is considered a diffusion flame stationary combustion turbine when it is in the diffusion flame mode.

(y) *Unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

§ 60.332 Standard for nitrogen oxides.

(a) On and after the date on which the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b), (c), and (d) of this section shall comply with one of the following, except as provided in paragraphs (e), (f), (g), (h), (i), (j), (k), and (l) of this section.

(1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0075 \frac{(14.4)}{Y} + F$$

where:

STD = allowable ISO corrected (if required as given in Sec. 60.335(b)(1)) NO_x emission concentration (percent by volume at 15 percent oxygen and on a dry basis),
Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and

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F = NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(4) of this section.

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150 \frac{(14.4)}{Y} + F$$

where:

STD = allowable ISO corrected (if required as given in Sec. 60.335(b)(1)) NO_x emission concentration (percent by volume at 15 percent oxygen and on a dry basis),

Y = manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and

F = NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(4) of this section.

(3) The use of F in paragraphs (a)(1) and (2) of this section is optional. That is, the owner or operator may choose to apply a NO_x allowance for fuel-bound nitrogen and determine the appropriate F-value in accordance with paragraph (a)(4) of this section or may accept an F-value of zero.

(4) If the owner or operator elects to apply a NO_x emission allowance for fuel-bound nitrogen, F shall be defined according to the nitrogen content of the fuel during the most recent performance test required under Sec. 60.8 as follows:

Fuel-bound nitrogen (% by weight)	F (NO _x % by volume)
N ≤ 0.015.....	0
0.015 < N ≤ 0.1.....	0.04(N)
0.1 < N ≤ 0.25.....	0.004 + 0.0067(N - 0.1)
N > 0.25.....	0.005

Where:

N = the nitrogen content of the fuel (percent by weight), or:

Manufacturers may develop and submit to EPA custom fuel-bound nitrogen allowances for each gas turbine model they manufacture. These fuel-bound nitrogen allowances shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by Sec. 60.8. Notices of approval of custom fuel-bound nitrogen allowances will be published in the Federal Register.

(b) Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

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(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

(d) Stationary gas turbines with a manufacturer's rated base load at ISO conditions of 30 megawatts or less except as provided in § 60.332(b) shall comply with paragraph (a)(2) of this section.

(e) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired and that have commenced construction prior to October 3, 1982 are exempt from paragraph (a) of this section.

(f) Stationary gas turbines using water or steam injection for control of NO_x emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

(g) Emergency gas turbines, military gas turbines for use in other than a garrison facility, military gas turbines installed for use as military training facilities, and fire fighting gas turbines are exempt from paragraph (a) of this section.

(h) Stationary gas turbines engaged by manufacturers in research and development of equipment for both gas turbine emission control techniques and gas turbine efficiency improvements are exempt from paragraph (a) on a case-by-case basis as determined by the Administrator.

(i) Exemptions from the requirements of paragraph (a) of this section will be granted on a case-by-case basis as determined by the Administrator in specific geographical areas where mandatory water restrictions are required by governmental agencies because of drought conditions. These exemptions will be allowed only while the mandatory water restrictions are in effect.

(j) Stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour that commenced construction, modification, or reconstruction between the dates of October 3, 1977, and January 27, 1982, and were required in the September 10, 1979, Federal Register (44 FR 52792) to comply with paragraph (a)(1) of this section, except electric utility stationary gas turbines, are exempt from paragraph (a) of this section.

(k) Stationary gas turbines with a heat input greater than or equal to 10.7 gigajoules per hour (10 million Btu/hour) when fired with natural gas are exempt from paragraph (a)(2) of this section when being fired with an emergency fuel.

(l) Regenerative cycle gas turbines with a heat input less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) are exempt from paragraph (a) of this section.

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

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(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8000 ppmw).

§ 60.334 Monitoring of operations.

(a) Except as provided in paragraph (b) of this section, the owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water or steam injection to control NO_x emissions shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine.

(b) The owner or operator of any stationary gas turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which uses water or steam injection to control NO_x emissions may, as an alternative to operating the continuous monitoring system described in paragraph (a) of this section, install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NO_x and O₂ monitors. As an alternative, a CO₂ monitor may be used to adjust the measured NO_x concentrations to 15 percent O₂ by either converting the CO₂ hourly averages to equivalent O₂ concentrations using Equation F-14a or F-14b in appendix F to part 75 of this chapter and making the adjustments to 15 percent O₂, or by using the CO₂ readings directly to make the adjustments, as described in Method 20. If the option to use a CEMS is chosen, the CEMS shall be installed, certified, maintained and operated as follows:

(1) Each CEMS must be installed and certified according to PS 2 and 3 (for diluent) of 40 CFR part 60, appendix B, except the 7-day calibration drift is based on unit operating days, not calendar days. Appendix F, Procedure 1 is not required. The relative accuracy test audit (RATA) of the NO_x and diluent monitors may be performed individually or on a combined basis, i.e., the relative accuracy tests of the CEMS may be performed either:

(i) On a ppm basis (for NO_x) and a percent O₂ basis for oxygen; or

(ii) On a ppm at 15 percent O₂ basis; or

(iii) On a ppm basis (for NO_x) and a percent CO₂ basis (for a CO₂ monitor that uses the procedures in Method 20 to correct the NO_x data to 15 percent O₂).

(2) As specified in Sec. 60.13(e)(2), during each full unit operating hour, each monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required to validate the hour.

(3) For purposes of identifying excess emissions, CEMS data must be reduced to hourly averages as specified in Sec. 60.13(h).

(i) For each unit operating hour in which a valid hourly average, as described in paragraph (b)(2) of this section, is obtained for both NO_x and diluent, the data acquisition and handling system must calculate and record the hourly NO_x emissions in the

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units of the applicable NO_x emission standard under Sec. 60.332(a), i.e., percent NO_x by volume, dry basis, corrected to 15 percent O₂ and International Organization for Standardization (ISO) standard conditions (if required as given in Sec. 60.335(b)(1)). For any hour in which the hourly average O₂ concentration exceeds 19.0 percent O₂, a diluent cap value of 19.0 percent O₂ may be used in the emission calculations.

(ii) A worst case ISO correction factor may be calculated and applied using historical ambient data. For the purpose of this calculation, substitute the maximum humidity of ambient air (H_o), minimum ambient temperature (T_a), and minimum combustor inlet absolute pressure (P_o) into the ISO correction equation.

(iii) If the owner or operator has installed a NO_x CEMS to meet the requirements of part 75 of this chapter, and is continuing to meet the ongoing requirements of part 75 of this chapter, the CEMS may be used to meet the requirements of this section, except that the missing data substitution methodology provided for at 40 CFR part 75, subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in Sec. 60.7(c).

(c) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use steam or water injection to control NO_x emissions, the owner or operator may, but is not required to, for purposes of determining excess emissions, use a CEMS that meets the requirements of paragraph (b) of this section. Also, if the owner or operator has previously submitted and received EPA, State, or local permitting authority approval of a procedure for monitoring compliance with the applicable NO_x emission limit under Sec. 60.332, that approved procedure may continue to be used.

(d) The owner or operator of any new turbine constructed after July 8, 2004, and which uses water or steam injection to control NO_x emissions may elect to use either the requirements in paragraph (a) of this section for continuous water or steam to fuel ratio monitoring or may use a NO_x CEMS installed, certified, operated, maintained, and quality-assured as described in paragraph (b) of this section.

(e) The owner or operator of any new turbine that commences construction after July 8, 2004, and which does not use water or steam injection to control NO_x emissions, may, but is not required to, elect to use a NO_x CEMS installed, certified, operated, maintained, and quality-assured as described in paragraph (b) of this section. Other acceptable monitoring approaches include periodic testing approved by EPA or the State or local permitting authority or continuous parameter monitoring as described in paragraph (f) of this section.

(f) The owner or operator of a new turbine that commences construction after July 8, 2004, which does not use water or steam injection to control NO_x emissions may, but is not required to, perform continuous parameter monitoring as follows:

(1) For a diffusion flame turbine without add-on selective catalytic reduction controls (SCR), the owner or operator shall define at least four parameters indicative of the unit's NO_x formation characteristics and shall monitor these parameters continuously.

(2) For any lean premix stationary combustion turbine, the owner or operator shall continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_x mode.

(3) For any turbine that uses SCR to reduce NO_x emissions, the owner or operator shall continuously monitor appropriate parameters to verify the proper operation of the emission controls.

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(4) For affected units that are also regulated under part 75 of this chapter, if the owner or operator elects to monitor NO_x emission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in Sec. 75.19 of this chapter, the requirements of this paragraph (f) may be met by performing the parametric monitoring described in section 2.3 of appendix E or in Sec. 75.19(c)(1)(iv)(H) of this chapter.

(g) The steam or water to fuel ratio or other parameters that are continuously monitored as described in paragraphs (a), (d) or (f) of this section shall be monitored during the performance test required under Sec. 60.8, to establish acceptable values and ranges. The owner or operator may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. The owner or operator shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_x emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan. For affected units that are also subject to part 75 of this chapter and that use the low mass emissions methodology in Sec. 75.19 of this chapter or the NO_x emission measurement methodology in appendix E to part 75, the owner or operator may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in Sec. 75.19 (e)(5) or in section 2.3 of appendix E and section 1.3.6 of appendix B to part 75 of this chapter.

(h) The owner or operator of any stationary gas turbine subject to the provisions of this subpart:

(1) Shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in paragraph (h)(3) of this section. The sulfur content of the fuel must be determined using total sulfur methods described in Sec. 60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86 (all of which are incorporated by reference-see Sec. 60.17), which measure the major sulfur compounds may be used; and

(2) Shall monitor the nitrogen content of the fuel combusted in the turbine, if the owner or operator claims an allowance for fuel bound nitrogen (i.e., if an F-value greater than zero is being or will be used by the owner or operator to calculate STD in Sec. 60.332). The nitrogen content of the fuel shall be determined using methods described in Sec. 60.335(b)(9) or an approved alternative.

(3) Notwithstanding the provisions of paragraph (h)(1) of this section, the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in Sec. 60.331(u), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring. The owner or operator shall use one of the following sources of information to make the required demonstration:

(i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

(ii) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

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(4) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the owner or operator may, without submitting a special petition to the Administrator, continue monitoring on this schedule.

(i) The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows:

(1) Fuel oil. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). If an emission allowance is being claimed for fuel-bound nitrogen, the nitrogen content of the oil shall be determined and recorded once per unit operating day.

(2) Gaseous fuel. Any applicable nitrogen content value of the gaseous fuel shall be determined and recorded once per unit operating day. For owners and operators that elect not to demonstrate sulfur content using options in paragraph (h)(3) of this section, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.

(3) Custom schedules. Notwithstanding the requirements of paragraph (i)(2) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (i)(3)(i) and (i)(3)(ii) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in Sec. 60.333.

(i) The two custom sulfur monitoring schedules set forth in paragraphs (i)(3)(i)(A) through (D) and in paragraph (i)(3)(ii) of this section are acceptable, without prior Administrative approval:

(A) The owner or operator shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in paragraph (i)(3)(i)(B), (C), or (D) of this section, as applicable.

(B) If none of the 30 daily measurements of the fuel's total sulfur content exceeds 0.4 weight percent (4000 ppmw), subsequent sulfur content monitoring may be performed at 12 month intervals. If any of the samples taken at 12-month intervals has a total sulfur content between 0.4 and 0.8 weight percent (4000 and 8000 ppmw), follow the procedures in paragraph (i)(3)(i)(C) of this section. If any measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section.

(C) If at least one of the 30 daily measurements of the fuel's total sulfur content is between 0.4 and 0.8 weight percent (4000 and 8000 ppmw), but none exceeds 0.8 weight percent (8000 ppmw), then:

(1) Collect and analyze a sample every 30 days for three months. If any sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section. Otherwise, follow the procedures in paragraph (i)(3)(i)(C)(2) of this section.

(2) Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section. Otherwise, follow the procedures in paragraph (i)(3)(i)(C)(3) of this section.

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(3) Begin monitoring at 12-month intervals. If any sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section. Otherwise, continue to monitor at this frequency.

(D) If a sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), immediately begin daily monitoring according to paragraph (i)(3)(i)(A) of this section. Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than 0.8 weight percent (8000 ppmw), are obtained. At that point, the applicable procedures of paragraph (i)(3)(i)(B) or (C) of this section shall be followed.

(ii) The owner or operator may use the data collected from the 720-hour sulfur sampling demonstration described in section 2.3.6 of appendix D to part 75 of this chapter to determine a custom sulfur sampling schedule, as follows:

(A) If the maximum fuel sulfur content obtained from the 720 hourly samples does not exceed 20 grains/100 scf (i.e., the maximum total sulfur content of natural gas as defined in Sec. 60.331(u)), no additional monitoring of the sulfur content of the gas is required, for the purposes of this subpart.

(B) If the maximum fuel sulfur content obtained from any of the 720 hourly samples exceeds 20 grains/100 scf, but none of the sulfur content values (when converted to weight percent sulfur) exceeds 0.4 weight percent (4000 ppmw), then the minimum required sampling frequency shall be one sample at 12 month intervals.

(C) If any sample result exceeds 0.4 weight percent sulfur (4000 ppmw), but none exceeds 0.8 weight percent sulfur (8000 ppmw), follow the provisions of paragraph (i)(3)(i)(C) of this section.

(D) If the sulfur content of any of the 720 hourly samples exceeds 0.8 weight percent (8000 ppmw), follow the provisions of paragraph (i)(3)(i)(D) of this section.

(j) For each affected unit that elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the owner or operator shall submit reports of excess emissions and monitor downtime, in accordance with Sec. 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under Sec. 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows:

(1) Nitrogen oxides.

(i) For turbines using water or steam to fuel ratio monitoring:

(A) An excess emission shall be any unit operating hour for which the average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with Sec. 60.332, as established during the performance test required in Sec. 60.8. Any unit operating hour in which no water or steam is injected into the turbine shall also be considered an excess emission.

(B) A period of monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.

(C) Each report shall include the average steam or water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during each excess emission. You do not have to report ambient conditions if you opt to use the worst case ISO correction factor as specified in Sec. 60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of Sec. 60.335(b)(1).

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(ii) If the owner or operator elects to take an emission allowance for fuel bound nitrogen, then excess emissions and periods of monitor downtime are as described in paragraphs (j)(1)(ii)(A) and (B) of this section.

(A) An excess emission shall be the period of time during which the fuel-bound nitrogen (N) is greater than the value measured during the performance test required in Sec. 60.8 and used to determine the allowance. The excess emission begins on the date and hour of the sample which shows that N is greater than the performance test value, and ends with the date and hour of a subsequent sample which shows a fuel nitrogen content less than or equal to the performance test value.

(B) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour that a required sample is taken, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

(iii) For turbines using NO_x and diluent CEMS:

(A) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO_x concentration exceeds the applicable emission limit in Sec. 60.332(a)(1) or (2). For the purposes of this subpart, a "4-hour rolling average NO_x concentration" is the arithmetic average of the average NO_x concentration measured by the CEMS for a given hour (corrected to 15 percent O₂ and, if required under Sec. 60.335(b)(1), to ISO standard conditions) and the three unit operating hour average NO_x concentrations immediately preceding that unit operating hour.

(B) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO_x concentration or diluent (or both).

(C) Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. You do not have to report ambient conditions if you opt to use the worst case ISO correction factor as specified in Sec. 60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of Sec. 60.335(b)(1).

(iv) For owners or operators that elect, under paragraph (f) of this section, to monitor combustion parameters or parameters that document proper operation of the NO_x emission controls:

(A) An excess emission shall be a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

(B) A period of monitor downtime shall be a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

(2) Sulfur dioxide. If the owner or operator is required to monitor the sulfur content of the fuel under paragraph (h) of this section:

(i) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(ii) If the option to sample each delivery of fuel oil has been selected, the owner or operator shall immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur

content of a delivery exceeds 0.8 weight percent. The owner or operator shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to paragraph (j)(2)(i) of this section. When all of the fuel from the delivery has been burned, the owner or operator may resume using the as-delivered sampling option.

(iii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.

(3) *Ice fog.* Each period during which an exemption provided in § 60.332(f) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(4) *Emergency fuel.* Each period during which an exemption provided in § 60.332(k) is in effect shall be included in the report required in § 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported.

(5) All reports required under Sec. 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period.

Sec. 60.335 Test methods and procedures.

(a) The owner or operator shall conduct the performance tests required in Sec. 60.8, using either

(1) EPA Method 20,

(2) ASTM D6522-00 (incorporated by reference, see Sec. 60.17), or

(3) EPA Method 7E and either EPA Method 3 or 3A in appendix A to this part, to determine NO_x and diluent concentration.

(4) Sampling traverse points are to be selected following Method 20 or Method 1, (non-particulate procedures) and sampled for equal time intervals. The sampling shall be performed with a traversing single-hole probe or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(5) Notwithstanding paragraph (a)(4) of this section, the owner or operator may test at few points than are specified in Method 1 or Method 20 if the following conditions are met:

(i) You may perform a stratification test for NO_x and diluent pursuant to

(A) [Reserved]

(B) The procedures specified in section 6.5.6.1(a) through (e) appendix A to part 75 of this chapter.

(ii) Once the stratification sampling is completed, the owner or operator may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NO_x concentrations, normalized to 15 percent O₂, is within 10 percent of the mean normalized concentration for all traverse points, then you may use 3 points (located either 16.7, 50.0, and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The 3 points shall be located along the measurement line that exhibited the highest average normalized NO_x concentration during the stratification test; or

APPENDIX GG

(B) If each of the individual traverse point NO_x concentrations, normalized to 15 percent O₂, is within 5 percent of the mean normalized concentration for all traverse points, then you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid.

(6) Other acceptable alternative reference methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the applicable nitrogen oxides emission limitation in Sec. 60.332 and shall meet the performance test requirements of Sec. 60.8 as follows:

(1) For each run of the performance test, the mean nitrogen oxides emission concentration (NO_{xo}) corrected to 15 percent O₂ shall be corrected to ISO standard conditions using the following equation. Notwithstanding this requirement, use of the ISO correction equation is optional for: Lean premix stationary combustion turbines; units used in association with heat recovery steam generators (HRSG) equipped with duct burners; and units equipped with add-on emission control devices:

$$NO_x = (NO_{x_o})(P_r/P_o)^{0.5} e^{19(H_o - 0.00633)} (288[\text{deg}]K/T_a)^{1.53}$$

Where:

NO_x = emission concentration of NO_x at 15 percent O₂ and ISO standard ambient conditions, ppm by volume, dry basis,

NO_{xo} = mean observed NO_x concentration, ppm by volume, dry basis, at 15 percent O₂,

P_r = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg,

P_o = observed combustor inlet absolute pressure at test, mm Hg,

H_o = observed humidity of ambient air, g H₂O/g air,

e = transcendental constant, 2.718, and

T_a = ambient temperature, [deg]K.

(2) The 3-run performance test required by Sec. 60.8 must be performed within 5 percent at 30, 50, 75, and 90-to-100 percent of peak load or at four evenly-spaced load points in the normal operating range of the gas turbine, including the minimum point in the operating range and 90-to-100 percent of peak load, or at the highest achievable load point if 90-to-100 percent of peak load cannot be physically achieved in practice. If the turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel. Notwithstanding these requirements, performance testing is not required for any emergency fuel (as defined in Sec. 60.331).

(3) For a combined cycle turbine system with supplemental heat (duct burner), the owner or operator may elect to measure the turbine NO_x emissions after the duct burner rather than directly after the turbine. If the owner or operator elects to use this alternative sampling location, the applicable NO_x emission limit in Sec. 60.332 for the combustion turbine must still be met.

(4) If water or steam injection is used to control NO_x with no additional post-combustion NO_x control and the owner or operator chooses to monitor the steam or water to fuel ratio in accordance with Sec. 60.334(a), then that monitoring system must be operated concurrently with each EPA Method 20, ASTM D6522-00 (incorporated by reference, see Sec. 60.17), or EPA Method 7E run and shall be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable Sec. 60.332 NO_x emission limit.

APPENDIX GG

(5) If the owner operator elects to claim an emission allowance for fuel bound nitrogen as described in Sec. 60.332, then concurrently with each reference method run, a representative sample of the fuel used shall be collected and analyzed, following the applicable procedures described in Sec. 60.335(b)(9). These data shall be used to determine the maximum fuel nitrogen content for which the established water (or steam) to fuel ratio will be valid.

(6) If the owner or operator elects to install a CEMS, the performance evaluation of the CEMS may either be conducted separately (as described in paragraph (b)(7) of this section) or as part of the initial performance test of the affected unit.

(7) If the owner or operator elects to install and certify a NO_x CEMS under Sec. 60.334(e), then the initial performance test required under Sec. 60.8 may be done in the following alternative manner:

(i) Perform a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load.

(ii) Use the test data both to demonstrate compliance with the applicable NO_x emission limit under Sec. 60.332 and to provide the required reference method data for the RATA of the CEMS described under Sec. 60.334(b).

(iii) The requirement to test at three additional load levels is waived.

(8) If the owner or operator elects under Sec. 60.334(f) to monitor combustion parameters or parameters indicative of proper operation of NO_x emission controls, the appropriate parameters shall be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in Sec. 60.334(g).

(9) To determine the fuel bound nitrogen content of fuel being fired (if an emission allowance is claimed for fuel bound nitrogen), the owner or operator may use equipment and procedures meeting the requirements of:

(i) For liquid fuels, ASTM D2597-94 (Reapproved 1999), D6366-99, D4629-02, D5762-02 (all of which are incorporated by reference, see Sec. 60.17); or

(ii) For gaseous fuels, shall use analytical methods and procedures that are accurate to within 5 percent of the instrument range and are approved by the Administrator.

(10) If the owner or operator is required under Sec. 60.334(i)(1) or (3) to periodically determine the sulfur content of the fuel combusted in the turbine, a minimum of three fuel samples shall be collected during the performance test. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129-00, D2622-98, D4294-02, D1266-98, D5453-00 or D1552-01 (all of which are incorporated by reference, see Sec. 60.17); or

(ii) For gaseous fuels, ASTM D1072-80, 90 (Reapproved 1994); D3246-81, 92, 96; D4468-85 (Reapproved 2000); or D6667-01 (all of which are incorporated by reference, see Sec. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Administrator.

(11) The fuel analyses required under paragraphs (b)(9) and (b)(10) of this section may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

(c) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

APPENDIX GG

(1) Instead of using the equation in paragraph (b)(1) of this section, manufacturers may develop ambient condition correction factors to adjust the nitrogen oxides emission level measured by the performance test as provided in Sec. 60.8 to ISO standard day conditions.

Friday, Barbara

To: jlee@covb.org; 'KKosky@Golder.com'; JStevens@covb.org; 'Little.James@epamail.epa.gov'; Forney.Kathleen@epamail.epa.gov; Bradner, James

Cc: Heron, Teresa

Subject: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

Attachments: Appendix GG.pdf; 0610029-007_CAM Plan.pdf; 0610029-007_CAM.pdf; 0610029-007_draft.pdf; 0610029-007_SOB.pdf; 0610029-007CoverLetter.pdf; 0610029-007NoticeofIntent.pdf

Dear Sir/Madam:

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The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

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Thank you,

DEP, Bureau of Air Regulation

9/21/2007

Friday, Barbara

From: System Administrator
To: Bradner, James
Sent: Friday, September 21, 2007 2:14 PM
Subject: Delivered:DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

Your message

To: 'jlee@covb.org'; 'KKosky@Golder.com'; 'JStevens@covb.org'; 'Little.James@epamail.epa.gov'; 'Forney.Kathleen@epamail.epa.gov'; Bradner, James
Cc: Heron, Teresa
Subject: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant
Sent: 9/21/2007 2:14 PM

was delivered to the following recipient(s):

Bradner, James on 9/21/2007 2:14 PM

Friday, Barbara

From: Exchange Administrator
Sent: Friday, September 21, 2007 2:14 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

Attachments: ATT333598.txt; DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant



ATT333598.txt
(357 B)



DRAFT Title V
Permit Renewal N...

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

jlee@covb.org
JStevens@covb.org

Friday, Barbara

From: Mail Delivery System [MAILER-DAEMON@mseive01.rtp.epa.gov]
Sent: Friday, September 21, 2007 2:13 PM
To: Friday, Barbara
Subject: Successful Mail Delivery Report

Attachments: Delivery report; Message Headers



Delivery report.txt
(721 B)



Message
Headers.txt (2 KB)

This is the mail system at host mseive01.rtp.epa.gov.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<Forney.Kathleen@epamail.epa.gov>: delivery via 127.0.0.1[127.0.0.1]:10025: 250
OK, sent 46F409A3_3537_48237_1

<Little.James@epamail.epa.gov>: delivery via 127.0.0.1[127.0.0.1]:10025: 250
OK, sent 46F409A3_3537_48237_1

Friday, Barbara

From: System Administrator
To: Heron, Teresa
Sent: Friday, September 21, 2007 2:17 PM
Subject: Delivered:DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

Your message

To: 'jlee@covb.org'; 'KKosky@Golder.com'; 'JStevens@covb.org'; 'Little.James@epamail.epa.gov'; 'Forney.Kathleen@epamail.epa.gov';
Bradner, James
Cc: Heron, Teresa
Subject: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant
Sent: 9/21/2007 2:14 PM

was delivered to the following recipient(s):

Heron, Teresa on 9/21/2007 2:16 PM

Friday, Barbara

From: Bradner, James
Sent: Friday, September 21, 2007 2:23 PM
To: Friday, Barbara
Subject: Re: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

Received, thanks.

----- Original Message -----

From: Friday, Barbara
To: 'jlee@covb.org' <jlee@covb.org>; 'KKosky@Golder.com' <KKosky@Golder.com>; 'JStevens@covb.org' <JStevens@covb.org>; 'Little.James@epamail.epa.gov' <Little.James@epamail.epa.gov>; 'Forney.Kathleen@epamail.epa.gov' <Forney.Kathleen@epamail.epa.gov>; Bradner, James
Cc: Heron, Teresa
Sent: Fri Sep 21 14:13:38 2007
Subject: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

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<blocked::http://www.adobe.com/products/acrobat/readstep.html> .

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Thank you,

DEP, Bureau of Air Regulation

Friday, Barbara

From: Bradner, James
To: Friday, Barbara
Sent: Friday, September 21, 2007 2:23 PM
Subject: Read: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

Your message

To: 'jlee@covb.org'; 'KKosky@Golder.com'; 'JStevens@covb.org'; 'Little.James@epamail.epa.gov'; 'Forney.Kathleen@epamail.epa.gov';
Bradner, James
Cc: Heron, Teresa
Subject: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant
Sent: 9/21/2007 2:14 PM

was read on 9/21/2007 2:23 PM.

Friday, Barbara

From: Mail Delivery System [MAILER-DAEMON@sophos.golder.com]
Sent: Friday, September 21, 2007 2:12 PM
To: Friday, Barbara
Subject: Successful Mail Delivery Report

Attachments: Delivery report; Message Headers



Delivery report.txt
(455 B)

Message
Headers.txt (2 KB)

This is the mail system at host sophos.golder.com.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<KKosky@Golder.com>: delivery via 127.0.0.1[127.0.0.1]:10025: 250 OK, sent
46F40984_7122_17_1

Friday, Barbara

From: Stevens, Jim [JStevens@covb.org]
Sent: Friday, September 21, 2007 2:55 PM
To: Friday, Barbara
Subject: RE: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

I acknowledge receipt of attached Title V Documents.

Jim Stevens

Director of Power Resources
Vero Beach Municipal Power Plant
Vero Beach, Florida 32961
Phone (772) 978 5051
Fax (772) 978 5090
Cell (772) 473 3202

-----Original Message-----

From: Friday, Barbara [mailto:Barbara.Friday@dep.state.fl.us]
Sent: Friday, September 21, 2007 2:14 PM
To: Lee, John; KKosky@Golder.com; Stevens, Jim; Little.James@epamail.epa.gov;
Forney.Kathleen@epamail.epa.gov; Bradner, James
Cc: Heron, Teresa
Subject: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

Dear Sir/Madam:

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DEP, Bureau of Air Regulation

9/24/2007

Friday, Barbara

From: Lee, John [JLee@covb.org]
To: Friday, Barbara
Sent: Friday, September 21, 2007 2:33 PM
Subject: Read: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

Your message

To: JLee@covb.org
Subject:

was read on 9/21/2007 2:33 PM.

Friday, Barbara

From: Stevens, Jim [JStevens@covb.org]
To: Friday, Barbara
Sent: Friday, September 21, 2007 2:53 PM
Subject: Read: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

Your message

To: JStevens@covb.org
Subject:

was read on 9/21/2007 2:53 PM.

Friday, Barbara

From: Heron, Teresa
To: Friday, Barbara
Sent: Friday, September 21, 2007 4:35 PM
Subject: Read: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant

Your message

To: 'jlee@covb.org'; 'KKosky@Golder.com'; 'JStevens@covb.org'; 'Little.James@epamail.epa.gov'; 'Forney.Kathleen@epamail.epa.gov'; Bradner, James
Cc: Heron, Teresa
Subject: DRAFT Title V Permit Renewal No.: 0610029-007-AV - City of Vero Beach Power Plant
Sent: 9/21/2007 2:14 PM

was read on 9/21/2007 4:35 PM.