

**Florida Department of
Environmental Protection**

Memorandum

To: Trina L. Vielhauer
Through: A. A. Linero, P.E.
Through: Scott M. Sheplak, P.E.
From: David L. Read
Date: December 24, 2007
Re: Keys Energy Services/Stock Island Power Plant
PROPOSED Permit Revision No. 0870003-008-AV

Attached for approval and signature is a permit to revise the Keys Energy Stock Island Power Plant Title V Operation Permit. The facility is located at 6900 Front Street, Stock Island, Monroe County.

The STATEMENT OF BASIS contains an overview of the changes made in this permit compared to the previous Title V permit. The purpose of the revision is to add the conditions applicable to their new fuel oil-fired 48 MW LM6000PC SPRINT simple cycle combustion turbine and associated fuel oil tank. The unit started up in July 2006 and has been sparingly used (less than 100 hours). Therefore they have not triggered the provision that would require consideration of a SCR system. We had determined earlier that this project was subject to 40 CFR 60, Subpart GG rather than Subpart KKKK because of the commenced construction date.

No public comments were received on the draft permit.

We recommend your approval and signature.

Attachments

TLV/aal/dlr



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

December 24, 2007

Mr. Edward Garcia
Environmental/Safety Officer
Stock Island Power Plant
Keys Energy Services
1001 James Street
Post Office Box 6100
Key West, Florida 33041-6100

Re: PROPOSED Title V Permit Revision No. 0870003-008-AV
Keys Energy Service – Stock Island Power Plant

Dear Mr. Garcia:

One copy of the “PROPOSED Determination” for the Title V Air Operation Permit Revision for the Keys Energy Services – Stock Island Power Plant, located at 6900 Front Street, Stock Island, Monroe County, is enclosed. This letter is only a courtesy to inform you that the DRAFT Permit has become a PROPOSED Permit

An electronic version of this determination has been posted on the Division of Air Resources Management’s (DARM) World Wide Web site for the United States Environmental Protection Agency (USEPA) Region 4 office’s review. The web site address is:

<http://www.dep.state.fl.us/air/eproducts/ards/>.

Pursuant to section 403.0872(6), Florida Statutes (F.S.), if no objection to the PROPOSED Permit is made by the USEPA within 45 days, the PROPOSED Permit will become a FINAL Permit no later than 55 days after the date on which the PROPOSED Permit was mailed (posted) to the USEPA. If the USEPA has an objection to the PROPOSED Permit, the FINAL Permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

If you have any questions, please contact the Project Engineer, David Read, at 850-414-7268.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/aal/sms/dlr

Enclosures

Copy furnished to:

Edward Garcia, Keys Energy Services: edward.garcia@keysenergy.com

Ivan Clark, P.E., R.W. Beck, Inc.: iclark@rwbeck.com

A. J. Satyal, South District Office: ajaya.satyal@dep.state.fl.us

Gracy Danois, EPA Region 4: danois.gracy@epa.gov

PROPOSED Determination

PROPOSED Title V Permit Revision No. 0870003-008-AV
Keys Energy Service – Stock Island Power Plant

I. Public Notice:

An “INTENT TO ISSUE A TITLE V AIR OPERATION PERMIT REVISION” to the Keys Energy Services – Stock Island Power Plant, located at 6900 Front Street, Stock Island, Monroe County was clerked on September 20, 2007. The “PUBLIC NOTICE OF INTENT TO ISSUE A TITLE V AIR OPERATION PERMIT REVISION” was published on October 7, 2007 in the Key West Citizen. The DRAFT Permit was available for public inspection at the Department’s South District Office, 2295 Victoria Ave, Suite 364, P.O. Box 2549, Fort Myers, Florida 33902-2549 (Telephone: 239/332-6975). Proof of the publication of the “PUBLIC NOTICE OF INTENT TO ISSUE A TITLE V AIR OPERATION PERMIT REVISION” was received on October 24, 2007.

II. Public Comments:

No comments were received.

III. Conclusions:

The permitting authority hereby issues the PROPOSED Permit.

STATEMENT OF BASIS

Keys Energy Services
Stock Island Power Plant
Facility ID No.: 0870003
Monroe County

TITLE V AIR OPERATION PERMIT REVISION

PROPOSED Permit No.: 0870003-008-AV

This Title V Operation Permit Revision (Title V Revision) is for the purpose of adding the requirements of Air Construction Permit 0870003-07-AC (AC Permit) for a new combustion turbine (CT) and ancillary equipment to the previously issued Title V Permit. The mentioned AC Permit can be viewed at: www.dep.state.fl.us/Air/permitting/construction/stockisland.htm .

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

The AC Permit was issued under the rules for the Prevention of Significant Deterioration and included a determination of best available control technology. The AC Permit authorized construction of a nominal 48 megawatts (MW) fuel oil-fired simple cycle CT, a nominal 1,000,000 gallon fuel oil storage tank, and a water tank. Pollution control measures include water injection and use of low sulfur (less than 0.05 percent sulfur) No. 2 fuel oil. A selective catalytic reduction system must be installed at a future date if the hours of operation of the new CT exceed 2,500 hours, based on a 12 month rolling total.

The new CT has been designated as Emissions Unit 011 (EU011). The new CT is also regulated under the Clean Air Act Acid Rain Program. A compliance assurance monitoring plan (CAM) plan was not required because compliance will be assured by a continuous emissions monitoring system (CEMS) for nitrogen oxides emissions. There is no add-on control for the rest of the regulated pollutants so no CAM plan is required. Applicable conditions for the new CT are contained in new Subsection III-F of the permit.

The tank was not included in the best available control technology (BACT) determination and according to the applicable condition in the AC Permit, "As revised October 15, 2003, NSPS Subpart Kb does not apply to storage vessels which store a liquid with a vapor pressure less than 3.5 kPa". The new oil tank was originally designated as EU012 in the construction permit. However, it will be included within EU010 in Appendix U-1 that covers all of the unregulated units.

Including the new CT, the facility now consists of six key emission units with a total nominal generating capacity of 128.7 MW. These include: two 8.8 MW diesel generators (EU005 and EU006); one 23.5 MW CT (EU007); two 19.77 MW CT (EU008 and EU009); and the new 48 MW CT (EU011).

Section IV of this Title V Revision includes the allowances pursuant to the Acid Rain Program. Allowances are shown for EU 005, 006 and the new EU011. Allowances are also included for the Ralph Garcia Steam Plant at the facility (EU001) that was permanently retired in 1998.

Based on the Title V permit revision application received April 27, 2007, this facility is not a major source of hazardous air pollutants.

Keys Energy Services
Stock Island Power Plant
Facility ID No. 0870003
Monroe County

TITLE V AIR OPERATION PERMIT REVISION

PROPOSED Permit No. 0870003-008-AV

Permitting Authority:

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

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Telephone: 850/488-0114
Fax: 850/921-9533

Compliance Authority:

Department of Environmental Protection
South District
2295 Victoria Avenue, Suite 364
Ft. Myers, Florida 33902-2549
Telephone: 239/332-6975
Fax: 239/332-6969

TITLE V AIR OPERATION PERMIT REVISION

PROPOSED Permit No.: 0870003-008-AV

TABLE OF CONTENTS

Section	Page Number
Placard Page	1
I. Facility Information	2 - 3
A. Facility Description	
B. Summary of Emissions Unit ID Nos. and Brief Descriptions	
C. Retired Acid Rain Units	
D. Relevant Documents	
II. Facility-wide Conditions	4 - 6
III. Emissions Units and Conditions	
A. Two Diesel Generators, 8.8 MW	7 - 11
B. 23.50 MW Combustion Turbine	12 - 13
C. 19.77 MW Combustion Turbines	14 - 16
D. Common Conditions I	17 - 18
E. Common Conditions II	19 - 30
F. 48.00 MW Combustion Turbine	31 - 49
IV. Acid Rain Part	50 - 51



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE:

Keys Energy Services
P.O. Drawer 6100
Key West, Florida 33041-6100

Permit No. 0870003-008-AV

Facility ID No.: 0870003

SIC Nos.: 49, 4911

Project: Title V Air Operation Permit Revision

This permit is for the operation of the Stock Island Power Plant. This facility is located at 6900 Front Street, Stock Island, Monroe County; UTM Coordinates: Zone 17, 425.65 km East and 2716.67 km North; Latitude: 24° 33' 49" North and Longitude: 81° 44' 03" West.

This Title V air operation permit revision 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 Keys Energy Services is authorized to operate the Stock Island Power Plant as shown in the application and approved drawings, plans, and other documents, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

Appendix AR-1, Acid Rain: Phase II Acid Rain Part Application received July 25, 2005

Appendix U-1, List of Unregulated Emissions Units

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

APPENDIX TV-6, Title V Conditions (Version Dated 06/23/06)

APPENDIX SS-1, Stack Sampling Facilities (Version dated 10/07/96)

TABLE 297.310-1, Calibration Schedule (Version Dated 10/07/96)

FIGURE 1 - Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Report
(Version dated 7/96)

Acid Rain Retired Unit Exemption (Ralph Garcia Steam Plant)

Phase II Acid Rain New Unit Exemptions (D-1 & D-2)

Effective Date: January 1, 2005

Revision Effective Date: [ARMS Day 55]

Renewal Application Due Date: July 5, 2009

Expiration Date: December 31, 2009

Joseph Kahn, Director
Division of Air Resource
Management

JK/tlv/aal/sms/dlr

Section I. Facility Information

Subsection A. Facility Description

This facility consists of six key regulated emission units with a total generating capacity of 128.7 MW. There are two regulated diesel generators, four simple cycle combustion turbines, and miscellaneous unregulated units. To reduce pollution, a combination of control techniques is used including water injection, ignition timing retardation, and low sulfur fuel oil.

Further, when the operational hours of the 48 MW simple cycle combustion turbine (E.U. ID No. 011) exceeds 2500 hours, based on a 12 month rolling total, a selective catalytic reduction (SCR) unit must be installed to help control its NO_x emissions.

The Ralph Garcia Steam Plant (previously designated as E.U. ID No. 001) was retired January 1, 1998. Also included in this permit are insignificant emissions units and activities.

Based on the Title V permit revision application received April 27, 2007, this facility is not a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Units

<u>E.U. ID No.</u>	<u>Brief Description</u>
005	8.8 MW Medium Speed Diesel Generator [Unit #1; EPA ID #D-1]
006	8.8 MW Medium Speed Diesel Generator [Unit #2; EPA ID #D-2]
007	23.5 MW Simple Cycle Combustion Turbine [CT-1]
008	19.77 MW Simple Cycle Combustion Turbine [CT-2]
009	19.77 MW Simple Cycle Combustion Turbine [CT-3]
010	Unregulated Emissions Units
011	48.00 MW Simple Cycle Combustion Turbine [CT-4]

Emission units 002, 003, 004 and 012 were moved to emissions unit 010.

Subsection C. Retired Acid Rain Unit

001 37 MW Ralph Garcia Steam Plant [EPA ID #1][Retired January 1998]

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit ID Nos. on all correspondence, test report submittals, applications, and other information.

Subsection D. Relevant Documents

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

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

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

Table 2-1, Summary of Compliance Requirements

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

Appendix H-1, Permit History/ID Number Transfers

Statement of Basis

These documents are on file with permitting authority:

Initial Title V Permit Application received June 12, 1996
Title V Permit Renewal Application received on July 2, 2004
Title V Permit Renewal Application complete on September 3, 2004
DRAFT Title V Permit Renewal clerked on October 1, 2004
PROPOSED Title V Permit Renewal was posted on November 12, 2004
FINAL Title V Permit Renewal was posted on January 1, 2005
Air Construction/PSD Permit application received on October 14, 2004
Technical Evaluation and Preliminary Determination issued May 31, 2005
Intent to Issue Air Construction/PSD Permit distributed May 31, 2005
Final Determination Issued September 8, 2005
Application for a Title V Air Operation Permit Renewal received April 27, 2007, electronically via Electronic Permit Submittal and Processing System (EPSAP).
Request for Additional Information dated June 14, 2007.
Response received on July 30, 2007.

Section II. Facility-wide Conditions

1. APPENDIX TV-6, TITLE V CONDITIONS (version dated June 23, 2006), is a part of this permit. {Permitting note: APPENDIX TV-6, TITLE V CONDITIONS, is distributed to the Permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}
2. 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.]

{Permitting Note: Although the Permittee is not required to perform a visible emissions compliance test to demonstrate compliance with the facility-wide limitations annually or before renewal, if the Department believes that the general visible emissions standard is being violated, the Department may require that the owner or operator perform a visible emissions compliance test per Chapter 62-297.310(7)(b), Special Compliance Tests. In addition, Department personnel who are certified to perform visible emissions tests may determine compliance with the general visible emissions standard.}

4. Prevention of Accidental Releases (Section 112(r) of CAA).
 - a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

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

and,

- b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C. [40 CFR 68 and Rule 62-213.440(2), F.A.C.]
5. 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 or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

“Nothing was deemed necessary and ordered at this time.”

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

6. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Exempt 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. Emissions of Unconfined Particulate Matter. Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter at this facility include the following requirements (see Condition 57. of APPENDIX TV-6, TITLE V CONDITIONS):

The following requirements are **“not federally enforceable”**:

- a. Maintenance of paved areas as needed;
- b. Regular mowing of grass and care of vegetation; and,
- c. Limiting access to plant property by unnecessary vehicles.

[Rule 62-296.320(4)(c)2., F.A.C.; Proposed by applicant in the initial Title V permit application received June 12, 1996]

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

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

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of APPENDIX TV-4, TITLE V CONDITIONS)}

9. The Permittee shall submit all compliance, annual operating reports and other correspondence required of this permit to the Department’s South District and Marathon Branch offices:

Department of Environmental Protection
South District Office
2295 Victoria Avenue, Suite 364
Fort Myers, Florida, 33901
Telephone: 239/332-6975
Fax: 239/332-6969

Department of Environmental Protection
Marathon Branch Office
2796 Overseas Highway, Suite 221
Marathon Florida, 33901
Telephone: 305/289-2310
Fax: 305/289-2314

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

United States Environmental Protection Agency
Region 4
Air, Pesticides, & Toxics Management Division
Air and EPCRA Enforcement Branch, Air Enforcement Section

61 Forsyth Street
Atlanta, Georgia 30303
Telephone: 404/562-9155
Fax: 404/562-9163

{Permitting note: Condition no. 51 of Appendix TV-6, lists the necessary elements of a compliance certification required under 40 CFR 70.6(c)(5)(iii).}

11. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.
[Rule 62-213.440, F.A.C.]
12. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information. [Rule 62-213.420(4), F.A.C.]

Section III. Emissions Units and Conditions

Subsection A. Two Medium Speed Diesel Generators

<u>E.U. ID No.</u>	<u>Brief Description</u>
005	8.8 MW Medium Speed Diesel Generator [Unit #1; EPA ID #D-1]
006	8.8 MW Medium Speed Diesel Generator [Unit #2; EPA ID #D-2]

Each of the two 8.8 MW (nominal) electric Fairbanks Morse diesel generators (Model PC-2.6V) burns No. 2 distillate fuel oil and has a maximum heat input rate of 85.4 million Btu per hour. Sulfur dioxide emissions are controlled by limiting the sulfur content of the No. 2 fuel oil to 0.05% by weight. Nitrogen oxides emissions are controlled by ignition timing retard and by limiting the hours of operation. Visible emissions and NOx emissions are continuously monitored. Commercial operation commenced April 1, 1991. {Rule 212.400, F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination dated 6/5/89, AO44-207419 & PSD-FL-135}

Essential Potential to Emit (PTE) Parameters

- A.1. Permitted Capacity.** The maximum heat input rate to each diesel generator shall not exceed 85.4 MMBtu per hour (606 gallons per hour). The sum total consumption of fuel oil for both diesel generators combined shall not exceed 2.27 million gallons in any consecutive 12-month period. [Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions - (PTE) and AC44-207419/PSD-FL-135]
- A.2. Emissions Unit Operating Rate Limitation During and After Testing.** Testing of emissions shall be conducted with the 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 [Rule 62-297.310(2), F.A.C.]
- A.3. Methods of Operation - Fuels.** The only fuel to be burned in this unit is new (virgin) No. 2 fuel oil. The sulfur content shall not exceed 0.05 percent by weight. [Rules 62-213.440(1), F.A.C.; AC44-221256/PSD-FL-135; and Acid Rain Program New Unit Exemptions]
- A.4. Hours of Operation.** For both units combined, the hours of operation shall not exceed a combined total of 3,740 full load equivalent engine hours in any consecutive 12-month period. [Rule 62-212.400(6), F.A.C. and PSD-FL-135]

Emission Limitations and Standards

{Permitting Note: The attached 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.}

{Permitting Note: Unless otherwise specified, the averaging times for specific conditions A.5.- A.10. are based on the specified averaging time of the applicable test method.}

A.5. Oxides of Nitrogen. NO_x emissions shall not exceed any of the following limits:

- a. 160.9 pounds per hour from each engine;
- b. 6.0 grams per horsepower-hour from each engine;
- c. 300.9 tons in any consecutive 12-month period for the combined sum total from both engines.

[Rule 62-212.400(6), 62-212.400(1)(c), and 62-212.400(2)(d)4., F.A.C., and AC44-221256]

A.6. Sulfur Dioxide. SO₂ emissions shall not exceed either of the following limits:

- a. 43.6 pounds per hour from each engine;
- b. 81.6 tons in any consecutive 12-month period for the combined sum total from both engines.

[Rule 62-212.400(6), 62-212.400(1)(c), and 62-212.400(2)(d)4., F.A.C., and AC44-221256]

A.7.

a. Particulate Matter. PM/PM₁₀ emissions shall not exceed any of the following limits:

- (a) 8.5 pounds per hour from each engine;
- (b) 0.1 pound per million Btu heat input;
- (c) 16.0 tons in any consecutive 12-month period for the combined sum total from both engines.

b. Visible Emissions. Visible emissions (VE) shall not exceed 20% opacity.

[Rule 62-212.400(6), 62-212.400(1)(c), and 62-212.400(2)(d)4., F.A.C., AC44-221256 and PSD-FL-135]

A.8. Carbon Monoxide. CO emissions shall not exceed any of the following limits:

- a. 53.6 pounds per hour from each engine;
- b. 2.0 grams per horsepower-hour from each engine;
- c. 100.3 tons in any consecutive 12-month period for the combined sum total from both engines.

[Rule 62-212.400(6), 62-212.400(1)(c), and 62-212.400(2)(d)4., F.A.C., and AC44-221256]

A.9. Volatile Organic Compounds. VOC emissions shall not exceed any of the following limits:

- a. 26.8 pounds per hour from each engine;
- b. 1.0 grams per horsepower-hour from each engine;
- c. 50.1 tons in any consecutive 12-month period for the combined sum total from both engines.

[Rule 62-212.400(6), 62-212.400(1)(c), and 62-212.400(2)(d)4., F.A.C., and AC44-221256].

A.10. Beryllium (Be). Beryllium emissions shall not exceed 0.00054 pounds per hour from each engine and shall not exceed 2.0 pounds in any consecutive 12-month period for the combined sum total from both engines

[Rule 62-212.400(6), 62-212.400(1)(c), and 62-212.400(2)(d)4., F.A.C., AC44-221256]

- A.11. Objectionable Odor.** The Permittee shall not discharge air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(1)(a)2, F.A.C., AC44-221256]

Excess Emissions

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

- A.12.** 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.]
- A.13.** 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 Requirements

- A.14.** The Permittee shall calibrate, maintain, and operate continuous monitoring equipment, in accordance with the manufacturer's instructions, to continuously monitor and record opacity and NOx emissions. The Permittee shall maintain a complete file of all measurements, including continuous emissions monitoring system, monitoring device, and performance testing measurements; all continuous emissions monitoring system performance evaluations, all continuous emissions monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required, recorded in an a permanent legible form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
[Rule 62-4.070(3), F.A.C. and AC44-221256/PSD-FL-135]

Test Methods and Procedures

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

- A.15.** The Permittee shall conduct a compliance test for each diesel generator on an annual basis for the following pollutants. Each compliance test shall be conducted in accordance with 40 CFR 60, Appendix A, using the method indicated.
- a. Oxides of Nitrogen (NOx) - EPA Method 20.
 - b. Sulfur Dioxide (SO₂) - EPA Method 6 or ASTM D 2880-71 for sulfur in oil.
 - c. Visible Emissions - EPA Method 9.
 - d. Particulate Matter (PM/PM₁₀) - EPA Method 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.
[Rule 62-297.310(7)(a)4. & 5., F.A.C., AC44-152197]

- A.16.** The Permittee shall conduct a compliance test for each of the following pollutants 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 this requirement. 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 compliance test results for any emissions unit that, during the year prior to renewal: a) did not operate; or b) in the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours. Each compliance test shall be conducted in accordance with 40 CFR 60 Appendix A, using the method indicated.

- a. Carbon Monoxide (CO) – EPA Method 10.
- b. Beryllium (Be) – EPA Method 104.
- c. Volatile Organic Compounds (VOC) - EPA Method 25.

[Rule 62-297.310(7)(a)3., F.A.C., AC44-152197]

A.17. By this permit, annual emissions compliance testing for visible emissions and particulate matter is not required for these emissions units while burning liquid fuel(s) for less than 400 hours per year. [Rule 62-297.310(7)(a)4., F.A.C.]

A.18. The specific conditions of **Subsection D, Common Conditions I**, apply to these emission units.

Reporting and Recordkeeping Requirements

A.19. In order to document compliance with the hours of operation limitation of specific condition **A.4**, the fuel oil consumption limit of specific condition **A.1**, and the annual NO_x emission limit of specific condition **A.5**, the Permittee shall keep daily records of the hours of operation, the fuel oil consumption, and the NO_x emissions. At a minimum, the records shall indicate:

- (a) the daily hours of operation for each individual diesel generator,
- (b) the daily hours of operation expressed as full load equivalent engine hours(both units combined);
- (c) the daily sum total fuel oil consumption in gallons for both units combined;
- (d) the daily sum total NO_x emissions in pounds for both units combined;
- (e) a cumulative total hours of operation expressed as full load equivalent engine hours for the current month;
- (f) a cumulative sum total fuel oil consumed in gallons for the current month;
- (g) a cumulative sum total NO_x emissions in tons for the current month;
- (h) a rolling cumulative total hours of operation expressed as full load equivalent engine hours for the previous 12 consecutive months;
- (i) a rolling cumulative sum total fuel oil consumed in gallons for the previous 12 months; and
- (j) a rolling cumulative sum total NO_x emissions in tons for the previous 12 consecutive months.

[Rule 62-4.070(3), F.A.C. and AC44-221256/PSD-FL-135]

A.20. For each calendar quarter, the Permittee shall submit to the Department a written report of emissions in excess of the emission limiting standards as set forth in this permit. The report shall be postmarked by the 30th day following the end of each calendar quarter. The report shall include at least the following information:

1. The quarterly hours of operation for each individual diesel generator.

2. The magnitude of excess emissions, any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
3. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions.
4. 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.
5. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

[Rule 62-4.070(3), F.A.C. and AC44-221256/PSD-FL-135]

- A.21.** In order to document compliance with the hourly SO₂ emission limit of specific condition **A.6** and the fuel sulfur limit of specific condition **A.3**, the Permittee shall keep records of the as-fired fuel sulfur content, in percent by weight. For each shipment of fuel oil, the sulfur content shall be based on either vendor provided analysis or other analysis using ASTM D2622-94, ASTM D4294-90 (95), ASTM D1552-95, ASTM D1266-91, or both ASTM D4057-88 and ASTM D129-95 (or the latest editions). The records shall be maintained for a minimum of five years and shall be made available to the Department upon request.
[Rule 62-4.070(3), F.A.C. and AC44-221256/PSD-FL-135]

Source Commitments

- A.22.** If the Permittee requests relaxation of any federally enforceable limits for these units, then the Department will determine whether the NSR requirements of Rule 62-212.400, F.A.C. shall apply, as though the construction permit AC44-221256 had not been issued.
[Rule 62-4.070(3), F.A.C., and AC44-221256/PSD-FL-135]
- A.23.** Best Available Control Technology (BACT) will be re-evaluated if the Permittee requests an increase in or exceeds the permitted hours of operation. Selective Catalytic Reduction for NO_x control will be required at a minimum for BACT if deemed technologically feasible. In no event shall the BACT control installation and compliance testing occur later than 30 months from the date that the Permittee requested to exceed the permitted hours of operation or actually exceeded the permitted hours of operation. [Rule 62-4.070(3), F.A.C., and AC44-221256/PSD-FL-135]
- A.24.** The three existing 16.5 MW steam units at the Key West Plant shall not operate.
[AC44-221256/PSD-FL-135 and AC44-152197]

Subsection B. 23.5 MW Combustion Turbine

<u>E.U. ID No.</u>	<u>Brief Description</u>
007	23.5 MW Simple Cycle Combustion Turbine [CT-1]

Emissions unit 007 is a General Electric (GE) Frame 5 model PG5341 CT equipped with water injection for fuel oil firing. It has a rated capacity of 23.5 MW at ISO conditions. The GE CT has a heat input of 312 MMBtu per hour (at 59° F) while burning oil. The CT is fired with No. 2 fuel oil with a sulfur content not to exceed 0.05 % by weight. NO_x emissions are controlled by a water injection system. The water to fuel ratio is continuously monitored. This turbine began operation January 1, 1996.

{Permitting notes: This emissions unit is regulated under Rule 62-210.300, F.A.C., Permits Required; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(7)(b) 38., F.A.C.; NSPS - 40 CFR 60 Subpart A; Rule 212.400, F.A.C., Prevention of Significant Deterioration; PSD-FL-210; and AC44-245399. The unit is not affected by the Acid Rain Program, since it meets the requirements of 40 CFR 72.7 by serving a generator with less than 25 MW.}

Essential Potential to Emit (PTE) Parameters

- B.1. Permitted Capacity.** The maximum heat input to the GE combustion turbine (CT) at an ambient temperature of 59° F shall not exceed 312 MMBtu/hr while firing fuel oil. Heat input may vary depending on ambient conditions and the CT's characteristics. The approved manufacturer's curves shall be used to establish heat input rates over a range of temperatures for the purpose of compliance determination. [Rule 62-210.200, F.A.C., AC44-245399/PSD-FL-210]
- B.2. Methods of Operation - Fuels.** The only fuel to be burned in this unit is new No. 2 fuel oil. The sulfur content shall not exceed 0.050 percent by weight. [Rules 62-4.160(2), 62-210.200, and 62-213.440(1), F.A.C., AC44-245399/PSD-FL-210]
- B.3. Hours of Operation/Fuel Consumption.** The maximum No. 2 fuel oil consumption allowed to be burned in the CT is 7.1 million gallons per year, which is equivalent to 2,888.5 hours per year at full-load; the CT may operate for more than this if operating at part-load. [Rule 62-212.500(56), F.A.C., AC44-245399, PSD-FL-210]

Emission Limitations and Standards

{Permitting Note: The attached 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.}

{Permitting Note: Unless otherwise specified, the averaging times for specific conditions B.6.- B.8. are based on the specified averaging time of the applicable test method.}

- B.4. Oxides of Nitrogen.** NO_x emissions shall not exceed any of the following limits:
 - a. Nitrogen oxides emissions, expressed as NO_x, shall not exceed:
STD = 0.0075 (14.4)/Y + F
where:
STD = allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

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

F = NO_x emission allowance for fuel-bound nitrogen as defined in 40 CFR 60.332(a)(3).

F shall be defined according to the nitrogen content of the fuel as follows:

<u>Fuel-bound nitrogen (% by weight)</u>	<u>F (NO_x% by volume)</u>
N ≤ 0.015	0
0.015 < N ≤ 0.1	0.04(N)
0.1 < N ≤ 0.25	0.004 + 0.0067(N - 0.1)
N > 0.25	0.005

where:

N = the nitrogen content of the fuel (percent by weight);

- b. 75 ppmvd, based on a 1-hour average at 15% O₂;
- c. 96 lbs./hour, based on a 1-hour average at 15% O₂;
- d. 138 TPY.

[AC44-245399/PSD-FL-210, 40 CFR 60.332]

- B.5.** Sulfur Dioxide. SO₂ emissions shall be controlled by limiting the sulfur content of the fuel to a maximum of 0.05 percent by weight. [AC44-245399/PSD-FL-210, 40 CFR 60.333]
- B.6.** Particulate Matter/PM₁₀. PM/PM₁₀ emissions shall be limited to 18 lbs./hour, based on a 1-hour average; 43 TPY. [AC44-245399, PSD-FL-210]
- B.7.** Carbon Monoxide. CO shall be limited to 20 PPM at 100% load, and 136 PPM at 50% load; 64 lbs. per hour, based on a 1-hour average; 152 TPY. [AC44-245399/PSD-FL-210]
- B.8.** Visible Emissions. Visible emissions shall be limited to 20 percent opacity. [AC44-245399/PSD-FL-210]

Excess Emissions, Monitoring Requirements, and Test Methods & Procedures, and Reporting & Recordkeeping Requirements

- B.9.** Two copies of the results of the emission tests for the pollutants listed in conditions **B.4.** through **B.7.** shall be submitted within forty-five days of the last sampling run to the South District office in Fort Myers. All reports shall be in a format consistent with and shall include the information in accordance with Rule 62-297.310 (8), F.A.C. [Rule 62-297.310(8), F.A.C.]
- B.10.** The specific conditions of **Subsection D, Common Conditions I,** and **Subsection E, Common Conditions II,** apply to this emissions unit.

Subsection C. 19.77 MW Combustion Turbines

<u>E.U. ID No.</u>	<u>Brief Description</u>
008	19.77 MW Simple Cycle Combustion Turbine [CT-2]
009	19.77 MW Simple Cycle Combustion Turbine [CT-3]

These emissions units are two refurbished General Electric Model MS-5001R 19.77 MW combustion turbines. CT-2 had a startup date of June 21, 1998, while CT-3 had a startup date of August 1, 1998.

{Permitting notes: These emissions units are regulated under Rule 62-210.300, F.A.C., Permits Required; NSPS - 40 CFR 60, Subparts A (General Provisions) and GG, (Standards of Performance for Stationary Gas Turbines), adopted and incorporated by reference in Rule 62-204.800(7)(b)38., F.A.C.; Rule 212.400, F.A.C., Prevention of Significant Deterioration; and AC0870003-003, issued January 8, 1998. The units are not affected by the Acid Rain Program, since they meet the requirements of 40 CFR 72.7 by serving a generator with less than 25 MW.}

General Provisions

Notification and Record Keeping

- C.1.** A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 CFR 60.13(c) shall be postmarked not less than 30 days prior to such date. The notification shall be sent to the Department's South District Office and Marathon Branch Office. [40 CFR 60.7(a)(5)]
- C.2.** When it has been demonstrated that these units meet the emission limitations established in permit AC-0870003-003, a properly signed and sealed certification from the permittee's Professional Engineer shall be submitted to the offices listed in C.1. stating that 1) the construction of CT-2 and CT-3 was completed in accordance with permit AC-870003-003 and, 2) the units have been tested and are in compliance with the terms and conditions contained within permit AC-870003-003.
[Rules 62-212.400(7)(b) and 62-213.420(1)(a)5., F.A.C., AC-870003-003]

Performance Tests

- C.3.** Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup, the Permittee shall conduct performance test(s) and furnish the offices listed in C.1. a written report of the results of such performance test(s) [40 CFR 60.8(a)]
*{Permitting note: See **Subsection E.** for additional requirements.}*

Essential Potential to Emit (PTE) Parameters

- C.4.** Hours of Operation. Each emission unit is allowed to operate 4,000 hours per year. The combined operation of both units shall also be limited to 4,000 hours per year. The facility is required to keep daily records of the operating hours. [AC-870003-003]
- C.5.** Method of Operation - Fuels. Only No. 2 fuel oil can be fired in the combustion turbines. The maximum sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent, by weight. [AC-870003-003]

- C.6. Permitted Capacity. The maximum heat input rate to each combustion turbine shall not exceed 305 million Btu per hour (MMBtu/hr). [AC-870003-003]
- C.7. Fuel Consumption. The maximum No. 2 fuel oil consumption allowed to be burned in either emission unit No. 008 or emission unit No. 009 is 8,840,000 gallons per year, which is equivalent to 4,000 hours per year of operation at full load. The combined fuel oil consumption for both units shall be limited to 8,840,000 gallons per year. [AC-870003-003]

Emission Limitations and Standards

{Permitting Note: The attached 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.}

{Permitting Note: Unless otherwise specified, the averaging times for specific conditions C.10.- C.12. are based on the specified averaging time of the applicable test method.}

{Note: The emission limits of lb/hr apply to each unit, while the TPY limit apply to each unit individually and both units collectively.}

- C.8. Oxides of Nitrogen. For each turbine, NO_x emissions shall not exceed any of the following limits:

- a. Nitrogen oxides emissions, expressed as NO_x, shall not exceed:

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

where:

STD = allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

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

F = NO_x emission allowance for fuel-bound nitrogen as defined in 40 CFR 60.332(a)(3).

F shall be defined according to the nitrogen content of the fuel as follows:

<u>Fuel-bound nitrogen (% by weight)</u>	<u>F (NO_x% by volume)</u>
N ≤ 0.015	0
0.015 < N ≤ 0.1	0.04(N)
0.1 < N ≤ 0.25	0.004 + 0.0067(N - 0.1)
N > 0.25	0.005

where: N = the nitrogen content of the fuel (percent by weight);

- b. 75 ppmvd, based on a 1-hour average at 15% O₂ ; and
- c. 93.8 lb/hour based on a 1-hour average at 15% O₂; and 40 degrees F from each turbine.
- d. 172 TPY, based on an average hourly concentration of 86 pounds per hour at 85 degrees F ambient temperature from both turbines combined.
- e. no more than 4,000 hours per year of operation, from either or both turbines combined.

[40 CFR 60.332, AC-870003-003]

- C.9.** Sulfur Dioxide. For each turbine, SO₂ emissions shall be controlled by limiting the sulfur content of the fuel to a maximum of 0.05 percent by weight. [40 CFR 60.333, AC-870003-003]
- C.10.** Particulate Matter/PM10. For each turbine, PM/PM₁₀ emissions shall be limited to 16.6 lb/hour, based on a 1-hour average; PM and PM₁₀ from both turbines combined shall be limited to 55 TPY and 45 TPY, respectively. [AC-870003-003]
- C.11.** Carbon Monoxide. For each turbine, CO shall be limited to 25.2 lb./hour, based on a 1-hour average; and from both turbines combined, 101 TPY. [AC-870003-003]
- C.12.** Visible Emissions. Visible emissions shall be limited to 20 percent opacity. [AC-870003-003]

Excess Emissions, Monitoring Requirements, Test Methods & Procedures, and Reporting & Recordkeeping Requirements

- C.13.** Two copies of the results of the emission tests for the pollutants listed in conditions **C.8.** through **C.11.** shall be submitted within forty-five days of the last sampling run to the South District office in Ft. Myers. All reports shall be in a format consistent with and shall include the information in accordance with Rule 62-297.310 (8), F.A.C. [Rule 62-297.310(8), F.A.C.]
- C.14.** The specific conditions of **Subsection D, Common Conditions I, and Subsection E, Common Conditions II**, apply to these emissions units.

Subsection D. Common Conditions I

The following conditions apply to all emissions units listed in **Section III, Subsections A., B., and C.** of this permit.

Test Methods & Procedures

D.1. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of 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.]

D.2. 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.]

D.3. Applicable Test Procedures.

(a) **Required Sampling Time.**

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
2. **Opacity Compliance Tests.** When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.

Exceptions to these requirements are as follows:

- a. (not applicable)
- b. (not applicable)
- 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. (See attachment.)
- (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.]

D.4. Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C., SIP approved]

D.5. 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)(c), F.A.C., SIP approved]

Subsection E. Common Conditions II

The following conditions apply only to the Combustion Turbines listed in listed in **Section III, Subsections B. and C.** of this permit.

Excess Emissions

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

E.1. Excess emissions from the CT resulting from start-up, shutdown, malfunction, or load change shall be acceptable providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for a longer duration. [AC44-245399/PSD-FL-210, 0870003-003-AC]

E.2. Excess Emissions Defined. For the purpose of reports required under 40 CFR 60.7(c) (see specific condition **E.24.**), periods of excess emissions that shall be reported are defined as follows:

- a. *Nitrogen oxides.* Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with 40 CFR 60.332 by the performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in 40 CFR 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a).
- b. *Sulfur dioxide.* Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.05 percent.

[40 CFR 60.334(c)(1)&(c)(2), 0870003-003-AC]

Monitoring Requirements

E.3. CMS Requirements. The Permittee shall install, operate, and maintain a continuous monitoring system (CMS) to monitor and record the fuel consumption, the ratio of water to fuel being fired in the turbine, and the electrical output in MW. The system shall be accurate to within +5.0 percent and shall be approved by the Department. Quarterly calibrations shall be performed on the CMS. [40 CFR 60.334(a); AC44-245399/PSD-FL-210, 0870003-003-AC]

E.4. Critical Fuel Parameters. The Permittee shall monitor sulfur content, nitrogen content, and the lower heating value of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

- c. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

- d. If the turbine is supplied its fuel without intermediate bulk storage, the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Bureau of Air Regulation before they can be used to comply with 40 CFR 60.334(b).

[AC44-245399/PSD-FL-210, 40 CFR 60.334(b)(1)&(b)(2), 0870003-003-AC]

Test Methods & Procedures

- E.5. Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 95 to 100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input versus inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. 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.

To demonstrate compliance with federal new source performance standard Subpart GG - Standards of performance Stationary Gas Turbines, the initial test shall be conducted at four load points and corrected to ISO conditions for comparison to the NSPS allowable. Subsequent annual compliance tests conducted to establish compliance with NOx limits that are more stringent than the NSPS standard shall not require an ISO correction or testing at four load points; rather, the testing shall be done at capacity, as defined above. However, when testing shows that NOx emissions exceed the standard when operating at capacity, the company shall recalibrate the NOx emission control system using emission testing at four loads as required in Subpart GG.

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

- E.6. Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Department (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Department's satisfaction that the affected facility is in compliance with the standard, or (3) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in 40 CFR 60.8 shall be construed to abrogate the Department's authority to require testing under section 114 of the Act. [40 CFR 60.8(b)(1), (4) & (5)]
- E.7. Performance tests shall be conducted under such conditions, as the Department shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Department 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. [40 CFR 60.8(c)]

- E.8.** The Keys Energy Services shall provide, or cause to be provided, performance testing facilities as follows:
1. Sampling ports adequate for test methods applicable to such facility. This includes (a) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (b) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
 2. Safe sampling platform(s).
 3. Safe access to sampling platform(s).
 4. Utilities for sampling and testing equipment.
- [40 CFR 60.8(e)]
- E.9.** 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 Department's approval, be determined using the arithmetic mean of the results of the two other runs.
- [40 CFR 60.8(f)]
- E.10.** Compliance tests shall be performed on the CT while firing oil. Testing of emissions shall be conducted at 95-100% of the manufacturer's rated heat input based on the average ambient air temperature during the test.
- Annual compliance tests shall be performed on the CT if the No. 2 fuel was used for more than 400 hours in the preceding 12-month period. Tests shall be conducted using EPA reference methods in accordance with 40 CFR 60, Appendix A, as adopted by reference in Chapter 62-297, F.A.C.:
- e. Reference Method 5B for PM.
 - f. Reference Method 9 for VE.
 - g. Reference Method 10 for CO.
 - h. Reference Method 20 for NO_x.
 - i. Other methods may be used for compliance testing after obtaining prior Departmental approval, in writing.
- [Rule 62-297.310(7)(a)(4), F.A.C., AC44-2445399, 0870003-003-AC]
- E.11.** Sulfur Content. The Permittee shall determine compliance with the sulfur content standard in 40 CFR 60.333(b) as follows: ASTM D 2880-96, or more recent version, shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-90(94) E-1, D 3031-81(86), D 4084-94, or D 3246-92, or more recent versions, shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Department. 40 CFR 60.335(d)]

E.12. To compute the nitrogen oxides emissions, the Permittee shall use analytical methods and procedures that are accurate to within +5 percent and are approved by the Department to determine the nitrogen content of the fuel being fired. 40 CFR 60.335(a)]

E.13. The NO_x emission rate shall be computed for each run using the following equation:

$$NO_x = (NO_{x0}) (P_r/P_o)^{0.5} e^{19(H_o-0.00633)} (288^\circ K/T_a)^{1.53}$$

where:

NO_x = emission rate of NO_x at 15 percent O₂ and ISO standard ambient conditions, volume percent.

NO_{x0} = observed NO_x concentration, PPM by volume.

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

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

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

e = transcendental constant, 2.718.

T_a = ambient temperature, °K.

[40 CFR 60.335(c)(1)]

E.14. The owner or operator may use the following as an alternative to the reference methods and procedures specified in 40 CFR 60.335:

Instead of using the equation in paragraph 40 CFR 60.335(c)(1), manufacturers may develop ambient condition correction factors to adjust the nitrogen oxides emission level measured by the performance test as provided in 40 CFR 60.8 to ISO standard day conditions. These factors are developed for each gas turbine model they manufacture in terms of combustion inlet pressure, ambient air pressure, ambient air humidity, and ambient air temperature. They shall be substantiated with data and must be approved for use by the Department before the initial performance test required by 40 CFR 60.8. Notices of approval of custom ambient condition correction factors will be published in the Federal Register. [40 CFR 60.335(f)(1)]

E.15. The monitoring device of 40 CFR 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with 40 CFR 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer. 40 CFR 60.335(c)(2)]

E.16. Compliance with the allowable emission limiting standards for NO_x given in **Subsections B. and C.** shall be determined by using EPA Reference Method 20 as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in Rule 62-204.800, F.A.C. The span values shall be 300 PPM of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. An annual compliance test shall be performed on the unit if operated for more than 400 hours in the preceding 12-month period. Rule 62-297.310, F.A.C. and 40 CFR 60.335(c)(3)]

E.17. In conducting the performance tests required in 40 CFR 60.8, 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 this permit, except as provided for in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph 40 CFR 60.335(f). [40 CFR 60.335(b)]

E.18.

- (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 Department. Appendix F is applicable December 4, 1987.
- (b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.
- (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 Department 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 Department 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 Department within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.
- (d)
 - (1) Permittee's 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 Department, 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 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 Department. 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).

[Rule 62-296.800, F.A.C.; 40 CFR 60.13(a)-(h)]

- E.19.** After receipt and consideration of written application, the Department may approve alternatives to any monitoring procedures or requirements of 40 CFR 60 including, but not limited to the following:
- (1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by 40 CFR 60 would not provide accurate measurements due to liquid water or other interferences caused by substances with the effluent gases.
 - (2) Alternative monitoring requirements when the affected facility is infrequently operated.
 - (3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.
 - (4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.
 - (5) Alternative methods of converting pollutant concentration measurements to units of the standards.
 - (6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.
 - (7) Alternatives to the ASTM test methods or sampling procedures specified by any subpart.
 - (8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, Appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Department may require that such demonstration be performed for each affected facility.
 - (9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities are released to the atmosphere through more than one point.

[Rule 62-296.800, F.A.C.; 40 CFR 60.13(i)]

Reporting and Recordkeeping Requirements

- E.20.** To determine compliance with the fuel oil firing heat input limitation, the Permittee shall maintain daily records of fuel oil consumption for the turbine and the heating value for the fuel. All records shall be maintained for a minimum of five years after the date of each record and shall be made available to representatives of the Department upon request. [Rule 62-4.070(3)]

E.21. Excess Emissions Report. The Permittee shall record the occurrence and duration of any startup, shutdown, or malfunctions of the turbine and any malfunction of the air pollution control equipment or CMS. Additionally, the Permittee shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C., and 40 CFR 60.7(b)]

E.22. Quarterly Report. The Permittee shall submit a quarterly excess emissions and monitoring systems performance report. 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.

[40 CFR 60.7(c)]

E.23. Summary Report. The summary report form shall contain the information and be in the format shown in Figure 1 of 40 CFR 60.7(d) unless otherwise specified by the Department. One summary report form shall be submitted for each pollutant monitored.

5. If the total duration of excess emissions for the reporting period is less than one percent of the operating time for the reporting period and CMS downtime for the reporting period is less than five 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 Department.
6. If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five 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.

[40 CFR 60.7(d)]

E.24. Reporting Frequency.

- (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), 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 1 full year (e.g., 4 quarterly or 12 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 recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard; and
 - (iii) The Department does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).
- (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 Department in writing of his or her intention to make such a change and the Department does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Department may review information concerning the source's entire previous performance history during the required recordkeeping 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 Department to make a judgment about the source's potential for noncompliance in the future. If the Department disapproves the Permittee's request to reduce the frequency of reporting, the Department will notify the Permittee in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Department to the Permittee 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 Permittee shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the non-complying event. After demonstrating compliance with the applicable standard for another full year, the Permittee may again request approval from the Department to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2).

[40 CFR 60.7(e)]

E.25. Records Retention. The Permittee 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 5 (five) years following the date of such measurements, maintenance, reports, and records.

[40 CFR 60.7(f); Rule 62-213.440(1)(b)2.b., F.A.C.]

Additional General Provisions - 40 CFR 60 Subpart A

E.26. Department Notification.

- (a) The Permittee shall provide to the Department's South District office at least 15 days prior notice of any compliance or performance test, except as specified under other subparts, to afford the District office the opportunity to have an observer present. Test results shall be submitted to the District office no later than 45 days after completion of the test.
- (b) The Permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted timely and in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and, the anticipated completion date of the change.

[40 CFR 60.8(d) and Rule 62-297.310(7)(a)9., F.A.C.]

Compliance with Standards and Maintenance Requirements

- E.27.** 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 Department, or as provided in 40 CFR 60.11(e)(5). For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard). [40 CFR 60.11(b)]
- E.28.** The Permittee shall follow the manufacturer's instructions during periods of start-up, shutdown, malfunction, or load change to ensure that the best operational practices to minimize emissions will be adhered to and the duration of any excess emissions will be minimized. The instructions shall be kept on file at the plant site and made available for inspection upon request by the Department. [40 CFR 60.11(d)]
- E.29.** Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in 40 CFR 60, nothing in 40 CFR 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [40 CFR 60.11(g)]
- E.30.** 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]

Monitoring Requirements

E.31. An alternative to the relative accuracy test specified in Performance Specification 2 of 40 CFR 60 Appendix B, may be requested as follows:

- (4) An alternative to the reference method tests for determining relative accuracy is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Department to waive the relative accuracy test in section 7 of Performance Specification 2 and substitute the procedures in section 10 if the results of a performance test conducted according to the requirements in 40 CFR 60.8 of this subpart or other tests performed following the criteria in 40 CFR 60.8 demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Department to waive the relative accuracy test and substitute the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the relative accuracy test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration, or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Department will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).
- (5) The waiver of a CEMS relative accuracy test will be reviewed and may be rescinded at such time following successful completion of the alternative RA procedure that the CEMS data indicate the source emissions approaching the level of the applicable standard. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven, consecutive, averaging periods as specified by the applicable regulation(s) [e.g., 40 CFR 60.45(g)(2) and 40 CFR 60.45(g)(3), 40 CFR 60.73(e), and 40 CFR 60.84(e)] It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of relative accuracy testing. If this criterion is exceeded, the owner or operator must notify the Department within 10 days of such occurrence and include a description of the nature and cause of the increasing emissions. The Department will review the notification and may rescind the waiver and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 7 of Performance Specification 2.

[Rule 62-296.800, F.A.C.; 40 CFR 60.13(j)]

Modifications

- E.32.** Except as provided under 40 CFR 60.14(e) and 40 CFR 60.14(f), any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere. Rule 62-296.800, F.A.C.; 40 CFR 60.14(a)]
- E.33.** Emission rate shall be expressed as kg/hr (lbs./hour) of any pollutant discharged into the atmosphere for which a standard is applicable. The Department shall use the following to determine emission rate:
- (6) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors", EPA Publication No. AP-42, or other emission factors determined by the Department to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrate that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.
 - (7) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in 40 CFR 60.14(b)(1) does not demonstrate to the Department's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Department's satisfaction that there are reasonable grounds to dispute the result obtained by the Department utilizing emission factors as referenced in 40 CFR 60.14(b)(1). When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in 40 CFR 60 Appendix C of 40 CFR 60 shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Department shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.
- [Rule 62-296.800, F.A.C.; 40 CFR 60.14(b)]
- E.34.** The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of 40 CFR 60 any other facility within that source. [Rule 62-296.800, F.A.C.; 40 CFR 60.14(c)]
- E.35.** The following shall not, by themselves, be considered modifications under 40 CFR 60:
- (8) Maintenance, repair, and replacement which the Department determines to be routine for a source category, subject to the provisions of 40 CFR 60.14(c) and 40 CFR 60.15.
 - (9) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.
 - (10) An increase in the hours of operation.
 - (11) Use of an alternative fuel or raw material if, prior to the date any standard under 40 CFR 60 becomes applicable to that source type, as provided by 40 CFR 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the

change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.

- (12) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Department determines to be less environmentally beneficial.
- (13) The relocation or change in ownership of an existing facility.

[Rule 62-296.800, F.A.C.; 40 CFR 60.14(e)]

- E.36.** Special provisions set forth under an applicable subpart of 40 CFR 60 shall supersede any conflicting provisions of this section. [Rule 62-296.800, F.A.C.; 40 CFR 60.14(f)]
- E.37.** Within 180 days of the completion of any physical or operational change subject to the control measures specified in 40 CFR 60.14(a), compliance with all applicable standards must be achieved. [Rule 62-296.800, F.A.C.; 40 CFR 60.14(g)]

Subsections F.1 and F.2. 48 MW Combustion Turbine

<u>E.U. ID No.</u>	<u>Brief Description</u>
011	48 MW Simple Cycle Combustion Turbine [CT-4]

Emissions unit 011 is a General Electric LM 6000 PC SPRINT Combustion Turbine-Electrical Generator with spray intercooling and water injection. It has a rated capacity of 48 MW at ISO conditions. The maximum heat input to the combustion turbine from firing No. 2 fuel oil is 434 MMBtu per hour (LHV) based on the following: 100% base load, lower heating value of No. 2 fuel oil, and a compressor inlet air temperature of 41° F. The CT is fired with No. 2 fuel oil with a sulfur content not to exceed 0.05 % by weight. NOx emissions are controlled by a spray cooling and water injection system when operational hours are less than or equal to 2,500 hours (**described in subsection F.1 below**), based on a 12 month rolling total. If operational hours exceed 2,500 hours (**described in subsection F.2 below**) a selective catalytic reduction (SCR) system must be installed to help control NOx emissions. The water to fuel ratio is continuously monitored. This turbine began operation July 1, 2006.

{Permitting notes: This emissions unit is regulated under Rule 62-210.300, F.A.C., Permits Required; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(7)(b) 38., F.A.C.; NSPS - 40 CFR 60 Subpart A; Rule 212.400, F.A.C., Prevention of Significant Deterioration; PSD-FL-210; and AC44-245399. The unit is affected by the Acid Rain Program, since it exceeds the requirements of 40 CFR 72.7 by serving a generator with greater than 25 MW. This gas turbine is exempt from the requirements of NSPS - 40 CFR 60, Subpart KKKK since its start of construction was prior to February 18, 2005 the date upon which Subpart KKKK was proposed.}

F.1. COMBUSTION TURBINE (EU 011) WATER INJECTION ONLY & ≤ 2,500 HOURS

This section of the permit addresses the following new emissions unit for the period during which the unit operates for 2,500 hours or less on a rolling 12-month total and with water injection only. Upon reaching the first rolling 12-month total of 2,501, section **III.F.2.** of this permit will supersede all conditions in this section (**III.F.1.**).

Essential Potential to Emit (PTE) Parameters

F.1.1. Permitted Capacity. The heat input to the combustion turbine from firing No. 2 fuel oil shall not exceed 434 MMBtu per hour (LHV) based on the following: 100% base load, lower heating value of No. 2 fuel oil, and a compressor inlet air temperature of 41° F. Heat input rates will vary depending upon compressor conditions and the combustion turbine characteristics. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves on file with the Department.
[Design, Rule 62-210.200, F.A.C. (Definition - PTE)]

F.1.2. Methods of Operation - Fuels. Only distillate fuel oil with a maximum sulfur content less than or equal to 0.05 percent by weight shall be used in the combustion turbine. The permittee shall demonstrate compliance with the fuel sulfur limit by keeping the records specified in this permit.
[Applicant Request, Rule 62-210.200, F.A.C. (Definition - PTE)]
{Permitting note: Pipeline natural gas is currently unavailable to the Keys.}

F.1.3. Hours of Operation. The combustion turbine shall operate no more than 2,500 hours based on a 12-month rolling total without installing a selective catalytic reduction (SCR) system. Exceeding this restriction shall require the installation and operation of an SCR system as required in **III.F.2.** below [Applicant Request, Rules 62-210.200, (PTE) and 62-212.400(2)(g), F.A.C.]

Emission Limitations and Standards

{Permitting Note: The attached 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.}

{Permitting Note: Unless otherwise specified, the averaging times for specific conditions F.1.6. - F.1.9. are based on the specified averaging time of the applicable test method.}

F.1.4. Summary Table: The following table is for informational and convenience purposes only. Specific emission standards and limitations are contained in the specific conditions of the permit. This table does not supersede any of the terms or conditions of this permit.

Pollutant	Emission Standard/Limit	Emissions (lb/hr)	Emissions (TPY)
NO _x	42 ppmvd @ 15% O ₂	75.9	94.9
CO	30 ppmvd @ 15% O ₂	33.0	41.0
SO ₂	0.05 percent sulfur fuel oil	23.6	29.5
SAM	0.05 percent sulfur fuel oil	5.4	6.8
PM/PM ₁₀	VE = 10% as surrogate	25.0 (front and back)	31.3
PM/PM ₁₀	VE = 10% as surrogate	13.9 (front half)	17.4
VOC	16 ppmvd @ 15% O ₂	10.0	12.6

Note: Annual emissions, for the purposes of this table only, are based on a 41° F temperature and 2,500 hours of full load operation. Some values listed are for potential to emit (PTE) purposes.

F.1.5. Sulfuric Acid Mist (SAM) and Sulfur Dioxides (SO₂). Emissions of SAM and SO₂ shall be limited by the use of 0.05 percent sulfur fuel oil (or superior fuel oil) and good combustion techniques as specified in this permit. SAM and SO₂ emissions shall not exceed 6.8 and 29.5 tons per year, respectively. The permittee shall demonstrate compliance with the fuel sulfur limit by maintaining the fuel records specified by this permit. [Rules 62-4.070(3), and 62-212.400, F.A.C. (BACT)].

F.1.6. Carbon Monoxide: CO emissions from the combustion turbine shall not exceed 30.0 ppmvd @15% O₂. CO emissions shall not exceed 33.0 pounds per hour. The permittee shall demonstrate compliance with this standard by conducting performance tests and emissions monitoring in accordance with EPA Method 10 and the requirements of this permit. [Rule 62-212.400, F.A.C. (PSD Avoidance)]

F.1.7. Nitrogen Oxides (NO_x). This emissions limit applies during the initial phase of operation when the combustion turbine operates no more than 2,500 hours based on a 12-month rolling total: NO_x emissions from the combustion turbine shall not exceed a BACT emission limit of 42 ppmvd @15% O₂ during initial and annual tests nor exceed 42.0 ppmvd @15% O₂ on a 24-hour block average while firing fuel oil. The permittee shall demonstrate compliance with this standard by conducting performance tests and emissions monitoring in accordance with 40 CFR Part 60 Subpart GG and based on a 24-hour block average for data collected from the continuous emissions monitor. [Rule 62-212.400, F.A.C. (BACT)]

{Permitting Note: Pipeline natural gas is currently unavailable to the Keys. However, for a similar unit operating on natural gas and for a comparable number of hours, a BACT limit would likely be set at 15 ppmvd @ 15% O₂.}

F.1.8. Particulate Matter (PM/PM₁₀) and Visible Emissions (VE). Emissions of PM and PM₁₀ shall be limited by the use of 0.05 percent sulfur fuel oil (or superior fuel oil) and good combustion techniques as specified in this permit. Visible emissions from the combustion turbine shall not exceed 10% opacity, based on a 6-minute average. The permittee shall demonstrate compliance with this standard by conducting tests in accordance with EPA Method 9 and the performance testing requirements of this permit. This work practice standard is established as a means of ensuring compliance with the BACT PM/PM₁₀ emission limits. [Rules 62-4.070(3) and 62-212.400, F.A.C. (PSD Applicability)]

F.1.9. Volatile Organic Compounds (VOC): VOC emissions from the combustion turbine shall not exceed 16.0 ppmvd corrected to 15% oxygen. VOC emissions shall not exceed 10.0 pounds per hour. The VOC emissions shall be measured and reported in terms of methane. The permittee shall demonstrate compliance with these standards by conducting initial tests in accordance with EPA Methods 25 and/or 25A and the performance testing requirements of this permit. Optional testing in accordance with EPA Method 18 may be conducted to account for the actual methane fraction of the measured VOC emissions. [Application, Design, Rule 62-4.070(3), F.A.C.]

Excess Emissions, Monitoring Requirements, and Test Methods & Procedures, and Reporting & Recordkeeping Requirements

F.1.10. Two copies of the results of the emission tests for the pollutants listed in conditions **F.1.6.** through **F.1.9.** shall be submitted within forty-five days of the last sampling run to the South District office in Fort Myers. All reports shall be in a format consistent with and shall include the information in accordance with Rule 62-297.310 (8), F.A.C. [Rule 62-297.310(8), F.A.C.]

F.1.11. Reserved

Performance Restrictions

F.1.12. Operating Procedures. All operators and supervisors shall be properly trained to operate and maintain the combustion turbine and pollution control systems in accordance with the guidelines and procedures established by the manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Rule 62-4.070(3); Rule 62-212.400, F.A.C. (BACT)]

F.1.13. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify the Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

Emissions Controls

F.1.14. Water Injection Technology: The permittee shall operate, and maintain a water injection system designed to achieve the permitted NO_x emissions standards for the unit.
[Rule 62-4.070(3); Rule 62-212.400, F.A.C. (BACT)]

F.1.15. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly.
[Rule 62-210.650, F.A.C.]

Excess Emissions

{Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Section III.D.1. of this permit. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, NESHAP, or Acid Rain programs.}

F.1.16. Definitions.

- (a) *Excess Emissions* are defined as emissions of pollutants in excess of those allowed by any applicable air pollution rule of the Department, or by a permit issued pursuant to any such rule or Chapter 62-4, F.A.C. The term applies only to conditions which occur during startup, shutdown, or malfunction. [Rule 62-210.200(106), F.A.C.]
- (b) Startup is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
[Rule 62-210.200(246), F.A.C.]
- (c) Shutdown is the cessation of the operation of an emissions unit for any purpose.
[Rule 62-210.200(231), F.A.C.]
- (d) Malfunction is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(160), F.A.C.]

F.1.17. Startup, Shutdown, Malfunction: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing: (1) best operational practices to minimize emissions are adhered to, and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A written report summarizing each malfunction resulting in excess emissions shall be submitted in a quarterly report. [Rule 62-210.700(1) and (6), F.A.C.]

- (a) During startup and shutdown, visible emissions excluding water vapor shall not exceed 20% opacity for more than 2 hours in any 24-hour block averaging period.
[Design; Rule 62-210.700(1) and (5), F.A.C.]
- (b) During all startups, shutdowns, and malfunctions, the NOx continuous emissions monitoring System (CEMS) shall monitor and record emissions. Up to 2 hours (120 minutes) of monitoring data during any 24-hour block averaging period may be excluded from continuous compliance demonstrations as a result of startups, shutdowns, and documented malfunctions. However, only data obtained during startups, shutdowns, and documented malfunctions may be used for the 2 hour exclusion period. Other arbitrary high readings may not be excluded from compliance averaging periods.
[Rule 62-210.700(1) and (5), F.A.C.]
- (c) A documented malfunction means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile, or electronic mail. In case of malfunctions, the permittee shall notify the Compliance Authorities within one working day. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Design; Rules 62-210.700(1), (5), and 62-4.130, F.A.C.]

F.1.18. Prohibition: 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.]

Emissions Performance Testing

F.1.19. Sampling Facilities: The permittee shall provide facilities on the combustion turbine stack to accommodate adequate testing and sampling locations in order to determine compliance with the applicable emission limits specified by this permit. Permanent stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.
[Rules 62-4.070 and 62-204.800, F.A.C., and 40 CFR 60.40a(b)]

F.1.20. Performance Test Methods: Compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.

- (a) EPA Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources;
- (b) EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources;
- (c) EPA Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure); or EPA Method 20 - Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines; and
- (d) EPA Method 25 or 25A - Determination of Volatile Organic Concentrations. (EPA Method 18 may be conducted to account for the non-regulated methane portion of the VOC emissions).

No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the DEP Emissions Monitoring Section Administrator in accordance with an alternate sampling procedure specified in Rule 62-297.620, F.A.C.

- F.1.21. Test Notification:** The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests.
[40 CFR 60.7, 40 CFR 60.8 and Rule 62-297.310(7)(a)9., F.A.C.]
- F.1.22. Annual Performance Tests:** To demonstrate compliance with the emission standards specified in this permit, the permittee shall conduct annual performance tests for NO_x, CO, and visible emissions from the combustion turbine. If conducted at permitted capacity, NO_x emissions data collected during the annual NO_x continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the required annual performance test. Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1st to September 30th). In the event that the operation of the CT is less than 400 hours per year, annual testing is not required for that year. [Rule 62-297.310(7)(a), F.A.C.]
- F.1.23. Tests Prior to Permit Renewal:** Prior to renewing the air operation permit, the permittee shall conduct performance tests for CO, NO_x, and visible emissions from the combustion turbine. VOC emission tests are not required prior to permit renewal provided the CO emission standards are met. These tests shall be conducted within the 12-month period prior to renewing the air operation permit. For pollutants required to be tested annually, the permittee may submit the most recent annual compliance test to satisfy the requirements of this provision.
[Rule 62-297.310(7)(a)3., F.A.C.]
- F.1.24. Tests After Major Repairs or Replacements:** The Department may require that additional compliance testing be conducted within 90 days after major repairs or replacements are performed. [Rule 62-297.310(7)(a)4., F.A.C.]
- F.1.25. Combustion Turbine Testing Capacity.** Required performance tests for compliance with standards specified in this permit shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. However, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for inlet temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Emissions performance tests shall meet all applicable requirements of Chapters 62-204 and 62-297, F.A.C. [Rule 62-297.310(2), F.A.C.]
- F.1.26. Calculation of Emission Rate:** For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
- F.1.27. 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. [Rule 62-297.310(4)(a)1., F.A.C.]

2. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)2., F.A.C.]
- (b) Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]
- (c) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

F.1.28. 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. [Rule 62-297.310(5)(a), F.A.C.]
- (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)(b), F.A.C.]

F.1.29. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

Continuous Monitoring Requirements

F.1.30. NO_x CEMS: The permittee shall install, calibrate, operate, and maintain a CEMS to measure and record NO_x and oxygen concentrations in the combustion turbine exhaust stack. A monitor for carbon dioxide may be used in place of the oxygen monitor, but the system shall be capable of correcting the emissions to 15% oxygen. The NO_x monitoring devices shall comply with the requirements of 40 CFR 60.334(b) for 40 CFR Part 75 monitoring systems. The NO_x CEMS shall be used for the purpose of demonstrating continuous compliance with the NO_x emissions limit (24-hour block average concentration limit) specified in condition **F.1.7**. [Rule 62-212.400, F.A.C. (BACT) and 40 CFR 75]

F.1.31. NO_x CEMS Data Requirements:

- (a) Data Collection. Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. A valid hour is one in which at least 1 data point is recorded in each quadrant during which the unit was operating.

- (b) **Data Reporting:** Data collected by the CEMS shall be used to demonstrate continuous compliance with the emissions standards specified for each 24-hour block averaging period. The block averaging period shall run from midnight to midnight of each day. Emissions shall be reported in units of ppmvd corrected to 15% oxygen for each hour of operation. The compliance averages shall be determined by calculating the arithmetic average of a 24-hour block of all valid hourly emission rates. A minimum of 1 valid hour shall be required to calculate a 24-hour block average. When a monitoring system reports emissions in excess of the standards allowed by this permit, the permittee shall notify the Compliance Authority within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. The Department may request a written report summarizing the excess emissions incident. The permittee shall also report excess emissions in a quarterly report as required in specific condition **F.1.37** of this permit.
- (c) **Data Exclusion.** As provided in **III.F.1.16 and F.1.17.**, valid hourly emission rates shall not include periods of start up, shutdown, or documented malfunction as described under the excess emissions requirements of this permit. Up to 2 hours of monitoring data during any 24-hour block averaging period may be excluded from continuous compliance demonstrations as a result of startups, shutdowns, and documented malfunctions.

[Rules 62-4.130, 62-4.160(8), 62-204.800, 62-210.700, 62-297.520, F.A.C and 40 CFR 60.7].

F.1.32. Hours of Operation: Using a component of the gas turbine control system, the permittee shall monitor and record the hours of gas turbine operation. Within five working days following the end of each calendar month, the permittee shall record the total hours of operation (including hours during startups, shutdowns, and malfunctions) for the current month, and the total hours of operation for the current month plus the preceding 11 months.

[Rule 62-204.070, F.A.C., and Applicant Request]

Compliance Demonstrations

- F.1.33. Records Retention:** All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]
- F.1.34. Fuel Records:** The permittee shall demonstrate compliance with the fuel sulfur limits for fuel oil specified in this permit by maintaining records required by 40 CFR 60.334 and 60.335. [Rules 62-4.070(3) and 62-4.160(15), F.A.C.]
- F.1.35. Monthly Operations Summary:** By the fifth calendar day of each month, the permittee shall record the hours of operation and amount of fuel fired for the combustion turbine. The information shall be recorded in a written or electronic log and shall summarize the previous month of operation and the previous 12 months of operation. All hours of operation (including hours during startups, shutdowns, and malfunctions) shall be included in the demonstration of compliance with the 12-month fuel usage limitations. Information recorded and stored as an electronic file shall be available for inspection and/or printing within at least one day of a request from the Compliance Authority. [Rule 62-4.160(15), F.A.C.]

Reports

F.1.36. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C.
[Rule 62-297.310(8), F.A.C.].

F.1.37. Excess Emissions Reporting:

- (a) If excess NO_x or visible emissions occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.
- (b) NSPS Semi-Annual Reports. For purposes of reporting emissions in excess of NSPS Subpart GG, excess emissions from the gas turbine are defined as: any operating hour in which the CEMS 4-hr rolling average NO_x concentration exceeds the NSPS NO_x emissions standard identified in Appendix GG; and any monitoring period during which the sulfur content of the fuel being fired in the gas turbine exceeds the NSPS standard identified in Appendix GG. Within thirty (30) days following each calendar semi-annual period, the permittee shall submit a report on any periods of excess emissions that occurred during the previous semi-annual to the Compliance Authority.

{Note: If there are no periods of excess emissions as defined in NSPS Subpart GG, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semi-Annual Report.}

- (c) SIP Quarterly Report: Within 30 days following the end of each calendar-quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of NO_x emissions in excess of the BACT permit standards at Specific Condition **F.1.17** following the NSPS format in 40 CFR 60.7(c), Subpart A. Periods of startup, shutdown and malfunction, shall be monitored, recorded and reported as excess emissions when emission levels exceed the standards specified in this permit. In addition, the report shall summarize the CEMS systems monitor availability for the previous quarter.

[Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7, and 60.332(j)(1)]

F.1.38. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating hours and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

F.1.39. Hours of Operation: Within ten working days following the first consecutive 12-month period in which the hours of operation exceed 2,500, the permittee shall notify the Compliance Authority. The notification shall include a summary of operation for the last 12 months, and the expected date of initial operation of the SCR system for the control of NO_x as required by **III.F.2**
[Rule 62-204.070, F.A.C.]

F.2. COMBUSTION TURBINE (EU 011) WATER INJECTION AND SCR & > 2,500 Hours

This subsection of the permit addresses the following new emissions unit upon exceeding 2,500 hours of operation on a 12-month rolling total and thereafter. Upon exceeding 2,500 hours of operation on a 12-month rolling total, the provisions of subsection **III.F.2** will supersede that of subsection **III.F.1.** for the rest of the operating life of the unit. BACT is water injection and SCR.

Essential Potential to Emit (PTE) Parameters

- F.2.1. Permitted Capacity.** The heat input to the combustion turbine from firing No. 2 fuel oil shall not exceed 434 MMBtu per hour (LHV) based on the following: 100% base load, lower heating value of No. 2 fuel oil, and a compressor inlet air temperature of 41° F. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves on file with the Department. [Design, Rule 62-210.200, F.A.C. (Definition - PTE)]
- F.2.2. Methods of Operation - Fuels.** Only distillate fuel oil with a maximum sulfur content less than or equal to 0.05 percent by weight shall be used in the combustion turbine. The permittee shall demonstrate compliance with the fuel sulfur limit by keeping the records specified in this permit. Total fuel usage shall not exceed 13,600,000 gallons of fuel oil during any consecutive 12 months. [Applicant Request, Rule 62-210.200, F.A.C. (Definition - PTE)].
- F.2.3. Hours of Operation.** The combustion turbine may operate 8,760 hours per year. [Applicant Request, Rule 62-210.200, F.A.C. (PTE)]

Emission Limitations and Standards

{Permitting Note: The attached 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.}

{Permitting Note: Unless otherwise specified, the averaging times for specific conditions F.2.6.- F.2.9. are based on the specified averaging time of the applicable test method.}

- F.2.4. Summary Table:** The following table is for informational and convenience purposes only. Specific emission standards and limitations are contained in the specific conditions of the permit. This table does not supersede any of the terms or conditions of this permit.

Pollutant	Emission Standard/Limit	Emissions (lb/hr)	Emissions (TPY)
NO _x	9 ppmvd @ 15% O ₂ 24-hr block average	16.3	36.0
CO	20.0 ppmvd @ 15% O ₂	20.0	44.2
SO ₂	0.05 percent sulfur fuel oil	23.6	39.9
SAM	0.05 percent sulfur fuel oil	5.4	6.9
PM/PM ₁₀	VE = 10% as surrogate 0.05 percent sulfur fuel oil	25.0	109.5
PM	VE = 10% as surrogate 0.05 percent sulfur fuel oil	25.0	109.5
VOC	8.0 ppmvd @ 15% O ₂	5.0	11.0

Note: Annual emissions, for the purposes of this table only, are based on a 41° F temperature and the equivalent of 4,420 hours of full load operation. PM/PM₁₀ estimates are based on the equivalent of 8,760 hours of full load operation. Some values listed are for potential to emit (PTE) purposes.

- F.2.5. Sulfuric Acid Mist (SAM) and Sulfur Dioxides (SO₂).** Emissions of SAM, and SO₂ shall be limited by the use of 0.05 percent sulfur fuel oil (or superior fuel oil) and good combustion techniques as specified in this permit. SAM and SO₂ emissions shall not exceed 6.9 and 39.9 tons per year, respectively. Compliance with the SO₂ limit provides assurance that SAM emissions stay within permitted limits. The permittee shall demonstrate compliance with the fuel sulfur limit by maintaining the records specified by this permit.
[Rule 62-212.400, F.A.C. (BACT)].
- F.2.6. Carbon Monoxide (CO):** CO emissions from the combustion turbine shall not exceed 20.0 ppmvd @15% O₂. CO emissions shall not exceed 20.0 lbs per hour. The permittee shall demonstrate compliance with this standard by conducting performance tests and emissions monitoring in accordance with EPA Method 10 and the requirements of this permit.
[Rule 62-212.400, F.A.C. (PSD Avoidance)]
- F.2.7. Nitrogen Oxides (NO_x):** The combustion turbine and SCR system shall be designed and constructed to meet an emission limit of 5.0 ppmvd @15% O₂. This shall be demonstrated during each initial test following installation of new catalyst. During normal operation, NO_x emissions shall not exceed 9.0 ppmvd @15% O₂ on a 24-hour block average. The permittee shall demonstrate compliance with this standard by conducting performance tests and emissions monitoring in accordance with 40 CFR Part 60 Subpart GG and based on a 24-hour block average for data collected from the continuous emissions monitor.
[Rule 62-212.400, F.A.C. (BACT)]
- {Permitting note: The 5.0 ppmvd value reflects BACT. The 9.0 ppmvd value is based on the fuel use limitation that would limit NO_x emissions to less than 40 tons per year. The Department will revise the higher long term limit downward in conjunction with any future applications that will increase fuel use above 13,600,000 gallons per year.}*
- F.2.8. Ammonia (NH₃).** The ammonia slip rate shall be limited to 10.0 ppmvd @ 15% O₂.
[Rule 62-212.400, F.A.C. (BACT)].
- F.2.9. Particulate Matter (PM/PM₁₀).** Emissions of PM and PM₁₀ shall be limited by the use of 0.05 percent sulfur fuel oil (or superior fuel oil) and good combustion techniques as specified in this permit. Visible emissions from the combustion turbine shall not exceed 10% opacity, based on a 6-minute average. The permittee shall demonstrate compliance with this standard by conducting tests in accordance with EPA Method 9 and the performance testing requirements of this permit. This work practice standard is established as a means of ensuring compliance with the BACT PM/PM₁₀ emission limits. [Rule 62-212.400, F.A.C. (PSD Applicability)]
- F.2.10. Volatile Organic Compounds (VOC).** VOC emissions from the combustion turbine shall not exceed 8.0 ppmvd corrected to 15% oxygen. VOC emissions shall not exceed 5.0 pounds per hour. The VOC emissions shall be measured and reported in terms of methane. The permittee shall demonstrate compliance with these standards by conducting initial tests in accordance with EPA Methods 25 and/or 25A and the performance testing requirements of this permit. Optional testing in accordance with EPA Method 18 may be conducted to account for the actual methane fraction of the measured VOC emissions. [Application, Design, Rule 62-4.070(3), F.A.C.]

Excess Emissions, Monitoring Requirements, and Test Methods & Procedures, and Reporting & Recordkeeping Requirements

F.2.11. Two copies of the results of the emission tests for the pollutants listed in conditions **F.2.6.** through **F.2.9.** shall be submitted within forty-five days of the last sampling run to the South District office in Fort Myers. All reports shall be in a format consistent with and shall include the information in accordance with Rule 62-297.310 (8), F.A.C. [Rule 62-297.310(8), F.A.C.]

Performance Restrictions

F.2.12. Operating Procedures: All operators and supervisors shall be properly trained to operate and maintain the combustion turbine and pollution control systems in accordance with the guidelines and procedures established by the manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions.
[Rule 62-4.070(3); Rule 62-212.400, F.A.C. (BACT)]

F.2.13. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify the Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

Emission Controls

F.2.14. Water Injection Technology: The permittee shall operate and maintain a water injection system designed to achieve the permitted NO_x emissions standards for the unit in conjunction with the SCR system. [Applicant request; Rule 62-4.070(3); Rule 62-212.400, F.A.C. (BACT)]

F.2.15. Selective Catalytic Reduction (SCR): Within two months after exceeding the 12-month rolling total of 2,500 operating hours, the permittee shall install, calibrate, tune operate and maintain an SCR system designed to achieve the permitted NO_x emissions standards for the unit in conjunction with the water injection system. [Design and Rule 62-212.400, F.A.C.]

F.2.16. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly.
[Rule 62-210.650, F.A.C.]

Excess Emissions

{Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Section III.F.2. of this permit. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, NESHAP, or Acid Rain programs.}

F.2.17. Definitions

- (a) *Excess Emissions* are defined as emissions of pollutants in excess of those allowed by any applicable air pollution rule of the Department, or by a permit issued pursuant to any such rule or Chapter 62-4, F.A.C. The term applies only to conditions which occur during startup, shutdown, or malfunction. [Rule 62-210.200(106), F.A.C.]

- (b) Startup is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions. [Rule 62-210.200(246), F.A.C.]
- (c) Shutdown is the cessation of the operation of an emissions unit for any purpose. [Rule 62-210.200(231), F.A.C.]
- (d) Malfunction is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(160), F.A.C.]

F.2.18. Startup, Shutdown, Malfunction: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing: (1) best operational practices to minimize emissions are adhered to, and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A written report summarizing each malfunction resulting in excess emissions shall be submitted in a quarterly report. [Rule 62-210.700(1) and (6), F.A.C.]

- (e) During startup and shutdown, visible emissions excluding water vapor shall not exceed 20% opacity for more than 2 hours in any 24-hour block averaging period. [Design; Rule 62-210.700(1) and (5), F.A.C.]
- (f) During all startups, shutdowns, and malfunctions, the NOx continuous emissions monitoring System (CEMS) shall monitor and record emissions. Up to 2 hours (120 minutes) of monitoring data during any 24-hour block averaging period may be excluded from continuous compliance demonstrations as a result of startups, shutdowns, and documented malfunctions. However, only data obtained during startups, shutdowns, and documented malfunctions may be used for the 2 hour exclusion period. Other arbitrary high readings may not be excluded from compliance averaging periods. [Rule 62-210.700(1) and (5), F.A.C.]
- (g) A documented malfunction means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile, or electronic mail. In case of malfunctions, the permittee shall notify the Compliance Authorities within one working day. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Design; Rules 62-210.700(1), (5), and 62-4.130, F.A.C.]

F.2.19. Prohibition: 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.]

Emission Performance Testing

F.2.20. Sampling Facilities: The permittee shall provide facilities for the combustion turbine stack to accommodate adequate testing and sampling locations in order to determine compliance with the applicable emission limits specified by this permit. Permanent stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. KEYS shall advise the Department of any requirements within the cited rule that would be incompatible with the operation of an SCR system or unadvisable due to storm design criteria.
[Rules 62-4.070 and 62-204.800, F.A.C., and 40 CFR 60.40a(b)]

F.2.21. Performance Test Methods: Compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.

- (h) EPA Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources;
- (i) EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources;
- (j) EPA Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure); or EPA Method 20 - Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines.
- (k) EPA Method 25 or 25A - Determination of Volatile Organic Concentrations. (EPA Method 18 may be conducted to account for the non-regulated methane portion of the VOC emissions); and
- (l) Conditional Test Method 027 – Measurement of Ammonia Slip.

No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the DEP Emissions Monitoring Section Administrator in accordance with an alternate sampling procedure specified in Rule 62-297.620, F.A.C.

F.2.22. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to initial NSPS performance tests and at least 15 days prior to any other required tests.
[40 CFR 60.7, 40 CFR 60.8 and Rule 62-297.310(7)(a)9., F.A.C.]

F.2.23. Annual Performance Tests: To demonstrate compliance with the emission standards specified in this permit, the permittee shall conduct annual performance tests for NO_x, CO, and visible emissions from the combustion turbine for each fuel. Testing for ammonia slip is required during the first scheduled annual performance tests after the cumulative hours of operation exceed 1,500 actual hours starting from the initial installation of the SCR catalyst. Thereafter, ammonia testing is required during the first scheduled annual performance tests after subsequent cumulative 1,500 hours of operation or after regeneration, replacement or addition to the SCR catalyst system. If conducted at permitted capacity, NO_x emissions data collected during the annual NO_x continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the required annual performance test. Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1st to September 30th). In the event that the operation of the CT is less than 400 hours per year, annual testing is not required for that year.
[Rule 62-297.310(7)(a), F.A.C.]

- F.2.24. Tests Prior to Permit Renewal:** Prior to renewing the air operation permit, the permittee shall conduct performance tests for CO, NO_x, and visible emissions from the combustion turbine. VOC emission tests are not required prior to permit renewal provided the CO emission standards are met. Testing for ammonia slip meeting the requirements of Condition **F.2.23**, Annual Performance Tests will meet the requirements of this condition. These tests shall be conducted within the 12-month period prior to renewing the air operation permit. For pollutants required to be tested annually, the permittee may submit the most recent annual compliance test to satisfy the requirements of this provision. [Rule 62-297.310(7)(a)3., F.A.C.]
- F.2.25. Tests After Major Repairs or Replacements:** The Department may require that additional compliance testing be conducted within 90 days after major repairs or replacements are performed. [Rule 62-297.310(7)(a)4., F.A.C.]
- F.2.26. Combustion Turbine Testing Capacity:** Required performance tests for compliance with standards specified in this permit shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. However, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for inlet temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Emissions performance tests shall meet all applicable requirements of Chapters 62-204 and 62-297, F.A.C. [Rule 62-297.310(2), F.A.C.]
- F.2.27. Calculation of Emission Rate:** For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
- F.2.28. Applicable Test Procedures**
- (m) 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. [Rule 62-297.310(4)(a)1., F.A.C.]
 2. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.
[Rule 62-297.310(4)(a)2., F.A.C.]
 - (n) Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.
[Rule 62-297.310(4)(b), F.A.C.]
 - (o) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.
[Rule 62-297.310(4)(d), F.A.C.]

F.2.29. Determination of Process Variables

- (p) 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. [Rule 62-297.310(5)(a), F.A.C.]
- (q) 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)(b), F.A.C.]

F.2.30. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

Continuous Monitoring Requirements

F.2.31. NO_x CEMS: The permittee shall install, calibrate, operate, and maintain a CEMS to measure and record NO_x and oxygen concentrations in the combustion turbine exhaust stack. A monitor for carbon dioxide may be used in place of the oxygen monitor, but the system shall be capable of correcting the emissions to 15% oxygen. The NO_x monitoring devices shall comply with the requirements of 40 CFR 60.334(b) for 40 CFR Part 75 monitoring systems. The NO_x CEMS shall be used for the purpose of demonstrating continuous compliance with the NO_x emissions limit (24-hour block average concentration limit) specified in condition F.2.7. [Rule 62-212.400, F.A.C. (BACT) and 40 CFR 75]

F.2.32. NO_x CEMS Data Requirements:

- (r) Data Collection. Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. A valid hour is one in which at least 1 data point is recorded in each quadrant during which the unit was operating.
- (s) Data Reporting: Data collected by the CEMS shall be used to demonstrate continuous compliance with the emissions standards specified for each 24-hour block averaging period. The block averaging period shall run from midnight to midnight of each day. Emissions shall be reported in units of ppmvd corrected to 15% oxygen for each hour of operation. The compliance averages shall be determined by calculating the arithmetic average of a 24-hour block of all valid hourly emission rates. A minimum of 1 valid hour shall be required to calculate a 24-hour block average. When a monitoring system reports emissions in excess of the standards allowed by this permit, the permittee shall notify the Compliance Authority within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. The Department may request a written report summarizing the excess

emissions incident. The permittee shall also report excess emissions in a quarterly report as required in specific condition **F.2.38** of this permit.

- (t) **Data Exclusion.** As provided in **III.F.2.17 and F.2.18**, valid hourly emission rates shall not include periods of start up, shutdown, or documented malfunction as described under the excess emissions requirements of this permit. Up to 2 hours of monitoring data during any 24-hour block averaging period may be excluded from continuous compliance demonstrations as a result of startups, shutdowns, and documented malfunctions.

[Rules 62-4.130, 62-4.160(8), 62-204.800, 62-210.700, 62-297.520, F.A.C and 40 CFR 60.7].

F.2.33. Hours of Operation: Using a component of the gas turbine control system, the permittee shall monitor and record the hours of gas turbine operation. Within five working days following the end of each calendar month, the permittee shall record the total hours of operation (including startups, shutdowns, and malfunctions) for the current month, and the total hours of operation for the current month plus the preceding 11 months.

Rule 62-204.070, F.A.C., and Applicant Request]

Compliance Demonstration

F.2.34. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]

F.2.35. Fuel Records: The permittee shall demonstrate compliance with the fuel sulfur limits for fuel oil specified in this permit by maintaining records required by 40 CFR 60.334 and 60.335 and the provisions of 40 CFR 75 Appendix D. Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

F.2.36. Monthly Operations Summary: By the fifth calendar day of each month, the permittee shall record the hours of operation and amount of each fuel fired for the combustion turbine. The information shall be recorded in a written or electronic log and shall summarize the previous month of operation and the previous 12 months of operation. All hours of operation shall be included in the demonstration of compliance with the 12-month fuel usage limitations. Information recorded and stored as an electronic file shall be available for inspection and/or printing within at least one day of a request from the Compliance Authority.

[Rule 62-4.160(15), F.A.C.]

Reports

F.2.37. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C.

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

F.2.38. Excess Emissions Reporting:

- (u) If excess NO_x or visible emissions occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.
- (v) NSPS Semi-Annual Reports. For purposes of reporting emissions in excess of NSPS Subpart GG, excess emissions from the gas turbine are defined as: any operating hour in which the CEMS 4-hr rolling average NO_x concentration exceeds the NSPS NO_x emissions standard identified in Appendix GG; and any monitoring period during which the sulfur content of the fuel being fired in the gas turbine exceeds the NSPS standard identified in Appendix GG. Within thirty (30) days following each calendar semi-annual period, the permittee shall submit a report on any periods of excess emissions that occurred during the previous semi-annual to the Compliance Authority.

{Note: If there are no periods of excess emissions as defined in NSPS Subpart GG, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semi-Annual Report.}

- (w) SIP Quarterly Report: Within 30 days following the end of each calendar-quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of NO_x emissions in excess of the BACT permit standards at Specific Condition **F.2.18** following the NSPS format in 40 CFR 60.7(c), Subpart A. Periods of startup, shutdown and malfunction, shall be monitored, recorded and reported as excess emissions when emission levels exceed the standards specified in this permit. In addition, the report shall summarize the CEMS systems monitor availability for the previous quarter.

[Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7, and 60.332(j)(1)]

- F.2.39. Annual Operating Report:** The permittee shall submit an annual report that summarizes the actual fuel usage and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. Rule 62-210.370(2), F.A.C.]

Section IV. Acid Rain Part

Operated by: Keys Energy Services

ORIS code: 6584

The following emissions units are regulated under the Acid Rain Program:

<u>E.U. ID No.</u>	<u>Description</u>
001	Ralph Garcia Steam Plant [EPA ID #1][Retired]
005	8.8 MW Medium Speed Diesel Generator [Unit #1; EPA ID #D-1]
006	8.8 MW Medium Speed Diesel Generator [Unit #2; EPA ID #D-2]
011	48.0 MW Simple Cycle Combustion Turbine (CT-4)

Subsection A. This Subsection addresses Acid Rain, Phase II, Retired and New Unit Exemption.

The emissions unit listed below is regulated under Phase II of the federal Acid Rain Program.

<u>E.U. ID No.</u>	<u>Description</u>
001	Ralph Garcia Steam Plant – PERMANENTLY RETIRED
005	8.8 MW Medium Speed Diesel Generator (Unit #1) – NEW UNIT EXEMPTION
006	8.8 MW Medium Speed Diesel Generator (Unit #2) – NEW UNIT EXEMPTION
011	48.0 MW Simple Cycle Combustion Turbine (CT-4)

IV.A.1.

- a. The New and Retired Unit Exemption forms submitted for this facility constitutes the Acid Rain Part application pursuant to 40 CFR 72.7 and 40 CFR 72.8 and is a part of this permit. The owners and operators of this acid rain unit shall comply with the standard requirements and special provisions set forth in DEP Form No. 62-210.900(1)(a)2 and 62-210.900(1)(a)3., effective April 16, 2001, signed by the Designated Representative on September 27, 2004, and received by the Department on September 28, 2004. This unit is subject to the following: 40 CFR 72.1 which requires the unit to have an Acid Rain Part as part of its Title V permit; 40 CFR 72.2 which provides associated definitions; 40 CFR 72.3 which provides measurements, abbreviations, and acronyms; 40 CFR 72.4 which provides the federal authority of the Administrator; 40 CFR 72.5 which provides the authority of the states; 40 CFR 72.6 which makes the boiler a Phase II unit; 40 CFR 72.10 which gives the public access to information about this unit; and, 40 CFR 72.13 which incorporates certain ASTM methods into 40 CFR Part 72. [Chapter 62-213, F.A.C.; and Rule 62-214.340, F.A.C.]
- b. For the new GE LM 6000 PC SPRINT Simple Cycle Combustion Turbine, DEP Form No. 62-210.900(1)(a), version dated 06/16/03, signed by the Designated Representative on 07/12/05, and received by the Department on 07/25/05. [Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

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

E.U. ID No.	EPA ID No.	YEAR	2005	2006	2007	2008	2009
001 (retired)	1	SO ₂ allowances, under Table 2 of 40 CFR 73	2571*	2571*	2571*	2571*	2571*
005, 006 (New Units Exemption)	D-1, D-2	SO ₂ allowances, under Table 2 of 40 CFR 73	100	100	100	100	100
011	CT-4	SO ₂ allowances to be determined by U.S. EPA.	0	0	0	0	0

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

IV.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.

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

[Rules 62-213.440(1)(c)1., 2., & 3., F.A.C.]

IV.A.4. The designated representative of this acid rain unit applied for an exemption from the requirements of the Federal Acid Rain Program by submitting a completed and signed “Retired Unit Exemption” form (DEP Form No. 62-210.900(1)(a)3., F.A.C., attached) and “New Unit Exemption” form (DEP Form No. 62-210.900(1)(a)2., F.A.C., attached) to the Department. The date of permanent retirement is January 1, 1998.
 [Rule 62-214.340(2), F.A.C.; and 40 CFR 72.8.]

IV.A.5. Where an applicable requirement of the Act is more stringent than applicable regulations promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Administrator.
 [40 CFR 70.6(a)(1)(ii); and Rule 62-210.200, F.A.C., Definitions – Applicable Requirements.]

IV.A.6. Comments, notes, and justifications: None.

Appendix AR-1, Acid Rain.

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No.: 0870003-008-AV

The new emissions units listed below is regulated under Acid Rain Program, Phase II.

E.U. ID No.	Description
-011	GE LM 6000 PC SPRINT Simple Cycle Combustion Turbine

The Designated Representative of this acid rain unit applied for a Phase II permit by submitting to the Department a completed "Acid Rain Part Application" form (DEP Form No. 62-210.900(1)(a), F.A.C., Effective: 06/16/03) signed by the Designated Representative on 07/12/05.

The submitted form was scanned and is attached in this appendix.

Appendix H-1, Permit History/ID Number Changes

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No. 0870003-008-AV
Facility ID No. 0870003

Permit History (For tracking purposes):

<u>E.U. ID No.</u>	<u>Description</u>	<u>Permit No.</u>	<u>Issued</u>	<u>Expiration Date</u>	
001	Steam Turbine (EPA ID #1)	AO44-245479 AC44-61820	05/03/94 12/17/82	04/25/99 06/15/83	RETIRED January, 1998
002	Diesel Peaking Unit #1	AO44-175804	02/20/90	02/20/95	Now in E.U. 010
003	Diesel Peaking Unit #2	AO44-175804	02/20/90	02/20/95	Now in E.U. 010
004	Diesel Peaking Unit #3	AO44-175804	02/20/90	02/20/95	Now in E.U. 010
005 & 006	8.8 MW Medium Speed Diesel Generators D-1 & D-2	AO44-207419 AC44-221256/ PSD-FL-135 AC4452197/ PSD-FL-135	03/19/93 03/19/93	12/31/97 03/18/94	
007	23.5 MW Simple Cycle Combustion Turbine CT-1	AC44-245399/ PSD-FL-210	06/05/89 09/28/95	04/01/91 12/31/96	
008 & 009	19.8 MW Simple Cycle Combustion Turbines CT-2 & CT-3	0870003-003-AC & 0870003-004-AC	01/08/98 04/13/98	01/08/00 05/19/00	
010	Unregulated Emissions Units 48 MW Simple Cycle	0870003-001-AV 0870003-007-AC	01/01/00 09/08/05	12/31/04 11/30/07	
011 & 012	Combustion Turbine CT-4 & Nominal 1,000,000 gallon No. 2 Fuel Oil Tank	(PSD-FL-348)			

ID Number Changes: From: Facility ID No. 52FTM440003; To: Facility ID No. 0870003

From: E.U. ID No. 002, 003, 004; To: E.U. ID No. 010; Note: 010 units are all unregulated units.

Notes: 1 - AO permits automatic extensions in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.

{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 I-1, List of Insignificant Emissions Units and Activities

Keys Energy Services
Stock Island Plant
Page 1 of 2

PROPOSED Permit No. 0870003-008-AV

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 activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Brief Description of Emissions Units and Activities

1. Internal combustion engines in boats, aircraft and vehicles used for transportation of passengers or freight.
2. Cold storage refrigeration equipment, except for any such equipment located at a Title V source using an ozone-depleting substance regulated under 40 CFR Part 82.
3. Vacuum pumps in laboratory operations.
4. Equipment used for steam cleaning.
5. Belt or drum sanders having a total sanding surface of five square feet or less and other equipment used exclusively on wood or plastics or their products having a density of 20 pounds per cubic foot or more.
6. Equipment used exclusively for space heating, other than boilers.
7. Laboratory equipment used exclusively for chemical or physical analyses.
8. Brazing, soldering or welding equipment.
9. One or more emergency generators located within a single facility provided:
 - a. None of the emergency generators is subject to the Federal Acid Rain Program; and
 - b. Total fuel consumption by all such emergency generators within the facility is limited to 32,000 gallons per year of diesel fuel, 4,000 gallons per year of gasoline, 4.4 million standard cubic feet per year of natural gas or propane, or an equivalent prorated amount if multiple fuels are used.
10. One or more heating units and general purpose internal combustion engines located within a single facility provided:
 - c. None of the heating units or general purpose internal combustion engines is subject to the Federal Acid Rain Program; and

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

Keys Energy Services
Stock Island Plant
Page 2 of 2

PROPOSED Permit No. 0870003-008-AV

- d. Total fuel consumption by all such heating units and general purpose internal combustion engines within the facility is limited to 32,000 gallons per year of diesel fuel, 4,000 gallons per year of gasoline, 4.4 million standard cubic feet per year of natural gas or propane, or an equivalent prorated amount if multiple fuels are used.
11. Fire and safety equipment.
12. Surface coating operations within a single facility if the total quantity of coatings containing greater than 5.0 percent VOCs, by volume, used is 6.0 gallons per day or less, averaged monthly, provided:
 - a. Such operations are not subject to a volatile organic compound Reasonably Available Control Technology (RACT) requirement of Chapter 62-296, F.A.C.; and
 - b. The amount of coatings used shall include any solvents and thinners used in the process including those used for cleanup.
13. Surface coating operations utilizing only coatings containing 5.0 percent or less VOCs, by volume.
14. Degreasing units using heavier-than-air vapors exclusively, except any such unit using or emitting any substance classified as a hazardous air pollutant.

Note: No exemption shall be granted to any emissions unit or activity if:

- (1) Such unit or activity would be subject to any unit-specific applicable requirement;
- (2) Such unit or activity, in combination with other units and activities proposed for exemption; would cause the facility to exceed any major source threshold(s) as defined in Rule 62-213.420(3)(c)1., F.A.C., unless it is acknowledged in the permit application that such units or activities would cause the facility to exceed such threshold(s); or
- (3) Such unit or activity would emit or have the potential to emit:
 - (a) 500 pounds per year or more of lead and lead compounds expressed as lead;
 - (b) 1,000 pounds per year or more of any hazardous air pollutant;
 - (c) 500 pounds per year or more of total hazardous air pollutants; or
 - (d) 5.0 tons per year or more of any other regulated pollutant.

[Rule 62-213.430(6), F.A.C.]

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

Keys Energy Services
Stock Island
Page 1 of 1

PROPOSED Permit No. 0870003-008-AV

Unregulated Emissions Units and 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 activities are neither “regulated emissions units” nor “insignificant emissions units”.

E.U. ID No. Brief Description of Emissions Units and Activities

	Two No. 2 Fuel Oil Storage Tanks - 500,000 gallons each; subject only to 40 CFR 60.116b (a) and (b)
	No. 2 Fuel Oil Storage Tank - 1.9 million gallons; no applicable standards
010	Two No. 2 Fuel Oil Storage “day” Tanks - 16,000 gallons each
	Four Vehicular Fleet Fuel Tanks - 2,000 gallons each
	Three Diesel Peaking Generators (2 MW): Unit 10 (formerly E.U. 002, 003, & 004)
	No. 2 Fuel Oil Storage Tank - 1,000,000 gallon; not subject to 40 CFR 60, Subpart Kb*

* On the basis that low sulfur fuel oil has been shown to consistently exert less than 3.5 kilopascals of Reid vapor pressure.

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

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No.0870003-008-AV
Facility ID No. 0870003

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

E.U. 005, 006 8.8 MW 85.4 MMBtu/hr Medium Speed Diesel Generators, Two Units
Emission Limits are for Each Engine

Pollutant/Parameter	Fuel	Hours/Year	Allowable Emissions			Equivalent Emissions		Regulatory Citations	See Permit Condition
			Standards	lbs/hour	TPY	lbs./hour	TPY		
SO2	#2 oil	3740 Full-load equivalent	0.05% fuel	43.6	41.00			Rule 62-212.400, BACT	III.A.3, A.6
PM	#2 oil	Engine hours	0.1 lbs/MMBtu	8.5	8			Rule 62-296.702	III.A.7
VE	#2 oil		20% opacity					Rule 62-296.320(4)(b)1	II.3
NOx	#2 oil		6.0 grams/hp-hour	160.9	151			Rule 62-212.400, BACT	III.A.5
CO	#2 oil		2.0 grams/hp-hour	53.6	50			Rule 62-212.400, BACT	III.A.8
Beryllium (Be)	#2 oil			0.00054	1			Rule 62-212.400, BACT	III.A.10
VOC	#2 oil		1.0 grams/hp-hour	26.8	25			Rule 62-212.400, BACT	III.A.9

Notes:
*Equivalent Emissions provided for information only.

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

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No. 0870003-008-AV
Facility ID No. 0870003

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

E.U. 008, 009 19.77 MW 305 MMBtu/hour Simple Cycle Combustion Turbine, Two Units

Pounds/hour apply to each turbine, while TPY limit is for both units combined

Pollutant/Parameter	Fuel	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citations	See Permit
			Standard(s)	lbs/hour	TPY	lbs./hour	TPY		Condition
SO2	#2 oil		0.05% fuel only			15.9	31.8	AC-0870003-003	III.C.5,C.9
PM	#2 oil			16.6	45	16.6	55	AC-0870003-003	III.C.10
CO	#2 oil			25.2	101	25.2	50.5	AC-0870003-003	III.C.11
NOx	#2 oil		75 ppm	93.8	172			AC-0870003-003	III.C.8
VE	#2 oil		20%				n/a	AC-0870003-003	III.C.12

Notes:

*Equivalent Emissions provided for information only.

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

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No. 0870003-008-AV
Facility ID No. 0870003

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

E.U. 007 23.5 MW 312 MMBtu/hour Simple Cycle Combustion Turbine CT-1

Pollutant/Parameter	Fuel	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citations	See Permit Condition
			Standard(s)	lbs/hour	TPY	lbs./hour	TPY		
SO2	#2 oil		0.05% fuel only					AC44-245399 PSD-FL-210	III.B.5.
PM	#2 oil			18	43	18	43	AC44-245399 PSD-FL-210	III.B.6.
CO	#2 oil		100% load: 20 ppm 50% load: 136 ppm	64	152	64	152	AC44-245399 PSD-FL-210	III.B.7.
NOx	#2 oil		75 ppmvd at 15% O2	96	138	96	138	AC44-245399 PSD-FL-210	III.B.4.
VE	#2 oil		20%				n/a	AC44-245399 PSD-FL-210	III.B.8.

Notes:

*Equivalent Emissions provided for information only.

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

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No. 0870003-008-AV
Facility ID No. 0870003

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

E.U. 011 48.0 MW 434 MMBtu/hour Simple Cycle Combustion Turbine, Operational Hours ≤ 2,500

Pollutant/Parameter	Fuel	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citations	See Permit
			Standard(s)	lbs/hour	TPY	lbs./hour	TPY		Condition
SO2	#2 oil		0.05% fuel only	23.6	29.5			AC-0870003-007	III.F.1.4, F.1.5
PM/PM10 (Front & Back)	#2 oil		VE =10% as surrogate 0.05% fuel only	25.0	31.3			AC-0870003-007	III.F.1.4, F.1.8
CO	#2 oil		30 ppmvd @15% O2	33.0	41.0			AC-0870003-007	III.F.1.4, F.1.6
NOx	#2 oil		42 ppmvd @15% O2	75.9	94.9			AC-0870003-007	III.F.1.4, F.1.7
VE	#2 oil		10% opacity					AC-0870003-007	III.F.1.4, F.1.8
VOC	#2 oil		16 ppmvd @15% O2	10.0	12.6			AC-0870003-007	III.F.1.4, F.1.9
SAM	#2 oil		0.05% fuel only	5.4	6.8			AC-087-0003-007	III.F.1.4, F.1.5

Notes:

*Equivalent Emissions provided for information only.

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

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No. 0870003-008-AV
Facility ID No. 0870003

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

E.U. 011 48.0 MW 434 MMBtu/hour Simple Cycle Combustion Turbine, Operational Hours > 2,500

Pollutant/Parameter	Fuel	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citations	See Permit
			Standard(s)	lbs/hour	TPY	lbs./hour	TPY		Condition
SO2	#2 oil		0.05% fuel only	23.6	39.9			AC-0870003-007	III.F.2.4, F.2.5
PM/PM10 (Front & Back)	#2 oil		VE =10% as surrogate 0.05% fuel only	25.0	109.0			AC-0870003-007	III.F.2.4, F.2.9
CO	#2 oil		20 ppmvd @15% O2	20.0	44.2			AC-0870003-007	III.F.2.4, F.2.6
NOx	#2 oil		9 ppmvd @15% O2 24 block average	16.3	36.0			AC-0870003-007	III.F.2.4, F.2.7
VE	#2 oil		10% opacity					AC-0870003-007	III.F.2.4, F.2.9
VOC	#2 oil		8 ppmvd @15% O2	5.0	11.0			AC-0870003-007	III.F.2.4, F.2.10
SAM	#2 oil		0.05% fuel only	5.4	6.9			AC-0870003-007	III.F.2.4, F.2.5
NH3	#2 oil		10.0 ppmvd @15% O2					AC-0870003-007	III.F.2.8

Notes:

*Equivalent Emissions provided for information only.

Table 2-1, Summary of Compliance Requirements

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No. 0870003-008-AV
Facility ID No. 0870003

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

E.U. 005, 006

8.8 MW 85.4 MMBtu/hour Two Medium Speed Diesel Generators

Pollutant/ Parameter	Fuel	Compliance Method	Frequency of Sampling	Frequency Base Date *	Min. Compliance Test Duration	CMS**	Permit Condition
CO	#2 oil	EPA Method 10	annual	01-Jun			III.A.15
VE	#2 oil	DEP Method 9	permit renewal	01-Jun			II.3 & III.A.15
NOx	#2 oil	EPA Method 20	annual	01-Jun			III.A.15
SO2	#2 oil	EPA Method 6 or ASTM D 2880-71	permit renewal	01-Jun			III.A.15
PM	#2 oil	EPA Method 5	annual	01-Jun			III.A.15
VOC	#2 oil	EPA Method 25	permit renewal	01-Jun			III.A.16
Beryllium	#2 oil	EPA Method 104	annual	01-Jun			III.A.16

Notes:

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

**CMS = continuous monitoring system

Table 2-1, Summary of Compliance Requirements

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No.0870003-008-AV
Facility ID No. 0870003

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

E.U. 007 23.5 MW 312 MMBtu/hour Simple Cycle Combustion Turbine
E.U. 008, 009 19.77 MW 305 MMBtu/hour Simple Cycle Combustion Turbine, Two Units

Pollutant/ Parameter	Fuel	Compliance Method	Frequency of Sampling	Frequency Base Date *	Min. Compliance Test Duration	CMS**	Permit Condition
SO2	No. 2 oil	ASTM4294 or equivalent	After each fuel oil shipment	Per 40 CFR 60.334			III.E.11
PM	No. 2 oil	EPA Method 5B	annual				III.E.10
VE	No. 2 oil	DEP Method 9	annual				III.E.10
CO	No. 2 oil	EPA Method 10	annual				III.E.10
NOx	No. 2 oil	EPA Method 20	annual				III.E.10

Notes:

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

**CMS = continuous monitoring system

Table 2-1, Summary of Compliance Requirements

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No.0870003-008-AV
Facility ID No. 0870003

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

E.U. 011 48.0 MW 434 MMBtu/hour Simple Cycle Combustion Turbine, Operational Hours ≤ 2,500

Pollutant/ Parameter	Fuel	Compliance Method	Frequency of Sampling	Frequency Base Date *	Min. Compliance Test Duration	CMS**	Permit Condition
SO2	No. 2 oil	ASTM4294 or equivalent	After each fuel oil shipment	Per 40 CFR 60.334			III.F.1.5
PM	No. 2 oil	VE as surrogate	annual				III.F.1.8, F.1.20(a)
VE	No. 2 oil	EPA Method 9	annual				III.F.1.8, F.1.20 (a)
CO	No. 2 oil	EPA Method 10	annual				III.F.1.6, F.1.20 (b)
NOx	No. 2 oil	EPA Method 7E/20 & CFR 60, Subpart GG 24 hr block average of CEMS data	annual			yes	III.F.1.7, F.1.20 (c)
VOC	No. 2 oil	EPA Method 25/25A or Method 18	Annual				III.F.1.9, F.1.20 (d)

Notes:

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

**CMS = continuous monitoring system

Table 2-1, Summary of Compliance Requirements

Keys Energy Services
Stock Island Power Plant

PROPOSED Permit No.0870003-008-AV
Facility ID No. 0870003

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

E.U. 011 48.0 MW 434 MMBtu/hour Simple Cycle Combustion Turbine, Operational Hours > 2,500

Pollutant/ Parameter	Fuel	Compliance Method	Frequency of Sampling	Frequency Base Date *	Min. Compliance Test Duration	CMS**	Permit Condition
SO2	No. 2 oil	ASTM4294 or equivalent	After each fuel oil shipment	Per 40 CFR 60.334			III.F.2.5
PM	No. 2 oil	VE as surrogate	annual				III.F.2.9, F.2.21(a)
VE	No. 2 oil	EPA Method 9	annual				III.F.2.9, F.2.21 (a)
CO	No. 2 oil	EPA Method 10	annual				III.F.2.6, F.2.21 (b)
NOx	No. 2 oil	EPA Method 7E/20 & CFR 60, Subpart GG 24 hr block average of CEMS data	annual			yes	III.F.2.7, F.2.21 (c)
VOC	No. 2 oil	EPA Method 25/25A or Method 18	annual				III.F.2.10, F.2.21 (d)
NH3	No. 2 oil	Candidate Test Method 027	annual				III.F.2.8, F.2.21 (e)
<p>Notes: *Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C. **CMS = continuous monitoring system</p>							

Friday, Barbara

To: edward.garcia@keysenergy.com; Clark, Ivan L.; Satyal, Ajaya
Cc: Read, David
Subject: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant
Attachments: 0870003.008.AV.P_pdf[1].zip

Dear Sir/Madam:

A copy of the “PROPOSED PERMIT DETERMINATION” and the related permit documents for the above referenced facility are attached. This e-mail is being provided as a courtesy to inform you that the DRAFT permit has become a PROPOSED permit, and that the PROPOSED permit has been transmitted to the USEPA for their review.

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED permit is made by the USEPA within 45 days, the PROPOSED permit will become a FINAL permit no later than 55 days after the date on which the PROPOSED permit was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED permit, the FINAL permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

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

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

12/27/2007

Friday, Barbara

From: System Administrator
To: Satyal, Ajaya
Sent: Thursday, December 27, 2007 12:03 PM
Subject: Delivered: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant

Your message

To: 'edward.garcia@keysenergy.com'; 'Clark, Ivan L.'; Satyal, Ajaya
Cc: Read, David
Subject: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant
Sent: 12/27/2007 12:03 PM

was delivered to the following recipient(s):

Satyal, Ajaya on 12/27/2007 12:03 PM

Friday, Barbara

From: System Administrator
To: Read, David
Sent: Thursday, December 27, 2007 12:03 PM
Subject: Delivered:PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant

Your message

To: 'edward.garcia@keysenergy.com'; 'Clark, Ivan L.'; Satyal, Ajaya
Cc: Read, David
Subject: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant
Sent: 12/27/2007 12:03 PM

was delivered to the following recipient(s):

Read, David on 12/27/2007 12:03 PM

Friday, Barbara

From: Exchange Administrator
Sent: Thursday, December 27, 2007 12:03 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

Attachments: ATT137303.txt; PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant



ATT137303.txt
(295 B)



PROPOSED Title V
Permit Revisi...

This is an automatically generated Delivery Status Notification.

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

edward.garcia@keysenergy.com

Friday, Barbara

From: Exchange Administrator
Sent: Thursday, December 27, 2007 12:03 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

Attachments: ATT137308.txt; PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant



ATT137308.txt
(284 B)

PROPOSED Title V
Permit Revisi...

This is an automatically generated Delivery Status Notification.

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

IClark@RWBeck.com

Friday, Barbara

From: Satyal, Ajaya
To: Friday, Barbara
Sent: Thursday, December 27, 2007 12:54 PM
Subject: Read: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant

Your message

To: 'edward.garcia@keysenergy.com'; 'Clark, Ivan L.'; Satyal, Ajaya
Cc: Read, David
Subject: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant
Sent: 12/27/2007 12:03 PM

was read on 12/27/2007 12:54 PM.

Friday, Barbara

From: Garcia, Edward [Edward.Garcia@KeysEnergy.com]
To: Friday, Barbara
Sent: Thursday, December 27, 2007 12:07 PM
Subject: Read: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant

Your message

To: Edward.Garcia@KeysEnergy.com
Subject:

was read on 12/27/2007 12:07 PM.

Friday, Barbara

From: Read, David
To: Friday, Barbara
Sent: Thursday, December 27, 2007 12:11 PM
Subject: Read: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant

Your message

To: 'edward.garcia@keysenergy.com'; 'Clark, Ivan L.'; Satyal, Ajaya
Cc: Read, David
Subject: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant
Sent: 12/27/2007 12:03 PM

was read on 12/27/2007 12:10 PM.

Friday, Barbara

From: Satyal, Ajaya
Sent: Thursday, December 27, 2007 12:55 PM
To: Friday, Barbara
Subject: RE: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant

Received proposed TV 0870003-008-AV.

Thanks,

Ajaya Satyal, Air Program Administrator
Florida Department of Environmental Protection, South District
2295 Victoria Ave, Ste. 364
Fort Myers, Florida 33902
Phone Number (239) 332-6975

From: Friday, Barbara
Sent: Thursday, December 27, 2007 12:03 PM
To: 'edward.garcia@keysenergy.com'; 'Clark, Ivan L.'; Satyal, Ajaya
Cc: Read, David
Subject: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant

Dear Sir/Madam:

A copy of the "PROPOSED PERMIT DETERMINATION" and the related permit documents for the above referenced facility are attached. This e-mail is being provided as a courtesy to inform you that the DRAFT permit has become a PROPOSED permit, and that the PROPOSED permit has been transmitted to the USEPA for their review.

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED permit is made by the USEPA within 45 days, the PROPOSED permit will become a FINAL permit no later than 55 days after the date on which the PROPOSED permit was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED permit, the FINAL permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

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

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

12/27/2007

Friday, Barbara

From: Clark, Ivan L. [IClark@RWBeck.com]
Sent: Thursday, December 27, 2007 6:07 PM
To: Friday, Barbara; edward.garcia@keysenergy.com; Satyal, Ajaya
Cc: Read, David; Nelson, Brian E.
Subject: RE: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant

Barbara

Could you please resend the attachment and change the extention from zip to zi. Our computer system deletes zip files attachments.

Ivan Clark
Principal and Assistant National Director
R. W. Beck, Inc.
1801 California Street
Suite 2800
Denver, CO 80202
(303) 299-5247
fax (303) 297-2811
e-mail iclark@rwbeck.com

This communication and any related verbal communication are provided under the terms of R. W. Beck's contract with its client, and are not intended to be used or relied upon by any third party other than advisors or consultants to the client. Any use of such communication by any other third party is the responsibility of such third party, and R. W. Beck accepts no responsibility for any damages incurred by any third party as a result of decisions or actions based on such communication. Any guidance or opinions provided herein should only be read and relied upon by client within the limitations and context of any prior guidance provided by R. W. Beck in any prior work products relating to the subject matter of such communication.

From: Friday, Barbara [mailto:Barbara.Friday@dep.state.fl.us]
Sent: Thursday, December 27, 2007 10:03 AM
To: edward.garcia@keysenergy.com; Clark, Ivan L.; Satyal, Ajaya
Cc: Read, David
Subject: PROPOSED Title V Permit Revision No.: 0870003-008-AV - Keys Energy Service - Stock Island Poewr Plant

Dear Sir/Madam:

A copy of the "PROPOSED PERMIT DETERMINATION" and the related permit documents for the above referenced facility are attached. This e-mail is being provided as a courtesy to inform you that the DRAFT permit has become a PROPOSED permit, and that the PROPOSED permit has been transmitted to the USEPA for their review.

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED permit is made by the USEPA within 45 days, the PROPOSED permit will become a FINAL permit no later than 55 days after the date on which the PROPOSED permit was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED permit, the FINAL permit will not be issued until the permitting authority receives

12/28/2007

written notice that the objection is resolved or withdrawn.

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

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on [this link to the DEP Customer Survey](#). Thank you in advance for completing the survey.

Thank you,

DEP, Bureau of Air Regulation