Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Mr. Rex Taylor
City Manager, Utilities Director
City of Vero Beach
PO Box 1389
Vero Beach, FL 32961-1389

FINAL Permit No.: 0610029-002-AV
City of Vero Beach Municipal Utilities

Enclosed is FINAL Permit Number 0610029-002-AV for the operation of the City of Vero Beach Municipal Utilities located at 100 17th Street, Vero Beach, Indian River County, issued pursuant to Chapter 403, Florida Statutes (F.S.).

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the permitting authority in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the permitting authority.

Executed in Tallahassee, Florida.

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12/16/97 to the person(s) listed or as otherwise noted:

Mr. Rex Taylor, City Manager, Utilities Director *
Mr. Shuler W. Massey, Director of Power Resources *
Mr. Kennard Kosky, P.E., Golder Associates
Mr. Richard M. Siefert, City of Vero Beach Power Plant
Mr. Len Kozlov P.E., DEP Central District
Ms. Carla E. Pierce, USEPA, Region 4 (INTERNET E-mail Memorandum)
Ms. Yolanda Adams, USEPA, Region 4 (INTERNET E-mail Memorandum)

12/16/97
cc: Susan DeVore
Reading File

Clerk Stamp

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

Barbara J. Boutwell 12/16/97
(Clerk) (Date)

BEST AVAILABLE COPY

Is your **RETURN ADDRESS** completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "*Return Receipt Requested*" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Shuler W. Massey
Director of Power Resources
City of Vero Beach
P. O. Box 1389
Vero Beach, Florida 32961-1389

4a. Article Number
P263584654

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
12-23-97

5. Received By: (*Print Name*)

6. Signature: (*Addressee or Agent*)
X George Young

8. Addressee's Address (*Only if requested and fee is paid*)

PS Form **3811**, December 1994 Domestic Return Receipt

Thank you for using Return Receipt Service.

P 263 584 653

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail (*See reverse*)

Sent to	Mr. Rex Taylor
Street & Number	P. O. Box 1389
Post Office, State, & ZIP Code	Vero Beach, FL 32961-1389
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	12/16/97 City of Vero Beach ID#0610029-002-AV

PS Form **3800**, April 1995

P 263 584 654

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail (*See reverse*)

Sent to	Mr. Shuler W. Massey
Street & Number	P. O. Box 1389
Post Office, State, & ZIP Code	Vero Beach, FL 32961-1389
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	12/16/97 City of Vero Beach ID#0610029-002-AV

PS Form **3800**, April 1995

Memorandum

Florida Department of
Environmental Protection

TO: Howard L. Rhodes

FROM: Clair H. Fancy

DATE: November 26, 1997

12/15 I signed Howard out Clair

SUBJECT: FINAL Permit No.: 0610029-002-AV
City of Vero Beach
City of Vero Beach Municipal Utilities

This permit is for the initial Title V air operation permit for the subject facility which is a municipal power plant with four boilers and one gas turbine. Unregulated emissions units include the adjacent waste water treatment facility. Fossil fuel steam generators, Units 3 and 4, and the combined cycle gas turbine, Unit 5 are the Acid Rain units at the facility.

We received 46 comments from City of Vero Beach on the DRAFT permit, mostly related to clarification of the permit conditions. All comments were resolved.

We received no comments from Region 4, U.S. EPA. I recommend your signature.

Attachment (permit)

CHF/sd

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

Initial Title V Air Operation Permit
FINAL Permit No.: 0610029-002-AV

Permitting Authority:
State of Florida
Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-1344
Fax: 850/922-6979

Initial Title V Air Operation Permit
FINAL Permit No.: 0610029-002-AV

Table of Contents

Section	**Page Number**
Placard Page	1
I. Facility Information	2 - 3
A. Facility Description.	
B. Summary of Emissions Unit ID No(s). and Brief Description(s).	
C. Relevant Documents.	
II. Facility-wide Conditions	4 - 5
III. Emissions Unit(s) and Conditions	
A. Emissions Unit 001, Fossil Fuel Steam Generator, Unit 1	6 - 7
B. Emissions Unit 002, Fossil Fuel Steam Generator, Unit 2	8 - 9
C. Emissions Unit 003, Fossil Fuel Steam Generator, Unit 3	10 - 12
D. Emissions Unit 004, Fossil Fuel Steam Generator, Unit 4	13 - 18
E. Emissions Unit 005, Combined Cycle Gas Turbine, Unit 5	19 - 22
F. Common Conditions	23 - 29
G. NSPS Common Conditions	30 - 35
IV. Acid Rain Part	
A. Acid Rain, Phase II	36-37
Attachments	end

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

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

FINAL Permit No.: 0610029-002-AV
Facility ID No.: 0610029
SIC Nos.: 49 , 4931
Project: Initial Title V Air Operation Permit

This permit is for the operation of the City of Vero Beach Municipal Utilities. This facility is located at 100 17th Street, Vero Beach, Indian River County; UTM Coordinates: Zone 17, 561.4 km East and 3056.5 km North; Latitude: 27° 37' 52" North and Longitude: 80° 22' 33" West.

STATEMENT OF BASIS: This Title V air operation permit 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-1, Title V Conditions (version dated12/2/97)
Appendix SS-1, Stack Sampling Facilities (version dated 10/07/96)
Appendix M, Custom Fuel Monitoring Schedule for Natural Gas
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 07/01/95
Alternate Sampling Procedure: ASP Number 97-B-01
BACT Determination dated June 28, 1991
Order Dated 9/17/97 Extending Permit Expiration Date
Approval of Custom Fuel Monitoring Schedule Dated 10/28/97

Effective Date: January 1, 1998
Renewal Application Due Date: July 5, 2002
Expiration Date: December 31, 2002

for Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/sms/sd

Section I. Facility Information.

Subsection A. Facility Description.

This facility is an electric power generating plant located adjacent to a wastewater treatment facility and consists of:

Fossil Fuel Steam Generating Unit 1 (Emissions Unit 001), rated at 13 MW;

Fossil Fuel Steam Generating Unit 2 (Emissions Unit 002), rated at 17 MW;

Fossil Fuel Steam Generating Unit 3 (Emissions Unit 003), rated at 34 MW;

Fossil Fuel Steam Generating Unit 4 (Emissions Unit 004), rated at 56 MW;

Combined Cycle Gas Turbine Unit 5 (Emissions Unit 005), rated at 38 MW.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the initial Title V permit application received June 14, 1996, this facility is a major source of hazardous air pollutants (HAPs).

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.

<u>These documents are provided to the permittee for information purposes only:</u>
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

<u>These documents are on file with the permitting authority:</u>
Initial Title V Permit Application received June 14, 1996

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-1, TITLE V CONDITIONS, is a part of this permit.
{Permitting Notes: APPENDIX TV-1, 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. Not Federally Enforceable. 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). If required by 40 CFR 68, the permittee shall submit to the implementing agency:

a. a risk management plan (RMP) when, and if, such requirement becomes applicable; and
b. certification forms and/or RMPs according to the promulgated rule schedule.

[40 CFR 68]

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. Not Federally Enforceable. 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.]

8. Not Federally Enforceable. 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, and c proposed by applicant in the initial Title V permit application received June 14, 1996; Item d was required by the Department]

9. 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.]

10. 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: 407/897-5963

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
Operating Permits Section
61 Forsyth Street
Atlanta, GA 30303
Phone: 404/562-9099
Fax: 404/562-9095

11. The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year.
{See condition No. 51., Appendix TV-1, Title V Conditions}
[Rules 62-213.440(3) and 62-214.420(11), F.A.C.]

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

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

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.

{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

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.]

<u>**Monitoring of Operations**</u>

C.13. <u>Annual Tests Required - PM and VE</u>. 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.]

<u>**Record Keeping and Reporting Requirements**</u>

C.14. <u>Excess Emissions for Sulfur Dioxide - Report</u>. 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 AC 31-253502 (PSD-FL-152B)]

<u>**Common Conditions**</u>

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.

{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

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 NO_2 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:

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

where:
PS_{NOx} = 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 SO_2.** 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, SO_2, and NO_X standards in 40 CFR 60.42, 60.43, and 60.44 as follows:
(1) The emission rate (E) of particulate matter, SO_2, 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 (lb/million Btu).
C = concentration of pollutant, ng/dscm (lb/dscf).
% O_2 = 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 O_2 concentration (%O_2). The O_2 sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the O_2 concentration for the run shall be the arithmetic mean of all the individual O_2 sample concentrations at each traverse point.
(iii) If the particulate run has more than 12 traverse points, the O_2 traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O_2 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 SO_2 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 O_2 concentration (%O_2). The O_2 sample shall be taken simultaneously with, and at the same point as, the SO_2 sample. The SO_2 emission rate shall be computed for each pair of SO_2 and O_2 samples. The SO_2 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 SO_2 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 O_2 concentration (%O_2). 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 O_2 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, SO_2 and NO_X may be determined by using the Fc 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).
$\%CO_2$ = 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 O_2 and CO_2 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 ($\overline{d}$) 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 Fo 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 $\overline{d}$ 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 SO_2 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 SO_2 (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 SO_2 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 O_2 concentration ($\%O_2$) 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, SO_2 and NOx. 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 NOx are Required, No CMS for SO_2 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.

{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 AC 31-253502 (PSD-FL-152B). 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. 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 AC 31-253502 (PSD-FL-152B)]

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 AC 31-253502 (PSD-FL-152B)]

Emission Limitations and Standards

E.5. Visible Emissions Visible emissions shall not exceed 10% opacity.
[AC 31-253502 (PSD-FL-152B)]

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 AC 31-253502 (PSD-FL-152B)]

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-152B
CO	0.0224 lb/mmBtu	0.0226 lb/mmBtu	42.1	PSD-FL-152B

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:

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

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.}
[AC 31-253502 (PSD-FL-152B) 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 NOx.

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 AC 31-253502 (PSD-FL-152B)]

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 AC 31-253502 (PSD-FL-152B)]

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.
[AC 31-253502 (PSD-FL-152B)]

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 AC 31-253502 (PSD-FL-152B)]

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.
[AC 31-253502 (PSD-FL-152B) and requested by applicant in the initial Title V permit application received June 14, 1996]

E.14. Excess Emissions by CEMS. The CEMS for NOx 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.]

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 received in accordance with the custom fuel monitoring schedule in Appendix M of this permit.
[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 recorded in the previous year, 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, AC 31-253502 (PSD-FL-152B)]

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

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 <u>five</u> 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. <u>Pursuant to 40 CFR 60.8 Performance Tests</u>.

(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. <u>Pursuant to 40 CFR 60.11 Compliance With Standards And Maintenance Requirements</u>.

(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 12/27/95.

[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

A.2. Sulfur dioxide (SO_2) allowance allocations for each Acid Rain unit are as follows:

E.U. ID No.	EPA ID	Year	2000	2001	2002
003	3	**SO2 allowances, under Table 2 or 3 of 40 CFR Part 73**	312*	312*	312*
004	4	**SO2 allowances, under Table 2 or 3 of 40 CFR Part 73**	106*	106*	106*
005	5	**SO2 allowances, under Table 2 or 3 of 40 CFR Part 73**	314*	314*	314*

* 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 increase 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. Statement of Compliance. See Section II, condition 11 of this permit.

A.5. Comments, notes, and justifications: None

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers (version dated 02/05/97)

Abbreviations and Acronyms:

°F: Degrees Fahrenheit
BACT: Best Available Control Technology
CFR: Code of Federal Regulations
DEP: State of Florida, Department of Environmental Protection
DARM: Division of Air Resource Management
EPA: United States Environmental Protection Agency
F.A.C.: Florida Administrative Code
F.S.: Florida Statute
ISO: International Standards Organization
LAT: Latitude
LONG: Longitude
MMBtu: million British thermal units
MW: Megawatt
ORIS: Office of Regulatory Information Systems
SOA: Specific Operating Agreement
UTM: Universal Transverse Mercator

Citations:

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, guidance memorandums, permit numbers, and ID numbers.

Code of Federal Regulations:

Example: **[40 CFR 60.334]**

Where:	40	reference to	Title 40
	CFR	reference to	Code of Federal Regulations
	60	reference to	Part 60
	60.334	reference to	Regulation 60.334

Florida Administrative Code (F.A.C.) Rules:

Example: **[Rule 62-213, F.A.C.]**

Where:	62	reference to	Title 62
	62-213	reference to	Chapter 62-213
	62-213.205	reference to	Rule 62-213.205, F.A.C.

ISO: International Standards Organization refers to those conditions at 288 degrees K, 60 percent relative humidity, and 101.3 kilopascals pressure.

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers (continued)

Identification Numbers:

Facility Identification (ID) Number:

Example: Facility ID No.: 1050221

Where:

105 = 3-digit number code identifying the facility is located in Polk County
0221 = 4-digit number assigned by state database.

Permit Numbers:

Example: 1050221-002-AV, or
1050221-001-AC

Where:

AC = Air Construction Permit
AV = Air Operation Permit (Title V Source)
105 = 3-digit number code identifying the facility is located in Polk County
0221 = 4-digit number assigned by permit tracking database
001 or 002 = 3-digit sequential project number assigned by permit tracking database

Example: PSD-FL-185
PA95-01
AC53-208321

Where:

PSD = Prevention of Significant Deterioration Permit
PA = Power Plant Siting Act Permit
AC = old Air Construction Permit numbering

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; Tank 3 (350,000 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.

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).

Appendix TV-1, the Title V Core Conditions, has been provided only to the applicant. The most recent version of these conditions may be obtained from the Department's Internet Web site at:

http://www.dep.state.fl.us/air/

If you do not have access to the Internet and would like a copy of Appendix TV, please contact Susan DeVore, Department of Environmental Protection, Division of Air Resources Management, Bureau of Air Regulation, Mail Station 5505, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, 850/488-1344.

Appendix H-1, Permit History/ID Number Changes

Permit History (for tracking purposes):

E.U. ID No.	Description	Permit No.	Issue Date	Expiration Date	Extended Date[1, 2]	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
		AC31-253502/ PSD-FL-152B*	9/21/95	8/15/96		9/27/95
		AO31-227564	10/7/93	9/30/98		

* AC31-253502/ PSD-FL-152B effectively superseded the previous construction permits.

ID Number Changes (for tracking purposes):

From: **Facility ID No.:** 30ORL310005

To: **Facility ID No.:** 0610029

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 S
Permit Summary Tables

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, SO_2 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, SO_2 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 SO_2 emissions using fuel oil.

Appendix S
Permit Summary Tables

Table 1-1, Continued

Emissions Unit	Brief Description								
003	Fossil Fuel Steam Generator, Unit 3, rated at 34 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 62-296.405(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 SO_2 emissions using fuel oil.

Appendix S
Permit Summary Tables

Table 1-1, Continued

Emissions Unit	Brief Description
004	Fossil Fuel Steam Generator, Unit 4, rated at 56 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	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
NOx	Natural Gas	8760	0.20 lb/mmBtu			137	600.1	40 CFR 60.44(a)(1)	D.6
NOx	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 NOx emissions based on using number 4 fuel oil for total heat input.

Appendix S
Permit Summary Tables

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					AC 31-253502 (PSD-FL-152B)	E.5
SO_2	"	8760	0.25% S by weight, fuel oil 10 gr S/ccf, natural gas		178.2	123		AC 31-253502 (PSD-FL-152B)	E.6
NOx	No. 2 Fuel Oil	8760	42 ppmvd at 15% oxygen on a dry basis		243.7	79	114.2	AC 31-253502 (PSD-FL-152B)	E.7
NOx	Natural Gas	8760	25 ppmvd at 15% oxygen on a dry basis		243.7	44.3	194	AC 31-253502 (PSD-FL-152B)	E.7
PM_{10}	No. 2 Fuel Oil	8760	0.025 lb/mmBtu		23.7	11.4	16.4	AC 31-253502 (PSD-FL-152B)	E.7
PM_{10}	Natural Gas	8760	0.006 lb/mmBtu		23.7	2.5	10.9	AC 31-253502 (PSD-FL-152B)	E.7

Appendix S
Permit Summary Tables

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	AC 31-253502 (PSD-FL-152B)	E.7
VOC	Natural Gas	8760	0.0112 lb/mmBtu		21.0	4.6	20.3	AC 31-253502 (PSD-FL-152B)	E.7
CO	No. 2 Fuel Oil	8760	0.0226 lb/mmBtu		42.1	10.3	14.9	AC 31-253502 (PSD-FL-152B)	E.7
CO	Natural Gas	8760	0.0224 lb/mmBtu		42.1	9.3	40.6	AC 31-253502 (PSD-FL-152B)	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

Appendix S
Permit Summary Tables

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, SO_2	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
SO_2	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
NOx	Oil, Natural Gas	EPA Test Methods 7, 7A, 7C, 7D, or 7E	Annual	August 1st	3 hours	Yes	D.8

Appendix S
Permit Summary Tables

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
NOx	"	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.

Appendix M, Custom Fuel Monitoring Schedule for Natural Gas

Pursuant to 40 CFR 60.334(b)(2), a custom fuel monitoring schedule shall be followed for the natural gas fired at this facility and shall be as follows:

1. Monitoring of fuel nitrogen content shall not be required when natural gas is the only fuel being fired in the turbines.

2. Sulfur Monitoring

    a. Analysis for fuel sulfur content of the natural gas fired at this facility shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternate method. The reference methods are ASTM D1072-80, ASTM D3031-81, ASTM D3246-81 and ASTM D4084-82, as referenced in 40 CFR 60.335(b)(2).

    b. This custom fuel monitoring schedule shall become effective on the date this permit is effective. Effective the date of this custom schedule, sulfur monitoring of natural gas fired at the facility shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content and indicates consistent compliance with the sulfur limits of 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.

    c. If, after monitoring required in item 2.b. above, the sulfur content shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, and the fuel sulfur limits of this permit, sample analysis shall be conducted twice per year. This monitoring shall be conducted during the first and third quarters of each calendar year.

    d. Should any sulfur analysis, as required in items 2.b. or 2.c. above indicate noncompliance with the sulfur limits of 40 CFR 60.333 or this permit, the owner or operator shall notify the Department of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency (EPA). Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

3. If there is a change in fuel supply, the owner or operator shall notify the Department and EPA of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

4. Records of sample analysis and fuel supply pertinent to this custom fuel monitoring schedule for natural gas shall be retained for a period of five years, and shall be available at the facility for inspection by personnel of the Department or EPA.

Phase II Permit Application

For more information, see instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

This submission is: ☒ New ☐ Revised

STEP 1
Identify the source by plant name, State, and ORIS code from NADB

Plant Name *City of Vero Beach Municipal Power Plant*	State *FL*	ORIS Code *693*

STEP 2
Enter the boiler ID# from NADB for each affected unit, and indicate whether a repowering plan is being submitted for the unit by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e

a	b	c	d	e
	Compliance Plan			
Boiler ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)	Repowering Plan	New Units Commence Operation Date	New Units Monitor Certification Deadline
3	Yes	*No*		
4	Yes	*No*		
***5*	Yes	*No*	*12/92*	*1/1/96*
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			

STEP 3
Check the box if the response in column c of Step 2 is "Yes" for any unit

☐ For each unit that will be repowered, the Repowering Extension Plan form is included and the Repowering Technology Petition form has been submitted or will be submitted by June 1, 1997.

Plant Name (from Step 1)
City of Vero Beach Municipal Power Plant

STEP 4
Read the standard requirements and certification, enter the name of the designated representative, and sign and date

Standard Requirements

Permit Requirements.

(1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Submit a complete Acid Rain part application (including a compliance plan) under 40 CFR part 72, Rules 62-214.320 and 330, F.A.C. in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain part application and issue or deny an Acid Rain permit;
(2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Operate the unit in compliance with a complete Acid Rain part application or a superseding Acid Rain part issued by the permitting authority; and
(ii) Have an Acid Rain Part.

Monitoring Requirements.

(1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements.

(1) The owners and operators of each source and each Acid Rain unit at the source shall:
(i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
(3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
(i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
(ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements.

(1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
(i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
(ii) All emissions monitoring information, in accordance with 40 CFR part 75;
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

Plant Name (from Step 1)
City of Vero Beach Municipal Power Plant

Recordkeeping and Reporting Requirements (cont.)

(iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
(6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
(7) Each violation of a provision of 40 CFR parts 72, 73, 75, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
(2) Limiting the number of allowances a unit can hold; *provided,* that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name *Shuler W. Massey, Director of Power Resources*	
Signature Shuler W. Massey	Date 12-27-95

STEP 5 (optional) Enter the source AIRS and FINDS identification numbers, if known	
	AIRS *0610029*
	FINDS

Revised Best Available Control Technology (BACT) Determination
City of Vero Beach
Indian River County

The applicant proposes to install a combustion turbine generator system at their facility in Vero Beach. The generator system will consist of a single 40 megawatt (MW) combustion turbine and a single heat recovery steam generator (HRSG) which will be used to repower an existing nominal 20 MW steam turbine.

The combustion turbine will be capable of both combined cycle and simple cycle operation. It is anticipated that the combustion turbine will use natural gas as the primary fuel and distillate oil as the backup fuel. The applicant has indicated the maximum annual tonnage of regulated air pollutants emitted from the facility based on 100 percent capacity for natural gas firing and 25% for oil-firing at ISO conditions to be as follows:

Pollutant	Potential Emissions (tons/yr)		PSD Significant Emission Rate (tons/yr)
	Natural Gas	Fuel Oil	
NO_x	328.5	132.5	40
SO_2	1.3	130.8	40
PM	11.0	11.0	25
PM_{10}	11.0	11.0	15
CO	43.8	11.0	100
VOC	21.9	5.5	40
H_2SO_4	0.019	3.9	7
Be	0.0	0.0012	0.0004
Hg	0.0	0.0015	0.1
Pb	0.0	0.0125	0.6

Florida Administrative Code Rule 17-2.500(2)(f)(3) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table.

Date of Receipt of a BACT Application

May 9, 1991

BACT Determination Requested by the Applicant

Pollutant	Determination
NO_x	25 ppmvd @ 15% O_2 (natural gas burning)* 65 ppmvd @ 15% O_2 (No. 2 fuel oil firing)
SO_2	Firing of natural gas or No. 2 fuel oil with a maximum sulfur content of 0.25%
PM and PM_{10}	Combustion control
H_2SO_4	Firing of No. 2 fuel oil with a maximum sulfur content of 0.25%
Be	Firing of No. 2 fuel oil

* The applicant proposes to install low NOx combustors or SCR within one year after the date the combustion turbine commences commercial operation. The above NO_x emission limitations would apply only if low NOx combustors are installed. If SCR is installed, the NOx emission limitations would be 9 ppmvd or 25 ppmvd (@ 15% O_2) for natural gas or No. 2 fuel oil firing, respectively. Until installation of low NOx combustors or SCR, the applicant proposes to limit NO_x emissions to 42 ppmvd and 65 ppmvd @ 15% oxygen when from natural gas and oil, respectively.

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 17-2, Air Pollution, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards of BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source of source category. If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from combined cycle power plants can be grouped into categories based upon what control equipment and techniques are available to control emissions from these facilities. Using this approach, the emissions can be classified as follows:

- Combustion Products (Particulates and Heavy Metals). Controlled generally by good combustion of clean fuels.

- Products of Incomplete Combustion (CO, VOC, Toxic Organic Compounds). Control is largely achieved by proper combustion techniques.

- Acid Gases (SO_x, NO_x HCl, Fl). Controlled generally by gaseous control devices.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "nonregulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., particulates, sulfur dioxide, fluorides, sulfuric acid mist, etc.), if a reduction in "nonregulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

Combustion Products

The City of Vero Beach's projected emissions of particulate matter, PM_{10}, and beryllium surpass the significant emission rates given in Florida Administrative Code Rule 17-2.500, Table 500-2 for No. 2 fuel oil firing only. A review of the BACT/LAER Clearinghouse indicates that the applicants proposed emission rate (equivalent to 0.025 lb/MMBtu) is representative of BACT for turbines of similar size.

As this is the case, a PM/PM_{10} emissions limitation of 0.025 lb/MMBtu for No. 2 fuel oil firing is reasonable as BACT for the Vero Beach facility.

In general, the BACT/LAER Clearinghouse does not contain specific emission limits for beryllium from turbines. BACT for these heavy metals is typically represented by the level of particulate control. As this is the case, the emission factor of 0.025 lb/MMBtu for particulate matter PM_{10} is judged to also represent BACT for beryllium.

Products of Incomplete Combustion

The emissions of carbon monoxide and volatile organic compounds are each below the significant level and therefore do not require a BACT analysis.

Acid Gases

The emissions of sulfur dioxide, nitrogen oxides, and sulfuric acid mist, represent a significant proportion of the total emissions and need to be controlled if deemed appropriate. Sulfur dioxide emissions from combustion turbines are directly related to the sulfur content of the fuel being combusted.

The applicant has proposed the use of natural gas and No. 2 fuel oil with a maximum sulfur content of 0.25% to control sulfur dioxide emissions. A review of the latest edition (1990) of the BACT/LAER Clearinghouse indicates that sulfur dioxide emissions from combustion turbines have been controlled by limiting fuel oil sulfur content to a range of 0.1 to 0.3%, with the average for the facilities listed being approximately 0.24 percent. As this is the case, the applicant's proposal to use No. 2 fuel oil with a maximum sulfur content of 0.25% is judged to represent BACT.

The applicant has stated that BACT for nitrogen oxides (NO_x) will be complied with by installing low NO_x combustors capable of limiting NOx emissions to 25 ppmvd or 65 ppmvd at 15% oxygen when burning natural gas or No. 2 fuel oil, respectively, or by installing selective catalytic reduction ("SCR") capable of limiting NOx emissions to 9 ppmvd or 25 ppmvd at 15% oxygen when burning natural gas and No. 2 fuel oil, respectively, within one year after the date the new unit commences commercial operation. Until the installation of low NOx combustors or SCR, wet injection will limit NO_x emissions from Unit 5 to 42 ppmvd or 65 ppmvd at 15% oxygen when burning natural gas or No. 2 fuel oil, respectively.

A review of the EPA's BACT/LAER Clearinghouse indicates that the lowest NO_x emission limit established to date for a combustion turbine is 4.5 ppmvd at 15 percent oxygen. This level of control was accomplished through the use of water injection and a SCR system.

SCR is a post-combustion method for control of NO_x emissions. The SCR process combines vaporized ammonia with NO_x in the presence of a catalyst to form nitrogen and water. The vaporized ammonia is injected into the exhaust gases prior to passage through the catalyst bed. The SCR process can achieve up to 90% reduction of NO_x with a new catalyst. As the catalyst ages, the maximum NO_x reduction will decrease to approximately 86 percent.

Given the applicant's proposed BACT level for nitrogen oxides control stated above, an evaluation can be made of the cost and associated benefit of using SCR as follows:

The applicant has indicated that the total levelized annual cost (operating plus amortized capital cost) to install SCR for natural gas firing at 95 percent capacity factor is $1,080,000. Taking into consideration the total levelized annual cost, a cost/benefit analysis of using SCR can now be developed.

Based on the information supplied by the applicant, it is estimated that the maximum annual NO_x emissions with low NO_x combustors from the Vero Beach facility will be 186 tons/year, at a total levelized annual cost of $377,000. Assuming that SCR would reduce the NO_x emissions by an additional 80%, the SCR would control 119 tons of NO_x annually for natural gas firing. When this reduction is taken into consideration with the incremental annual cost of $703,000 (cost of SCR less cost of low NOx combustors) the cost per ton of controlling NO_x is $5,907. This cost ($5,907/ton) exceeds costs that have been previously justified as BACT.

Since SCR has been determined to be BACT for several combined cycle facilities, the EPA has clearly stated that there must be unique circumstances to consider the rejection of such control on the basis of economics. In a recent letter from EPA Region IV to the Department regarding the permitting of a combined cycle facility (Tropicana Products, Inc.), the following statement is made:

> "In order to reject a control program on the basis of economic considerations, the applicant must show why the costs associated with the control are significantly higher for this specific project than for other similar projects that have installed this control system or in general for controlling the pollutant.

A review of the combined cycle facilities in which SCR has been established as a BACT requirement indicates that the majority of these facilities are also intended to operate at high capacity factors. As this is the case, the proposed project is similar to other facilities in which SCR has been established as BACT, thereby supporting SCR as BACT for the proposed facility.

For fuel oil firing, the cost associated with controlling NO_x emissions must take into account the potential operating problems that can occur with using SCR in the oil firing mode.

A concern associated with the use of SCR on combined cycle projects is the formation of ammonium bisulfate. For the SCR process, ammonium bisulfate can be formed due to the reaction of sulfur in the fuel and the ammonia injected. The ammonium bisulfate formed has a tendency to plug the tubes of the heat recovery steam generator leading to operational problems. As this is the case, SCR has been judged to be technically infeasible for oil firing in some previous BACT determinations.

The latest information available now indicates that SCR can be used for oil firing provided that adjustments are made in the ammonia to NO_x injection ratio. For natural gas firing operation NO_x emissions can be controlled with up to a 90 percent efficiency using a 1 to 1 or greater injection ratio. By lowering the injection ratio for oil firing, testing has indicated that NO_x can be controlled with efficiencies ranging from 60 to 75 percent. When the injection ratio is lowered there is not a problem with ammonium bisulfate formation since essentially all of the ammonia is able to react with the nitrogen oxides present in the combustion gases.

Based on this strategy SCR has been both proposed and established as BACT for oil fired combined cycle facilities with NO_x emissions limits ranging from 11.7 to 25 ppmvd depending on the efficiency of control established.

Assuming that the lowered ammonia injection ratio strategy was used to control NO_x emissions by 65%, the SCR would control 310 tons (62% of 503 tons/yr) of NO_x annually for oil firing. When this reduction is taken into consideration with the total annual cost of SCR, the cost per ton of controlling NO_x is $4,630. This cost is lower than that determined for natural gas firing and is could be considered reasonable. However, when the proposed 25% capacity factor limit on oil-firing is taken into consideration, SCR technology is not cost effective.

Environmental Impact Analysis

The predominant environmental impacts associated with this proposal are related to the use of SCR for NO_x control. The use of SCR results in emissions of ammonia, which may increase with increasing levels of NO_x control. In addition, some catalysts may contain substances which are listed as hazardous waste, thereby creating an additional environmental burden. Although the use of SCR does have some environmental impacts, the disadvantages do not outweigh the benefit which would be provided by reducing nitrogen oxide emissions by 80 percent. The overwhelming benefit of NO_x control by using SCR is substantiated by the fact that nearly one half of all BACT determinations have established SCR as the control measure for nitrogen oxides over the last five years.

In addition to the criteria pollutants, the impacts of toxic pollutants associated with the combustion of natural gas and No. 2 fuel oil have been evaluated. Beryllium for oil fired operation exceeds PSD significant levels. Other toxics are expected to be emitted in minimal amounts, with the total emissions combined to be less than 0.1 tons per year.

Although the emissions of the toxic pollutants could be controlled by particulate control devices such as a baghouse or scrubber, the amount of emission reductions would not warrant the added expense. As this is the case, the Department does not believe that the BACT determination would be affected by the emissions of the toxic pollutants associated with the firing of natural gas or No. 2 fuel oil.

Potentially Sensitive Concerns

With regard to controlling NO_x emissions with SCR, the applicant has identified the following technical limitations:

1. SCR would reduce output of combustion turbines by one percent.

2. SCR could result in the release of unreacted quantities of ammonia to the atmosphere.

3. SCR would require handling of ammonia by plant operators. Since it is a hazardous material, there is a concern about safety and productivity of operators.

4. SCR results in contaminated catalyst from flue gas trace elements which could be considered hazardous. Safety of operators and disposal of spent catalyst is a concern.

BACT Determination by DER

NOx Control

A review of the permitting activities for combined cycle proposals across the nation indicates that SCR has been required and most recently proposed for installations with a variety of operating conditions (i.e., natural gas, fuel oil, capacity factors ranging from low to high). However, the cost and other concerns expressed by the applicant are valid.

The information that the applicant presented and Department calculations indicates that the incremental cost of controlling NO_x with SCR ($5,907/ton) for natural gas is high compared to other BACT determinations which require SCR. Although the cost of SCR for oil firing ($4,630/ton) could be considered reasonable, when a 25% capacity factor limit on oil-firing is considered, SCR technology is not cost effective. Based on the information presented by the applicant and the studies conducted, the Department believes a permit requiring the use of SCR for NOx control is not justifiable.

Pursuant to Florida Administrative Code ("FAC") Rule 17-2.630(3)(a), the Department may approve the use of a system of innovative control technology as BACT if:

> 1. The proposed system would not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation or function.
>
> 2. The owner or operator shall be required to achieve a level of continuous emissions reduction equivalent to that which would have been required under a Section 17-2.630(1) BACT determination within a reasonable period of time specified by the Department, but not later than four years from the time of startup or seven years from the date of issuance of the construction permit.
>
> 3. Use of the proposed system would not:
>
>   a. Cause or contribute to a violation of any ambient air quality standard;
>
>   b. Have a significant impact on any Class I area; or
>
>   c. Have a significant impact on any area where an applicable maximum allowable increase is known to be violated.

"Innovative control technology" is defined as "[a]ny system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or nonair quality environmental impacts." Rule 17-2.100(98), FAC.

Under the terms of the above rules, the low NOx combustion system proposed by the City qualifies as a system of innovative control technology. Therefore, the Department has revised the permit to require retrofit installation of low

NOx combustors or SCR within one year of the date the new combustion turbine begins commercial operation. In accordance with the above BACT analysis, unless SCR is installed, No. 2 fuel oil firing must be limited to 25% of the annual capacity factor. However, if low NOx combustors are installed, and compliance testing establishes a NOx emissions rate of 42 ppmvd (at 15% O_2 on a dry basis) or lower, the annual limit on No. 2 fuel oil firing shall be 33% of the annual capacity factor. The additional capacity for oil firing at the 42 ppmvd NOx emissions rate is consistent with recent BACT determinations in Florida. In addition, in response to comments from EPA, simple cycle operation of the new unit shall be limited to 25% of the annual capacity factor during the first year of commercial operation and thereafter if SCR is installed.

SO_2 Control

For sulfur dioxide BACT is represented by firing natural gas or No. 2 fuel oil with an average sulfur content not to exceed 0.25 percent.

Other Emissions Control

The emission limitations for PM and PM_{10}, are based on previous BACT determinations for similar facilities, with the heavy metal beryllium being addressed through the particulate limitation and sulfuric acid mist being addressed through the sulfur dioxide limitation.

The emission limits for the City of Vero Beach project are thereby established as follows:

Pollutant	Emission Limit Natural Gas Firing	No. 2 Fuel Oil Firing
NOx	25 ppmvd @ 15% O_2	65 ppmvd @ 15% O_2 *
SO_2	Natural gas as fuel	Sulfur content not to exceed 0.25%
PM & PM_{10}	0.006 lb/MMBtu	0.025 lb/MMBtu
Sulfuric Acid Mist	Emissions limited by natural gas and No. 2 fuel oil firing	
Beryllium	Emissions limited by natural gas and No. 2 fuel oil firing	

* The permittee must install low NOx combustors or SCR within one year after the date the combustion turbine commences commercial operation. The above NO_x emission limitations

apply only if low NOx combustors are installed. If SCR is installed, the NOx emission limitations will be 9 ppmvd or 25 ppmvd (@ 15% O_2) for natural gas or No. 2 fuel oil firing, respectively. Until low NOx combustors or SCR are installed, the permittee must limit NO_x emissions to 42 ppmvd and 65 ppmvd @ 15% oxygen when from natural gas and oil, respectively.

Details of the Analysis May be Obtained by Contacting:

Barry Andrews, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:	Approved by:
CH Fancy	Carol M Browner
C. H. Fancy, P.E., Chief Bureau of Air Regulation	Carol M. Browner, Secretary Dept. of Environmental Regulation
June 17, 1991 Date	June 28, 1991 Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mr. Rex Taylor
City Manager, Utilities Director
City of Vero Beach
PO Box 1389
Vero Beach, FL 32961-1389

ORDER EXTENDING PERMIT EXPIRATION DATE
City of Vero Beach Municipal Utilities, **Facility ID No.:** 0610029

Section 403.0872(2)(b), Florida Statutes (F.S.), specifies that any facility which submits to the Department of Environmental Protection (Department) a timely and complete application for a Title V permit "is entitled to operate in compliance with its existing air permit pending the conclusion of proceedings associated with its application."

Section 403.0872(6), F.S., provides that a proposed Title V permit which is not objected to by the United States Environmental Protection Agency (EPA) "must become final no later than fifty-five (55) days after the date on which the proposed permit was mailed" to the EPA.

Pursuant to the Federal Acid Rain Program as defined in rule 62-210.200, Florida Administrative Code (F.A.C.), all Acid Rain permitting must become effective on January 1 of a given year.

This facility which will be permitted pursuant to section 403.0872, F.S., (Title V permit) will be required to have a permit effective date subsequent to the final processing date of the facility's Title V permit.

To prevent misunderstanding and to assure that the above identified facility continues to comply with existing permit terms and conditions until its Title V permit becomes effective, it is necessary to extend the expiration date(s) of its existing valid permit(s) until the effective date of its Title V permit. Therefore, under the authority granted to the Department by section 403.061(8), F.S., **IT IS ORDERED:**

1. The expiration date(s) of the existing valid permit(s) under which the above identified facility is currently operating is (are) hereby extended until the effective date of its permit issued pursuant to section 403.0872, F.S., (Title V permit);

2. The facility shall comply with all terms and conditions of its existing valid permit(s) until the effective date of its Title V permit;

3. The facility will continue to comply with the requirements of Chapter 62-214, F.A.C., and the Federal Acid Rain Program, as defined in rule 62-210.200, F.A.C., pending final issuance of its Title V permit.

PETITION FOR ADMINISTRATIVE REVIEW

The Department will take the action described in this Order unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 of the Florida Statutes (F.S.). Mediation under Section 120.573, F.S., will not be available for this proposed action.

A person whose substantial interests are affected by the Department's proposed decision may petition for an administrative hearing in accordance with sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Petitions must be filed within 21 days of receipt of this Order. A petitioner must 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 of the Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number, and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by the petitioner, if any;

(e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the action or proposed action addressed in this notice of intent.

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

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under section 120.542 of the Florida Statutes. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. The petition must specify the following information:

(a) The name, address, and telephone number of the petitioner;

(b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any;

(c) Each rule or portion of a rule from which a variance or waiver is requested;

(d) The citation to the statute underlying (implemented by) the rule identified in (c) above;

(e) The type of action requested;

(f) The specific facts that would justify a variance or waiver for the petitioner;

(g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and

(h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in section 120.542(2) of the Florida Statutes, and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This Order constitutes final agency action unless a petition is filed in accordance with the above paragraphs.

RIGHT TO APPEAL

Any party to this Order has the right to seek judicial review of the Order pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Notice of Agency Action is filed with the Clerk of the Department.

DONE AND ORDERED this 15 day of Sept, 1997 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes

HOWARD L. RHODES, Director
Division of Air Resources Management
Twin Towers Office Building
Mail Station 5500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
850/488-0114

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this order and all copies were sent by certified mail before the close of business on 9/17/97 to the person(s) listed:

Mr. Rex Taylor, City Manager, Utilities Director
Mr. Len Kozlov P.E., DEP Central District

Clerk Stamp

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

Barbara J. Boutwell 9/17/97
(Clerk) (Date)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
100 ALABAMA STREET, S.W.
ATLANTA, GEORGIA 30303-3104

OCT 28 1997

4APT-ARB

Mr. Joseph Kahn. P.E.
Permit Engineer
Title V Section
Air Resources Management Division
Florida Department of Environmental
Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJECT: Custom Fuel Monitoring Schedule Proposed for Stationary Gas Turbines at Vero Beach Municipal Utilities, Indian River County, Florida

Dear Mr. Kahn:

This letter is in response to your September 3, 1997, request for a determination regarding a custom fuel monitoring schedule proposed for combustion turbines at the referenced power plant. The natural gas fired turbines at the plant referenced above are subject to 40 C.F.R. Part 60, Subpart GG (Standards of Performance for Stationary Gas Turbines), and Region 4 has concluded that the proposed custom fuel monitoring schedule is acceptable because it is consistent with guidance that the U.S. Environmental Protection Agency (EPA) previously issued regarding such schedules.

According to 40 C.F.R. §60.334(b)(2), owners and operators of stationary gas turbines subject to Subpart GG are required to monitor fuel nitrogen and sulfur content on a daily basis if a company does not have intermediate bulk storage for its fuel. 40 C.F.R. §60.334(b)(2) also contains provisions allowing owners and operators of turbines that do not have intermediate bulk storage for their fuel to request approval of custom fuel monitoring schedules that require less frequent monitoring of fuel nitrogen and sulfur content. In a memorandum dated August 14, 1987, the EPA Compliance Monitoring Branch provided guidance regarding acceptable custom fuel monitoring provisions for natural gas fired turbines, and this memorandum also gave EPA regional offices the authority to approve custom fuel monitoring schedules for Subpart GG turbines.

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Under the EPA guidance issued in 1987, the requirement to monitor the nitrogen content of pipeline quality natural gas was waived entirely since the Agency determined that this type of fuel does not contain any fuel-bound nitrogen that can cause NO_x emissions. As an alternative to daily sulfur monitoring, the 1987 policy describes a three stage process under which owners and operators of natural gas fired turbines can obtain approval to conduct sampling on a semiannual basis. In the first step of this process, the sulfur content of the fuel must be monitored twice a month for at least six months. If the results of this bimonthly monitoring verify compliance with the applicable sulfur limit and indicate little variability in the sulfur content of the fuel, the fuel sampling and analysis frequency can be reduced from a bimonthly to a quarterly basis. If six quarters of fuel monitoring data verify compliance with the applicable sulfur standard and indicate little variability in the sulfur content of the fuel, the sampling and analysis frequency can be reduced to a semiannual basis. Since the custom fuel monitoring approach proposed by Vero Beach Municipal Utilities for the natural gas fired turbines at its Indian River County plant is identical to that outlined in the 1987 custom fuel monitoring guidance issued by EPA, Region 4 has no objections to approval of the proposed alternative schedule.

If you have any questions about the determination provided in this letter, please contact Mr. David McNeal of my staff at 404/562-9102.

Sincerely yours,

Douglas Neeley

R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides and Toxics Management Division