

**APPLICATION FOR
AIR OPERATION PERMIT RENEWAL
*SHADY HILLS GENERATING STATION
SHADY HILLS, FLORIDA***

Prepared For:

**LS Power Development, LLC
5611 Colleyville Blvd., Suite 260, Box 115
Colleyville, Texas 76034**

Prepared By:

**Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500**

June 2007

07387543

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603



TRANSMITTAL LETTER

**To: Trina Vielhauer, Chief
Air Resources Branch, FDEP**

**Date: June 28, 2007
Project No.: 07387543-0100**

Sent by: nav

- Mail
- Air Freight
- Hand Carried

- UPS
- Federal Express

RECEIVED
JUL 03 2007
BUREAU OF AIR REGULATION

Per: S. Mohammad/K. Kosky

Quantity	Item	Description
4	Copies	Application for Air Operation Permit Renewal – Shady Hills Generating Station, Shady Hills, Florida

Cc: Tod Harbour, Shady Hills

RECEIVED

JUL 03 2007

BUREAU OF AIR REGULATION

**APPLICATION FOR
AIR OPERATION PERMIT RENEWAL
SHADY HILLS GENERATING STATION
SHADY HILLS, FLORIDA**

Prepared For:

**Shady Hills Power Company, LLC
120 Long Ridge Road
Stamford, CT 06927**

Prepared By:

**Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500**

June 2007

07387543

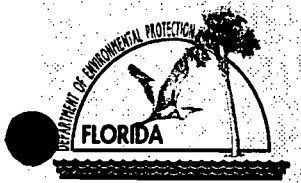
DISTRIBUTION:

4 copies – FDEP

2 copies – Shady Hills Power Company, LLC

1 copy – Golder Associates Inc.

AIR PERMIT APPLICATION-LONG FORM



Department of Environmental Protection

RECEIVED

JUL 03 2007

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

BUREAU OF AIR REGULATION

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air permit. Also use this form to apply for an air construction permit:

- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- Where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- Where the applicant proposes to establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial/revise/renewal Title V air operation permit.

Air Construction Permit & Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Shady Hills Generation Co., LLC	
2. Site Name: Shady Hills Generating Station	
3. Facility Identification Number: 1010373	
4. Facility Location...: Street Address or Other Locator: 14240 Merchant Energy Way City: Shady Hills County: Pasco Zip Code: 08816	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Roy S. Belden	
2. Application Contact Mailing Address... Organization/Firm: Shady Hills Power Company, LLC Street Address: 120 Long Ridge Road City: Stamford State: CT Zip Code: 06927	
3. Application Contact Telephone Numbers... Telephone: (203) 357-6820 ext. Fax: (203) 967-5116	
4. Application Contact Email Address: roy.belden@ge.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s): 1010373-006-AV	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

This application is for the renewal of Title V permit No. 1010373-004-AV for the Shady Hills Generating Station, which expires on December 31, 2007.

The facility consists of three, dual-fuel, nominal 170-megawatt (MW) GE Model PG7241FA combustion turbine (CT) electric generators, and one 2.8-million gallon fuel oil storage tank. The CTs can operate in simple-cycle mode and intermittent-duty mode. The CTs are equipped with dry low NO_x combustors and water injection capability for nitrogen oxides (NO_x) emission control.

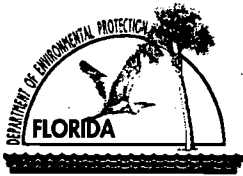
APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
001	170-MW Simple-Cycle Combustion Turbine		
002	170-MW Simple-Cycle Combustion Turbine		
003	170-MW Simple-Cycle Combustion Turbine		
004	Fuel Storage Tank		

Application Processing Fee

Check one: Attached - Amount: \$ _____ Not Applicable



Department of Environmental Protection

Division of Air Resource Management

RESPONSIBLE OFFICIAL NOTIFICATION FORM

Note: A responsible official is not necessarily a designated representative under the Acid Rain Program. To become a designated representative, submit a certificate of representation to the U.S. Environmental Protection Agency (EPA) in accordance with 40 CFR Part 72.24.

Identification of Facility

1. Facility Owner/Company Name: Shady Hills Power Company, LLC	
2. Site Name: Shady Hills Power Company, LLC	3. County: Pasco
4. Title V Air Operation Permit/Project No. (leave blank for initial Title V applications): 1010373-003-AV	

Notification Type (Check one or more)

<input type="checkbox"/> INITIAL:	Notification of responsible officials for an initial Title V application.
<input type="checkbox"/> RENEWAL:	Notification of responsible officials for a renewal Title V application.
<input checked="" type="checkbox"/> CHANGE:	Notification of change in responsible official(s). Effective date of change in responsible official(s) <u>June 21, 2007</u>

Primary Responsible Official

1. Name and Position Title of Responsible Official: Roy S. Belden, Vice President
2. Responsible Official Mailing Address: Organization/Firm: Shady Hills Power Company, LLC c/o GE Energy Financial Services Street Address: 120 Long Ridge Road City: Stamford State: CT Zip Code: 06927
3. Responsible Official Telephone Numbers: Telephone: (203) 357 - 6820 Fax: (203) 961 - 5116
4. Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input checked="" type="checkbox"/> The designated representative at an Acid Rain source.
5. Responsible Official Statement: <i>I, the undersigned, am a responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this notification. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this notification are true, accurate and complete. Further, I certify that I have authority over the decisions of all other responsible officials, if any, for purposes of Title V permitting.</i> <u>Roy Belden</u> <u>6/28/07</u> Signature Date

Additional Responsible Official

1. Name and Position Title of Responsible Official:
2. Responsible Official Mailing Address: Organization/Firm: Street Address: City: State: Zip Code:
3. Responsible Official Telephone Numbers: Telephone: () - Fax: () -
4. Responsible Official Qualification (<i>Check one or more of the following options, as applicable</i>): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.

Additional Responsible Official

1. Name and Position Title of Responsible Official:
2. Responsible Official Mailing Address: Organization/Firm: Street Address: City: State: Zip Code:
3. Responsible Official Telephone Numbers: Telephone: () - Fax: () -
4. Responsible Official Qualification (<i>Check one or more of the following options, as applicable</i>): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.

APPLICATION INFORMATION

Owner/Authorized Representative Statement

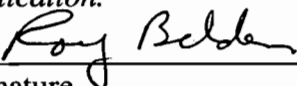
Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
Roy S. Belden
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Shady Hills Power Company, LLC Street Address: 120 Long Ridge Road City: Stamford State: CT Zip Code: 06927
3. Owner/Authorized Representative Telephone Numbers... Telephone: (203) 357-6820 ext. Fax: (203) 961-5116
4. Owner/Authorized Representative Email Address: roy.belden@ge.com
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.</i> _____ Signature _____ Date

APPLICATION INFORMATION

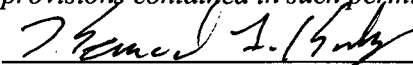

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: Roy S. Belden
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Shady Hills Power Company, LLC Street Address: 120 Long Ridge Road City: Stamford State: CT Zip Code: 06927
4. Application Responsible Official Telephone Numbers... Telephone: (203) 357-6820 ext. Fax: (203) 961-5116
5. Application Responsible Official Email Address: roy.belden@ge.com
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i>  _____ Signature <u>6/28/07</u> _____ Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky Registration Number: 14996
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6241 NW 23rd Street, Suite 500 City: Gainesville State: FL Zip Code: 32653
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext.516 Fax: (352) 336-6603
4. Professional Engineer Email Address: kkosky@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> (1) <i>To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> (2) <i>To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> (3) <i>If the purpose of this application is to obtain a Title V air operation permit (check here <input checked="" type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> (4) <i>If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> (5) <i>If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  Signature _____ Date <u>6/25/07</u> (seal) 

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization # 00001670

FACILITY INFORMATION

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 347.0 North (km) 3,139.0		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 28/22/00 Longitude (DD/MM/SS) 82/30/00	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment : Emission units designated in this application correspond to those in FDEP permit No. 1010373-004-AV.			

Facility Contact

1. Facility Contact Name: Roy S. Belden, Vice President
2. Facility Contact Mailing Address... Organization/Firm: Shady Hills Power Company, LLC Street Address: 120 Long Ridge Road City: Stamford State: CT Zip Code: 06927
3. Facility Contact Telephone Numbers: Telephone: (203) 357-6820 ext. Fax: (203) 961-5116
4. Facility Contact Email Address: roy.belden@ge.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name: Roy S. Belden
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Shady Hills Power Company, LLC Street Address: 120 Long Ridge Road City: Stamford State: CT Zip Code: 06927
3. Facility Primary Responsible Official Telephone Numbers... Telephone: (203) 357-6820 ext. Fax: (203) 961-5116
4. Facility Primary Responsible Official Email Address: roy.belden@ge.com

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment: Emissions units 001, 002, and 003 are subject to NSPS Subpart GG - Standards of Performance for Stationary Gas Turbines.	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	A	N
PM ₁₀	A	N
CO	A	N
VOC	A	N
SO ₂	A	N
NO _x	A	N

FACILITY INFORMATION

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: SH-FI-C1 <input type="checkbox"/> Previously Submitted, Date: _____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-11 <input type="checkbox"/> Previously Submitted, Date: _____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: SH-FI-C3 <input type="checkbox"/> Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input type="checkbox"/> Attached, Document ID: _____
3. Rule Applicability Analysis: <input type="checkbox"/> Attached, Document ID: _____
4. List of Exempt Emissions Units (Rule 62-210.300(3), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

- 1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
 Attached, Document ID: _____ Not Applicable (no exempt units at facility)

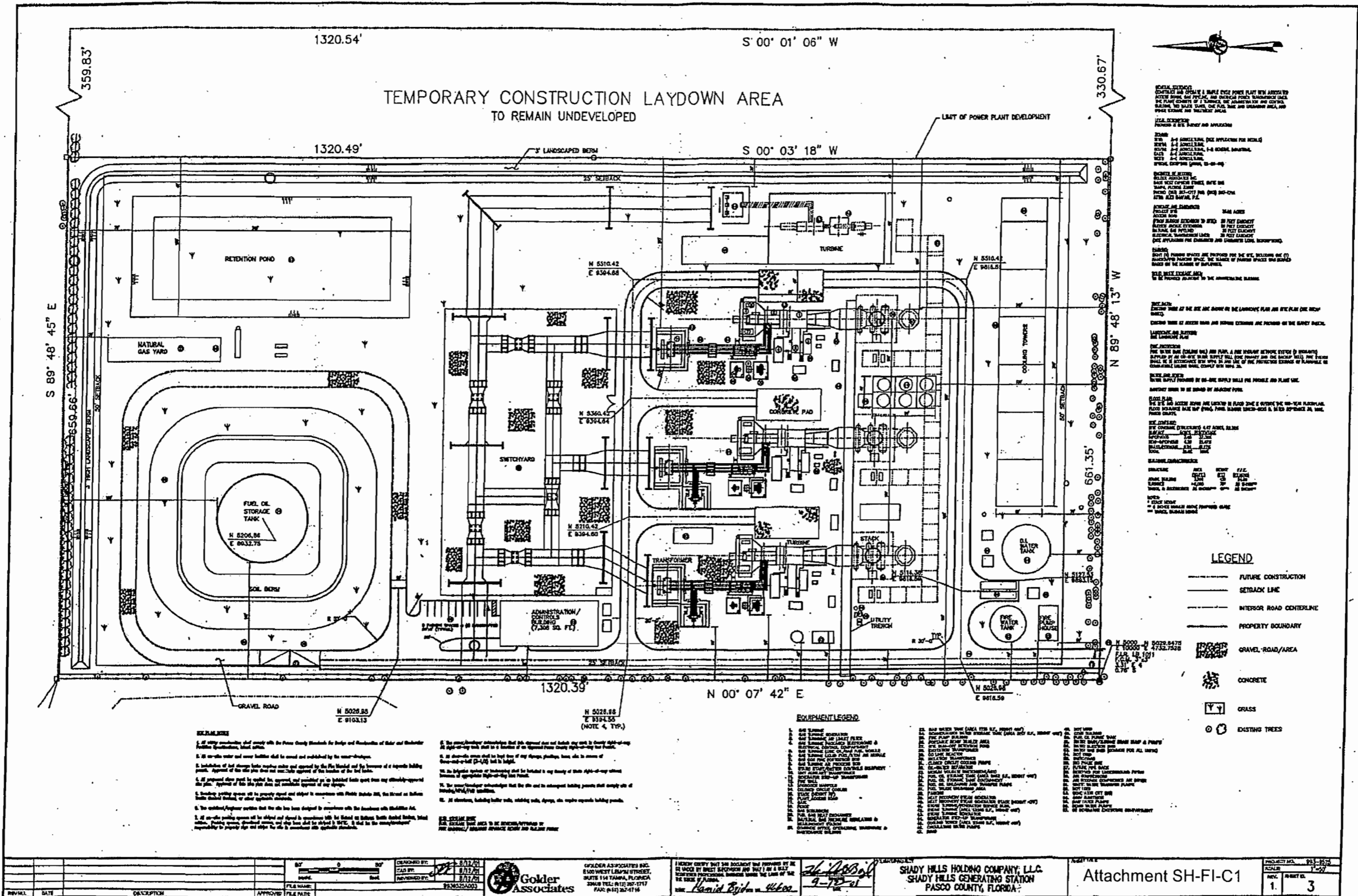
Additional Requirements for Title V Air Operation Permit Applications

- 1. List of Insignificant Activities (Required for initial/renewal applications only):
 Attached, Document ID: **SH-FI-CV1** Not Applicable (revision application)
- 2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
 Attached, Document ID: **SH-FI-CV2**
 Not Applicable (revision application with no change in applicable requirements)
- 3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
 Attached, Document ID: **SH-FI-CV3**
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
- 4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
 Attached, Document ID: _____
 Equipment/Activities On site but Not Required to be Individually Listed
 Not Applicable
- 5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
 Attached, Document ID: _____ Not Applicable
- 6. Requested Changes to Current Title V Air Operation Permit:
 Attached, Document ID: **SH-F1-CV6** Not Applicable

Additional Requirements Comment

ATTACHMENT SH-FI-C1

FACILITY PLOT PLAN



GENERAL NOTES:
 CONTRACTOR SHALL VERIFY A SINGLE CYCLE POWER PLANT WITH ASSOCIATED
 ACCESS ROADS AND PIPING AND OPERATIONAL PIPING. THE CONTRACTOR SHALL
 THE PLANT CAPACITY OF 1 TURBINE, THE ADMINISTRATION AND CONTROL
 BUILDING, NO. 10000, THE FUEL OIL STORAGE TANK, AND THE FUEL OIL
 STORAGE TANK TREATMENT AREA.

LEGAL DESCRIPTION:
 PARCELS 2 & 3, SHADY HILLS HOLDING COMPANY, INC.

BOUNDARY:
 25' SETBACK
 30' SETBACK
 30' SETBACK
 30' SETBACK

LANDSCAPED BERM:
 25' SETBACK

LIMIT OF POWER PLANT DEVELOPMENT:

LEGEND:

- FUTURE CONSTRUCTION
- SETBACK LINE
- INTERIOR ROAD CENTERLINE
- PROPERTY BOUNDARY
- GRAVEL ROAD/AREA
- CONCRETE
- GRASS
- EXISTING TREES

EQUIPMENT LEGEND:

- 1. GAS TURBINE
- 2. GAS TURBINE
- 3. GAS TURBINE
- 4. GAS TURBINE
- 5. GAS TURBINE
- 6. GAS TURBINE
- 7. GAS TURBINE
- 8. GAS TURBINE
- 9. GAS TURBINE
- 10. GAS TURBINE
- 11. GAS TURBINE
- 12. GAS TURBINE
- 13. GAS TURBINE
- 14. GAS TURBINE
- 15. GAS TURBINE
- 16. GAS TURBINE
- 17. GAS TURBINE
- 18. GAS TURBINE
- 19. GAS TURBINE
- 20. GAS TURBINE
- 21. GAS TURBINE
- 22. GAS TURBINE
- 23. GAS TURBINE
- 24. GAS TURBINE
- 25. GAS TURBINE
- 26. GAS TURBINE
- 27. GAS TURBINE
- 28. GAS TURBINE
- 29. GAS TURBINE
- 30. GAS TURBINE
- 31. GAS TURBINE
- 32. GAS TURBINE
- 33. GAS TURBINE
- 34. GAS TURBINE
- 35. GAS TURBINE
- 36. GAS TURBINE
- 37. GAS TURBINE
- 38. GAS TURBINE
- 39. GAS TURBINE
- 40. GAS TURBINE
- 41. GAS TURBINE
- 42. GAS TURBINE
- 43. GAS TURBINE
- 44. GAS TURBINE
- 45. GAS TURBINE
- 46. GAS TURBINE
- 47. GAS TURBINE
- 48. GAS TURBINE
- 49. GAS TURBINE
- 50. GAS TURBINE
- 51. GAS TURBINE
- 52. GAS TURBINE
- 53. GAS TURBINE
- 54. GAS TURBINE
- 55. GAS TURBINE
- 56. GAS TURBINE
- 57. GAS TURBINE
- 58. GAS TURBINE
- 59. GAS TURBINE
- 60. GAS TURBINE
- 61. GAS TURBINE
- 62. GAS TURBINE
- 63. GAS TURBINE
- 64. GAS TURBINE
- 65. GAS TURBINE
- 66. GAS TURBINE
- 67. GAS TURBINE
- 68. GAS TURBINE
- 69. GAS TURBINE
- 70. GAS TURBINE
- 71. GAS TURBINE
- 72. GAS TURBINE
- 73. GAS TURBINE
- 74. GAS TURBINE
- 75. GAS TURBINE
- 76. GAS TURBINE
- 77. GAS TURBINE
- 78. GAS TURBINE
- 79. GAS TURBINE
- 80. GAS TURBINE
- 81. GAS TURBINE
- 82. GAS TURBINE
- 83. GAS TURBINE
- 84. GAS TURBINE
- 85. GAS TURBINE
- 86. GAS TURBINE
- 87. GAS TURBINE
- 88. GAS TURBINE
- 89. GAS TURBINE
- 90. GAS TURBINE
- 91. GAS TURBINE
- 92. GAS TURBINE
- 93. GAS TURBINE
- 94. GAS TURBINE
- 95. GAS TURBINE
- 96. GAS TURBINE
- 97. GAS TURBINE
- 98. GAS TURBINE
- 99. GAS TURBINE
- 100. GAS TURBINE

EXPLANATION:

1. All utility easements shall comply with the Pasco County Standards for Buried and Aboveground of Water and Sewerage and the Florida Building Code, Section 100.05.
2. All water and sewer facilities shall be owned and maintained by the owner-developer.
3. Installation of fuel storage tanks shall comply with and approved by the Fire Marshal and the issuance of a separate building permit. Approval of this site plan does not constitute approval of the location of the fuel tanks.
4. All proposed above ground oil storage tanks shall be installed in accordance with the applicable codes and standards.
5. Landscaping shall be installed in accordance with the applicable codes and standards.
6. The applicant/owner certifies that the site has been designed in compliance with the American with Disabilities Act.
7. All on-site parking spaces shall be striped and signed in accordance with the Florida Building Code, Section 100.05. Parking spaces, including spaces and signs shall be striped in WHITE. It shall be the owner-developer's responsibility to properly sign and stripe the site in accordance with applicable standards.
8. The owner-developer certifies that the site plan does not include any work to County right-of-way or right-of-way easement that is a violation of an approved Pasco County right-of-way easement.
9. All structures shall be built on top of any drainage swales, basins, or in areas of 100-year flood (1-100) but to be built.
10. No structure shall be located in any flood zone of this right-of-way easement.
11. The owner-developer certifies that the site and its subsequent building permits shall comply with all applicable codes and standards.
12. All structures, including but not limited to, signs, shall comply with applicable codes and standards.

CONCRETE:
 ALL CONCRETE SHALL BE 4000 PSI (NOTE 4, TYP.)

GRAVEL ROAD:
 ALL GRAVEL SHALL BE 4000 PSI (NOTE 4, TYP.)

GRASS:
 ALL GRASS SHALL BE 4000 PSI (NOTE 4, TYP.)

EXISTING TREES:
 ALL EXISTING TREES SHALL BE 4000 PSI (NOTE 4, TYP.)

ATTACHMENT SH-FI-C3

**PRECAUTIONS TO PREVENT EMISSIONS
OF UNCONFINED PARTICULATE MATTER**

ATTACHMENT SH-FI-C3
PRECAUTIONS TO PREVENT EMISSIONS
OF UNCONFINED PARTICULATE MATTER

The facility has negligible amounts of unconfined particulate matter as a result of the operation of the facility. Reasonable precautions are undertaken at the facility, which also minimize particulate emissions, in accordance with 62-296.320 (4)(c) 2, F.A.C.:

- Paving and maintenance of roads, parking areas, and yards.
- Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles, and similar activities.
- Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne.
- Landscaping or planting of vegetation.
- Use of hoods, fans, filters, and similar equipment to contain, capture, and/or vent particulate matter.
- Confining abrasive blasting where possible.
- Enclosure or covering of conveyor systems.

ATTACHMENT SH-FI-CV1

LIST OF INSIGNIFICANT ACTIVITIES

ATTACHMENT SH-FI-CV1
LIST OF INSIGNIFICANT ACTIVITIES

Unregulated insignificant activities at the Shady Hills Generating Station include, but are not limited to the following:

- Operation of a CO₂-based fire protection system to be used in case of emergency fire in or near the CTs.
- Operation of an electric-based fire protection system for the building. The unit also contains a small space heater.
- Operation of a 13.5 MMBtu/hr indirect-fired fuel gas heater to prevent the natural gas from freezing.
- Storage operations for the fuel oil storage locations and fuel oil truck unloading area.
- Miscellaneous maintenance, cleaning, and painting of the building, including the control room, maintenance shop, storage warehouse, and offices and their contents.
- Miscellaneous heaters.
- Miscellaneous general purpose internal combustion engines (i.e., cranes) for routine facility maintenance and/or equipment malfunctions.
- Surface coating operations using VOCs.
- Water analyses operations to ensure proper operation of the water injection system and the CT cooling processes.
- Stormwater retention basin maintenance.

ATTACHMENT SH-FI-CV2

TITLE V CORE LIST

ATTACHMENT SH-FI-CV2

TITLE V CORE LIST

(Effective: 03/01/02)

(Updated based on latest version of FDEP Air Rules)

[**Note:** The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

Federal: (description)

40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.

40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).

40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State: (description)**CHAPTER 62-4, F.A.C.: PERMITS, effective 06-01-01**

62-4.030, F.A.C.: General Prohibition.

62-4.040, F.A.C.: Exemptions.

62-4.050, F.A.C.: Procedure to Obtain Permits; Application.

62-4.060, F.A.C.: Consultation.

62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.

62-4.080, F.A.C.: Modification of Permit Conditions.

62-4.090, F.A.C.: Renewals.

62-4.100, F.A.C.: Suspension and Revocation.

62-4.110, F.A.C.: Financial Responsibility.

62-4.120, F.A.C.: Transfer of Permits.

62-4.130, F.A.C.: Plant Operation - Problems.

62-4.150, F.A.C.: Review.

62-4.160, F.A.C.: Permit Conditions.

62-4.210, F.A.C.: Construction Permits.

62-4.220, F.A.C.: Operation Permit for New Sources.

**CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS,
effective 06-21-01**

62-210.300, F.A.C.: Permits Required.

62-210.300(1), F.A.C.: Air Construction Permits.

62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.

62-210.300(5), F.A.C.: Notification of Startup.

62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.300(7), F.A.C.: Transfer of Air Permits

- 62-210.350, F.A.C.: Public Notice and Comment.
- 62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.
- 62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.
- 62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.
- 62-210.360, F.A.C.: Administrative Permit Corrections.
- 62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.
- 62-210.650, F.A.C.: Circumvention.
- 62-210.700, F.A.C.: Excess Emissions.
- 62-210.900, F.A.C.: Forms and Instructions.
- 62-210.900(1), F.A.C.: Application for Air Permit – Title V Source, Form and Instructions.
- 62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.
- 62-210.900(7), F.A.C.: Application for Transfer of Air Permit – Title V and Non-Title V Source.

Chapter 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW,
effective 08-17-00

**CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR
POLLUTION, effective 04-16-01**

- 62-213.205, F.A.C.: Annual Emissions Fee.
- 62-213.400, F.A.C.: Permits and Permit Revisions Required.
- 62-213.410, F.A.C.: Changes Without Permit Revision.
- 62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
- 62-213.415, F.A.C.: Trading of Emissions Within a Source.
- 62-213.420, F.A.C.: Permit Applications.
- 62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
- 62-213.440, F.A.C.: Permit Content.
- 62-213.450, F.A.C.: Permit Review by EPA and Affected States
- 62-213.460, F.A.C.: Permit Shield.
- 62-213.900, F.A.C.: Forms and Instructions.
- 62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.
- 62-213.900(7), F.A.C.: Statement of Compliance Form.

**CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective
03-02-99**

- 62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter.
- 62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING,
effective 03-02-99

- 62-297.310, F.A.C.: General Test Requirements.
- 62-297.310 (4), F.A.C.: Applicable Test Procedures.
- 62-297.310 (7), F.A.C.: Frequency of Compliance Tests.
- 62-297.310 (6), F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions Unit.
- 62-297.310 (5), F.A.C.: Determination of Process Variables.
- 62-297.310 (8), F.A.C.: Test Report.

62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

Miscellaneous:

CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests

CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective
07-01-98

CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 11-30-94

CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 02-09-99

CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling,
effective 09-10-96

ATTACHMENT SH-FI-CV6
REQUESTED ADMINISTRATIVE CHANGES

ATTACHMENT SH-FI-CV6**REQUESTED ADMINISTRATIVE CHANGES**

The facility owner has undergone a name change from Mirant Corp. to Shady Hills Power Company, LLC (Shady Hills). Shady Hills requests the appropriate corrections. A change to the responsible official has been previously filed with the FDEP.

Shady Hills requests administrative changes to reflect the recent revisions to 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, and requests the following changes to the Title V permit:

Condition A.36. (CEMS in Lieu of Water to Fuel Ratio)

Shady Hills requests that the condition, which currently says:

"The NO_x CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335 (c)(2) (1998 version) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMS."

be revised to say:

"The NO_x CEMS data shall be used for identifying excess emissions in accordance with 60.334(b)(3), Subpart GG. The calibration of the water/fuel monitoring device required in 40 CFR 60.335 (b)(4) will be replaced by the 40 CFR 75 certification tests for the NO_x CEMS."

Condition A.38. (Natural Gas Monitoring Schedule)

Shady Hills requests the removal of the custom fuel monitoring schedule for natural gas described in Condition A.38 of the current Title V permit; and per 40 CFR 60.334(h)(3), elects not to monitor the total sulfur content of natural gas by demonstrating that the natural gas used meet the definition of natural gas in 40 CFR 60.331(u). To make the demonstration, Shady Hills presents the most recent natural gas sampling data and the purchase contract with Florida Gas Transmission characterizing the quality of natural gas, which specifies that the sulfur content is 20 grains/100 standard cubic feet (scf) or less.

Condition A.38 should be revised to say that the sulfur content of natural gas shall be demonstrated based on 40 CFR 60.334(h)(3)(i).

Condition A.39. (Fuel Oil Monitoring Schedule)

Shady Hills requests the regulation cited in the condition to be revised from 40 CFR 60.335(d) to 40 CFR 60.334(i)(1).

Shady Hills also requests administrative changes to reflect the recent revisions to 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels.

The 2.8 million gallon storage tank (EU 004) at the facility stores distillate fuel oil with true vapor pressure less than 3.5 kilopascals and therefore, according to 40 CFR 60.110b(b), exempt from the requirements of Subpart Kb.

Shady Hills requests that Condition B.1, which currently says:

"Emission Unit 004, Fuel Storage Tank, shall comply with all applicable provisions of 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels, adopted by reference in Rule 62-204.800, F.A.C."

be revised to say that Subpart Kb is not applicable.

No other changes are requested or necessary.

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

A 170 MW simple-cycle combustion turbine

3. Emissions Unit Identification Number: **001**

4. Emissions Unit Status Code: A	5. Commence Construction Date: GE	6. Initial Startup Date: 12/20/01	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---	---	--	--

9. Package Unit:

Manufacturer: **GE**

Model Number: **7FA**

10. Generator Nameplate Rating: **170 MW**

11. Emissions Unit Comment:

Emission unit is a GE Frame 7FA simple-cycle combustion turbine.

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
Staged combustion for NO_x control (natural gas burning).
Water injection for NO_x control (distillate oil firing).

2. Control Device or Method Code(s): **025, 028**

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	1,806 MMBtu/hr
4. Maximum Incineration Rate:	pounds/hr tons/day
5. Requested Maximum Operating Schedule:	24 hours/day 52 weeks/year 7 days/week 5,000 hours/year
6. Operating Capacity/Schedule Comment:	<p>Maximum heat input rates: Natural gas firing - 1,612 MMBtu/hr Distillate fuel oil firing - 1,806 MMBtu/hr</p> <p>Maximum heat input rates are based on lower heating value of each fuel at ISO conditions (59 degrees °F, 60 percent RH, and 14.7 psi pressure) and 100 percent load.</p> <p>Fuel oil firing limited to an average of 1,000 hr/CT/yr. Annual operation limited to an average of 3,390 hr/CT/yr. No single CT is permitted to operate more than 5,000 hr/yr.</p>

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: CT1		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 75 feet	7. Exit Diameter: 18 feet	
8. Exit Temperature: 1,113 °F	9. Actual Volumetric Flow Rate: 2,645,000 acfm	10. Water Vapor: 8.6 %	
11. Maximum Dry Standard Flow Rate: 800,000 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 347.0 North (km): 3,139.0		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) 28/22/00 Longitude (DD/MM/SS) 82/30/00	
15. Emission Point Comment: Exit temperature and flow rates from previous Title V permit application dated March 2002.			

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Natural-Gas Firing		
2. Source Classification Code (SCC): 2-01-002-01		3. SCC Units: Million cubic feet natural gas burned
4. Maximum Hourly Rate: 1.70	5. Maximum Annual Rate: 5,752.3	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 950
10. Segment Comment: Based on natural gas lower heating value (LHV) of 950 Btu/ft³ and at ISO conditions. Maximum hourly rate = 1,612 MMBtu/hr /950 MMBtu/MM ft³ = 1.697 MM ft³/hr Maximum annual rate = 1.697 MM ft³/hr x 3,390 hr/yr = 5,752.3 MM ft³/yr.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Distillate Oil Firing		
2. Source Classification Code (SCC): 2-01-001-01		3. SCC Units: 1,000 Gallons burned
4. Maximum Hourly Rate: 13.7	5. Maximum Annual Rate: 13,700	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.05	8. Maximum % Ash:	9. Million Btu per SCC Unit: 132
10. Segment Comment: Based on distillate oil LHV of 132 MMBtu/1,000 gallons and at ISO conditions. Maximum hourly rate = 1,806 MMBtu/hr /132 MMBtu/1,000 gal = 13,682 gal/hr. Maximum annual rate = 13,682 gal/hr x 1,000 hr/yr = 13,682,000 gal/yr.		

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			EL
PM ₁₀			EL
CO	028, 025		EL
VOC	028, 025		EL
SO ₂			EL
NO _x	028, 025		EL

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

Page [1] of [6]
Total Particulate Matter – PM *

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 17.0 lb/hour 20.5 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 17.0 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (17.0 lb/hr x 1,000 hr/yr + 10 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 20.5 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

Page [1] of [6]
Total Particulate Matter - PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10 percent opacity	4. Equivalent Allowable Emissions: 10.0 lb/hour 16.95 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10 percent opacity	4. Equivalent Allowable Emissions: 17.0 lb/hour 8.5 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

Page [2] of [6]
Particulate Matter – PM₁₀

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM₁₀		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 17.0 lb/hour 20.5 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 17.0 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (17.0 lb/hr x 1,000 hr/yr + 10 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 20.5 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

POLLUTANT DETAIL INFORMATION

Page [2] of [6]
Particulate Matter – PM₁₀

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10 percent opacity	4. Equivalent Allowable Emissions: 10.0 lb/hour 16.95 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10 percent opacity	4. Equivalent Allowable Emissions: 17.0 lb/hour 8.5 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

Page [3] of [6]
Carbon Monoxide - CO

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 71.4 lb/hour 86.5 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 20 ppmvd (oil) 12 ppmvd (gas) Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions = (71.4 lb/hr x 1,000 hr/yr + 42.5 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 86.5 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing. Mass emissions based on ISO conditions. Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

Page [3] of [6]
Carbon Monoxide - CO

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 12 ppmvd	4. Equivalent Allowable Emissions: 42.5 lb/hour 72.04 tons/year
5. Method of Compliance: Annual testing using using EPA Method 10.	
6. Allowable Emissions Comment (Description of Operating Method): Equivalent allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 20 ppmvd	4. Equivalent Allowable Emissions: 71.4 lb/hour 35.7 tons/year
5. Method of Compliance: Annual testing using using EPA Method 10.	
6. Allowable Emissions Comment (Description of Operating Method): Equivalent allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

POLLUTANT DETAIL INFORMATION

Page [4] of [6]
Volatile Organic Compounds - VOC

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 16.2 lb/hour 11.45 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 7 ppmvw (oil) 1.4 ppmvd (gas) Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (16.2 lb/hr x 1,000 hr/yr + 2.8 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 11.45 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing. Mass emissions based on ISO conditions.			

EMISSIONS UNIT INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

POLLUTANT DETAIL INFORMATION

Page [4] of [6]
Volatile Organic Compounds - VOC

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1.4 ppmvd	4. Equivalent Allowable Emissions: 2.8 lb/hour 4.75 tons/year
5. Method of Compliance: Methods 18, 25, or 25A (Initial test oil); no annual; CO emissions limit as a surrogate.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 7 ppmvw	4. Equivalent Allowable Emissions: 16.2 lb/hour 8.1 tons/year
5. Method of Compliance: Methods 18, 25, or 25A (Initial test oil); no annual; CO emissions limit as a surrogate.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

POLLUTANT DETAIL INFORMATION

Page [5] of [6]
Sulfur Dioxide – SO₂

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 98.7 lb/hour 55.3tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.05% sulfur (oil) 1 grain sulfur / 100 scf (gas) Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions = (98.7 lb/hr x 1,000 hr/yr + 5 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 55.3 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing. Mass emissions based on ISO conditions. Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

Page [5] of [6]
Sulfur Dioxide – SO₂

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1 gr/100 scf	4. Equivalent Allowable Emissions: 5 lb/hour 8.5 tons/year
5. Method of Compliance: Use of pipeline natural gas (sulfur content 1 grain/100 ft³).	
6. Allowable Emissions Comment (Description of Operating Method): Equivalent allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.05% sulfur	4. Equivalent Allowable Emissions: 98.7 lb/hour 49.4 tons/year
5. Method of Compliance: Use of distillate oil with a maximum of 0.05 percent sulfur. Fuel sampling.	
6. Allowable Emissions Comment (Description of Operating Method): Equivalent allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

Page [6] of [6]
Nitrogen Oxides – NO_x

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO_x		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 351.0 lb/hour 252.1 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 42 ppmvd @ 15% O₂ (oil) 42 ppmvd @ 15% O₂ (gas) Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions = (351.0 lb/hr x 1,000 hr/yr + 64.1 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 252.1 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing and ISO conditions. Mass emissions based on ISO conditions. Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing.			

EMISSIONS UNIT INFORMATION

Section [1]
Simple-Cycle Combustion Turbine No. 1

POLLUTANT DETAIL INFORMATION

Page [6] of [6]
Nitrogen Oxide – NO_x

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 9 ppmvd at 15 percent O₂.	4. Equivalent Allowable Emissions: 64.1 lb/hour 108.6 tons/year
5. Method of Compliance: CEM Data (24-hour block average)	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 42 ppmvd at 15 percent O₂.	4. Equivalent Allowable Emissions: 351.0 lb/hour 175.5 tons/year
5. Method of Compliance: CEM Data (3-hour average)	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Permit No. 1010373-004-AV.	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: VE 99	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour	
4. Method of Compliance: None	
5. Visible Emissions Comment: Rule 62-210.700(1) for excess emissions during startup, shutdown, or malfunction. Excess emissions limited to 2 hours per 24-hour period.	

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: EM	2. Pollutant(s): NO_x
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Horiba Model Number: ENSA-E4220LS Serial Number: 11527	
5. Installation Date: 01 Nov, 2001	6. Performance Specification Test Date: 8 May, 2006
7. Continuous Monitor Comment: Continuous monitoring of NO_x emissions. 40 CFR Part 75.	

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: O₂	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Monitoring for O₂ for dilution with NO_x monitors. 40 CFR 75	

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-I1 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-I2 <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-I3 <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-I4 <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-I5 <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: May 8, 2006 <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

Simple-Cycle Combustion Turbine No. 1

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(4)(d), F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input checked="" type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: November 21, 2000 <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

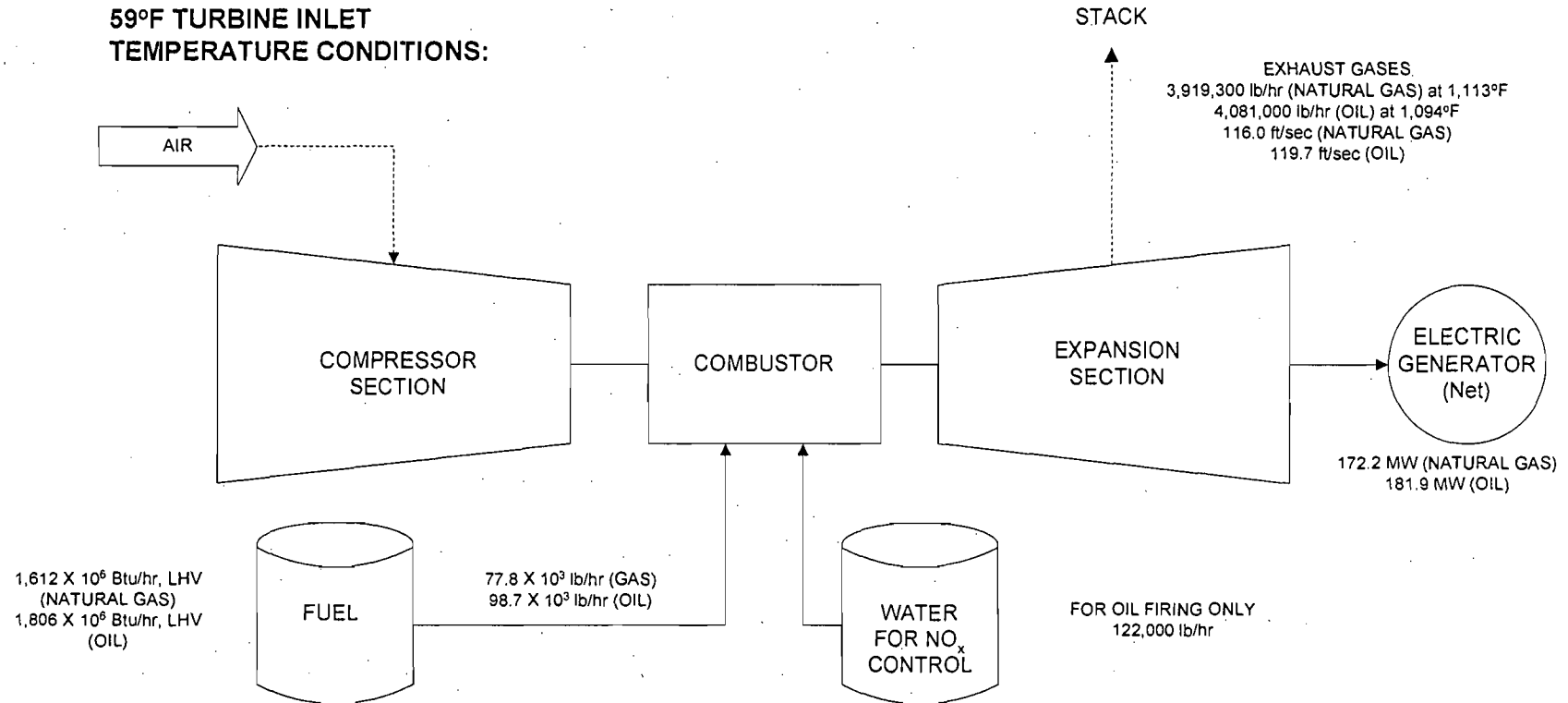
Simple-Cycle Combustion Turbine No. 1

Additional Requirements Comment

[Empty rectangular box for additional requirements comment]

ATTACHMENT SH-EU1-I1
PROCESS FLOW DIAGRAM

59°F TURBINE INLET
TEMPERATURE CONDITIONS:



Attachment SH-EU1-11
Simplified Flow Diagram of GE Frame 7FA
Combustion Turbine
Baseload, Annual Design Conditions

Process Flow Legend

Solid/Liquid ———>
Gas - - - - ->
Steam - ·····>

Filename: 07387543/SH-EU1-11

Date: 5/10/07



ATTACHMENT SH-EU1-I2

FUEL SPECIFICATIONS

EMPACT ANALYTICAL SYSTEMS, INC

365 S. MAIN STREET
BRIGHTON, CO 80601
(303) 637-0150

NATURAL GAS ANALYSIS

PROJECT NO. :	200704099	ANALYSIS NO. :	01
COMPANY NAME :	SHADY HILLS POWER CO.	ANALYSIS DATE:	APRIL 19, 2007
		SAMPLE DATE :	APRIL 12, 2007
ACCOUNT NO. :		CYLINDER NO. :	1284
NAME/DESCRIP :	U3		
	@ 14:00		
FIELD DATA			
SAMPLED BY :	ARCIDIO ALICEA	SAMPLE TEMP. :	87
SAMPLE PRES. :	440	AMBIENT TEMP.:	
COMMENTS :	SPOT		

<u>COMPONENTS</u>	<u>NORM. MOLE%</u>	<u>GPM @ 14.696</u>	<u>GPM @ 14.73</u>
HELIUM	0.01	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	0.01	-	-
NITROGEN	0.40	-	-
CO2	0.82	-	-
METHANE	95.83	-	-
ETHANE	2.17	0.579	0.580
PROPANE	0.45	0.124	0.124
ISOBUTANE	0.10	0.033	0.033
N-BUTANE	0.11	0.035	0.035
ISOPENTANE	0.04	0.015	0.015
N-PENTANE	0.03	0.011	0.011
<u>HEXANES+</u>	<u>0.03</u>	<u>0.013</u>	<u>0.013</u>
TOTAL	100.00	0.808	0.810

BTU @ 60 DEG F	14.696	14.73
LOW NET DRY REAL=	929.1	931.2
NET SATURATED REAL=	912.9	915.0
HIGH GROSS DRY REAL =	1031.0	1033.4
GROSS SATURATED REAL =	1013.0	1015.4

SPECIFIC GRAVITY (AIR=1 @14.696 PSIA 60F) : 0.5846
 COMPRESSIBILITY FACTOR : 0.99784

NOTE: REFERENCE GPA 2261(ASTM D1945 & ASME-PTC, 2145, & 2172 CURRENT PUBLICATIONS

EMPACT ANALYTICAL SYSTEMS, INC

365 S. MAIN STREET
BRIGHTON, CO 80601
(303) 637-0150

NATURAL GAS ANALYSIS

PROJECT NO. :	200704099	ANALYSIS NO. :	02
COMPANY NAME :	SHADY HILLS POWER CO.	ANALYSIS DATE:	APRIL 19, 2007
		SAMPLE DATE :	APRIL 12, 2007
ACCOUNT NO. :		CYLINDER NO. :	1293
NAME/DESCRIP :	U2		
	@ 14:00		
FIELD DATA			
SAMPLED BY :	ARCIDIO ALICEA	SAMPLE TEMP. :	88
SAMPLE PRES. :	440	AMBIENT TEMP.:	
COMMENTS :	SPOT		

<u>COMPONENTS</u>	<u>NORM. MOLE%</u>	<u>GPM @ 14.696</u>	<u>GPM @ 14.73</u>
HELIUM	0.01	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	0.00	-	-
NITROGEN	0.40	-	-
CO2	0.83	-	-
METHANE	95.82	-	-
ETHANE	2.19	0.584	0.586
PROPANE	0.46	0.127	0.127
ISOBUTANE	0.10	0.033	0.033
N-BUTANE	0.11	0.035	0.035
ISOPENTANE	0.03	0.011	0.011
N-PENTANE	0.02	0.007	0.007
HEXANES+	0.03	0.013	0.013
TOTAL	100.00	0.809	0.811

BTU @ 60 DEG F	14.696	14.73
LOW NET DRY REAL=	928.8	930.9
NET SATURATED REAL=	912.6	914.7
HIGH GROSS DRY REAL =	1030.7	1033.1
GROSS SATURATED REAL =	1012.7	1015.1

SPECIFIC GRAVITY (AIR=1 @14.696 PSIA 60F) : 0.5844
 COMPRESSIBILITY FACTOR : 0.99784

NOTE: REFERENCE GPA 2261(ASTM D1945 & ASME-PTC), 2145, & 2172 CURRENT PUBLICATIONS

EMPACT ANALYTICAL SYSTEMS, INC

365 S. MAIN STREET
BRIGHTON, CO 80601
(303) 637-0150

NATURAL GAS ANALYSIS

PROJECT NO. :	200704099	ANALYSIS NO. :	03
COMPANY NAME :	SHADY HILLS POWER CO.	ANALYSIS DATE:	APRIL 19, 2007
		SAMPLE DATE :	APRIL 12, 2007
ACCOUNT NO. :		CYLINDER NO. :	1292
NAME/DESCRIP :	U1		
	@ 14:00		
FIELD DATA			
SAMPLED BY :	ARCIDIO ALICEA	SAMPLE TEMP. :	85
SAMPLE PRES. :	435	AMBIENT TEMP.:	
COMMENTS :	SPOT		

<u>COMPONENTS</u>	<u>NORM. MOLE%</u>	<u>GPM @ 14.696</u>	<u>GPM @ 14.73</u>
HELIUM	0.01	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	0.00	-	-
NITROGEN	0.40	-	-
CO2	0.84	-	-
METHANE	95.78	-	-
ETHANE	2.20	0.587	0.588
PROPANE	0.46	0.127	0.127
ISOBUTANE	0.10	0.033	0.033
N-BUTANE	0.11	0.035	0.035
ISOPENTANE	0.03	0.011	0.011
N-PENTANE	0.02	0.007	0.007
<u>HEXANES+</u>	<u>0.05</u>	<u>0.021</u>	<u>0.022</u>
TOTAL	100.00	0.820	0.822

BTU @ 60 DEG F	14.696	14.73
LOW NET DRY REAL=	929.5	931.7
NET SATURATED REAL=	913.3	915.5
HIGH GROSS DRY REAL =	1031.5	1033.9
GROSS SATURATED REAL =	1013.5	1015.9

SPECIFIC GRAVITY (AIR=1 @14.696 PSIA 60F) : 0.5850
 COMPRESSIBILITY FACTOR : 0.99783

NOTE: REFERENCE GPA 2261(ASTM D1945 & ASME-PTC), 2145, & 2172 CURRENT PUBLICATIONS

EMPACT ANALYTICAL SYSTEMS, INC

365 S. MAIN STREET
BRIGHTON, CO 80601
(303) 637-0150

PROJECT NO: 200704099
COMPANY NAME: SHADY HILLS POWER CO.
NAME/DESCRIP: @ 14:10

SAMPLE NO: 04
ANALYSIS DATE: APRIL 19, 2007
SAMPLE DATE: APRIL 12, 2007
SAMPLED BY: ARCIDIO ALICEA

COMMENTS: 1 L. TEDLAR BAG
SPOT

TEST PROCEDURE / METHOD:

SULFUR BY GAS CHROMATOGRAPH SCD350 *

COMPONENT	SULFUR	
	ppm mole (ul/L)	ppm wt (ug/g)
Hydrogen Sulfide (H2S)	BDL	
Carbonyl Sulfide (COS)/Sulfur Dioxide (SO2)	BDL	
Methanethiol (MeSH)	BDL	
Ethanethiol (EtSH)	BDL	
Dimethylsulfide (DMS)	BDL	
Carbon Disulfide (CS2)	BDL	
2-Propanethiol (i-PrSH)	BDL	
t-Butanethiol (t-BuSH)	BDL	
1-Propanethiol (n-PrSH)	BDL	
Methylethylsulfide (MES)	BDL	
s-Butanethiol (s-BuSH)	BDL	
i-Butanethiol (i-BuSH)	BDL	
Thiophene (TP)	BDL	
Diethylsulfide (DES)	BDL	
n-Butanethiol (n-BuSH)	BDL	
Dimethyldisulfide (DMDS)	BDL	
2-Methylthiophene (2-MTP)	BDL	
3-Methylthiophene (3-MTP)	BDL	
2-Ethylthiophene (2-ETP)	BDL	
Methylethyldisulfide (MEDS)	BDL	
Dimethylthiophene (DMTP)	BDL	
Unidentified Sulfurs	BDL	
Diethyldisulfide (DEDS)	BDL	
Benzothiophene (BzTP)	BDL	
Methylbenzothiophenes (MBzTP)	BDL	
Unidentified Sulfurs	BDL	
Dimethylbenzothiophenes (DMBzTP)	BDL	
Unidentified Sulfurs	BDL	
TOTAL SULFUR	0.0	0.0

**TOTAL GRAINS OF SULFUR
GRAINS OF H2S**

0.0000 / 100 scf
0.0000 / 100 scf

* ASTM D5504

** DETECTION LIMIT DETERMINED TO BE 0.1 ppm (ul/L) Sulfur - BDL (BELOW DETECTION LIMIT)

** DETECTION LIMIT DETERMINED TO BE .01 grains Sulfur/100cf - BDL (BELOW DETECTION LIMIT)

THE DATA PRESENTED HEREIN HAS BEEN ACQUIRED THROUGH JUDICIOUS APPLICATION OF CURRENT STATE-OF-THE ART ANALYTICAL TECHNIQUES. THE APPLICATIONS OF THIS INFORMATION IS THE RESPONSIBILITY OF THE USER. EMPACT ANALYTICAL SYSTEMS, INC. ASSUMES NO RESPONSIBILITY FOR ACCURACY OF THE REPORTED INFORMATION NOR ANY CONSEQUENCES OF ITS APPLICATION.

5/29/2007 1:21:05 PM

Louisiana Refining Division
Marathon Petroleum Company, LLC
4663 West Airline Highway
Garyville, LA 70051
Telephone 985/535-2100

FINAL
CERTIFICATE OF ANALYSIS

Unit: 63-Tank Farm Sample Date: 5/25/2007 8:00:00 AM
Location: TK150-9 Sample ID: 1080469
Vessel: O-209-12 TR-141-07 Date Loaded: 5/29/07
Batch Certification Number: ULD070085

Analysis	Method	Low Spec	High Spec	Results
90 % Obs, deg F	D86 Observed	540	640	607
FBP, deg F	D86 Observed		690	647
Ash, wt% Note: This statistical result was dated 5/18/2007	D482, Ash		0.010	<0.001
Color, ASTM	D6045 Color, ASTM		2.5	1.0
Calc. (4 Var) LSD Cetane Index	D4737B Calc (4 Var) LSD CI	40.0		47.3
Cloud Point, deg F	D5773 Cloud Point		20	3
Carbon Residue, 10% Bottoms, wt%	D524 Carb Res. 10% Btms		0.35	0.09
Conductivity, ps/m	D2624 Conductivity @ 40F	50		126
Corrosion	D130, Cu Corr.		1B	1a
Doctor	D4952, Doctor			NEG
D93A Flash Point, deg F	D93A Flash Point	140		147
Gravity - API	D4052, API	30.0		37.7
Haze Rating	Colonial Haze Rating		2	1
Moisture, ppm	D6304 Moisture			44
NACE Corrosion	TM0172-86, NACE	B+		A
Pour Point, deg F	D5949 Pour Point		10	-8
Reflectance, %	D6468 Reflectance	80.0		96.6
Sulfur, ppm	D5453, SPPM		8	6
Sulfur, ppm, Top	D5453, SPPM T		8	6
Sulfur, ppm, Mid	D5453, SPPM M		8	6
Sulfur, ppm, Btm	D5453, SPPM B		8	6
Viscosity @ 104 Deg F, cSt	D445 Viscosity @ 104 F	1.9	3.4	2.3
Batch Cert	Batch Cert Number			ULD070085

Note: NACE corrosion and ash analyses are performed on a statistical basis. These tests are performed on one in ten samples. Historical data provides a high level of confidence that these values remain consistently below the specification limits. The result on the Certificate of Analysis is from the day noted beside statistical result on the parameter line. If no date is noted then the test was performed on this sample.

BYRON JOSEPH JACOB
FOREMAN
LOUISIANA REF-PROD CONTROL
985-535 7451

Signed

By providing this data under my signature, I attest to the accuracy and validity of the data contained on this form and certify that no deliberate misrepresentation of the results, in any manner, has occurred.

ATTACHMENT SH-EU1-I3

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT
WATER INJECTION SYSTEM**

ATTACHMENT SH-EU1-I3a**DETAILED DESCRIPTION OF CONTROL EQUIPMENT
WATER INJECTION SYSTEM****GENERAL**

The water injection system provides water to the combustion system of the gas turbine to limit the levels of nitrogen oxides (NO_x) in the turbine exhaust. This limitation is required by strict local and federal regulation. The water injection system schedules water flow to the turbine as a function of total fuel flow, relative humidity, and ambient temperature. The required water/fuel ratio is established through field compliance testing of the individual turbine. A final control schedule based on these tests is programmed in the SPEEDTRONIC control, which then regulates the system. The water injection system consists of both on-base components and an off-base water injection skid. This skid is a factory assembled and enclosed package. It receives water from the customer's treatment facility, and delivers filtered water at the pressure and flow rate required to meet the applicable emissions requirement at that operating condition. The filtered water is introduced to the turbine combustion system through a water supply manifold. The manifold supplies water to each of the 14 combustors on the gas turbine. The manifold inlet connection is located on the turbine base. The water is injected through identical nozzles in each of the combustors. The following is a brief functional description of the system as well as a control and monitoring description. More detailed information on individual items is given in the manufacturer's literature (equipment publications).

FUNCTIONAL DESCRIPTION

The water injection system supplies treated and filtered water at the required flow rate and pressure to the combustion system of the gas turbine. Water enters the skid and passes through a strainer (FW1-2), which protects the system components from damage by foreign objects. A pressure switch (63WN-1) senses pressure upstream of the Pump. The SPEEDTRONIC control system will trip the pump motor if the pressure sensed by this switch is too low. This protects the pump from damage due to cavitation. An electric motor (88WN-1) drives the centrifugal water injection pump (PW1-1). The speed of the electric motor is controlled by a variable frequency drive unit or [VFD (97WN-1)]. The VFD modulates the frequency of the AC power supplied to the motor (88WN-1). By varying the frequency of the AC power, the pump speed can be precisely controlled. By varying the pump speed, the pump discharge pressure, and hence the discharge flow rate are controlled. The VFD controls the pump speed in response to a 4-20 milliamphere (mA) demand signal from the SPEEDTRONIC. A 0-10 V speed feedback signal (96WN-4) from the VFD is fed back to the SPEEDTRONIC for monitoring and fault detection purposes.

A discharge pressure transmitter (96WP-1) is located downstream of the pump. The signal from this transmitter is fed back to the SPEEDTRONIC for monitoring and fault detection. The flow then passes through a high pressure filter assembly (FW1-1). The filter elements are contained in high-pressure filter housing, with a vent and drain. A differential pressure gauge indicates the pressure drop across the filter. A differential pressure switch (63WN-3) also senses the differential pressure across the filter, and signals an alarm in the SPEEDTRONIC control if the pressure differential exceeds the pressure specified in the device summary. Downstream of the filter, the flow is split into a main line to the turbine and a recirculation line, which returns to the pump inlet upstream of the inlet strainer via the "cascade" recirculation orifice. The recirculation flow allows the pump to run in a stable and safe condition when there is little or no flow being delivered to the turbine. It is important that the pump is not run only on recirculation flow for an extended period of time. Extended running on pump recirculation only may cause overheating of the pump, or damage to the pump seals. The water flow in the main line next passes through a turbine flow meter (FM1-1), with triple pick-ups, each with its own flow transmitter (96WF-1, 96WF-2, and 96WF-3). The flow meter provides a signal to the SPEEDTRONIC control system.

A strainer (FW1-3) is installed downstream of the flow meters, to protect the other system components in the event of a flow meter failure. Manually operated bypass/isolation valves, and a bypass piping loop is provided to allow the flow meter to be isolated (e.g. for flushing) or to be removed for maintenance (if necessary). Downstream of the flow meters, the flow passes through a water actuated stop valve (VS2-1), with solenoid control valve (20WN-1), which shuts off water flow in response to a command from the control system. Downstream of the stop valve is a manual isolation valve, followed by the skid discharge connection ("WJ2"). Interconnecting piping (provided by the customer) carries the water flow from the skid discharge to the manifold connection on the turbine base ("WI2"). The manifold distributes flow equally to 14 flow proportioning valves (VWP 1 to 14). These valves have a 15 psid (1.0 kg/cm²) cracking pressure, and provide a graduated flow restriction such that the flow resistance is relatively high at low flows. The purpose of the flow proportioning valves is to provide an even flow distribution at start-up and at low flows. The discharge from each of these valves is connected to tubing, which carries the flow of water to one of the combustors.

CONTROL AND MONITORING

Total water flow to the turbine is scheduled as a function of fuel flow to the turbine. A control schedule must be established during field compliance tests to meet emissions limits specified by the

applicable local or federal standards. The compliance curve, determined as a result of these tests, is programmed into the SPEEDTRONIC control system. It is used as a reference for comparison to the actual water flow, in order to verify that emissions regulations are being met. The electronic controllers (micro-computers R, S, and T) in the SPEEDTRONIC control the flow of water in accordance with the control schedule and compliance control curve. The controllers generate a 4 to 20 mA demand signal to the VFD, which accurately modulates pump speed to obtain the required flow. The control signal is generated in accordance with the control schedule, to achieve the required emissions levels at that particular operating condition. The skid flow meter (FM1-1) generates a 4 to 20 mA output proportional to flow rate, which the SPEEDTRONIC uses in the flow control loop as a feedback signal.

ATTACHMENT SH-EU1-I3b**DETAILED DESCRIPTION OF CONTROL EQUIPMENT
FUEL GAS SYSTEM (DLN 2.6)****GENERAL**

The stop/speed ratio valve (SRV) and the gas control valves (GCVs) work in conjunction to regulate the total fuel flow delivered to the gas turbine. This arrangement uses four separate GCVs to control the distribution of the fuel flow to a multi-nozzle combustion system (see gas fuel system schematic). The GCVs control the desired fuel flow in response to a control system fuel command, fuel stroke reference (FSR). The response of the fuel flow to GCVs' commands is made predictable by maintaining a predetermined pressure upstream of the GCVs. The GCVs' upstream pressure, P2, is controlled by modulating the SRV based on turbine speed as a percentage of full speed, TNH, and feedback from the P2 pressure transducers, 96FG-2A, B, and C. Refer to the gas fuel system schematic. In a dry low NO_x 2.6 (DLN-2.6) combustion system there are four gas fuel system manifolds: Premix 1 (PM1), Premix 2 (PM2), Premix 3 (PM3), and quaternary (Q). Each combustion chamber has a total of six fuel nozzles. The PM1 gas fuel delivery system consists of one diffusion type fuel nozzle for each combustion chamber. The PM2 gas fuel delivery system consists of two premix type fuel nozzles for each combustion chamber. The Q gas fuel delivery system consists of injection pegs located in each combustion casing. The PM3 gas fuel delivery system consists of three premix type fuel nozzles for each combustion chamber. The GCVs regulate the percentage of the total fuel flow delivered to each of the gas fuel system manifolds.

FUEL GAS CONTROL SYSTEM

The GCVs and SRV are actuated by hydraulic cylinders moving against spring loaded valve plugs. Three coil servo valves are driven by electrical signals from the control system to regulate the hydraulic fluid in the actuator cylinders. Redundant sensors in the form of linear variable differential transformers (LVDTs) mounted on each valve provide the control system with valve position feedback for closed loop position control. A functional explanation of each part or subsystem is contained in subsequent paragraphs. For more detail on the electro-hydraulic circuits see the SPEEDTRONIC system text, gas fuel system schematics, and control sequence programs furnished to the site.

GAS CONTROL VALVES

The plugs in the GCVs are contoured to provide the proper flow area in relation to valve stroke. The combined position of the control valves is intended to be proportional to FSR. The GCVs use a

skirted valve disc and venturi seat to obtain adequate pressure recovery. High pressure recovery occurs at valve pressure ratios substantially less than the critical pressure ratio. The result is that the flow through the GCVs is independent of the pressure drop across the valves and is a function of valve inlet pressure, P_2 , and valve area only. The control system's fuel command, FSR, is the percentage of maximum fuel flow required by the control system to maintain speed, load, or another set point. FSR is broken down into two parts which make up the fuel split set point, FSR1 and FSR2. FSR1 is the percentage of maximum fuel flow required from the liquid fuel system and FSR2 is the percentage of maximum fuel flow required from the gas fuel system. FSR2 is also broken down into four parts, FSRPM1, FSRPM2, FSRPM3, and FSRQT. FSRPM1 is the percentage of FSR2 controlling the GCV1 gas fuel valve. FSRPM2 is the percentage of FSR2 to be directed to the GCV2 gas fuel valves, and so on. FSRPM1 is used as a reference to a servo amplifier, which drives the coils of GCV No. 1. FSRPM2 is used to drive the coils of GCV No. 2, and so on.

ATTACHMENT SH-EU1-I4

PROCEDURES FOR STARTUP AND SHUTDOWN

OPS-023 COMBUSTION TURBINE STARTUP

Shady Hills, FL
GE Contractual Services
Effective Date: Pending

Number: OPS-023
Attachment SH-EU1-I4a.doc

I. SCOPE

- A. The purpose of this procedure is to provide safe means of Startup of the Gas Turbine Generators.

II. DEFINITIONS

- A. None.

III. RESPONSIBILITIES

- A. Facility Management:

- 1. To revise this procedure when new safety measures and operating techniques or technologies become available.

- B. Employee

- 1. To implement this operation by utilizing verbatim compliance of this procedure.
- 2. To use this procedure in parallel with all approved safety procedures.
- 3. To notify supervision when any unsafe or abnormal condition presents itself.

IV. GUIDELINES

- A. Start required BOP Equipment:

- 1. Start closed cooling water in accordance with OPS-031.
- 2. Start raw water for evap coolers in accordance with OPS-028.
- 3. Verify fuel systems are aligned in accordance with VLU's.
- 4. Start demin transfer pump in accordance with OPS-050.
- 5. Verify Compressed air system is online in accordance with OPS-037.
- 6. Verify gas heater is aligned and ready for operation in accordance with OPS-035.
- 7. Refer to OPS-044 for instructions on synchronizing.

- B. Select "Main" display from the demand display:

- 1. HMI: Shutdown Status
Off Cool down or ON Cool down
Off

- C. Select "Auto synchronize" ON.

- D. Select "Water Injection" ON.

OPS-023 COMBUSTION TURBINE STARTUP

Shady Hills, FL
GE Contractual Services
Effective Date: Pending

Number: OPS-023
Attachment SH-EU1-I4a.doc

- E. Select fuel to be used for start-up.
- F. Select "Auto" or "Remote" Depending on start location, then "Execute":
 - 1. "HMI: Startup Status
Ready to Start
Auto
- G. Select "Start" and "Execute":
 - 1. Unit Auxiliaries will be started lube oil flow will be established.
 - a. HMI: Seq in progress
 - 2. When permissives are satisfied (L4) will be satisfied.
 - a. HMI: Startup Status
Starting
Auto; Start
 - 3. When inot in cool down turning gear will engage, when unit realized approx. 6 rpm starting device will be energized and accelerate the unit.
 - a. HMI: Startup Status Crank
 - 4. When unit reaches 15% speed "14 HM" will appear on HMI at this time unit will purge for 5 minutes.
 - 5. FSR will be set to firing valve. Ignition sequence is initiated.
 - a. HMI: Startup Status/Firing
 - 6. Flame established HMI; display will indicate flame in those combustors with flame detectors.
 - 7. Select "Base Load"
 - 8. FSR set back to warm-up valve.
 - a. HMI: Startup Status/Warming up

NOTE

If flame goes out during the 60-second firing period, FSR will be reset to firing valve. At this time you may shut the unit down or attempt to fire again to fire again select CRANK on main display.

- 9. At the end of the warm up period, with flame established, FSR will increase.
 - a. HMI: Start-up Status/Accelerating 50% speed "14HA" will be displayed on HMI.

OPS-023 COMBUSTION TURBINE STARTUP

Shady Hills, FL
GE Contractual Services
Effective Date: Pending

Number: OPS-023
Attachment SH-EU1-I4a.doc

10. Turbine will continue to accelerate, at 85-90% starting device will disengage and shutdown.
 - a. HMI: Startup control to speed control at approx 60% speed.
 11. When turbine reaches operating speed "14HS" will be on HMI, field flashing is then terminated, if software switch (43S) is in off and remote is not selected on HMI.
 - a. HMI: Run Status
 Full Speed No Load
 Auto; Start
 12. If 43S is in auto or remote on HMI; Automatic Sync is initiated.
 - a. HMI: Synchronizing
- H. Normal Load Operation: Refer to OPS-043

NOTE:

Operator should monitor mode changes for proper DLN operation and indication of flame. Also monitor vibration screen for any extreme changes.

V. TRAINING

- A. Complete Control Room Operator Qualifications.

VI. REFERENCES

- A. GEK 107357 (GE Operations and Maintenance Manuel)
- B. OPS-043
- C. OPS-044

VII. APPENDIX

- A. None

OPS-024 COMBUSTION TURBINE SHUTDOWN

Shady Hills, FL
GE Contractual Services
Effective Date: Pending

Number: OPS-024
Attachment SH-EU1-I4b.doc

I. SCOPE

- A. The purpose of this procedure is to provide safe means of shutting down the Gas Turbine Generators.

II. DEFINITIONS

- A. None

III. RESPONSIBILITIES

- A. Facility Management
 - 1. To revise this procedure when new safety measures and operating techniques or technologies become available.
- B. Employee
 - 1. To implement this operation by utilizing verbatim compliance of this procedure.
 - 2. To use this procedure in parallel with all approved safety procedures.
 - 3. To notify supervision when any unsafe or abnormal condition presents itself.

IV. GUIDELINES

- A. Select STOP on the <I> /HMI Main Display.
 - 1. The unit will automatically unload, reduce speed, and chop fuel at part speed, and initiation of cooldown sequence as unit coasts to a stop.
- B. Immediately following shutdown verify unit is on turning gear to ensure minimum protection against rubs and unbalance on subsequent starting attempt.
G.E. recommends 48 hrs, prior to taking off cool down.

OPS-024 COMBUSTION TURBINE SHUTDOWN

Shady Hills, FL
GE Contractual Services
Effective Date: Pending

Number: OPS-024
Attachment SH-EU1-14b.doc

- C. Shut down and isolate associated BOP equipment in accordance with procedures.
- D. If this is the last unit to be shutdown refer to OPS-022 for supply systems to be shut down.
- E. Upon completion of supply systems shutdown perform the following.
 - 1. Walk unit down and inspect for leaks and any broken equipment.
 - 2. Take a set of logs.
 - 3. Verify unit is ready to start at HMI.
 - 4. Clear any alarms, and investigate problems and correct.

V. TRAINING

- A. Complete SR. Operations qualification.

VI. REFERENCES

- A. GE Operations and Maintenance Manuals

ATTACHMENT SH-EU1-15

**OPERATION AND MAINTENANCE PLAN
FUEL GAS SYSTEM**

ATTACHMENT SH-EU1-I5a
OPERATION AND MAINTENANCE PLAN
FUEL GAS SYSTEM

GENERAL

The dry low NO_x 2.6 (DLN-2.6) control system regulates the distribution of fuel delivered to a multi-nozzle, total premix combustor arrangement. The fuel flow distribution to each combustion chamber fuel nozzle assembly is calculated to maintain unit load and fuel split for optimal turbine emissions.

GAS FUEL SYSTEM

The DLN 2.6 Combustion system consists of six fuel nozzles per combustion can, each operating as a fully premixed combustor, five located radially, one located in the center. The center nozzle, identified as PM 1, (Premix 1), two outer nozzles located adjacent to the crossfire tubes, identified as PM2, (Premix 2), and the remaining three outer nozzles, identified as PM3, (Premix 3). Another fuel passage, located in the airflow upstream of the premix nozzles, circumferentially around the combustion can, is identified as the quaternary fuel pegs, The fuel flow to the six fuel nozzles and quaternary pegs are controlled by four independent control valves, each controlling flow split and unit load. The gas fuel system consists of the gas fuel SRV, GCV 1 (PM1), GCV 2 (PM2), GCV 3 (PM3), and GCV 4 (Quaternary). The SRV is designed to maintain a predetermined pressure, (P2), at the inlet of the GCVs. GCVs 1 to 4, (GCV I-4), regulate the desired gas fuel flow delivered to the turbine in response to the command signal FSR, from the SPEEDTRONIC panel. The DLN 2.6 control system is designed to ratio FSR into a flow control reference. This flow control philosophy is performed in a cascading routine, scheduling a percentage flow reference for a particular valve, and driving the remainder of the percentage to the next valve reference parenthetically downstream in the control software. The SRV and GCVs are monitored for their ability to track the command setpoint. If the valve command setpoint differs from the actual valve position by a prescribed amount for a period of time, an alarm will annunciate to warn the operator. If the condition persists for an extended amount of time, the turbine will be tripped and another alarm will annunciate the trip.

CHAMBER ARRANGEMENT

The 7F machine employs 14 combustors while the 9F employs 18 similar, but slightly larger combustors. For each machine there are two spark plugs and four flame detectors in selected chambers with crossfire tubes connecting adjacent combustors. Each combustor consists of a

six-nozzle/endcover assembly, forward and aft combustion casings, flow sleeve assembly, multi-nozzle cap assembly, liner assembly, and transition piece assembly. A quaternary nozzle arrangement penetrates the circumference of the combustion can, porting fuel to casing injection pegs located radially around the casing.

ATTACHMENT SH-EU1-15b
OPERATION AND MAINTENANCE PLAN
LIQUID FUEL SYSTEM

GENERAL

The liquid fuel (distillate oil) system filters, pressurizes, controls, and equally distributes fuel flow to the 14 turbine combustion chambers. Flow is regulated by controlling the position of 3-way valve, VC3-1. The entire liquid fuel system must be pressurized, with all valves in the open position, before starting the gas turbine. The liquid fuel system should be operated for a minimum of one half hour every week to prevent binding of the components. This is best achieved by operation of the turbine on liquid fuel for a minimum of one half hour per week with either 100 percent fuel oil or fuel gas mixed mode with fuel oil. The fuel system is comprised of the following major components:

1. Duplex low-pressure fuel filter FF1-1, -2 with transfer valve VM5-1 and thermal pressure relief valves VR41-1, -2.
2. Fuel pump PF1-1 with driving motor 88FP-1 and motor heater 23FP-1 and discharge pressure relief valve VR4-1.
3. Fuel flow control valve VC3-1.
4. Fuel stop valve VS1-1.
5. Fuel flow divider FD1-1.
6. Nozzle pressure selector valve VH17-1.
7. Check valves VCKI-1 through 14.
8. Fuel nozzle assemblies.

FUNCTIONAL DESCRIPTION**Duplex Low-Pressure Fuel Filter**

Fuel oil forwarded to the liquid fuel module within specified pressure and temperature ranges enters the low pressure filter FF1-1 or FFI-2 via transfer valve VM5-1 prior to entering the fuel pumps. The low-pressure filter consists of multiple five-micron synthetic elements with oversize contamination capacity. These elements retain contaminants, which could damage downstream components. The filter vessels are protected from thermal overpressure by relief valves VR41-1, -2. Differential pressure switch 63LF-5 gives a signal when the pressure drop across the filter reaches 15 psid (103 kPad). The ditty filter should then be serviced by replacing the dirty elements with clean ones.

Fuel Pump

Fuel pump PFI-1 is of the axial flow, positive displacement, rotary, screw type with one power rotor (driven screw) and two intermeshing idler rotors. The single ball bearing positions the power rotor for proper operation of the mechanical seal. The bearing is permanently "grease packed" and external to the pumped fuel. The motor driven fuel pump 88FP/PFI-1 is rated at one hundred percent capacity of the maximum turbine fuel requirement. The pump motor is equipped with an integral heater 23FP-1. The pump is protected from insufficient suction pressure by permissive-to-start pressure switch 63FL-2. During normal operation this switch functions as a low-pressure alarm. The fuel system is protected from excessive pressure by pump discharge relief valve VR4-1 that relieves pressure back to filter inlet.

Fuel Flow Control Valve

Pump discharge flow is modulated by the servo-controlled three-way control valve assembly VC3-1. Components of this assembly include the valve body, electrohydraulic servovalve 65FP-1, hydraulic oil filter FH3-1 and the cylinder. The valve controls the flow to the turbine by throttling the main port while opening the bypass port, returning the bypass flow to pump suction.

Liquid Fuel Stop Valve

Hydraulically operated three-way fuel oil stop valve VS1-1 shuts off the supply of fuel to the turbine during normal or emergency shutdowns. During normal turbine operation, the valve is held open (bypass closed) by high-pressure hydraulic oil that passes through a hydraulic trip relay (dump) valve VH4-1. This dump valve, located between the hydraulic supply and the stop valve hydraulic cylinder, is hydraulically operated by trip oil acting through solenoid valve 20FL-1. During a normal shutdown or emergency trip, low trip oil pressure will cause valve VH4-1 to shift position, dumping high-pressure hydraulic oil from the stop valve actuating cylinder, allowing the stop valve spring to close the valve. During an electrical trip, solenoid valve 20FL-1 causes the dump valve to shift with the same results as above. The stop valve will be fully closed within 0.5 second of the trip signal. Limit switch 33FL-1 signals stop valve closed position.

Flow Divider

Flow divider FD1-1 equally distributes filtered fuel to the 14 combustors. It is a continuous flow, free-wheeling device consisting of 14 gear pump elements in a circular or linear arrangement having a common inlet with a single-timing gear or shaft. This timing (sun) gear or shaft maintains the speed of each flow element synchronous with all the other elements.

The speed of each flow divider gear element is directly proportional to the total flow through the flow divider. Magnetic pickup assemblies 77FD-1, -2 and -3, fitted to the flow divider, produce a flow feedback signal at a frequency proportional to the fuel delivered to the combustion chambers. This signal is fed to the SPEEDTRONICE control panel where it is used in the fuel control system.

Pressure Selector Valve

An 18-position pressure selector valve VH17-1 allows monitoring of individually selected line pressures on a local gauge. These include: anyone of the 14 combustor fuel lines; pump discharge pressure; and flow divider inlet pressure.

Check Valves

Check valves VCKI-1 through 14 isolate the fuel nozzles during shutdown periods to prevent line drainage and flow communication between combustors.

ATTACHMENT SH-EU1-IV1
APPLICABLE REQUIREMENTS LISTING



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary.

NOTICE OF FINAL PERMIT REVISION

In the Matter of an Opening for Cause
of a Permit held by:

Mr. James Packer
Director of Operations, Southeast Business Unit
Mirant Corporation
1155 Perimeter Center West
Atlanta, GA 30338-5416

FINAL Permit Revision No. **1010373-004-AV**
Shady Hills Generating Station

Enclosed is FINAL Title V Permit Revision Number 1010373-004-AV for the operation of the Shady Hills Generating Station, located at 14240 Merchant Energy Way, Shady Hills, Pasco County, issued pursuant to Chapter 403, Florida Statutes (F.S.).

An electronic version of this permit has been posted on the Division of Air Resource Management's world wide web site for the United States Environmental Protection Agency (U.S. EPA) Region 4 office's review. The web site address is:

<http://www.dep.state.fl.us/air/permitting/airpermits>

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

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

"More Protection, Less Process"

Printed on recycled paper.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12/30/08 to the person(s) listed or as otherwise noted:

James Packer*
Kennard F. Kosky, P.E., Golder Associates, Inc.
U.S. EPA, Region 4 (INTERNET E-mail Memorandum)
Gerald Kissel, P.E., Southwest District Office

Clerk Stamp

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

Barbara J. Sunday 12/30/08
(Clerk) (Date)

FINAL PERMIT DETERMINATION

I. Comment(s).

No comments were received from U.S. EPA, Region 4, concerning the PROPOSED Title V Permit that was posted on the Department's web site on October 22, 2003.

II. Conclusion.

The permitting authority hereby issues the FINAL Title V Permit, with no changes:

BEST AVAILABLE COPY

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>
<p>1. Article Addressed to: Mr. James Packer Director of Operations, Southeast Business Unit Mirant Corporation 1155 Perimeter Center West Atlanta, Georgia 30388-5416</p>	<p>B. Received by (Printed Name) <input checked="" type="checkbox"/> Reg. Addressee</p> <p>C. Date of Delivery 1/5/04</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If YES, enter delivery address below:</p>
<p>2. Article Number (Transfer from service label) 7001 1140 0002 1577 9939</p>	<p>3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540</p>	

**U.S. Postal Service
 CERTIFIED MAIL RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)**

OFFICIAL USE

7001 1140 0002 1577 9939

Postage	\$	Postmark Here
Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$	

Sent To
 Mr. James Packer
 Street, Apt. No.,
 or PO Box No. 1155 Perimeter Center West
 City, State, ZIP+4
 Atlanta, Georgia 30388-5416

PS Form 3800, January 2001 See Reverse for Instructions

STATEMENT OF BASIS

Mirant Corporation
Shady Hills Generating Station
Facility ID No. 1010373
Pasco County

Title V Air Operation Permit Revision
Permit No. 1010373-004-AV

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 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.

This facility consists of three, dual-fuel, nominal 170 megawatt (MW) General Electric model PG7241FA combustion turbine-electrical generators, three 75-foot exhaust stacks, and one 2.8-million gallon fuel oil storage tank. The combustion turbine units can operate in simple-cycle mode and intermittent duty mode. The units are equipped with Dry Low NO_x (DLN-2.6) combustors and wet injection capability.

It has been discovered that certain applicable requirements related to volatile organic compounds (VOC) emissions were inadvertently omitted from the FINAL Title V Permit for the facility that was effective on January 1, 2003. Therefore, the Department is required to open the Title V Permit for cause and install these missing requirements in accordance with Rules 62-4.080(1), 62-213.430(4) and 62-213.440(1), F.A.C., and 40 CFR 70.7(f)(1)(iii).

Two Specific Conditions of the Title V Permit are added as follows:

- From:

A.14. [Reserved.]

- To:

A.14. Volatile Organic Compounds (VOC) Emissions. The concentration of VOC in the stack exhaust gas with the combustion turbine operating on natural gas shall exceed neither 1.4 ppmvd nor 2.8 lb/hr (ISO conditions) and neither 7 ppmvw nor 16.2 lb/hr (ISO conditions) while operating on oil to be demonstrated by *initial* stack test using EPA Method 18, 25 or 25A. [Rule 62-212.400, F.A.C.; and 1010373-001-AC, Specific Condition 21.]

- From:

A.26. [Reserved.]

- To:

A.26. Compliance with the VOC emission limit. An *initial* test is required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit and periodic tuning data will be employed as surrogate, and no annual testing is required.
[1010373-001-AC, Specific Condition 33.]

Compliance Assurance Monitoring (CAM) *does not apply* to these emissions units. Water injection is used for NO_x control.

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

Based on the initial Title V permit application received April 1, 2002, this facility is *not* a major source of hazardous air pollutants (HAPs).

The three combustion turbines are regulated under Phase II of the Federal Acid Rain Program. The facility holds ORIS code 55414.

Mirant Corporation
Shady Hills Generating Station
Facility ID No. 1010373
Pasco County

Title V Air Operation Permit Revision
FINAL Permit No. 1010373-004-AV

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

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

Telephone: 850/488-0114
Fax: 850/922-6979

Compliance Authority:
Department of Environmental Protection
Southwest District

3804 Coconut Palm Drive
Tampa, Florida 33619-8218

Telephone: 813/744-6100
Fax: 813/744-6458

Title V Air Operation Permit
FINAL Permit Revision No. 1010373-004-AV

Table of Contents

<u>Section</u>	<u>Page Number</u>
Placard Page	1
I. Facility Information	2
A. Facility Description.	
B. Summary of Emissions Unit ID No(s). and Brief Description(s).	
C. Relevant Documents.	
II. Facility-wide Conditions.....	3
III. Emissions Unit(s) and Conditions	
A. Three Simple-Cycle Combustion Turbines.....	6
B. Fuel Storage Tank.....	20
IV. Acid Rain Part.....	21



Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

Permittee:
Mirant Corporation

FINAL Permit No. 1010373-004-AV
Facility ID No.: 1010373
SIC Nos.: 49, 4911
Project: Title V Air Operation Permit Revision

This permit revision is for the operation of the Shady Hills Generating Station. This facility is located at 14240 Merchant Energy Way, Shady Hills, Pasco County; East of Hudson and North of SR 52; UTM coordinates are: Zone 17, 347.0 km E, 3139.0 km N; and, Latitude: 28° 22' 00" North, and Longitude: 82° 30' 00" 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 above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

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

Appendix TV-4, Title V Conditions, version dated 02/12/02

Appendix SS-1, Stack Sampling Facilities version dated 10/07/96

TABLE 297.310-1, CALIBRATION SCHEDULE version dated 10/07/96

FIGURE 1 - SUMMARY REPORT-GASEOUS AND OPACITY EXCESS

EMISSION AND MONITORING SYSTEM PERFORMANCE REPORT, version dated 07/96

Effective Date: January 1, 2003

Revision Effective Date: December 16, 2003

Renewal Application Due Date: July 1, 2007

Expiration Date: December 31, 2007

Department of Environmental Protection

Michael G. Cooke, Director
Division of Air Resource
Management

MGC/tbc

"More Protection, Less Process"

Printed on recycled paper.

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of three, dual-fuel, nominal 170 megawatt (MW) General Electric Frame 7FA combustion turbine-electrical generators (model PG7241FA), three 75-foot exhaust stacks, and one 2.8-million gallon fuel oil storage tank. The combustion turbine units can operate in simple-cycle mode and intermittent duty mode. The units are equipped with Dry Low NO_x (DLN-2.6) combustors and wet injection capability.

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

Based on the initial Title V permit application received April 1, 2002, this facility is *not* a major source of hazardous air pollutants (HAPs).

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

E.U. ID No.	Brief Description
-001	One nominal 170 Megawatt Gas Simple-Cycle Combustion Turbine-Electrical Generator.
-002	One nominal 170 Megawatt Gas Simple-Cycle Combustion Turbine-Electrical Generator.
-003	One nominal 170 Megawatt Gas Simple-Cycle Combustion Turbine-Electrical Generator.
-004	Fuel Storage Tank.

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

Subsection C. Relevant Documents.

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

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

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 Changes
Statement of Basis

These documents are on file with permitting authority:

FINAL Title V Air Operation Permit effective 01/01/03.
Letter from the Department to the Mirant Corporation dated May 29, 2003, indicating that the Title V permit will be opened for cause.
DRAFT Title V Permit Revision clerked on August 13, 2003.
PROPOSED Title V Permit Revision posted for EPA review on October 22, 2003.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. Appendix TV-4, Title V Conditions, is a part of this permit.
{Permitting note: Appendix TV-4, Title V Conditions, is distributed to the permittee only.
Other persons requesting copies of these conditions shall be provided one copy when requested or otherwise appropriate.}
 2. **Not federally enforceable. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited.** No person shall 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.
[Rules 62-296.320(4)(b)1. & 4., F.A.C.]
 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 3346
Merrifield, VA 22116-3346
Telephone: 703/816-4434
- 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]
5. [Reserved.]
 6. **Insignificant Emissions Units and/or Activities.** Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.
[Rules 62-213.440(1), 62-213.430(6), and 62-4.040(1)(b), F.A.C.]
 7. [Reserved.]
 8. **Not federally enforceable. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions.** The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or

installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

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

9. **Not federally enforceable.** Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

- Paving and maintaining roads, parking areas, and yards.
- Applying water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- Applying asphalt, water, oil, chemicals, or other dust suppressants to unpaved roads, yards, open stockpiles and similar activities.
- Removing particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent the particulate matter from becoming airborne.
- Landscaping and planting of vegetation.
- Using hoods, fans, filters, and other similar equipment to contain, capture, and/or vent particulate matter.
- Confining abrasive blasting where possible.
- Enclosing or covering of conveyor systems.

[Rule 62-296.320(4)(c)2., F.A.C.; and proposed by applicant in the initial Title V permit application received April 1, 2002.]

{Note: This condition implements the requirements of Rules 62-296.320(4)(c)1., 3., & 4., F.A.C. (see Condition 57. of Appendix TV-4, Title V Conditions).}

10. 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.]

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

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

12. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Southwest District Office.

Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-8218
Telephone: 813/744-6100
Fax: 813/744-6084

[1010373-001-AC, Specific Condition 6.]

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

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

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

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

15. BACT Determination. In accordance with Rule 62-212.400(6)(b), F.A.C. (and 40 CFR 51.166(j)(4)), the Best Available Control Technology (BACT) determination shall be reviewed and modified as appropriate in the event of a plant conversion. This paragraph states: "For phased construction project, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source." This reassessment will also be conducted for this project if there are any increases in heat input limits, hours of operation, oil firing, low or baseload operation (e.g., conversion to combined-cycle operation), short-term or annual emission limits, annual fuel heat input limits or similar changes.

[40 CFR 51.166(j)(4); Rule 62-212.400(6)(b), F.A.C.; and 1010373-001-AC, Specific Condition 7. in Facility Information Section]

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions units. . .

E.U. ID No.	Brief Description
-001	One nominal 170 Megawatt Gas Simple-Cycle Combustion Turbine-Electrical Generator.
-002	One nominal 170 Megawatt Gas Simple-Cycle Combustion Turbine-Electrical Generator.
-003	One nominal 170 Megawatt Gas Simple-Cycle Combustion Turbine-Electrical Generator.

These emissions units consist of three, dual-fuel, nominal 170 megawatt (MW) General Electric model PG7241FA combustion turbine-electrical generators, and three 75-foot exhaust stacks. The units can operate in simple-cycle mode and intermittent duty mode. The units are equipped with Dry Low NO_x (DLN-2.6) combustors and wet injection capability.

{Permitting note: These emissions units are regulated under Acid Rain-Phase II, 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C., Rule 212.400, F.A.C., Prevention of Significant Deterioration (PSD), Best Available Control Technology (BACT), and Air Construction Permit PSD-FL-280 (1010373-001-AC).}

Compliance Assurance Monitoring (CAM) *does not apply* to these emissions units. Water injection is used for NO_x control.

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

General

A.1. **Definitions.** For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60 shall apply, except that the term "Administrator" when used in 40 CFR 60 shall mean the Secretary or the Secretary's designee.
[40 CFR 60.2; and Rule 62-204.800(7)(a), F.A.C.]

A.2. **Concealment.** 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]

A.3. **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.; and 1010373-001-AC, Specific Condition 12.]

Essential Potential to Emit (PTE) Parameters

A.4. Permitted Capacity. The maximum heat input rates, based on the lower heating value (LHV) of each fuel to each Unit (-001, -002, and -003) at ambient conditions of 59°F temperature, 60% relative humidity, 100% load, and 14.7 psi pressure shall not exceed 1,612 million Btu per hour (mmBtu/hr) when firing natural gas, nor 1,806 mmBtu/hr when firing No. 2 or superior grade of distillate fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and 1010373-001-AC, Specific Condition 8.]

A.5. Methods of Operation -- Fuels. Only pipeline natural gas or No. 2 fuel oil, with a maximum of 0.05% sulfur content, by weight, or superior grade of distillate fuel oil, shall be fired in these units.

{Note: The limitation of this specific condition is more stringent than the NSPS sulfur dioxide limitation and thus assures compliance with 40 CFR 60.333 and 60.334.}

[Rules 62-210.200 (Definitions - Potential Emissions) and 62-213.410, F.A.C.; and 1010373-001-AC, Specific Condition 7.]

A.6. Fuel Oil Usage. The amount of back-up fuel (fuel oil) burned at the site (in Btu's) shall not exceed the amount of natural gas (primary fuel) burned at the site (in Btu's) during any consecutive 12-month period.

[Rule 62-210.200, F.A.C. (BACT); and 1010373-001-AC, Specific Condition 14.]

A.7. Hours of Operation. The three stationary gas turbines shall operate no more than an average of 3,390 hours per unit during any calendar year. The three stationary gas turbines shall operate no more than an average of 1000 hours per unit on fuel oil during any calendar year. No single combustion turbine shall operate more than 5,000 hours in a single year.

[Rules 62-4.160(2), 62-210.200(PTE), and 62-212.400, F.A.C.; and 1010373-001-AC, Specific Condition 13.]

Control Technology

A.8. Dry Low NO_x (DLN-2.6) combustors shall be used on the stationary combustion turbines to control nitrogen oxides (NO_x) emissions while firing natural gas.

[Rules 62-4.070 and 62-212.400, F.A.C.; and 1010373-001-AC, Specific Condition 15.]

A.9. The water injection (WI) system shall be used when firing No. 2 or superior grade distillate fuel oil for control of NO_x emissions.

[Rules 62-4.070 and 62-212.400, F.A.C.; and 1010373-001-AC, Specific Condition 16.]

A.10. The permittee shall provide manufacturer's emissions performance versus load diagrams for the DLN and wet injection systems prior to their installation. DLN systems shall each be tuned upon initial operation to optimize emissions reductions consistent with normal operation and maintenance practices and shall be maintained to minimize NO_x emissions and CO emissions, consistent with normal operation and maintenance practices. Operation of the DLN systems in the diffusion-firing mode shall be minimized when firing natural gas.

[Rules 62-4.070 and 62-210.650, F.A.C.; and 1010373-001-AC, Specific Condition 17.]

Emission Limitations and Standards

{Permitting note: 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.11. through A.17. are based on the specified averaging time of the applicable test method.}

A.11. Following is a summary of the emission limits and required technology. Values for NO_x are corrected to 15% O₂ on a dry basis. These limits, or their equivalent in terms of lb/hr or NSPS units, are followed by the applicable specific conditions.

POLLUTANT	CONTROL TECHNOLOGY	EMISSION LIMIT
PM/PM ₁₀ , VE	Pipeline Natural Gas Good Combustion	10/17 lb/hr (Gas/Fuel Oil) 10 Percent Opacity (Gas or Fuel Oil)
VOC (not PSD)	Pipeline Natural Gas Good Combustion	1.4 ppmvd (Gas) 7 ppmvw (Fuel Oil)
CO	Pipeline Natural Gas Good Combustion	12 ppmvd (Gas) 20 ppmvd (Fuel Oil)
SO ₂ and Sulfuric Acid Mist	Pipeline Natural Gas Low Sulfur Fuel Oil	1 gr S/100 ft ³ (in Gas) 0.05% sulfur, by weight (in Fuel Oil)
NO _x	Dry Low NO _x for Natural Gas Wet Injection and limited Fuel Oil usage	9 ppmvd (Gas) 42 ppmvd (Fuel Oil)

[Rules 62-212.400, 62-204.800(7)(b) (Subpart GG), 62-210.200 (Definitions-Potential Emissions) F.A.C.; and 1010373-001-AC, Specific Condition 18.]

A.12. Nitrogen Oxides (NO_x) Emissions.

- **While firing Natural Gas.** The emission rate of NO_x in the exhaust gas shall not exceed 9 ppmvd @15% O₂ on a 24 hr block average (of valid hours during which the unit is operated only) as measured by the continuous emission monitoring system (CEMS). Refer to Specific Condition A.23. for a discussion of valid hours contributing to the block average.

In addition, NO_x emissions calculated as NO₂ shall not exceed 64.1 pounds per hour (at ISO conditions) and 9 ppmvd @15% O₂ to be demonstrated by the initial "new and clean" GE performance stack test.

[Rule 62-212.400, F.A.C.]

- **While firing Fuel Oil:** The concentration of NO_x in the exhaust gas shall not exceed 42 ppmvd at 15% O₂ on the basis of a 3-hr average (of valid hour hours during which the unit is actually operated only) as measured by the continuous emission monitoring system (CEMS).

In addition, NO_x emissions calculated as NO₂ shall not exceed 351 lb/hr (at ISO conditions) and 42 ppmvd @15% O₂ to be demonstrated by stack test.

[Rule 62-212.400, F.A.C.]

- The permittee shall develop a NO_x reduction plan when the hours of oil firing reach the allowable limit of 1000 hours per year. This plan shall include a testing protocol designed to establish the maximum water injection rate and the lowest NO_x emissions possible without affecting the actual performance of the gas turbine. The testing protocol shall set a range of water injection rates and attempt to quantify the corresponding NO_x emissions for each rate and noting any problems with performance. Based on the test results, the plan shall recommend a new NO_x emissions limiting standard and shall be submitted to the Department's Bureau of Air Regulation and Compliance Authority for review. If the Department determines that a lower NO_x emissions standard is warranted for oil firing, this permit shall be revised.

[1010373-001-AC, Specific Condition 19.]

A.13. Carbon Monoxide (CO) Emissions. The concentration of CO in the stack exhaust gas shall exceed neither 12 ppmvd nor 42.5 lb/hr (at ISO conditions) while firing gas, and neither 20 ppmvd nor 71.4 lb/hr (at ISO conditions) while firing fuel oil. The permittee shall demonstrate compliance with these limits by stack test using EPA Method 10.

[Rule 62-212.400, F.A.C.; and 1010373-001-AC, Specific Condition 20.]

A.14. Volatile Organic Compounds (VOC) Emissions. The concentration of VOC in the stack exhaust gas with the combustion turbine operating on natural gas shall exceed neither 1.4 ppmvd nor 2.8 lb/hr (ISO conditions) and neither 7 ppmvw nor 16.2 lb/hr (ISO conditions) while operating on oil to be demonstrated by *initial* stack test using EPA Method 18, 25 or 25A.

[Rule 62-212.400, F.A.C.; and 1010373-001-AC, Specific Condition 21.]

A.15. Sulfur Dioxide (SO₂) Emissions. SO₂ emissions shall be limited by firing pipeline natural gas (sulfur content less than 1 grain per 100 standard cubic feet) or by firing No. 2 or superior grade distillate fuel oil with a maximum of 0.05 percent sulfur, by weight, for 1000 hours per year per unit. Emissions of SO₂ (at ISO conditions) shall not exceed 5 lb/hr (natural gas) and 98.7 lb/hr (fuel oil) as measured by applicable compliance methods described below.

[40 CFR 60 Subpart GG; Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.; and 1010373-001-AC, Specific Condition 22.]

A.16. Particulate Matter (PM/PM₁₀). PM/PM₁₀ emissions shall not exceed 10 lb/hr when operating on natural gas and shall not exceed 17 lb/hr when operating on fuel oil. Visible emissions testing shall serve as a surrogate for PM/PM₁₀ compliance testing.

[Rule 62-212.400, F.A.C.; and 1010373-001-AC, Specific Condition 23.]

A.17. Visible Emissions (VE). VE emissions shall serve as a surrogate for PM/PM₁₀ emissions and shall not exceed 10% opacity.

[Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.; and 1010373-001-AC, Specific Condition 24.]

Excess Emissions

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

A.18. Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period for other reasons unless specifically authorized by the Department for longer duration. Operation below 50% output shall be limited to 2 hours per unit cycle (breaker closed to breaker open).

[Rules 62-210.700(1) and (2), F.A.C.; and 1010373-001-AC, Specific Condition 25.]

A.19. Excess emissions entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited pursuant to Rule 62-210.700, F.A.C. These emissions shall be included in the 24-hr average for NO_x.

[Rule 62-210.700(4), F.A.C.; and 1010373-001-AC, Specific Condition 26.]

A.20. Excess Emissions Report. If excess emissions occur due to malfunction, the owner or operator shall notify the Department's Southwest District Office 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. Following the NSPS format, 40 CFR 60.7 Subpart A, periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels exceed the permitted standards listed in Specific Conditions A.11. and A.12.

[Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C.; 40 CFR 60.7; and 1010373-001-AC, Specific Condition 27.]

Test Methods and Procedures

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

A.21. Compliance with the allowable emission limiting standards shall be determined *annually* by using the following reference methods as described in 40 CFR 60, Appendix A (1998 version), and adopted by reference in Chapter 62-204.800, F.A.C.

[1010373-001-AC, Specific Condition 28.]

A.22. *Annual* compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., on each unit as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior Departmental approval is received in writing.

- EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".
- EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources".

- EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Short-term NO_x BACT limits (EPA reference Method 7E, "Determination of Nitrogen Oxides Emissions from Stationary Sources", or RATA test data may be used to demonstrate compliance for *annual* test requirements).

[1010373-001-AC, Specific Condition 29.]

A.23. Continuous compliance with the NO_x emission limits. Continuous compliance with the NO_x emission limits shall be demonstrated with the CEM system based on the applicable averaging time of 24-hr block average (DLN). Based on CEMS data, a separate compliance determination is conducted at the end of each operating day and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day. A valid hourly emission rate shall be calculated for each hour in which at least two NO_x concentrations are obtained at least 15 minutes apart. Valid hourly emission rates shall not include periods of start up, shutdown, or malfunction unless prohibited by Rule 62-210.700, F.A.C. These excess emissions periods shall be reported as required in Specific Conditions A.18. and A.19.

- All continuous monitoring systems (CEMS) shall be in continuous operation except for breakdowns, repairs, calibration checks, and zero and span adjustments. These CEMS shall meet minimum frequency of operation requirements: one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data average.

[Rules 62-4.070 and 62-210.700, F.A.C., 40 CFR 75 and 40 CFR 60.13; and 1010373-001-AC, Specific Condition 30.]

A.24. Compliance with the SO₂ and PM/PM₁₀ emission limits. Notwithstanding the requirements of Rule 62-297.340, F.A.C., the use of pipeline natural gas, is the method for determining compliance for SO₂ and PM₁₀. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO₂ standard, ASTM methods D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule or natural gas supplier data may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized. However, the applicant is responsible for ensuring that the procedures in 40 CFR 60.335 or 40 CFR 75 are used when determination of fuel sulfur content is made. Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (1998 version).

[1010373-001-AC, Specific Condition 31.]

A.25. Compliance with CO emission limit. *Annual* compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the *annual* RATA testing for the NO_x CEMS required pursuant to 40 CFR 75.

[1010373-001-AC, Specific Condition 32.]

A.26. Compliance with the VOC emission limit. An *initial* test is required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit and periodic tuning data will be employed as surrogate, and no annual testing is required.

[1010373-001-AC, Specific Condition 33.]

A.27. Testing procedures. Testing of emissions 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. In this case, 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 ambient 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. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C.

[1010373-001-AC, Specific Condition 34.]

A.28. 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.]

A.29. 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 three separate test runs unless otherwise specified in a particular test method or applicable rule.

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

A.30. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test

observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1.

TABLE 297.310-1
 CALIBRATION SCHEDULE

ITEM	MINIMUM CALIBRATION FREQUENCY	REFERENCE INSTRUMENT	TOLERANCE
Liquid in glass thermometer	Annually	ASTM Hg in glass reference thermometer or equivalent, or thermometric points	+/-2%
Bimetallic thermometer	Quarterly	Calibration liquid in glass thermometer	5 degrees F
Thermocouple	Annually	ASTM Hg in glass reference thermometer, NBS calibrated reference and potentiometer	5 degrees F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Figures 2-2 and 2-3
Probe Nozzles	Before each test, or when nicked, dented, or corroded	Micrometer	+/-0.001" mean of the last three readings; maximum deviation between readings .004"
Dry gas meter and Orifice Meter	<ol style="list-style-type: none"> 1. Full scale: when received, when 5% change observed, annually. 2. One point: Semiannually. 3. Check after each test series. 	Spirometer or calibrated wet test or dry gas test meter Comparison check	2% 5%

(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.]

A.31. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.; and 1010373-001-AC, Specific Condition 46.]

A.32. The permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

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

A.33. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

c. Each NESHAP pollutant, if there is an applicable emission standard.

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test,

and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

10. An annual compliance test conducted for visible emissions shall not be required for units exempted from permitting at Rule 62-210.300(3)(a), F.A.C., or units permitted under the General Permit provisions at Rule 62-210.300(4), F.A.C.

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

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.; SIP approved; and 1010373-001-AC, Specific Condition 36.]

Monitoring of Operations

Continuous Monitoring Requirements

A.34. Continuous Monitoring System. The permittee shall calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from these units. Upon request from EPA or DEP, the CEMS emission rates for NO_x on these units shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.
[Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C.; 40 CFR 75 and 40 CFR 60.7; and 1010373-001-AC, Specific Condition 40.]

A.35. CEMS for reporting excess emissions. Excess Emissions and Monitoring System Performance Reports shall be submitted as specified in 40 CFR 60.7(c). CEM monitor downtime shall be calculated and reported according to the requirements of 40 CFR 60.7(c)(3) and 40CFR 60.7(d)(2). Periods when NO_x emissions (ppmvd @ 15% oxygen) are above the BACT standards, listed in Specific Conditions Nos. A.11. and A.12., shall be reported to the Department's Southwest District Office within one working day (verbally) followed up by a written explanation not later than three (3) working days (alternatively by facsimile within one working day).
[1010373-001-AC, Specific Condition 41.]

A.36. CEMS in lieu of Water to Fuel Ratio. The NO_x CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998version). The calibration of the water/fuel monitoring device

required in 40 CFR 60.335 (c)(2) (1998 version) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMS.

[1010373-001-AC, Specific Condition 42.]

A.37. Continuous Monitoring Certification and Quality Assurance Requirements. The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the Department's Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62.

[1010373-001-AC, Specific Condition 43.]

A.38. Natural Gas Monitoring Schedule. A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following requirements are met:

- The permittee shall apply for an Acid Rain permit (part) within the deadlines specified in 40 CFR 72.30. (See Section IV, Acid Rain Part, of this permit. The Phase II Acid Rain Permit Application for the facility was deemed complete on November 29, 2000.)
- The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to using a primary fuel of pipeline supplied natural gas (sulfur content less than 1 gr/100 scf pursuant to 40 CFR 75.11(d)(2)).
- Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.

This custom fuel monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO₂ emissions must be accounted for as required pursuant to 40 CFR 75.11(d).

[1010373-001-AC, Specific Condition 44.]

A.39. Fuel Oil Monitoring Schedule. The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analysis was conducted and shall comply with the requirements of 40 CFR 60.335(d).

[1010373-001-AC, Specific Condition 45.]

Training Requirements

A.40. Operating Procedures. Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment.

[Rule 62-4.070(3), F.A.C.; and 1010373-001-AC, Specific Condition 11.]

Recordkeeping and Reporting Requirements

A.41. Test Notification. The Department's Southwest District Office shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance test(s).

[1010373-001-AC, Specific Condition 35.]

A.42. Test Results. Compliance test results shall be submitted to the Department's Southwest District Office no later than 45 days after completion of the last test run.

[Rule 62-297.310(8), F.A.C.; and 1010373-001-AC, Specific Condition 37.]

A.43. Records. All measurements, records, and other data required by this permit shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to the Department upon request.

[1010373-001-AC, Specific Condition 38.]

A.44. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, each owner or operator 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.]

A.45. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.

(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.

9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
 10. The number of points sampled and configuration and location of the sampling plane.
 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
 12. The type, manufacturer and configuration of the sampling equipment used.
 13. Data related to the required calibration of the test equipment.
 14. Data on the identification, processing and weights of all filters used.
 15. Data on the types and amounts of any chemical solutions used.
 16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
 17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
 18. All measured and calculated data required to be determined by each applicable test procedure for each run.
 19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
 20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
 21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.
- [Rule 62-297.310(8), F.A.C.; and 1010373-001-AC, Specific Condition 39.]

Subsection B. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
-004	Fuel Storage Tank.

This emissions unit consists of one 2.8 million gallon distillate fuel oil storage tank.

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

B.1. Emission Unit -004, Fuel Storage Tank, shall comply with all applicable provisions of 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels, adopted by reference in Rule 62-204.800, F.A.C. [Rule 62-204.800(7)(b), F.A.C.; and 1010373-001-AC, Specific Condition 5.]

Essential Potential to Emit (PTE) Parameters

B.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

Recordkeeping and Reporting Requirements

B.3. The permittee shall maintain records on site for storage vessel identification number -004 that includes the date of construction, the material storage capacity, and type of material stored for the life of this storage vessel. [40 CFR 60.116b(b)]

Section IV. Acid Rain Part.

Shady Hills Generating Station

ORIS code: 55414

The emissions units listed below are regulated under Phase II of the Federal Acid Rain Program.

E.U. ID No.	Description
-001	One nominal 170 Megawatt Gas Simple-Cycle Combustion Turbine-Electrical Generator
-002	One nominal 170 Megawatt Gas Simple-Cycle Combustion Turbine-Electrical Generator
-003	One nominal 170 Megawatt Gas Simple-Cycle Combustion Turbine-Electrical Generator

1. The Acid Rain Part application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these acid rain units must comply with the standard requirements and special provisions set forth in the application listed below:

a. DEP Form No. 62-210.900(1)(a), version 07/01/95, dated November 21, 2000, and deemed complete by the Department on November 29, 2000.
 [Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

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

E.U. ID No.	EPA ID #	Year	2003	2004	2005	2006	2007
-001	GT 101	SO ₂ allowances to be determined by U.S. EPA.	0	0	0	0	0
-002	GT 201	SO ₂ allowances to be determined by U.S. EPA.	0	0	0	0	0
-003	GT 301	SO ₂ allowances to be determined by U.S. EPA.	0	0	0	0	0

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 62-213.400(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.
[Rule 62-213.440(1)(c)1., 2. & 3., F.A.C.]

4. 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.]

Appendix H-1. Permit History/ID Number Changes.

Permit History (for tracking purposes):

E.U. ID No.	Description	Permit No.	Issue Date	Expiration Date	Comments
-001	Simple-Cycle Combustion Turbine	1010373-001-AC (PSD-FL-280) 1010373-002-AC	1/13/00 10/19/00	7/1/02	
-002	Simple-Cycle Combustion Turbine	1010373-001-AC (PSD-FL-280) 1010373-002-AC	1/13/00 10/19/00	7/1/02	
-003	Simple-Cycle Combustion Turbine	1010373-001-AC (PSD-FL-280) 1010373-002-AC	1/13/00 10/19/00	7/1/02	
-004	Fuel Oil Storage Tank	1010373-001-AC (PSD-FL-280) 1010373-002-AC	1/13/00 10/19/00	7/1/02	
-001 -002 -003 -004	All of the above.	1010373-003-AV	01/01/03	12/31/07	Initial Title V Permit

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

Mirant Corporation
Shady Hills Generating Station

Permit Revision No. 1010373-004-AV

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 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 Rules 62-210.300(3)(a) and (b)1., 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 Rules 62-210.300(3)(a) and (b)1., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

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

Brief Description of Emissions Units and/or Activities:

1. Operation of a CO ₂ based fire protection system to be used in case of emergency fire in or near the combustion turbines.
2. Operation of an electric based fire protection system for the building. The unit also contains a small space heater.
3. Operation of a 13.5 MMBtu/hr indirect fired fuel gas heater to prevent the natural gas from freezing.
4. Storage operations for the fuel oil storage locations and the fuel oil truck unloading area.
5. Miscellaneous maintenance and cleaning and painting of the building including the control room, maintenance shop, storage warehouse, offices and their contents.
6. Miscellaneous heaters.
7. Miscellaneous general-purpose internal combustion engines for routine facility maintenance and/or equipment malfunctions.
8. Surface coating operations using VOCs.
9. Water analysis tasks to ensure proper operation of the water injection system and the combustion turbine cooling processes.
10. Storm water retention basin maintenance.

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

Mirant Corporation Shady Hills Generating Station	Permit No. 1010373-004-AV Facility ID No. 1010373
--	--

These tables summarize information for convenience purposes only, and do not supersede any of the terms or conditions of this permit.

E.U. ID Nos.	Brief Description	
-001	Simple-Cycle Combustion Turbine	The three gas turbines shall operate no more than an average of 3390 hours per unit during any calendar year, and no more than an average of 1000 hours per unit on fuel oil during any calendar year.
-002	Simple-Cycle Combustion Turbine	
-003	Simple-Cycle Combustion Turbine	

Pollutant	Fuels	Allowable Emissions		Equivalent Emissions*		Regulatory Citation(s)	See permit condition(s)
		Standard(s)	lbs./hour	lbs./hour	TPY		
Visible Emissions	gas	10% Opacity				1010373-001-AC	A.17.
	oil						
Particulate Matter	gas		10		61.5	1010373-001-AC	A.16.
	oil		17				
Carbon Monoxide	gas	12 ppmvd 20 ppmvd	42.5		259.5	1010373-001-AC	A.13.
	oil		71.4				
Sulfur Dioxide	gas		5		165.9	1010373-001-AC	A.15.
	oil		98.7				
Nitrogen Oxides	gas	9 ppmvd 42 ppmvd	64.1		756	1010373-001-AC	A.12.
	oil		351				
VOCs	gas	1.4 ppmvd 7 ppmw	2.8			1010373-001-AC	A.14.
	oil		16.2				

Notes:

*The "Equivalent Emissions" listed are for informational purposes only.

Table 2-1. Summary of Compliance Requirements.

Pollutant	Fuels	Compliance Method	Testing Time Frequency	CMS*	See permit condition(s)
Particulate Matter	gas oil	VE emissions shall serve as a surrogate			A.17.
Carbon Monoxide	gas oil	EPA Method 10	Annual		A.22.
Sulfur Dioxide	gas oil	Fuel sampling and analysis	Daily		A.24.
Nitrogen Oxides	gas oil	CMS*	Continuous	Yes	A.23.
VOCs	gas oil	EPA Method 18, 25, or 25A	Initial test only.		A.14., A.26.

Notes:

*CMS [=] continuous monitoring system

MEMORANDUM

TO: Michael G. Cooke
FROM: Trina L. Vielhauer *TV*
DATE: ~~December 17, 2003~~
SUBJECT: FINAL Title V Air Operation Permit
No. 1010373-004-AV
Mirant Corporation
Shady Hills Generating Station

This is a Title V Air Operation Permit Revision for the subject facility.

This facility consists of three, dual-fuel, nominal 170 megawatt (MW) General Electric model PG7241FA combustion turbine-electrical generators, three 75-foot exhaust stacks, and one 2.8-million gallon fuel oil storage tank. The combustion turbine units can operate in simple-cycle mode and intermittent duty mode. The units are equipped with Dry Low NO_x (DLN-2.6) combustors and wet injection capability.

The only comment received on the DRAFT Permit was from the permittee, and it was resolved. *No comments* were received from U.S. EPA, Region 4, regarding the PROPOSED Permit.

I recommend your signature.

Attachment

TLV/tbc

ATTACHMENT SH-EU1-IV3
ALTERNATIVE METHODS OF OPERATION

ATTACHMENT SH-EU1-IV3**ALTERNATIVE METHODS OF OPERATION**

The simple-cycle combustion turbines (CTs) are fired primarily with low sulfur (maximum of 0.05 weight percent sulfur) No. 2 fuel oil or superior grade of distillate fuel oil and natural gas. The three stationary CTs at the Shady Hills Generating Station (EUs 001, 002, and 003) operate no more than an average of 3,390 hours per unit during any calendar year. The CTs operate no more than an average of 1,000 hours per unit on fuel oil during any calendar year. No single CT is permitted to operate more than 5,000 hours in a single year. The operation of the CTs at baseload is described below:

Fuel Oil Operation

The maximum heat input rate, based on the LHV of No. 2 fuel oil at ambient conditions of 59°F temperature, 60 percent relative humidity, 100 percent load, and 14.7 psi pressure, is limited to 1,806 MMBtu/hr when firing No. 2 or superior grade of distillate fuel oil.

The amount of fuel oil burned (in BTUs) at the Shady Hills Generating Station is limited, not to exceed the amount of natural gas burned at the station during any consecutive 12-month period.

Natural Gas Operation

The maximum heat input rate, based on the LHV of No. 2 fuel oil at ambient conditions of 59°F temperature, 60 percent relative humidity, 100 percent load, and 14.7 psi pressure, is limited to 1,612 MMBtu/hr when firing natural gas.

Acid Rain Part Application

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

This submission is: New Revised

STEP 1

Identify the source by plant name, State, and ORIS code

Plant Name Shady Hills Generating Station	State Florida	ORIS Code 55414
--	----------------------	------------------------

STEP 2

Enter the unit ID# for every Acid Rain unit at the Acid Rain source in column "a." For new units, enter the requested information in columns "c" and "d."

a Unit ID#	b Unit will hold allowances in accordance with 40 CFR 72.9(c)(1)	c New Units Commence Operation Date	d New Units Monitor Certification Deadline
001	Yes		
002	Yes		
003	Yes		
004	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		

Shady Hills Generating Station

Plant Name (from Step 1)

STEP 3
Read the standard requirements

Acid Rain Part Requirements

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

Monitoring Requirements

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

Sulfur Dioxide Requirements

- (1) The owners and operators of each source and each Acid Rain unit at the source shall:
 - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)), or in the compliance subaccount of another Acid Rain unit at the same source to the extent provided in 40 CFR 73.35(b)(3), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
 - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
 - (i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
 - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain part application, the Acid Rain part, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

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

Excess Emissions Requirements

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

Recordkeeping and Reporting Requirements

- (1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the EPA or the Department:
 - (i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
 - (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply;
 - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

Shady Hills Generating Station

Plant Name (from Step 1)

STEP 3,
Cont'd.

Recordkeeping and Reporting Requirements (cont)

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

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

Liability.

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
- (6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 75, 76, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities.

No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

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

STEP 4

Certification

Read the certification statement, sign, and date

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

Name	
Signature	Date

Acid Rain Program

Instructions for

Acid Rain Part Application

(40 CFR 72.30 - 72.31 and Rule 62-214.320, F.A.C.)

The Acid Rain Program requires the designated representative to submit an Acid Rain part application for each source with an Acid Rain unit. A complete Certificate of Representation must be received by EPA before the part application is submitted to the title V permitting authority. A complete Acid Rain part application, once submitted, is binding on the owners and operators of the Acid Rain source and is enforceable in the absence of an Acid Rain part until the title V permitting authority either issues an Acid Rain part to the source or disapproves the application.

Please type or print. The alternate designated representative may sign in lieu of the designated representative. If assistance is needed, contact the title V permitting authority.

STEP 1 Use the plant name and ORIS Code listed on the Certificate of Representation for the plant. An ORIS code is a 4 digit number assigned by the Energy Information Agency (EIA) at the U.S. Department of Energy to power plants owned by utilities. If the plant is not owned by a utility but has a 5 digit facility code (also assigned by EIA), use the facility code. If no code has been assigned or if there is uncertainty regarding what the code number is, contact EIA at (202) 287-1730 (for ORIS codes), or (202) 287-1927 (for facility codes).

STEP 2 For column "a," identify each Acid Rain unit at the Acid Rain source by providing the appropriate unit identification numbers, consistent with the unit identification numbers entered on the Certificate of Representation and with unit identification numbers used in reporting to DOE and/or EIA. For new units without identification numbers, owners and operators may assign such numbers consistent with EIA and DOE requirements.

For columns "c" and "d," enter the commence operation date(s) and monitor certification deadline(s) for new units in accordance with 40 CFR 72.2 and 75.4, respectively.

Submission Deadlines

For new units, an initial Acid Rain part application must be submitted to the title V permitting authority 24 months before the date the unit commences operation. Acid rain part renewal applications must be submitted at least 6 months in advance of the expiration of the acid rain portion of a title V permit, or such longer time as provided for under the title V permitting authority's operating permits regulation.

Submission Instructions

Submit this form to the appropriate title V permitting authority. If you have questions regarding this form, contact your local, State, or EPA Regional acid rain contact, or call EPA's Acid Rain Hotline at (202) 564-9620.

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

A 170 MW simple-cycle combustion turbine

3. Emissions Unit Identification Number: **002**

4. Emissions Unit Status Code:
A

5. Commence Construction Date:

6. Initial Startup Date:
12/20/01

7. Emissions Unit Major Group SIC Code:
49

8. Acid Rain Unit?
 Yes
 No

9. Package Unit:

Manufacturer: **GE**

Model Number: **7FA**

10. Generator Nameplate Rating: **170 MW**

11. Emissions Unit Comment:

Emission unit is a GE Frame 7FA simple-cycle combustion turbine.

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
Water injection for NO_x control (distillate oil firing).
Dry Low NO_x burner for NO_x control (natural gas burning).

2. Control Device or Method Code(s): 028, 205

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: 1,806 million Btu/hr		
4. Maximum Incineration Rate:	pounds/hr	
	tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	5,000 hours/year
6. Operating Capacity/Schedule Comment:		
Maximum heat input rates: Natural gas firing - 1,612 MMBtu/hr Distillate fuel oil firing - 1,806 MMBtu/hr		
Maximum heat input rates are based on lower heating value of each fuel at ambient conditions of 59°F, 60 percent RH, 100 percent load, and 14.7 psi pressure.		
Fuel oil firing limited to an average of 1,000 hr/CT/yr. Annual operation limited to an average of 3,390 hr/CT/year. No single CT is permitted to operate more than 5,000 hr/yr.		

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: CT1		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 75 feet	7. Exit Diameter: 18 feet	
8. Exit Temperature: 1,113 °F	9. Actual Volumetric Flow Rate: 2,645,000 acfm	10. Water Vapor: 8.6 %	
11. Maximum Dry Standard Flow Rate: 800,000 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 347.0 North (km): 3,139.0		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) 28/22/00 Longitude (DD/MM/SS) 82/30/00	
15. Emission Point Comment: Exit temperature and flow rates from previous Title V permit application dated March 2002.			

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Natural-Gas Firing		
2. Source Classification Code (SCC): 2-01-002-01		3. SCC Units: Million cubic feet natural gas burned
4. Maximum Hourly Rate: 1.70	5. Maximum Annual Rate: 5,752.3	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 950
10. Segment Comment: Based on natural gas lower heating value (LHV) of 950 Btu/ft ³ . Maximum hourly rate = 1,612 MMBtu/hr /950 MMBtu/MM ft ³ = 1.697 MM ft ³ /hr. Maximum annual rate = 1.697 MM ft ³ /hr x 3,390 hr/yr = 5,752.3 MM ft ³ /yr.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Distillate Oil Firing		
2. Source Classification Code (SCC): 2-01-001-01		3. SCC Units: 1,000 Gallons burned
4. Maximum Hourly Rate: 13.7	5. Maximum Annual Rate: 13,700	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.05	8. Maximum % Ash:	9. Million Btu per SCC Unit: 132
10. Segment Comment: Based on distillate oil lower heating value (LHV) of 132 MMBtu/1,000 gal. Maximum hourly rate = 1,806 MMBtu/hr /132 MMBtu/1,000 gallon = 13,682 gal/hr. Maximum annual rate = 13,682 gal/hr x 1,000 hr/yr = 13,682,000 gal/yr.		

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [1] of [6]
Total Particulate Matter - PM

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 17.0 lb/hour 20.5 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 17.0 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (17.0 lb/hr x 1,000 hr/yr + 10 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 20.5 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [1] of [6]
Total Particulate Matter - PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10.0 lb/hr	4. Equivalent Allowable Emissions: 10.0 lb/hour 16.95 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 17.0 lb/hr	4. Equivalent Allowable Emissions: 17.0 lb/hour 8.5 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [2] of [6]
Particulate Matter – PM₁₀

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM₁₀		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 17.0 lb/hour 20.5 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 17.0 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (17.0-lb/hr x 1,000 hr/yr + 10 lb/hr x 2,390 hrs/yr) x ton/2,000 lb = 20.5 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [2] of [6]
Particulate Matter – PM₁₀

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10.0 lb/hr	4. Equivalent Allowable Emissions: 10.0 lb/hour 16.95 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 17.0 lb/hr	4. Equivalent Allowable Emissions: 17.0 lb/hour 8.5 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [3] of [6]
Carbon Monoxide - CO

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 71.4 lb/hour 86.5 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 71.4 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (71.4 lb/hr x 1,000 hr/yr + 42.5 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 86.5 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [3] of [6]
Carbon Monoxide - CO

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 12 ppmvd	4. Equivalent Allowable Emissions: 42.5 lb/hour 72.04 tons/year
5. Method of Compliance: Annual testing using using EPA Method 10.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 20 ppmvd	4. Equivalent Allowable Emissions: 71.4 lb/hour 35.7 tons/year
5. Method of Compliance: Annual testing using using EPA Method 10.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [4] of [6]
Volatile Organic Compounds - VOC

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 16.2 lb/hour 11.45 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 16.2 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (16.2 lb/hr x 1,000 hr/yr + 2.8 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 11.45 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [4] of [6]
Volatile Organic Compounds - VOC

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1.4 ppmvd	4. Equivalent Allowable Emissions: 2.8 lb/hour 4.75 tons/year
5. Method of Compliance: CO emissions limit.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 7 ppmvw	4. Equivalent Allowable Emissions: 16.2 lb/hour 8.1 tons/year
5. Method of Compliance: CO emissions limit.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

Page [5] of [6]
Sulfur Dioxide – SO₂

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 98.7 lb/hour 55.3 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 98.7 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (98.7 lb/hr x 1,000 hr/yr + 5 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 55.3 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [5] of [6]
Sulfur Dioxide – SO₂

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 5 lb/hr	4. Equivalent Allowable Emissions: 5 lb/hour 8.5 tons/year
5. Method of Compliance: Use of pipeline natural gas (sulfur content < 1 grain/100 ft³).	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 98.7 lb/hr	4. Equivalent Allowable Emissions: 98.7 lb/hour 49.4 tons/year
5. Method of Compliance: Use of distillate oil with a maximum of 0.05 percent sulfur. Fuel sampling.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [6] of [6]
Nitrogen Dioxide – NO₂

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO_x		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 351.0 lb/hour 252.1 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 42 ppmvd at 15 percent O₂ Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (351.0 lb/hr x 1,000 hr/yr + 64.1 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 252.1 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing and ISO conditions.			

EMISSIONS UNIT INFORMATION

Section [2]
Simple-Cycle Combustion Turbine No. 2

POLLUTANT DETAIL INFORMATION

Page [6] of [6]
Nitrogen Dioxide – NO₂

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 9 ppmvd at 15 percent O₂.	4. Equivalent Allowable Emissions: 64.1 lb/hour 108.6 tons/year
5. Method of Compliance: CEM Data (24-hour block average)	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 42 ppmvd at 15 percent O₂.	4. Equivalent Allowable Emissions: 351.0 lb/hour 175.5 tons/year
5. Method of Compliance: CEM Data (3-hour average)	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Permit No. 1010373-004-AV.	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: EM	2. Pollutant(s): NO_x
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Horiba Model Number: ENSA-E4220LS Serial Number: 11527	
5. Installation Date: 01 Nov, 2001	6. Performance Specification Test Date: 8 May, 2006
7. Continuous Monitor Comment: Continuous monitoring of NO_x emissions. 40 CFR Part 75.	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: <u>SH-EU1-11</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: <u>SH-EU1-12</u> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: <u>SH-EU1-13</u> <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>SH-EU1-14</u> <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>SH-EU1-15</u> <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: <u>May 8, 2006</u> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(4)(d), F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input checked="" type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input checked="" type="checkbox"/> Copy Attached, Document ID: SH-EU1-IV5a <input checked="" type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-IV5b <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]

Simple-Cycle Combustion Turbine No. 2

Additional Requirements Comment

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

A 170 MW simple-cycle combustion turbine

3. Emissions Unit Identification Number: **003**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 12/20/01	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	--------------------------------	---	--	--

9. Package Unit:

Manufacturer: **GE**

Model Number: **7FA**

10. Generator Nameplate Rating: **170 MW**

11. Emissions Unit Comment:

Emission unit is a GE Frame 7FA simple-cycle combustion turbine.

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
Water injection for NO_x control (distillate oil firing).
Dry Low NO_x burner for NO_x control (natural gas burning).

2. Control Device or Method Code(s): **028, 205**

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: 1,806 million Btu/hr		
4. Maximum Incineration Rate: pounds/hr tons/day		
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	5,000 hours/year
6. Operating Capacity/Schedule Comment:		
Maximum heat input rates: Natural gas firing - 1,612 MMBtu/hr Distillate fuel oil firing - 1,806 MMBtu/hr		
Maximum heat input rates are based on lower heating value of each fuel at ambient conditions of 59 degree F, 60 percent RH, 100 percent load, and 14.7 psi pressure.		
Fuel oil firing limited to an average of 1,000 hr/CT/yr. Annual operation limited to an average of 3,390 hr/CT/yr. No single CT is permitted to operate more than 5,000 hr/yr.		

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: CT1		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 75 feet	7. Exit Diameter: 18 feet	
8. Exit Temperature: 1,113 °F	9. Actual Volumetric Flow Rate: 2,645,000 acfm	10. Water Vapor: 8.6 %	
11. Maximum Dry Standard Flow Rate: 800,000 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 347.0 North (km): 3,139.0		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) 28/22/00 Longitude (DD/MM/SS) 82/30/00	
15. Emission Point Comment: Exit temperature and flow rates from previous Title V permit application dated March 2002.			

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Natural-Gas Firing		
2. Source Classification Code (SCC): 2-01-002-01		3. SCC Units: Million cubic feet natural gas burned
4. Maximum Hourly Rate: 1.70	5. Maximum Annual Rate: 5,752.3	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 950
10. Segment Comment: Based on natural gas lower heating value (LHV) of 950 Btu/ft ³ . Maximum hourly rate = 1,612 MMBtu/hr /950 MMBtu/MM ft ³ = 1.697 MM ft ³ /hr Maximum annual rate = 1.697 MM ft ³ /hr x 3,390 hr/yr = 5,752.3 MM ft ³ /yr.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Distillate Oil Firing		
2. Source Classification Code (SCC): 2-01-001-01		3. SCC Units: 1,000 Gallons burned
4. Maximum Hourly Rate: 13.7	5. Maximum Annual Rate: 13,700	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.05	8. Maximum % Ash:	9. Million Btu per SCC Unit: 132
10. Segment Comment: Based on distillate oil LHV of 132 MMBtu/1,000 gal Maximum hourly rate = 1,806 MMBtu/hr /132 MMBtu/1,000 gal = 13,682 gal/hr Maximum annual rate = 13,682 gal/hr x 1,000 hr/yr = 13,682,000 gal/yr		

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			EL
PM ₁₀			EL
CO			EL
VOC			EL
SO ₂			EL
NO _x	028, 205		EL

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [1] of [6]
Total Particulate Matter - PM

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 17.0 lb/hour 55.3tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 17.0 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (17.0 lb/hr x 1,000 hr/yr + 10 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 20.5 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [1] of [6]
Total Particulate Matter - PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10.0 lb/hr	4. Equivalent Allowable Emissions: 10.0 lb/hour 16.95 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 17.0 lb/hr	4. Equivalent Allowable Emissions: 17.0 lb/hour 8.5 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [2] of [6]
Particulate Matter - PM₁₀

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM₁₀		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 17.0 lb/hour 20.5 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 17.0 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (17.0 lb/hr x 1,000 hr/yr + 10 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 20.5 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

Page [2] of [6]
Particulate Matter - PM₁₀

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10.0 lb/hr	4. Equivalent Allowable Emissions: 10.0 lb/hour 16.95 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 17.0 lb/hr	4. Equivalent Allowable Emissions: 17.0 lb/hour 8.5 tons/year
5. Method of Compliance: VE Test using EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [3] of [6]
Carbon Monoxide - CO

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 71.4 lb/hour 86.5 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 71.4 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (71.4 lb/hr x 1,000 hr/yr + 42.5 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 86.5 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [3] of [6]
Carbon Monoxide - CO

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 12 ppmvd	4. Equivalent Allowable Emissions: 42.5 lb/hour 72.04 tons/year
5. Method of Compliance: Annual testing using using EPA Method 10.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 20 ppmvd	4. Equivalent Allowable Emissions: 71.4 lb/hour 35.7 tons/year
5. Method of Compliance: Annual testing using using EPA Method 10.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [4] of [6]
Volatile Organic Compounds - VOC

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 16.2 lb/hour 11.45 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 16.2 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (16.2 lb/hr x 1,000 hr/yr + 2.8 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 11.45 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [4] of [6]
Volatile Organic Compounds - VOC

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1.4 ppmvd	4. Equivalent Allowable Emissions: 2.8 lb/hour 4.75 tons/year
5. Method of Compliance: CO emissions limit.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 7 ppmvw	4. Equivalent Allowable Emissions: 16.2 lb/hour 8.1 tons/year
5. Method of Compliance: CO emissions limit.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [5] of [6]
Sulfur Dioxide – SO₂

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 98.7 lb/hour 55.3 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 98.7 lb/hr Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (98.7 lb/hr x 1,000 hr/yr + 5 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 55.3 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing.			

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [5] of [6]
Sulfur Dioxide – SO₂

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 5 lb/hr	4. Equivalent Allowable Emissions: 5 lb/hour 8.5 tons/year
5. Method of Compliance: Use of pipeline natural gas (sulfur content < 1 grain/100 ft³).	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 98.7 lb/hr	4. Equivalent Allowable Emissions: 98.7 lb/hour 49.4 tons/year
5. Method of Compliance: Use of distillate oil with a maximum of 0.05 percent sulfur. Fuel sampling.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [6] of [6]
Nitrogen Oxide - NO_x

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO_x		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 351.0 lb/hour 252.1 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 42 ppmvd at 15 percent O₂ Reference: Permit No. 1010373-004-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 hr/yr of natural gas firing. Annual emissions = (351.0 lb/hr x 1,000 hr/yr + 64.1 lb/hr x 2,390 hr/yr) x ton/2,000 lb = 252.1 TPY			
11. Potential Fugitive and Actual Emissions Comment: Hourly emissions based on distillate oil firing and ISO conditions.			

EMISSIONS UNIT INFORMATION

Section [3]
Simple-Cycle Combustion Turbine No. 3

POLLUTANT DETAIL INFORMATION

Page [6] of [6]
Nitrogen Oxide – NO_x

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 9 ppmvd at 15 percent O₂.	4. Equivalent Allowable Emissions: 64.1 lb/hour 108.6 tons/year
5. Method of Compliance: CEM Data (24-hour block average)	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 42 ppmvd at 15 percent O₂.	4. Equivalent Allowable Emissions: 351.0 lb/hour 175.5 tons/year
5. Method of Compliance: CEM Data (3-hour average)	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on distillate oil firing and ISO conditions. Permit No. 1010373-004-AV.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Permit No. 1010373-004-AV.	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: EM	2. Pollutant(s): NO_x
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Horiba Model Number: ENSA-E4220LS Serial Number: 11527	
5. Installation Date: 01 Nov, 2001	6. Performance Specification Test Date: 8 May, 2006
7. Continuous Monitor Comment: Continuous monitoring of NO_x emissions. 40 CFR Part 75.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: <u>SH-EU1-11</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: <u>SH-EU1-12</u> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: <u>SH-EU1-13</u> <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>SH-EU1-14</u> <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>SH-EU1-15</u> <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: <u>May 8, 2006</u> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(4)(d), F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input checked="" type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input checked="" type="checkbox"/> Copy Attached, Document ID: SH-EU1-IV5a <input checked="" type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input checked="" type="checkbox"/> Attached, Document ID: SH-EU1-IV5b <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [3]

Simple-Cycle Combustion Turbine No. 3

Additional Requirements Comment

[Empty rectangular box for additional requirements comment]