ORIGINAL

TITLE V AIR OPERATING PERMIT RENEWAL APPLICATION

Shady Hills Power Company, LLC

Shady Hills Generating Station

Project No: 1010373-013-AV (AB055)
1010373-014 AC (AB085)

REPORT

Submitted To: Shady Hills Power Company, LLC
800 Long Ridge Road
Stamford, CT 06927

Submitted By: Golder Associates Inc.
5100 W. Lemon Street, Suite 208
Tampa, FL 33609 USA

Distribution: 4 Copies – Florida Department of Environmental Protection
2 Copies – Shady Hills Power Company, LLC
1 Copy – Golder Associates Inc.

May 2012

Project No. 123-89530

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May 17, 2012

123-89530

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DIVISION OF AIR RESOURCE MANAGEMENT

Mr. Jon Holtom, P.E.
Power Plant Permitting Group Administrator
Office of Permitting and Compliance
Division of Air Resource Management
Florida Department of Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: APPLICATION FOR TITLE V PERMIT RENEWAL
SHADY HILLS GENERATING STATION
FACILITY ID NO. 1010373

Dear Mr. Holtom:

Enclosed please find one original and three copies of the application for the concurrent processing of the Title V Renewal (Permit No. 010373-010-AV) and an air construction permit to incorporate minor revisions for Shady Hills Power Company, LLC's (Shady Hills) Generating Station located in Pasco County, Florida.

Shady Hills is requesting the following revisions:

- The addition of design heat input ratings for the three simple-cycle units (i.e., emission units (EUs) 1, 2 and 3);
- The removal of maximum heat input ratings for the three units;
- The addition of data exclusion procedures for State Implementation Plan (SIP) compliance, and;
- The inclusion of continuous emissions monitoring system (CEMS) data requirements for best available control technology (BACT) Standards for nitrogen oxides (NO_X) emissions.

In addition, Shady Hills requests that the 10 MMBtu/hr indirect-fired fuel gas heater be changed from an insignificant emission unit to a regulated emission unit similar to emission unit 008 of Air Construction Permit No. 1010373-012-AC (PSD-FL-402A). These changes were requested to ensure consistency with the provisions of the air construction permit for the Shady Hills Generating Station expansion (Permit No. 0101073-012-AC) and to clarify permitting conditions related to Data Exclusion Procedures for SIP Compliance and CEMS Data Requirements for BACT Standards.

Shady Hills looks forward to working with you on this permitting effort. If you would like to discuss any issues regarding this application, please contact Roy Belden by telephone at (203) 357 6820 or Scott Osbourn, P.E. of Golder Associates at (813) 287-1717 in Tampa.

Golder Associates Inc.
5100 W. Lemon Street, Suite 208
Tampa, FL 33609 USA
Tel: (813) 287-1717 Fax: (813) 287-1716 www.golder.com

Sincerely,

GOLDER ASSOCIATES INC.

Scott Osbourn, PE
Associate and Tampa Operations Manager

Attachments
Cc: Roy Belden, GE Energy Financial Services
Rick Waggoner, Compliance Opportunities Group

Table of Contents

PROJECT DESCRIPTION

Shady Hills Power Company, LLC (Shady Hills) operates the existing Shady Hills Generating Station located in Pasco County at 14240 Merchant Energy Way, Spring Hill, Florida, under permit Nos. 1010373-010-AV and 1010373-08-AV. The facility consists of an electrical generating power plant (Facility ID No. 1010373) with the following operations:

- Three, dual-fuel, nominal 170 megawatt (MW) General Electric (GE) Frame 7FA combustion turbine-electrical generators; and
- One 2.8-million gallon distillate fuel oil storage tank.

Simple-cycle Units 1, 2, and 3 are identical systems. The initial startup date for the simple-cycle units was December 20, 2001. Each unit consists of a GE Frame 7FA, Model PG7241 7FA. Each unit is fired with pipeline natural gas or No.2 fuel oil or superior grade of distillate fuel oil and uses dry low emission combustor technology. Each unit has its own stack that is 18 feet in diameter and 75 feet tall. Each unit can operate in simple-cycle mode and intermittent duty mode. Each unit is equipped with Dry Low-nitrogen oxides (NOx) combustors and water injection capability to minimize NOx emissions. Compliance is demonstrated by using NOx continuous emissions monitoring system (CEMS).

This facility operates peak hours of electrical use. The stationary gas turbines are allowed to operate an average of 3,390 hours per unit, including an average of 1,000 hours per unit on fuel oil during any calendar year. No single combustion turbine may operate more than 5,000 hours in a single year.

The primary regulatory requirements of the existing facility are as follows:

- Title III: The facility is not identified as a potential major source of hazardous air pollutants (HAPs).
- Title IV: The facility operates units subject to the acid rain provisions of the Clean Air Act.
- Title V: The facility is a Title V major source of air pollution in accordance with Chapter 213, Florida Administrative Code (F.A.C.).
- PSD: The facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400 F.A.C.
- NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal regulations (CFR) 60.
- CAIR: The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

This application is for the concurrent processing of the Title V Renewal (Permit No. 010373-010-AV) and an air construction permit to incorporate minor revisions as detailed in application Attachment SH-FI-CV6. These revisions include the addition of design heat input ratings for the three simple-cycle units (i.e., emission units (EUs) 1, 2 and 3), the removal of maximum heat input ratings for these units, the addition of data exclusion procedures for State Implementation Plan (SIP) compliance and the inclusion of CEMS data requirements for best available control technology (BACT) Standards for NO_X emissions. In addition, Shady Hills requests that the 10 MMBtu/hr indirect-fired fuel gas heater be changed from an insignificant emission unit to a regulated emission unit similar to emission unit 008 of Air Construction Permit No. 1010373-012-AC (PSD-FL-402A). These changes were requested to ensure consistency with the provisions of the air construction permit for the Shady Hills Generating Station expansion (Permit No.

0101073-012-AC) and to clarify permitting conditions related to Data Exclusion Procedures for SIP Compliance and CEMS Data Requirements for BACT Standards.

The Title V renewal application is due by May 20, 2012. Completed application forms (DEP Form No. 62-210.900(1)) and associated attachments are provided in Attachment A.

ATTACHMENT A

APPLICATION FOR AIR PERMIT - LONG FORM

DEP Form No. 62-210.900(1)

Department of Environmental Protection

Division of Air Resource Management

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MAY 18 2012
DIVISION OF AIR RESOURCE MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- 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, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **Shady Hills Power Company, 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: **36410**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Roy S. Belden**
2. Application Contact Mailing Address... Organization/Firm: **Shady Hills Power Company, LLC** Street Address: **800 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 E-mail Address: **roy.belden@ge.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 5-18-12	3. PSD Number (if applicable):
2. Project Number(s): 1010373-013-AV	Siting Number (if applicable):

1010373-014-AC

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being 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 concurrent processing of the Title V Renewal (Permit No. 010373-010-AV) and an air construction permit to incorporate minor revisions as detailed in application Attachment SH-FI-CV6. In addition, Shady Hills request that the 10 MMBtu/hr indirect-fired fuel gas heater be changed from an insignificant emission unit to a regulated emission unit similar to emission unit 008 of Air Construction Permit No. 1010373-012-AC (PSD-FL-402A).

The facility consists of three, dual-fuel, nominal 170-megawatt (MW) General Electric Frame 7FA combustion turbine (CT) electrical generators (model PG 7241FA), three exhaust stacks that are 18 feet in diameter and 75 feet tall, 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-nitrogen oxides or Dry Low-NOx combustors and water injection capability.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
001, 002, 003	Three 170-MW Simple-Cycle Combustion Turbines		
004	Fuel Oil Storage Tank		
TBD	Existing Natural Gas Heater (10 MMBtu/hr)		

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

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

1. Owner/Authorized Representative Name :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Owner/Authorized Representative E-mail Address:
5. Owner/Authorized Representative Statement: *I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.* _____ _____ Signature Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation 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):

- [x] 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.
- [ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
- [ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
- [x] The designated representative at an Acid Rain source or CAIR source.

3. Application Responsible Official Mailing Address...
Organization/Firm: **Shady Hills Power Company, LLC**
Street Address: **800 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 E-mail Address:

6. Application Responsible Official Certification:

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.

Roy S. Belden
Signature

5/10/12
Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Scott H. Osbourn**
   Registration Number: **57557**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **5100 W. Lemon Street, Suite 208**
   City: **Tampa** State: **FL** Zip Code: **33609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(813) 287-1717** ext. Fax: **(813) 287-1716**
4. Professional Engineer E-mail Address: **sosbourn@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) 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

(2) 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.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, 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.

(4) If the purpose of this application is to obtain an air construction permit (check here ☐, 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 [X], 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.

(5) 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 , 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.

Signature Date 5/16/12

(seal)

* Attach any exception to certification statement.
****Board of Professional Engineers Certificate of Authorization #0000167.**

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 :			

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: **800 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 E-mail Address:

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:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official E-mail Address:

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. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. [x] Title V Source	
4. [x] Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☐ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. [x] One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☐ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	

12. Facility Regulatory Classifications Comment:

Emission units 001, 002, and 003 are subject to NSPS Subpart KKKK – Standards of Performance for Stationary Combustion Turbines.

Shady Hills Generating Station is a minor source of HAP emissions and as such will not be subject to the MACT standard in 40 CFR, Subpart YYYY - National Emission Standards for Stationary Combustion Turbines.

The 10 MMBtu/hr existing Gas Heater is subject to all applicable requirements of 40 CFR 60, Subpart Dc which applies to Small Industrial, Commercial or Institutional Boilers and Subpart A, General Provisions.

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	A	N
PM10	A	N
CO	A	N
VOC	A	N
SO2	A	N
NOx	A	N

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'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:

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)
   [x] Attached, Document ID: **SH-FI-C1** [ ] 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)
   [x] Attached, Document ID: **SH-EU1-I1** [ ] 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)
   [x] Attached, Document ID: **SH-FI-C3** [ ] Previously Submitted, Date:_____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   [ ] Attached, Document ID:_____ [x] Not Applicable (existing permitted facility)

2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL):
   [ ] Attached, Document ID: **N/A**

3. Rule Applicability Analysis:
   [x] Attached, Document ID: **SH-FI-CV2, SH-EU1-TV1**

4. List of Exempt Emissions Units:
   [ ] Attached, Document ID:_____ [x] Not Applicable (no exempt units at facility)

5. Fugitive Emissions Identification:
   [ ] Attached, Document ID:_____ [x] Not Applicable

6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable

7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable

8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable

9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable

10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    [ ] Attached, Document ID:_____ [x] Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications – N/A

1. List of Exempt Emissions Units:
   ☐ 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)
   [x] 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)
   [x] 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)
   [x] 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 Onsite but Not Required to be Individually Listed
   [x] Not Applicable

5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ [x] Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   [x] Attached, Document ID: **SH-FI-CV6** ☐ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms:

   Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):

   [X] Attached, Document ID: **SH-FI-AR** [ ] Previously Submitted, Date:_____

   [ ] Not Applicable (not an Acid Rain source)

   Phase II NO_X Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):

   [ ] Attached, Document ID:_____ [ ] Previously Submitted, Date:_____

   [ ] Not Applicable

   New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):

   [ ] Attached, Document ID:_____ [ ] Previously Submitted, Date:_____

   [ ] Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):

   [x] Attached, Document ID: **SH-FI-CAIR** [ ] Previously Submitted, Date:_____

   [ ] Not Applicable (not a CAIR source)

Additional Requirements Comment

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 an initial, revised or renewal 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. 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 an 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 or 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. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes 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.

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.)

[X] 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).

[X] 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:
Simple-cycle Units 1, 2, and 3 are identical systems. Each unit consists of a GE Frame 7FA combustion turbine (CT) electrical generator rated at a nominal 170 megawatts (MW).

3. Emissions Unit Identification Number: **001, 002, and 003**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**01/2001**	**03/15/2002 (EU 001)** **03/19/2002 (EUs 002 & 003)**	**4911**

8. Federal Program Applicability: (Check all that apply)

[X] Acid Rain Unit

[X] CAIR Unit

9. Package Unit:
Manufacturer: **GE PG7241FA** Model Number: **PG 7241FA**

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

11. Emissions Unit Comment:

Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **Dry Low-NOx combustors are used to control NOx emissions when firing natural gas. Water injection systems are used to control NOx emissions when firing distillate oil.**
2. Control Device or Method Code: **025, 028**

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

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: **1,889 Million Btu/hr per CT**	
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: **Maximum heat input rates: Natural gas firing – 1,704 MMBtu/hr** **Distillate fuel oil firing – 1,889 MMBtu/hr** **Maximum heat input rates are based on lower heating value (LHV) of each fuel to each unit at ISO conditions (i.e., 59 degrees F, 60 percent relative humidity, 14.7 psi pressure) and 100 percent load.** **Fuel oil firing limited to an average of 1,000 hr/CT/yr.** **Annual operation limited to an average of 3,390 hrs/CT/yr.** **No single CT is permitted to operate more than 5,000 hrs/yr.**	

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, CT2, and CT3**	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: 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: **Each unit has its own stack that is 18 feet in diameter and 75 feet tall.**		

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 of natural gas firing**	
4. Maximum Hourly Rate: **1.8**	5. Maximum Annual Rate: **6,081**	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 LHV of 950 Btu/Ft^3 and at ISO conditions. Maximum hourly rate = 1,704 MMBtu/hr / 950 Btu/Ft^3 = 1.79 MM Ft^3/hr per CT Maximum annual rate = 1.79 MM Ft^3/hr x 3,390 hr/yr = 6,080.58 MM Ft^3/yr per CT**		

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: **14.3**	5. Maximum Annual Rate: **14,310**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **132**
10. Segment Comment: **Based on distillate fuel oil LHV of 132 Btu/1,000 gallons and at ISO conditions. Maximum hourly rate = 1,889 MMBtu/hr / 132 Btu/1,000 gal = 14,310.6 gal/hr per CT Maximum annual rate = 14,310.6 gal/hr x 1,000 hr/yr = 14,310,606 gal/yr per CT**		

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/PM_{10}			EL
CO			EL
VOC			EL
SO_2			EL
NOx			EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **$PM/PM_{10}/PM_{2.5}$**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17.0** lb/hour **20.5** tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **17.0 lb/hr (distillate fuel oil)** **10.0 lb/hr (natural gas)** Reference: **Permit No. 1010373-010-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: [ ] 5 years [ ] 10 years

10. Calculation of Emissions:

Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 of natural gas firing per unit.

Annual emissions = (17.0 lb/hr x 1,000 hr/yr) + (10.0 lb/hr x 2,390 hr/yr) x 1 ton/2,000lbs
= 20.45 TPY per CT

11. Potential, Fugitive, and Actual Emissions Comment:

Hourly emission based on distillate fuel oil firing per unit. All PM emissions are assumed to be $PM_{2.5}$ or smaller, thus PM, PM_{10} and $PM_{2.5}$ emissions are equivalent.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 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: **Annual VE Test using EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on natural gas firing.** **Permit No. 1010373-010-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: **Annual VE Test using EPA Method 9.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on distillate fuel oil firing.** **Permit No. 1010373-010-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):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **71.4** lb/hour **86.5** tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **20 ppmvd (distillate fuel oil)** **12 ppmvd (natural gas)** Reference: **Permit No. 1010373-010-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: [ ] 5 years [ ] 10 years

10. Calculation of Emissions:

Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 of natural gas firing per unit.

Annual emissions = (71.4 lb/hr x 1,000 hr/yr) + (42.5 lb/hr x 2,390 hr/yr) x 1 ton/2,000lbs
= 86.49 TPY per CT

11. Potential, Fugitive, and Actual Emissions Comment:

Hourly emission based on distillate fuel oil firing per unit. Mass emissions based on ISO conditions.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 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 EPA Method 10.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-010-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 EPA Method 10.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on distillate fuel oil firing and ISO conditions. Permit No. 1010373-010-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):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **16.2** lb/hour **11.45** tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **7 ppmvw (distillate fuel oil) 1.4 ppmvd (natural gas)** Reference: **Permit No. 1010373-010-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: [ ] 5 years [ ] 10 years

10. Calculation of Emissions:

Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 of natural gas firing per unit.

Annual emissions = (16.2 lb/hr x 1,000 hr/yr) + (2.8 lb/hr x 2,390 hr/yr) x 1 ton/2,000 lbs
= 11.45 TPY per CT

11. Potential, Fugitive, and Actual Emissions Comment:

Hourly emission based on distillate fuel oil firing per unit. Mass emissions based on ISO conditions.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 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: **1.7 ppmvd**	4. Equivalent Allowable Emissions: **2.8** lb/hour **4.75** tons/year
5. Method of Compliance: **Initial stack test when firing fuel oil using EPA Method18, 25, and 25A. No annual test; 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. 1010373-010-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: **Initial stack test when firing fuel oil using EPA Method18, 25, and 25A. No annual test; CO emissions limit as a surrogate.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on distillate fuel oil firing and ISO conditions. Permit No. 1010373-010-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):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **98.7** lb/hour **55.3** tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.05 percent sulfur, by weight (fuel oil)** **<1 grain sulfur / 100 scf (natural gas)** Reference: **Permit No. 1010373-010-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: [ ] 5 years [ ] 10 years

10. Calculation of Emissions:

Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 of natural gas firing per unit.

Annual emissions = (98.7 lb/hr x 1,000 hr/yr) + (5.0 lb/hr x 2,390 hr/yr) x 1 ton/2,000 lbs
= 55.33 TPY per CT

11. Potential, Fugitive, and Actual Emissions Comment:

Hourly emission based on distillate fuel oil firing per unit. Mass emissions based on ISO conditions.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 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 grain S / 100 scf**	4. Equivalent Allowable Emissions: **5** lb/hour **8.5** tons/year
5. Method of Compliance: **Use of pipeline natural gas (sulfur content less than 1 gr / 100 scf).**	
6. Allowable Emissions Comment (Description of Operating Method): **Equivalent allowable emissions based on natural gas firing and ISO conditions.** **Permit No. 1010373-010-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 % S, by weight**	4. Equivalent Allowable Emissions: **98.7** lb/hour **49.4** tons/year
5. Method of Compliance: **Use of No.2 or superior grade distillate fuel oil with a maximum of 0.05% sulfur;**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on distillate fuel oil firing and ISO conditions.** **Permit No. 1010373-010-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):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **NOx**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **351.0** lb/hour **252.1** tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **42 ppmvd @ 15% O_2 (fuel oil)** **9 ppmvd @ 15% O_2 (natural gas)** Reference: **Permit No. 1010373-010-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: [ ] 5 years [ ] 10 years

10. Calculation of Emissions:

Annual emissions based on 1,000 hr/yr of distillate oil firing and 2,390 of natural gas firing per unit.

Annual emissions = (351.0 lb/hr x 1,000 hr/yr) + (64.1 lb/hr x 2,390 hr/yr) x 1 ton/2,000 lbs
= 252.1 TPY per CT

11. Potential, Fugitive, and Actual Emissions Comment:

Hourly emission based on distillate fuel oil firing per unit. Mass emissions based on ISO conditions.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 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 @ 15% O_2**	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): **Equivalent allowable emissions based on natural gas firing and ISO conditions. Permit No. 1010373-010-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 @ 15% O_2**	4. Equivalent Allowable Emissions: **351.0** lb/hour **175.5** tons/year
5. Method of Compliance: **CEM Data (3-hr average)**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on distillate fuel oil firing and ISO conditions. Permit No. 1010373-010-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):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G 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: ☐ Rule ☒ 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. 1010373-010-AV**	

Visible Emissions Limitation: Visible Emissions Limitation **2** of **2**

1. Visible Emissions Subtype: **VE99**	2. Basis for Allowable Opacity: ☒ Rule ☐ 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.**	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H 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): **NOx**
3. CMS Requirement:	[x] Rule [ ] Other
4. Monitor Information... Manufacturer: **Horiba** Model Number: **ENSA-E4220LS**	Serial Number: **11527**
5. Installation Date: **11/01/2001**	6. Performance Specification Test Date: **05/08/2006**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. 40 CFR Part 75.**	

Continuous Monitoring System: Continuous Monitor __ of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

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)
   [X] Attached, Document ID: **SH-EU1-I1** [ ] 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)
   [X] Attached, Document ID: **SH-EU1-I2** [ ] 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)
   [ ] Attached, Document ID: **N/A** [ ] 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)
   [X] Attached, Document ID: **SH-EU1-I4** [ ] Previously Submitted, Date _____
   [ ] 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)
   [X] Attached, Document ID: **SH-EU1-I5** [ ] Previously Submitted, Date _____
   [ ] Not Applicable

6. Compliance Demonstration Reports/Records:
   [X] Attached, Document ID: **SH-EU1-I6**
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] 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:
   [ ] Attached, Document ID: _____ [X] Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

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)): ☐ Attached, Document ID: _____ ☒ Not Applicable
2.	Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3.	Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1.	Identification of Applicable Requirements: ☒ Attached, Document ID: **SH-EU1-TV1**
2.	Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☒ Not Applicable
3.	Alternative Methods of Operation: ☒ Attached, Document ID: **SH-EU1-TV3** ☐ Not Applicable
4.	Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements Comment

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 an initial, revised or renewal 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. 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 an 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 or 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. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes 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] of [3]
Fuel Oil Storage Tank

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:
Fuel oil storage tank (unregulated emission unit)

3. Emissions Unit Identification Number: **004**

4. Emissions Unit Status Code:	5. Commence Construction Date: **After July 23, 1984**	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:

8. Federal Program Applicability: (Check all that apply)

☐ Acid Rain Unit

☐ CAIR Unit

9. Package Unit:
Manufacturer Model Number:

10. Generator Nameplate Rating:

11. Emissions Unit Comment:
The fuel oil storage tank has a capacity of 2.8 million gallons storing distillate fuel oil or superior grade with a true vapor pressure less than 3.5 Kilopascals (kPa).

NSPS Subpart Kb recordkeeping requirements are applicable; but no emission limiting or work practice standards.

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code: **025, 028**

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **2.8 million gallons**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment:	

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: **004**	2. Emission Point Type Code:	
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:	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: 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:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **2**

1. Segment Description (Process/Fuel Type): **Fuel Storage - Fixed Roof Tanks - Distillate Oil (No. 2): Breathing Loss**		
2. Source Classification Code (SCC): **3-90-900-03**	3. SCC Units: **1,000 gallons used**	
4. Maximum Hourly Rate: **0.417**	5. Maximum Annual Rate: **1250.2**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **136**
10. Segment Comment: **See Appendix A for emission estimates and EPA Tanks (c. 4.0.9d) output file.**		

Segment Description and Rate: Segment **1** of **2**

1. Segment Description (Process/Fuel Type): **Fuel Storage - Fixed Roof Tanks - Distillate Oil (No. 2): Working Loss**		
2. Source Classification Code (SCC): **3-90-900-04**	3. SCC Units: **1,000 gallons used**	
4. Maximum Hourly Rate: **41.3**	5. Maximum Annual Rate: **123,770.7**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **136**
10. Segment Comment: **See Appendix A for emission estimates and EPA Tanks (c. 4.0.9d) output file.**		

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
VOC			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour **1.67** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Emissions calculated based on EPA's TANKS version 4.0.9d**	7. Emissions Method Code:
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: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Appendix A for emission estimates and EPA Tanks (c. 4.0.9d) output file.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

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):	

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):	

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):	

G. VISIBLE EMISSIONS INFORMATION – N/A

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

Visible Emissions Limitation: Visible Emissions Limitation __ of __

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation __ of __

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION – N/A

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

Continuous Monitoring System: Continuous Monitor ____ of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

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)
[x] Attached, Document ID: **SH-FI-C1** [ ] Previously Submitted, Date _____

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)
[ ] Attached, Document ID: **N/A** [ ] 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)
[ ] Attached, Document ID: **N/A** [ ] 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)
[ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
[x] 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)
[ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
[x] Not Applicable

6. Compliance Demonstration Reports/Records:
[ ] Attached, Document ID: _____
Test Date(s)/Pollutant(s) Tested: _____
[ ] Previously Submitted, Date: _____
Test Date(s)/Pollutant(s) Tested: _____
[ ] To be Submitted, Date (if known): _____
Test Date(s)/Pollutant(s) Tested: _____
[x] 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:
[ ] Attached, Document ID: _____ [x] Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

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)): ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: **N/A**
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements Comment

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 an initial, revised or renewal 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. 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 an 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 or 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. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes 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.

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 have 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:

   Natural Gas Heater

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

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C			**49**

8. Federal Program Applicability: (Check all that apply)

   ☐ Acid Rain Unit

   ☐ CAIR Unit

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating:

11. Emissions Unit Comment:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

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: **10** million Btu/hr (HHV)	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	 **7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment:	

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:	2. Emission Point Type Code:	
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: **30 Feet**	7. Exit Diameter: feet
8. Exit Temperature: **500°F**	9. Actual Volumetric Flow Rate: **4,950 acfm**	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 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:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Natural gas**		
2. Source Classification Code (SCC): **1-01-006-04**	3. SCC Units: **Million cubic feet burned**	
4. Maximum Hourly Rate: **0.00948**	5. Maximum Annual Rate: **32.1**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1055 (HHV)**
10. Segment Comment: **Maximum hourly rate = 10 MMBtu/hr / 1055 MMBtu/MMscf = 0.00948 MMscf/hr** **Maximum annual rate = 0.00948 MMscf/hr x 8,760 hr/yr = 83.0 MMscf/yr**		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

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
$PM_{10}/PM_{2.5}$			NS
CO			NS
VOC			NS
SO_2			NS
NO_x			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.05** lb/hour **0.21** tons/year	4. Synthetically Limited? ☒Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.005 lb/MMBtu** Reference: **AP-42, Table 1.4-2**	7. Emissions Method Code: **3**
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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

5.5 lb/MMscf / 1055 MMBtu/MMscf = 0.005 lb/MMBtu

0.005 lb/MMBtu * 10 MMBtu/hr = 0.05 lb/hr

0.05 lb/hr *8,760 hr/yr / (2,000 lb/ton) = 0.21 TPY/unit

11. Potential, Fugitive, and Actual Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.005 lb/MMBtu**	4. Equivalent Allowable Emissions: **0.05** lb/hour **0.21** tons/year
5. Method of Compliance: **Natural gas combustion.**	
6. Allowable Emissions Comment (Description of Operating Method):	

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):	

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):	

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

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **NOx**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.95** lb/hour **4.15** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.095 lb/MMBtu** Reference: **AP-42, Table 1.4-1**	7. Emissions Method Code: **3**
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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

100 lb/MMscf / 1055 MMBtu/MMscf = 0.095 lb/MMBtu
0.095 lb/MMBtu * 10 MMBtu/hr = 0.95 lb/hr
0.95 lb/hr *8,760 hr/yr / (2,000 lb/ton) = 4.15 TPY/unit

11. Potential, Fugitive, and Actual Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.095 lb/MMBtu**	4. Equivalent Allowable Emissions: **0.95** lb/hour **4.15** tons/year
5. Method of Compliance: **Natural gas combustion.**	
6. Allowable Emissions Comment (Description of Operating Method):	

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):	

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):	

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

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.80** lb/hour **3.49** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.080 lb/MMBtu** Reference: **AP-42, Table 1.4-1**	7. Emissions Method Code: **3**
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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

84 lb/MMscf / 1055 MMBtu/MMscf = 0.080 lb/MMBtu
0.080 lb/MMBtu * 10 MMBtu/hr = 0.80 lb/hr
0.80 lb/hr *8,760 hr/yr / (2,000 lb/ton) = 3.49 TPY/unit

11. Potential, Fugitive, and Actual Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.080 lb/MMBtu**	4. Equivalent Allowable Emissions: **0.8** lb/hour **3.49** tons/year
5. Method of Compliance: **Natural gas combustion.**	
6. Allowable Emissions Comment (Description of Operating Method):	

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):	

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):	

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

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.054** lb/hour **0.24** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 gr/100 scf natural gas** Reference: **Typical maximum for natural gas.**	7. Emissions Method Code: **2**
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: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **2 gr/ 100scf x (2 lb SO_2/ lb S) / 7000 gr/lb x 9,479 scf/hr = 0.054 lb/hr** **0.054 lb/hr *8,760 hr/yr / (2,000 lb/ton) = 0.24 TPY/unit**	
11. Potential, Fugitive, and Actual Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 grains/ 100 scf**	4. Equivalent Allowable Emissions: **0.054** lb/hour **0.24** tons/year
5. Method of Compliance: **8,760 hours per year operation, low sulfur distillate.**	
6. Allowable Emissions Comment (Description of Operating Method):	

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):	

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):	

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

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **$PM_{10}/PM_{2.5}$**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.07** lb/hour **0.31** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **7.6 lb/MMscf** Reference: **AP-42, Table, 1.4-2**	7. Emissions Method Code: **3**
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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

7.6 lb/MMscf * 9,479 scf/hr-gas / 1,000,000 = 0.07 lb/hr
0.07 lb/hr *8,760 hr/yr / (2,000 lb/ton) = 0.31 TPY/unit

11. Potential, Fugitive, and Actual Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **7.6 lb/MMscf**	4. Equivalent Allowable Emissions: **0.07** lb/hour **0.31** tons/year
5. Method of Compliance: **Natural gas combustion.**	
6. Allowable Emissions Comment (Description of Operating Method):	

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):	

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):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G 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: ☐ Rule ☒Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation **2** of **2**

1. Visible Emissions Subtype: **VE 99**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100%** Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment: **FDEP Rule 62-201.700(1), allowed for 2 hours (120 minutes) per 24 hours for startup, shutdown and malfunctions.**	

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ 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] of [3]
Natural Gas Heater

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)
   [x] Attached, Document ID: **SH-FI-C1** [ ] Previously Submitted, Date _____

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)
[ ] Attached, Document ID: **SH-EU1-I1** [ ] 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)
   [ ] Attached, Document ID: **N/A** [ ] 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)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [x] 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)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [x] Not Applicable

6. Compliance Demonstration Reports/Records:
   [ ] Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [x] 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:
   [ ] Attached, Document ID: _____ [x] Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

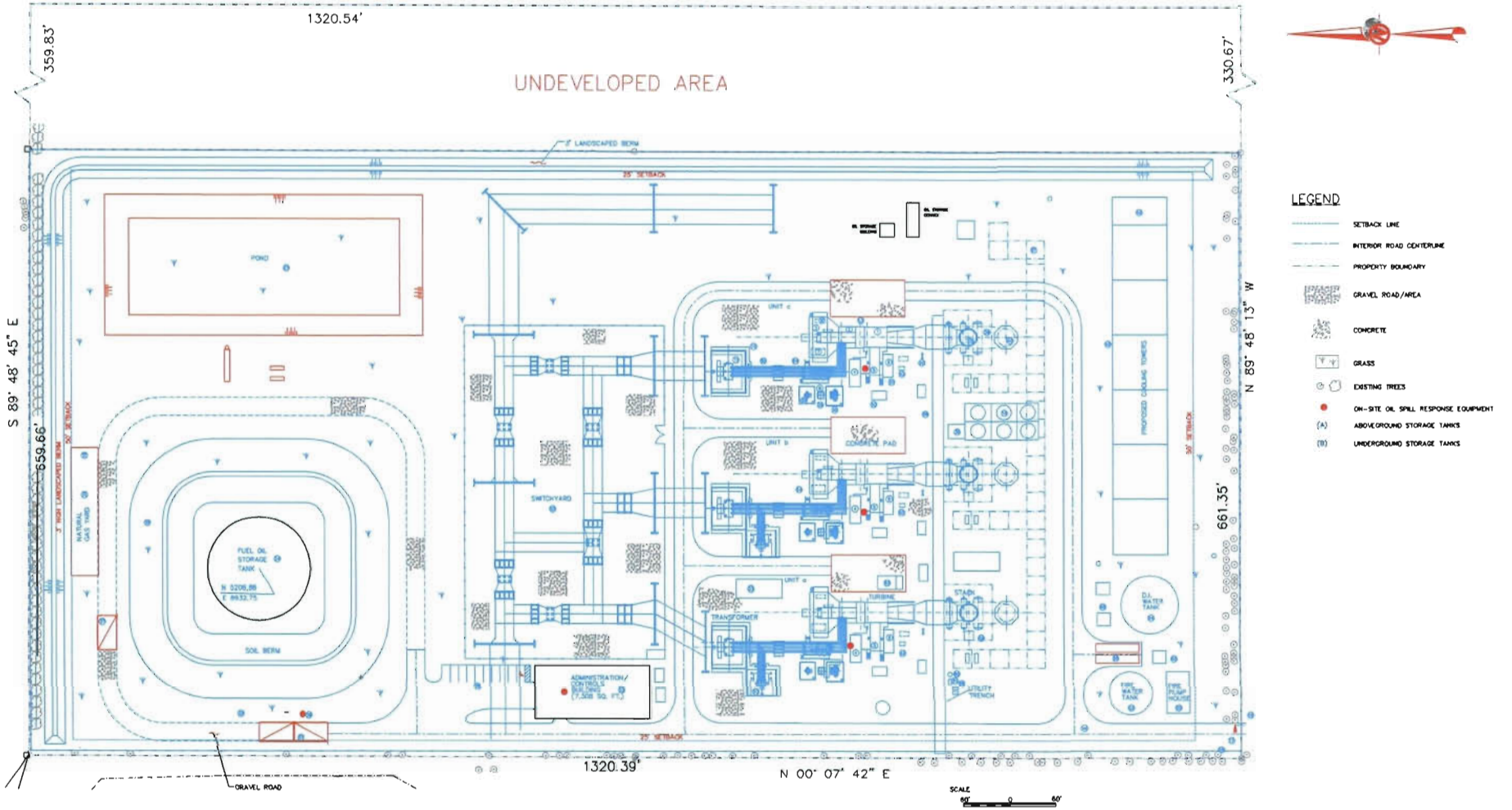
1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)):
   ☐ Attached, Document ID: _____ [x] Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.):
   ☐ Attached, Document ID: _____ [x] Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ [x] Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements:
   [x] Attached, Document ID: **SH-EU1-TV1**
2. Compliance Assurance Monitoring:
   ☐ Attached, Document ID: _____ [x] Not Applicable
3. Alternative Methods of Operation:
   ☐ Attached, Document ID: _____ [x] Not Applicable
4. Alternative Modes of Operation (Emissions Trading):
   ☐ Attached, Document ID: _____ [x] Not Applicable

Additional Requirements Comment

ATTACHMENT SH-FI-C1
FACILITY PLOT PLAN



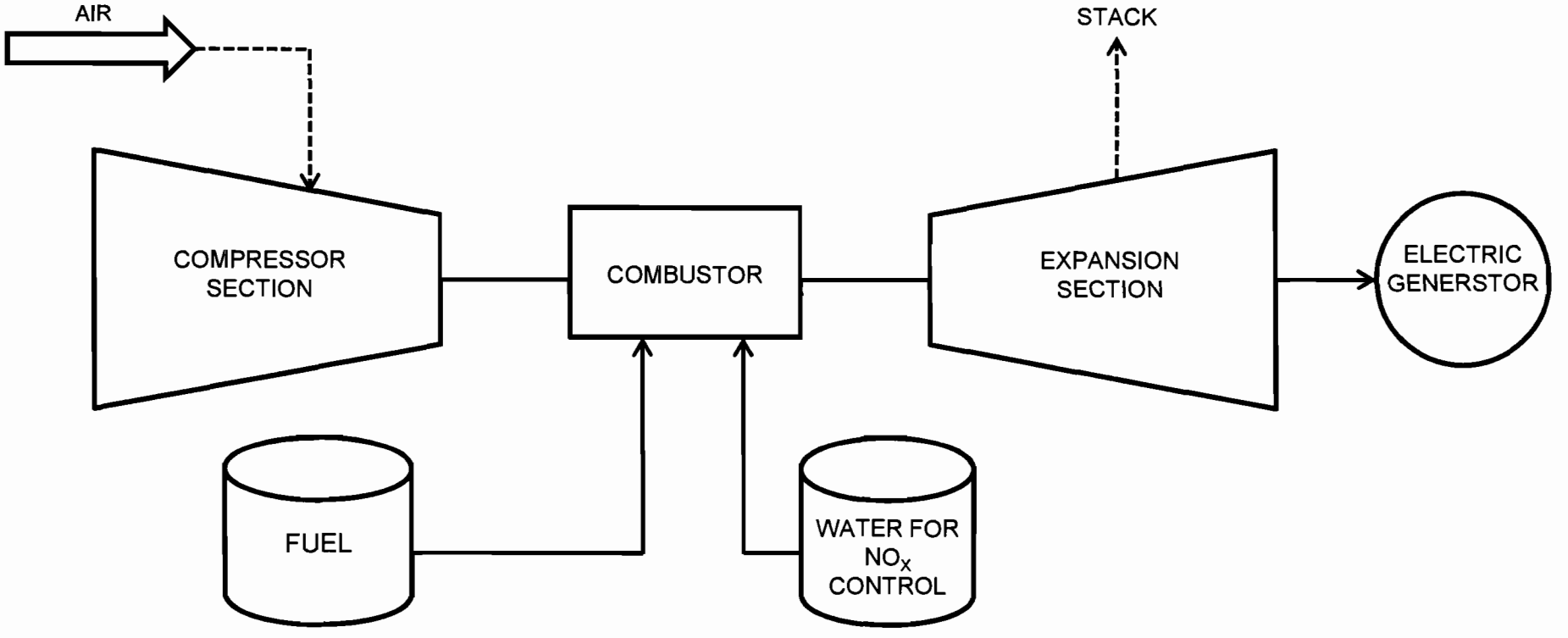
TITLE

SPILL PREVENTION, CONTROL AND CONTERMEASURE PLAN (SPCC)

SHADY HILLS POWER CO. LLC

ATTACHMENT SH-EU1-I1
PROCESS FLOW DIAGRAM

59°F TURBINE INLET TEMPERATURE CONDITIONS:



CLIENT/PROJECT **Shady Hills Company, LLC**				TAMPA, FLORIDA Golder Associates			TITLE: **Attachment SH-EU1-I1 SIMPLIFIED PROCESS FLOW DIAGRAM**
	DRAWN BY: PP	REVIEWED BY: SO	DATE: 3/28/12	NOT TO SCALE	FILE NO.:	JOB NO.: 12-89530	GE Frame 7FA Combustion Turbine

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.
- Landscaping or planting of vegetation.
- Use of hoods, fans, filters, and similar equipment to contain, capture, and/or vent particulate matter (for sand-blasting).
- Confining abrasive blasting where possible.

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 CO_2-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.
- 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

IDENTIFICATION OF APPLICABLE REQUIREMENTS

Title V Core List Effective: 03/01/02

[**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.
62-210.400, F.A.C.: Emission Estimates.
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.
62-297.330, F.A.C.: Applicable Test Procedures.
62-297.340, F.A.C.: Frequency of Compliance Tests.
62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions Unit.
62-297.350, F.A.C.: Determination of Process Variables.
62-297.570, 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-CV3

COMPLIANCE REPORT AND PLAN

ATTACHMENT SH-FI-CV3
COMPLIANCE REPORT AND PLAN

Compliance with the conditions set forth in this operation permit will be certified on an annual basis by the submittal of the Statement of Compliance – Title V Source DEP Form No. 62-213.900(7). This report will be submitted by March 1 of each year for the prior calendar year.

ATTACHMENT SH-FI-CV3 (CONTINUED)
COMPLIANCE CERTIFICATION

The facility and emission units identified in this application are in compliance with the Applicable Regulations identified in the application form and attachments referenced in the section. The compliance report for this facility will be submitted by March 1 of each year for the prior calendar year. The compliance statement is as follows:

I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Roy J. Belden
Signature, Responsible Official

5/10/12
Date

ATTACHMENT SH-FI-CV6

REQUESTED CHANGES TO CURRENT TITLE V AIR OPERATION PERMIT

ATTACHMENT SH-FI-CV6
REQUESTED CHANGES TO CURRENT TITLE V AIR OPERATION PERMIT

Shady Hills Generating Station has requested to modify the current Title V air operation permit to ensure consistency with the provisions of the air construction permit for the Shady Hills Generating Station expansion (Permit No. 0101073-012-AC (PSD-FL-402A)). These revisions include the addition of design heat input ratings for the three simple-cycle units (i.e., EUs 1, 2 and 3), the removal of maximum heat input ratings for these units, the addition of data exclusion procedures for SIP compliance and the inclusion of CEMS data requirements for BACT Standards for NO_X emissions. The requested changes to this permit are described in this attachment.

EU Nos.	Brief Description
001, 002 and 003	Simple-cycle Units 1, 2, and 3 are identical systems. The initial startup date for the simple-cycle units was 12/20/2001. Each unit consists of a General Electric Frame 7FA (Model PG7241 7FA) combustion turbine-electrical generator rated at a nominal 170 megawatts. Each unit is fired with pipeline natural gas and No. 2 distillate fuel oil and uses dry low emission combustor technology. Each unit has its own stack that is 18 feet in diameter and 75 feet tall. Each unit can operate in simple-cycle mode and intermittent duty mode. Each unit is equipped with Dry Low-NOx combustors and water injection capability to minimize NOx emissions. A CEMS is used for determining compliance with NOx. Design Heat Input Rating: The design heat input rating of each combustion turbine is 1,704 MMBtu/hr when firing natural gas and 1,889 MMBtu/hr when firing fuel oil (based on a compressor inlet air temperature of 59° Fahrenheit (F), 60 percent (%) relative humidity, 14.7 pounds per square inch (psi) pressure, the lower heating value (LHV) of each fuel and 100% load). Actual heat input rate will vary depending upon gas turbine characteristics, ambient conditions and evaporative cooling.

These emission units are regulated under Acid Rain-Phase II, 40 CFR 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines, adopted by reference in Rule 62-204.800, F.A.C.; and, Rule62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), including a determination of Best Available Control Technology (BACT) as established in Permit No. 1010373-001-AC/PSD-FL-280. Dry Low-NOx combustors are used to control NOx emissions when firing natural gas. Water injection systems are used to control NOx emissions when firing distillate oil. CAM does not apply to these emission units because compliance is demonstrated by using a NOx CEMS.

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

A.1. ~~Permitted Capacity~~ ~~The maximum heat input rates, based on the lower heating value (LHV) of each fuel to each unit (001, 002, and 003), ambient conditions of 59°F temperature, 60% relative humidity, 100% load and14.7 psi pressure, shall not exceed 1,704 million Btu per hour (MMBtu/hr) when firing natural gas, nor 1,889 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. [Rule 62-210.200(PTE), F.A.C.]~~

A.2. Emission Unit Operating Rate limitation After Testing. The operating rate of an emission unit may be restricted based on compliance testing. See Appendix STR (Stack Testing Requirements). [Rule 62-297.310(2), F.A.C.]

A.3. Methods of Operation - Fuels. Only pipeline natural gas or No. 2 fuel oil 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.} [Rule 62-210.200(PTE), F.A.C.; and 1010373-001-AC/PSD-FL-280]

A.4. 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(PTE), F.A.C.; and 1010373-001-AC/PSD-FL-280]

A.5. Hours of Operation. The stationary gas turbines are allowed to operate an average of 3,390 hours per unit, including an average of 1,000 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 62-210.200(PTE) and 62-212.400(BACT), F.A.C.; 1010373-009-AC/PSD-FL-280A; and 1010373-006-AV]

maximum water injection rate and the lowest NOx 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 NOx emissions for each rate and noting any problems with performance. Based on the test results, the plan shall recommend a new NOx 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 NOx emissions standard is warranted for oil firing, this permit shall be revised. To date, not one single emissions unit has fired fuel oil for 1,000 hours in a year.

[1010373-009-AC/PSD-FL-280A; and 1010373-006-AV]

A.10 CO Emissions. The concentration of CO in the stack exhaust gas shall exceed neither 12 ppmvd nor 42.5 lbs/hr (at ISO conditions) while firing gas, and neither 20 ppmvd nor 71.4 lbs/hr (at ISO conditions) while firing fuel oil. The permittee shall demonstrate compliance with these limits annually by stack testing using EPA Method 10. [Rule 62.212.400(BACT), F.A.C.; and 1010373-001-AC/PSD-FL-280]

A.11 VOC Emissions. The concentration of VOC in the stack exhaust with the combustion turbine operating on natural gas shall exceed neither 1.4 ppmvd nor 2.8 lbs/hr (at ISO conditions), and neither 7 ppmvw nor 16.2 lbs/hr (at ISO conditions) while firing fuel oil and demonstrated by *initial* stack test using EPA Method 18, 25 or 25A. The initial test requirement has been satisfied. [Rule 62.212.400(BACT), F.A.C.; and 1010373-001-AC/PSD-FL-280]

A.12 SO_2 Emissions. SO_2 emissions shall be limited by firing pipeline natural gas or No. 2 or superior grade distillate fuel oil. Emissions of SO_2 (at ISO Conditions) shall not exceed 5 lbs/hr (natural gas) and 98.7 lbs/hr (fuel oil). The permittee shall demonstrate compliance with these limits annually by stack testing using EPA Method 20 or by fuel monitoring provisions of this permit. [Rule 62.212.400(BACT), F.A.C.; and 1010373-001-AC/PSD-FL-280]

A.13 PM/PM_{10} Emissions. PM/PM_{10} emissions shall not exceed 10 lbs/hr when operating on natural gas and 17 lbs/hr when operating on fuel oil. VE testing shall serve as a surrogate for PM/PM_{10} compliance testing. If a compliance test is required to demonstrate compliance with these limits, the permittee shall stack test using EPA Method 5 or 17. [Rule 62.212.400(BACT), F.A.C.; and 1010373-001-AC/PSD-FL-280]

A.14 VE Emissions. VE emissions shall not exceed 10% opacity and serve as a surrogate for PM/PM_{10} emissions. The permittee shall demonstrate compliance with this limit annually by stack testing using EPA Method 9. [Rule 62.212.400(BACT), F.A.C.; and 1010373-001-AC/PSD-FL-280]

A.15 Fuel Sulfur Content. The sulfur content of the pipeline natural gas shall be less than 1 grain per 100 standard cubic feet. The maximum sulfur content of the No. 2 or superior grade distillate fuel oil is 0.05 percent, by weight. [Rule 62.212.400(BACT), F.A.C.; and 1010373-001-AC/PSD-FL-280]

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.16. Excess Emissions - Allowed.

a. Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed ~~two hours~~ 120 minutes in any 24 hour period 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). [Rule 62-210.700(1), F.A.C.; and 1010373-001-AC/PSD-FL-280]

~~b. CEMS Data Exclusion – DLN Tuning. CEMS data collected during initial or other major combustor tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of initial construction, a combustor change out, a major repair or maintenance to a combustor, or other similar~~

~~circumstances. Prior to performing any major tuning session, the permittee shall provide the Department's Southwest District Compliance Authority with advance notice that details the activity and proposed tuning schedule. The notice shall be by telephone, facsimile transmittal, or electronic mail. [Rules 62-4.070(3) and 1010373-010-AV]~~

{Permitting Note: The following conditions apply only to the State Implementation Plan (SIP)-based emissions standards specified in Condition No. __ and __ of this subsection. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, NESHAP, or Acid Rain programs.}

__. Definitions:

a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.

b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose.

c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

[Rule 62-210.200(165, 242, and 258), F.A.C.]

__. Data Exclusion Procedures for SIP Compliance: As per the procedures in this condition, limited amounts of CEMS emissions data, as specified in Condition __, may be excluded from the corresponding SIP-based compliance demonstration, provided that best operational practices to minimize emissions are adhered to, the duration of data excluded is minimized, and the procedures for data exclusion listed below are followed. As provided by the Department's authority in Rule 62-210.700(5), F.A.C., the following provisions and those given in Condition _ are adjustments to maximum and minimum factors in Rule 62-210.700(1), F.A.C.

a. Limiting Data Exclusion. If the compliance calculation using all valid CEMS emission data indicates that the emission unit is in compliance, then no CEMS data shall be excluded from the compliance demonstration.

b. Event Driven Exclusion. There must be an underlying event (startup, shutdown, malfunction, or fuel switching) in order to exclude data. If there is no underlying event, then no data may be excluded.

c. Continuous Exclusion. Data shall be excluded on a continuous basis. Data from discontinuous periods shall not be excluded for the same underlying event.
[Rule 62-210.700, F.A.C.]

__. Allowable Data Exclusions: The following data may be excluded from the corresponding SIP-based compliance demonstration for each of the events listed below in accordance with the Data Exclusion Procedures of Condition __:

a. Startup and Shutdown: Up to 120 minutes of CEMS data may be excluded for each combustion turbine startup and shutdown cycle. For startups and shutdowns of less than 120 minutes in duration, only those minutes attributable to startup and shutdown may be excluded.

b. *Malfunction*: Up to 120 minutes (in any operating day) of CEMS data may be excluded due to a documented malfunction. A "documented malfunction" means a malfunction that is documented

within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic email.

c. *DLN Tuning*: CEMS data collected during initial or other DLN tuning sessions may be excluded from the compliance demonstrations provided the tuning session is performed in accordance with the manufacturer's specifications or determined best practices. Prior to performing any tuning session, the permittee shall provide the Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail. [Design; Rule 62-4.070(3), F.A.C.]

d. *Fuel Switching*: Up to 60 minutes of CEMS data may be excluded for each fuel switch. For fuel switches of less than 60 minutes in duration, only those minutes attributable to fuel switching may be excluded.

All valid emissions data (including data collected during startup, shutdown, malfunction, DLN tuning, and fuel switching) shall be used to report emissions for the Annual Operating Report.
[Rules 62-210.200(BACT), 62-210.370, and 62-210.700, F.A.C.]

__. CEMS Data Requirements for BACT Standards:
{Permitting Note: The following conditions apply only to the SIP-based NO_X emissions standards specified in Condition Nos. __ and __ of this section. These requirements cannot vary or supersede any federal provision of the NSPS, or Acid Rain programs. Additional reporting and monitoring may be required by the individual subparts.}

a. *Data Collection*: Except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions shall be monitored and recorded during all operation including startup, shutdown, and malfunction.

b. *Operating Hours and Operating Days*: An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Any day with at least one operating hour for an emissions unit is an operating day for that emission unit.

c. *Valid Hour*: Each CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.

(1) Hours that are **not operating** hours are **not valid** hours.
(2) For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, there is insufficient data and the 1-hour block average is not valid.
(3) During fuel switching an hour in which fuel oil is fired is attributed towards compliance with the permit standards for oil firing.

d. *24-hour Block Averages*: A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive valid hourly average concentration values. If a unit operates less than 24 hours during the block, or there are less than 24 valid hourly averages available, the 24-hour block average shall be the average of all available valid hourly average concentration values for the 24-hour block.

{Permitting Note: For purposes of determining compliance with the 24-hour CEMS standards, the missing data substitution methodology of 40 CFR Part 75, Subpart D, shall not be utilized. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block and periods of missing CEMS data are to be

reported as monitor downtime in the excess emissions and monitoring performance reports. For example, the "24-hr block average" may consist of only 6 valid operating hours for the day.}

ATTACHMENT SH-FI-AR

ACID RAIN PART APPLICATION (DEP FORM NO. 62-210.900(1)(A))

Acid Rain Part Application

For more information, see instructions and refer to 40 CFR 72.30, 72.31, and 74; and Chapter 62-214, F.A.C.

This submission is: ☐ New ☐ Revised X Renewal

STEP 1

Identify the source by plant name, state, and ORIS or plant code.

Plant name	State	ORIS/Plant Code
Shady Hills Generating Station	**FL**	**55414**

STEP 2

Enter the unit ID# for every Acid Rain unit at the Acid Rain source in column "a."

If unit a SO_2 Opt-in unit, enter "yes" in column "b".

For new units or SO_2 Opt-in units, enter the requested information in columns "d" and "e."

a	b	c	d	e
Unit ID#	SO_2 Opt-in Unit? (Yes or No)	Unit will hold allowances in accordance with 40 CFR 72.9(c)(1)	New or SO_2 Opt-in Units Commence Operation Date	New or SO_2 Opt-in Units Monitor Certification Deadline
001		Yes		
002		Yes		
003		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		

Plant Name (from STEP 1) **Shady Hills Generating Station**

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 DEP 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 DEP; 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.
(4) For applications including a SO_2 Opt-in unit, a monitoring plan for each SO_2 Opt-in unit must be submitted with this application pursuant to 40 CFR 74.14(a). For renewal applications for SO_2 Opt-in units include an updated monitoring plan if applicable under 40 CFR 75.53(b).

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 DEP:
(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,

Plant Name (from STEP 1) **Shady Hills Generating Station**

STEP 3, Continued.

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, 74, 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 72.7or 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
For SO_2 Opt-in units only.

In column "f" enter the unit ID# for every SO_2 Opt-in unit identified in column "a" of STEP 2.

For column "g" describe the combustion unit and attach information and diagrams on the combustion unit's configuration.

In column "h" enter the hours.

f	g	h (not required for renewal application)
Unit ID#	Description of the combustion unit	Number of hours unit operated in the six months preceding initial application

Plant Name (from STEP 1) **Shady Hills Generating**

STEP 5

For SO_2 Opt-in units only.
(Not required for SO_2 Opt-in renewal applications.)

In column "i" enter the unit ID# for every SO_2 Opt-in unit identified in column "a" (and in column "f").

For columns "j" through "n," enter the information required under 40 CFR 74.20-74.25 and attach all supporting documentation required by 40 CFR 74.20-74.25.

i	j	k	l	m	n
Unit ID#	Baseline or Alternative Baseline under 40 CFR 74.20 (mmBtu)	Actual SO_2 Emissions Rate under 40 CFR 74.22 (lbs/mmBtu)	Allowable 1985 SO_2 Emissions Rate under 40 CFR 74.23 (lbs/mmBtu)	Current Allowable SO_2 Emissions Rate under 40 CFR 74.24 (lbs/mmBtu)	Current Promulgated SO_2 Emissions Rate under 40 CFR 74.25 (lbs/mmBtu)

STEP 6

For SO_2 Opt-in units only.

Attach additional requirements, certify and sign.

A. If the combustion source seeks to qualify for a transfer of allowances from the replacement of thermal energy, a thermal energy plan as provided in 40 CFR 74.47 for combustion sources must be attached.
B. A statement whether the combustion unit was previously an affected unit under 40 CFR 74.
C. A statement that the combustion unit is not an affected unit under 40 CFR 72.6 and does not have an exemption under 40 CFR 72.7, 72.8, or 72.14.
D. Attach a complete compliance plan for SO_2 under 40 CFR 72.40.
E. The designated representative of the combustion unit shall submit a monitoring plan in accordance with 40 CFR 74.61. For renewal application, submit an updated monitoring plan if applicable under 40 CFR 75.53(b).
F. The following statement must be signed by the designated representative or alternate designated representative of the combustion source: "I certify that the data submitted under 40 CFR Part 74, Subpart C, reflects actual operations of the combustion source and has not been adjusted in any way."

Signature	Date

STEP 7

Read the certification statement; provide name, title, owner company name, phone, and e-mail address; sign, and date.

Certification (for designated representative or alternate designated representative only)

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 **Roy S. Belden**	Title **Vice President**
Owner Company Name **Shady Hills Power Company, LLC**	
Phone **(203) 357-6820**	E-mail address **roy.belden@ge.com**
Signature Roy S. Belden	Date 5/10/12

ATTACHMENT SH-FI-CAIR

CAIR PART (DEP FORM NO. 62-210.900(1)(B))

Clean Air Interstate Rule (CAIR) Part

For more information, see instructions and refer to 40 CFR 96.121, 96.122, 96.221, 96.222, 96.321 and 96.322; and Rule 62-296.470, F.A.C.

This submission is: ☐ New ☐ Revised **X** Renewal

STEP 1

Identify the source by plant name and ORIS or EIA plant code

Plant Name: **Shady Hills Generating Station**	State: **Florida**	ORIS or EIA Plant Code: **55414**

STEP 2

In column "a" enter the unit ID# for every CAIR unit at the CAIR source.

In columns "b," "c," and "d," indicate to which CAIR program(s) each unit is subject by placing an "X" in the column(s).

For new units, enter the requested information in columns "e" and "f.

a	b	c	d	e	f
Unit ID#	Unit will hold nitrogen oxides (NO_x) allowances in accordance with 40 CFR 96.106(c)(1)	Unit will hold sulfur dioxide (SO_2) allowances in accordance with 40 CFR 96.206(c)(1)	Unit will hold NO_x Ozone Season allowances in accordance with 40 CFR 96.306(c)(1)	New Units Expected Commence Commercial Operation Date	New Units Expected Monitor Certification Deadline
001	**X**	**X**	**X**		
002	**X**	**X**	**X**		
003	**X**	**X**	**X**		

Plant Name (from STEP 1) **Shady Hills Generating Station**

STEP 3

Read the standard requirements.

CAIR NO_X ANNUAL TRADING PROGRAM

CAIR Part Requirements.

(1) The CAIR designated representative of each CAIR NO_X source and each CAIR NO_X unit at the source shall:
(i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.122 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and
(ii) [Reserved];
(2) The owners and operators of each CAIR NO_X source and each CAIR NO_X unit at the source shall have a CAIR Part included in the Title V operating permit issued by the DEP under 40 CFR Part 96, Subpart CC, and operate the source and the unit in compliance with such CAIR Part.

Monitoring, Reporting, and Recordkeeping Requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR NO_X source and each CAIR NO_X unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96, Subpart HH, and Rule 62-296.470, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HH, shall be used to determine compliance by each CAIR NO_X source with the following CAIR NO_X Emissions Requirements.

NO_X Emission Requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_X source and each CAIR NO_X unit at the source shall hold, in the source's compliance account, CAIR NO_X allowances available for compliance deductions for the control period under 40 CFR 96.154(a) in an amount not less than the tons of total NO_X emissions for the control period from all CAIR NO_X units at the source, as determined in accordance with 40 CFR Part 96, Subpart HH.
(2) A CAIR NO_X unit shall be subject to the requirements under paragraph (1) of the NO_X Requirements starting on the later of January 1, 2009, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.170(b)(1) or (2) and for each control period thereafter.
(3) A CAIR NO_X allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the NO_X Requirements, for a control period in a calendar year before the year for which the CAIR NO_X allowance was allocated.
(4) CAIR NO_X allowances shall be held in, deducted from, or transferred into or among CAIR NO_X Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FF and GG.
(5) A CAIR NO_X allowance is a limited authorization to emit one ton of NO_X in accordance with the CAIR NO_X Annual Trading Program. No provision of the CAIR NO_X Annual Trading Program, the CAIR Part, or an exemption under 40 CFR 96.105 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.
(6) A CAIR NO_X allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart EE, FF, or GG, every allocation, transfer, or deduction of a CAIR NO_X allowance to or from a CAIR NO_X unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR NO_X unit.

Excess Emissions Requirements.

If a CAIR NO_X source emits NO_X during any control period in excess of the CAIR NO_X emissions limitation, then:
(1) The owners and operators of the source and each CAIR NO_X unit at the source shall surrender the CAIR NO_X allowances required for deduction under 40 CFR 96.154(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AA, the Clean Air Act, and applicable state law.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the CAIR NO_X source and each CAIR NO_X 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 before the end of 5 years, in writing by the DEP or the Administrator.
(i) The certificate of representation under 40 CFR 96.113 for the CAIR designated representative for the source and each CAIR NO_X unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; 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 under 40 CFR 96.113 changing the CAIR designated representative.
(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HH, 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 CAIR NO_X Annual Trading Program.
(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR NO_X Annual Trading Program or to demonstrate compliance with the requirements of the CAIR NO_X Annual Trading Program.
(2) The CAIR designated representative of a CAIR NO_X source and each CAIR NO_X unit at the source shall submit the reports required under the CAIR NO_X Annual Trading Program, including those under 40 CFR Part 96, Subpart HH.

STEP 3, Continued

Liability.

(1) Each CAIR NO_X source and each CAIR NO_X unit shall meet the requirements of the CAIR NO_X Annual Trading Program.
(2) Any provision of the CAIR NO_X Annual Trading Program that applies to a CAIR NO_X source or the CAIR designated representative of a CAIR
NO_X source shall also apply to the owners and operators of such source and of the CAIR NO_X units at the source.
(3) Any provision of the CAIR NO_X Annual Trading Program that applies to a CAIR NO_X unit or the CAIR designated representative of a CAIR NO_X unit shall also apply to the owners and operators of such unit.

Effect on Other Authorities.

No provision of the CAIR NO_X Annual Trading Program, a CAIR Part, or an exemption under 40 CFR 96.105 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_X source or CAIR NO_X unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

CAIR SO_2 TRADING PROGRAM

CAIR Part Requirements.

(1) The CAIR designated representative of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall:
(i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.222 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and
(ii) [Reserved];
(2) The owners and operators of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall have a CAIR Part included in the Title V operating permit issued by the DEP under 40 CFR Part 96, Subpart CCC, for the source and operate the source and each CAIR unit in compliance with such CAIR Part.

Monitoring, Reporting, and Recordkeeping Requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR SO_2 source and each SO_2 CAIR unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96 ,Subpart HHH, and Rule 62-296.470, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HHH, shall be used to determine compliance by each CAIR SO_2 source with the following CAIR SO_2 Emission Requirements.

SO_2 Emission Requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall hold, in the source's compliance account, a tonnage equivalent in CAIR SO_2 allowances available for compliance deductions for the control period, as determined in accordance with 40 CFR 96.254(a) and (b), not less than the tons of total sulfur dioxide emissions for the control period from all CAIR SO_2 units at the source, as determined in accordance with 40 CFR Part 96, Subpart HHH.
(2) A CAIR SO_2 unit shall be subject to the requirements under paragraph (1) of the Sulfur Dioxide Emission Requirements starting on the later of January 1, 2010 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.270(b)(1) or (2) and for each control period thereafter.
(3) A CAIR SO_2 allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the SO_2 Emission Requirements, for a control period in a calendar year before the year for which the CAIR SO_2 allowance was allocated.
(4) CAIR SO_2 allowances shall be held in, deducted from, or transferred into or among CAIR SO_2 Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FFF and GGG.
(5) A CAIR SO_2 allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO_2 Trading Program. No provision of the CAIR SO_2 Trading Program, the CAIR Part, or an exemption under 40 CFR 96.205 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.
(6) A CAIR SO_2 allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart FFF or GGG, every allocation, transfer, or deduction of a CAIR SO_2 allowance to or from a CAIR SO_2 unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR SO_2 unit.

Excess Emissions Requirements.

If a CAIR SO_2 source emits SO_2 during any control period in excess of the CAIR SO_2 emissions limitation, then:
(1) The owners and operators of the source and each CAIR SO_2 unit at the source shall surrender the CAIR SO_2 allowances required for deduction under 40 CFR 96.254(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAA, the Clean Air Act, and applicable state law.

Station

STEP 3, Continued

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the CAIR SO_2 source and each CAIR SO_2 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 before the end of 5 years, in writing by the Department or the Administrator.

(i) The certificate of representation under 40 CFR 96.213 for the CAIR designated representative for the source and each CAIR SO_2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; 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 under 40 CFR 96.213 changing the CAIR designated representative.

(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HHH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HHH, 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 CAIR SO_2 Trading Program.

(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR SO_2 Trading Program or to demonstrate compliance with the requirements of the CAIR SO_2 Trading Program.

(2) The CAIR designated representative of a CAIR SO_2 source and each CAIR SO_2 unit at the source shall submit the reports required under the CAIR SO_2 Trading Program, including those under 40 CFR Part 96, Subpart HHH.

Liability.

(1) Each CAIR SO_2 source and each CAIR SO_2 unit shall meet the requirements of the CAIR SO_2 Trading Program.

(2) Any provision of the CAIR SO_2 Trading Program that applies to a CAIR SO_2 source or the CAIR designated representative of a CAIR SO_2 source shall also apply to the owners and operators of such source and of the CAIR SO_2 units at the source.

(3) Any provision of the CAIR SO_2 Trading Program that applies to a CAIR SO_2 unit or the CAIR designated representative of a CAIR SO_2 unit shall also apply to the owners and operators of such unit.

Effect on Other Authorities.

No provision of the CAIR SO_2 Trading Program, a CAIR Part, or an exemption under 40 CFR 96.205 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR SO_2 source or CAIR SO_2 unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

CAIR NO_x OZONE SEASON TRADING PROGRAM

CAIR Part Requirements.

(1) The CAIR designated representative of each CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season unit at the source shall:

(i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.322 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and

(ii) [Reserved];

(2) The owners and operators of each CAIR NO_x Ozone Season source required to have a Title V operating permit or air construction permit, and each CAIR NO_x Ozone Season unit required to have a Title V operating permit or air construction permit at the source shall have a CAIR Part included in the Title V operating permit or air construction permit issued by the DEP under 40 CFR Part 96, Subpart CCCC, for the source and operate the source and the unit in compliance with such CAIR Part.

Monitoring, Reporting, and Recordkeeping Requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96, Subpart HHHH, and Rule 62-296.470, F.A.C.

(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HHHH, shall be used to determine compliance by each CAIR NO_x Ozone Season source with the following CAIR NO_x Ozone Season Emissions Requirements.

NO_x Ozone Season Emission Requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season unit at the source shall hold, in the source's compliance account, CAIR NO_x Ozone Season allowances available for compliance deductions for the control period under 40 CFR 96.354(a) in an amount not less than the tons of total NO_x emissions for the control period from all CAIR NO_x Ozone Season units at the source, as determined in accordance with 40 CFR Part 96, Subpart HHHH.

(2) A CAIR NO_x Ozone Season unit shall be subject to the requirements under paragraph (1) of the NO, Ozone Season Emission Requirements starting on the later of May 1, 2009 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.370(b)(1),(2), or (3) and for each control period thereafter.

(3) A CAIR NO_x Ozone Season allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the NO_x Ozone Season Emission Requirements, for a control period in a calendar year before the year for which the CAIR NO_x Ozone Season allowance was allocated.

(4) CAIR NO_x Ozone Season allowances shall be held in, deducted from, or transferred into or among CAIR NO_x Ozone Season Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FFFF and GGGG.

(5) A CAIR NO_x Ozone Season allowance is a limited authorization to emit one ton of NO_x in accordance with the CAIR NO_x Ozone Season Trading Program. No provision of the CAIR NO_x Ozone Season Trading Program, the CAIR Part, or an exemption under 40 CFR 96.305 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.

(6) A CAIR NO_x Ozone Season allowance does not constitute a property right.

(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart EEEE, FFFF or GGGG, every allocation, transfer, or deduction of a CAIR NO_x Ozone Season allowance to or from a CAIR NO_x Ozone Season unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR NO_x Ozone Season unit.

Plant Name (from STEP 1) **Shady Hills Generating Station**

STEP 3, Continued

Excess Emissions Requirements.

If a CAIR NO_x Ozone Season source emits NO_x during any control period in excess of the CAIR NO_x Ozone Season emissions limitation, then:
(1) The owners and operators of the source and each CAIR NO_x Ozone Season unit at the source shall surrender the CAIR NO_x Ozone Season allowances required for deduction under 40 CFR 96.354(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAAA, the Clean Air Act, and applicable state law.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season 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 before the end of 5 years, in writing by the DEP or the Administrator.
(i) The certificate of representation under 40 CFR 96.313 for the CAIR designated representative for the source and each CAIR NO_x Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; 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 under 40 CFR 96.113 changing the CAIR designated representative.
(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HHHH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HHHH, 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 CAIR NO_x Ozone Season Trading Program.
(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR NO_x Ozone Season Trading Program or to demonstrate compliance with the requirements of the CAIR NO_x Ozone Season Trading Program.
(2) The CAIR designated representative of a CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season unit at the source shall submit the reports required under the CAIR NO_x Ozone Season Trading Program, including those under 40 CFR Part 96, Subpart HHHH.

Liability.

(1) Each CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season unit shall meet the requirements of the CAIR NO_x Ozone Season Trading Program.
(2) Any provision of the CAIR NO_x Ozone Season Trading Program that applies to a CAIR NO_x Ozone Season source or the CAIR designated representative of a CAIR NO_x Ozone Season source shall also apply to the owners and operators of such source and of the CAIR NO_x Ozone Season units at the source.
(3) Any provision of the CAIR NO_x Ozone Season Trading Program that applies to a CAIR NO_x Ozone Season unit or the CAIR designated representative of a CAIR NO_x Ozone Season unit shall also apply to the owners and operators of such unit.

Effect on Other Authorities.

No provision of the CAIR NO_x Ozone Season Trading Program, a CAIR Part, or an exemption under 40 CFR 96.305 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_x Ozone Season source or CAIR NO_x Ozone Season unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

STEP 4

Read the certification statement; provide name, title, owner company name, phone, and e-mail address; sign, and date.

Certification (for designated representative or alternate designated representative only)

I am authorized to make this submission on behalf of the owners and operators of the CAIR source or CAIR 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 **Roy S. Belden**	Title **Vice President**
Owner Name **Shady Hills Power Company, LLC**	Company
Phone **(203) 357-6820**	E-mail Address **roy.belden@ge.com**
Signature Roy S. Belden	Date 5/10/12

ATTACHMENT SH-EU1-I2

FUEL ANALYSIS OR SPECIFICATION

ATTACHMENT SH-EU1-I2
FUEL ANALYSIS OR SPECIFICATIONS

Fuel Analysis – No. 2 Fuel Oil

Parameter	Typical Value	Max Value
API gravity @ 60 F	30	
Relative density	7.1 lb/gal	
Heat content	19,500 Btu/lb (HHV)	
% sulfur		0.05 by weight[1]
% nitrogen	0.025 – 0.030	
% ash	negligible	

Note: The values listed are "typical" values for No.2 distillate fuel oil.

[1] Data from current TV air permit.

Fuel Analysis – Natural Gas

Parameter	Typical Value	Max Value
Relative density	0.58 (compared to air)	
heat content	950 - 1140 Btu/cu ft.	
% sulfur	1 grain/100 scf	2 grain/100 scf[1]
% nitrogen	0.8 % by volume	
% ash	negligible	

Note: The values listed are "typical" values for No.2 distillate fuel oil.

[1] Data from current TV air permit.

ATTACHMENT SH-EU1-I4

PROCEDURES FOR STARTUP AND SHUTDOWN

COMBUSTION TURBINE STARTUP (WARM) OP-1.4

Table of Contents

1.0 Purpose

1.1 This procedure describes the required steps, associated information, and references necessary to startup a Shady Hills Model 7FAe Gas Turbine Generators (GTG) from on cool-down to generator breaker closed with load selected.

1.2 This procedure was written with the assumption that personnel executing it are fully trained and qualified in GTG and Balance of Plant (BOP) equipment operations, and GE Environmental, Health, and Safety (EHS) procedures.

1.3 The plant is equipped with three GTGs, all are configured with the same equipment and control devices. There is one Human Machine Interface (HMI) in each GTG's Power Electrical and Electronic Control Center (PEECC) for control of that unit and two in the Control Room that provides control for all three. This procedure can be executed from any of these five HMIs.

2.0 Responsibilities

2.1 Facility Management:

2.1.1 Ensure personnel are properly trained on the correct execution of this procedure.

2.1.2 Revise this procedure when new safety measures and operating techniques or technologies become available.

2.2 Employee:

2.2.1 Implement this operation by utilizing verbatim compliance of this procedure.

2.2.2 Use this procedure in parallel with all approved safety procedures.

2.2.3 Notify supervision when any unsafe or abnormal condition presents itself.

3.0 References

3.1 General Electric MS7001FA O&M Manual
3.2 Shady Hills Night and Standing Orders
3.3 Shady Hills Work Instruction WI 6.0
3.4 Shady Hills CEMS QA/QC Plan
3.5 OPS 1.11 Fuel Gas System
3.6 OPS 1.11 Fuel Oil System
3.7 OPS 2.3 Evaporative Cooler System
3.8 Gas Tech 10.0 MMBTU/Hr Indirect Fired Gas Heater Manual

4.0 Special Tools/Equipment

None

5.0 Environmental, Health, and Safety

5.1 Employees must wear, at a minimum, hardhat, steel-toed boots, and safety glasses while working anywhere outside of the Administrative Building.

5.2 The location of all on-site personnel should be accounted for prior to starting any GTG or their subsystems.

5.3 Do not enter the turbine compartments while unit is in operation unless it is absolutely necessary. At any time, if/when entering the turbine compartment, while the unit is in operation, refer to ETC 004 for information on required Personal Protective Equipment (PPE).

6.0 Steps

Step Number	Step
1.	Review OPS 1.2 Plant Warm Startup Checklist and verify all requirements have been accomplished.
2.	Perform a Plant Inspection and complete all required documentation IAW Shady Hills WI 6.0.
3.	Ensure all CEMS are operational and ready for startup, perform daily CEMS QA/QC checks, and complete all required documentation IAW CEMS QA/QC Plan and WI 6.0.

CAUTION
Unit exhaust gases emissions must be continuously monitored while unit is in operation for compliance with state Title V permit (9 PPM/Gas and 42 PPM/Oil).

Step Number	Step
4.	On HMI Startup Control Screen ensure Turbine Status indicates "Ready to Start"
5.	Ensure all turbine compartments/surrounding areas are clear of personnel and equipment. The location and tasks of all plant personnel must be know before startup.
6.	Review Standing/Night Orders and Operations Board for any new information.
7.	Review Lockout/Tagout binder to ensure no LOTO's exist that would prevent safe startup of GTGs or their subsystems.
8.	Ensure all annunciated faults and alarms are cleared or explainable and none will affect the safe startup of any GTGs or their subsystems.
9.	Startup Fuel Gas Heater IAW OPS-1.11 and Manufactures Manual.
10.	On HMI Startup Control Screen select Target Turbine.

CAUTION
Review Standing Orders and Operations Board for proper start-up sequence

Step Number	Step
11.	On HMI Startup Control Screen, Select Mode Select: Auto
12.	On HMI Startup Control Screen, Select Fuel Type: Gas (Fuel Oil start-up refer to OPS 1.10 and Standing Orders)
13.	On HMI Gen/Exciter Screen, Select EX2000 Control: Start
14.	On HMI IGV Control Screen, Select IGV Mode Control: Auto
15.	On HMI Synch Screen, Select Sync Mode: Auto (Off for Fuel Oil)
16.	On HMI Start-up Control screen, Select Master Control: Start
17.	On HMI Start-up Control Screen, select Load Select: Preselect or Base Load as required per dispatch. If Base Load was selected skip to Step 19

NOTE
Auto Synchronization will be off during a Fuel Oil dispatch while starting on Fuel Gas until transfer is completed (Refer to OPS 1.10 and Standing Orders)

Step Number	Step
18.	If preselect has selected, on HMI Start-up Control Screen, Select MW Control Setpoint: Enter desired load (Minimum load 100 MW)
19.	From this point the unit will begin the startup sequence, Purge, Fire, Warm-up, Acceleration, and Breaker Closure (Refer to GE O&M Manuals and GE 7FAe Control Specifications).

Step Number	Step
20.	If unit is dispatched for Automatic Generator Control (AGC) skip to Step 23
21.	If unit is operating on Fuel Oil the Water Injection System will start at 2000 degrees Fahrenheit or around 40 MW, depending on ambient conditions. If Water Injection fails to start or shuts down unexpectedly go to Step 27.
22.	Continue unit operation IAW OPS-1.7

CAUTION
Unit must operate in DLN Mode 6 while on Fuel Gas and Water Injection on while on Fuel Oil for the unit to maintain exhaust gas emissions compliance.

AGC Control

Step Number	Step
23.	Select BOP Control Screens, select AGC Screen, ensure minimum setpoint is 100 MW, adjust maximum setpoint to 180 MW for Fuel Gas and 190 MW for Fuel Oil.
24.	Select Target Unit's Control Screen, select Start-up Control Screen, select AGC Control: On (Refer to dispatch schedule for exact AGC selection time).
25.	Fill and operate Evaporative Coolers while on AGC IAW OPS 2.3 and Standing Orders.
26.	Return to Step 22.

Water Injection Trouble

Step Number	Step
27.	On HMI Startup Control Screen, Select Load Select: Preselect
28.	On HMI Startup Control Screen, MW Control, select Setpoint: 40 MW or adjust setpoint until reference firing temperature is below 2000 degrees Fahrenheit.
29.	On HMI Startup Control Screen, Select Master Reset

30.	Water Injection should start automatically after Master Reset. If system fails to start, on HMI Water Injection Screen, select Water Injection: On
31.	If water injection fails to stay on after three attempts contact the O&M Manger for instructions.
32.	Return to Step 22

7.0 APPENDIX

None

OPS-1.5 Combustion Turbine Shutdown

GE Contractual Services, Shady Hills, FL

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 <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.

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-1.3 for supply systems to be shut down.

D. Upon completion of supply systems shutdown perform the following.

1. Walkdown unit and inspect for leaks and any broken equipment.

2. Take a set of shutdown logs.

3. Verify unit is ready to start at HMI.

4. Clear any alarms, and investigate problems and correct.

V. TRAINING

A. Complete Control Room Operator qualifications.

VII. ENVIRONMENTAL, HEALTH, AND SAFETY

A. Employees must wear, at a minimum, hardhat, steel-toed boots, and safety glasses while working anywhere outside of the Administrative Building.
B. The location of all on-site personnel should be accounted for prior to starting any Gas Turbine Generator or their subsystems.
C. Do not enter the turbine compartments while unit is in operation unless it is absolutely necessary. At any time, if/when entering the turbine compartment while the unit is in operation refer to ETC 004 for instruction.

VIII. REFERENCES

A. *GE Operations and Maintenance Manuals*

ATTACHMENT SH-EU1-I5

OPERATION AND MAINTENANCE PLAN

ATTACHMENT SH-EU1-I5
HEAVY-DUTY GAS TURBINE OPERATING AND MAINTENANCE CONSIDERATIONS (GER-3620L, DATED11/09)

Maintenance costs and availability are two of the most important concerns to a heavy-duty gas turbine equipment owner. Therefore, a comprehensive maintenance program that optimizes the owner's costs and maximizes equipment availability has been instituted at the facility. For this maintenance program to be effective, ownership has developed operating plans and procedures for the plant, which implement the equipment manufacturer's recommendations regarding the number and types of inspections, spare parts planning, and other major factors affecting component life and proper operation of the equipment.

The facility generally follows the O&M considerations and procedures outlined in the above-referenced document, which is maintained onsite. In this document, operating and maintenance practices for heavy-duty gas turbines are reviewed, with emphasis placed on types of inspections plus operating factors that influence maintenance schedules. Following these procedures is in the owner/operator's best interests, as a well-planned maintenance program will result in maximum equipment availability and optimization of maintenance costs. Note:

- The operation and maintenance practices outlined in this document are based on full utilization of GE-approved parts, repairs, and services, which may be followed at the facility's discretion.
- The operating and maintenance discussions presented in the document are generally applicable to all GE heavy-duty gas turbines; i.e., MS3000, 5000, 6000, 7000 and 9000. For purposes of illustration, the MS7001EA was chosen for most components except exhaust systems, which are illustrated using different gas turbine models as indicated.

ATTACHMENT SH-EU1-I6

COMPLIANCE DEMONSTRATION REPORTS/RECORDS

ATTACHMENT SH-EU-I6
COMPLIANCE DEMONSTRATION REPORTS/RECORDS

This attachment contains the following compliance reports and records:

- 2011 Annual Title V Compliance Certification Shady Hills
- 2012 Compliance Report for Shady Hills

Shady Hills Power Company, L.L.C.
800 Long Ridge Road, Stamford, CT 06927

February 24, 2012

Via Federal Express

Florida Department of Environmental Protection
Southwest District Office
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926

Re: Shady Hills Power Company, LLC
Facility ID No. 1010373
Permit No. 1010373-008/010-AV
2011 Annual Title V Compliance Certification

Dear Sir or Madam:

Enclosed please find a completed Statement of Compliance on DEP Form No. 62-213.900(7) for Shady Hills Generating Station in conformance with Permit No. 1010373-008/010-AV, Appendix TV-6 Condition 51.

If you have any questions or require additional information, please do not hesitate to call me at 203/357-6820 or Mr. Donald McBride, Facility Manager, at 727/857-1787.

Sincerely,

Roy S. Belden
Vice President

Enclosures

cc: US EPA Region IV – Air and EPCRA Enforcement Branch
Donald McBride – Shady Hills Power Company
Amanuel Haile-Mariam – GE Energy Financial Services

Department of Environmental Protection

Division of Air Resource Management

STATEMENT OF COMPLIANCE - TITLE V SOURCE

REASON FOR SUBMISSION (Check one to indicate why this statement of compliance is being submitted)

X **Annual Requirement**	☐ **Transfer of Permit**	☐ **Permanent Facility Shutdown**

REPORTING PERIOD*	REPORT DEADLINE**
January 1 through December 31 of 2011 (year)	March 1, 2012

*The statement of compliance must cover all conditions that were in effect during the indicated reporting period, including any conditions that were added, deleted, or changed through permit revision.

**See Rule 62-213.440(3)(a)2., F.A.C.

Facility Owner/Company Name: SHADY HILLS POWER COMPANY, L.L.C.

Site Name: SHADY HILLS GENERATING STATION Facility ID No. 1010373 County: PASCO

COMPLIANCE STATEMENT (Check only one of the following three options)

X **A.** This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part, and there were no reportable incidents of deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above.

____ **B.** This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part; however, there were one or more reportable incidents of deviations from applicable requirements associated with malfunctions or breakdowns of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above, which were reported to the Department. For each incident of deviation, the following information is included:

1. Date of report previously submitted identifying the incident of deviation.
2. Description of the incident.

____ **C.** This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part, EXCEPT those identified in the pages attached to this report and any reportable incidents of deviations from applicable requirements associated with malfunctions or breakdowns of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above, which were reported to the Department. For each item of noncompliance, the following information is included:

1. Emissions unit identification number.
2. Specific permit condition number (note whether the permit condition has been added, deleted, or changed during certification period).
3. Description of the requirement of the permit condition.
4. Basis for the determination of noncompliance (for monitored parameters, indicate whether monitoring was continuous, i.e., recorded at least every 15 minutes, or intermittent).
5. Beginning and ending dates of periods of noncompliance.
6. Identification of the probable cause of noncompliance and description of corrective action or preventative measures implemented.
7. Dates of any reports previously submitted identifying this incident of noncompliance.

For each incident of deviation, as described in paragraph **B.** above, the following information is included:

1. Date of report previously submitted identifying the incident of deviation.
2. Description of the incident.

STATEMENT OF COMPLIANCE - TITLE V SOURCE

RESPONSIBLE OFFICIAL CERTIFICATION

I, the undersigned, am a responsible official (Title V air permit application or responsible official notification form on file with the Department) of the Title V source for which this document is being submitted. With respect to all matters other than Acid Rain program requirements, I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Roy S. Belden — 2/24/12

(Signature of Title V Source Responsible Official) *(Date)*

Name: Roy S. Belden Title: Vice President

DESIGNATED REPRESENTATIVE CERTIFICATION (only applicable to Acid Rain source)

I, the undersigned, 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.

Roy S. Belden — 2/24/12

(Signature of Acid Rain Source Designated Representative) *(Date)*

Name: Roy S. Belden Title: Vice President

{Note: Attachments, if required, are created by a responsible official or designated representative, as appropriate, and should consist of the information specified and any supporting records. Additional information may also be attached by a responsible official or designated representative when elaboration is required for clarity. This report is to be submitted to both the compliance authority (DEP district or local air program) and the U.S. Environmental Protection Agency(EPA) (U.S. EPA Region 4, Air and EPCRA Enforcement Branch, 61 Forsyth Street, Atlanta GA 30303).}

COASTAL AIR CONSULTING INC.

245 West Ohio Ave. • Suite A • Lake Helen, FL 32744
Phone (386) 451-0169 • coastalair123@aol.com

COMPLETE EMISSIONS TESTING SERVICES • PERMITTING ASSISTANCE • CEMS CERTIFICATION • AMBIENT AIR MONITORING

Emissions Test Report

No. 116-036

SHADY HILLS POWER COMPANY

CT'S 1, 2 & 3

COMPLIANCE

Prepared for:

Shady Hills Power Company, LLC.
14240 Merchant Energy Way
Shady Hills, FL 34610

Prepared by:

Coastal Air Consulting, Inc.
1531 Wyngate Dr.
DeLand, FL 32724
(386) 451-0169

Completed On:

March 15, 2012

STATEMENT OF VALIDITY

All testing activities and results represented herein were conducted and obtained in accordance with the approved EPA protocols listed in 40 CFR Parts 60 & 75. The contents have been reviewed and verified to be true and correct at the time of testing.

Stephen C. Webb

Stephen C. Webb

President
Coastal Air Consulting, Inc.
1531 Wyngate Dr.
DeLand, FL 32724
(386) 451-0169

PROJECT STATISTICS

Client:	Shady Hills Power Company, LLC.
Facility:	Shady Hills Power Company, CT'S 1, 2 & 3
Location:	14240 Merchant Energy Way Shady Hills, FL 34610
Type of Process Tested:	170 Megawatt Simple Cycle Combustion Turbine
Test Protocols Performed:	Oxygen-EPA Method 3A Nitrogen Oxides-EPA Method 7E Carbon Monoxide-EPA Method 10 Visible Emissions-EPA Method 9
Source Analyzers:	Horiba - 4000 – # 4123031007 Horiba - 4000 – # 41346760064 Horiba - 4000 – # 41403700065
Testing Firm:	Coastal Air Consulting, Inc. 1531 Wyngate Dr. DeLand, FL 32724
Test Personnel:	Steve Webb Site Supervisor
Test Dates:	March 13,14 & 15, 2012
Client Representative:	Alec Jones
Observers:	None

TABLE OF CONTENTS

1.0 Introduction

Coastal Air Consulting, Inc. (Coastal) was contracted by Shady Hills Power Company, LLC. to determine the compliance for CO and NOx at Shady Hills Power Company CT'S 1, 2 & 3 in Shady Hills, Florida.

The sampling program was conducted on March 13, 14 & 15, 2012. The compliance test was performed by Coastal personnel, with the assistance of personnel assigned by Shady Hills Power Company.

2.0 Test Program Summary

A summary of test results developed by this source sampling program is presented in Tables 1-9.

TABLE 1
CO COMPLIANCE
CT 1

RUN #	LOAD (MW)	CO ppmvd	Allowable ppmvd	CO lb/hr @ ISO	Allowable lb/hr @ ISO
1	167	0.06	12	0.16	42.5
2	165	0.00	12	0.00	42.5
3	163	0.20	12	0.64	42.5
Avg.	**165**	**0.09**	**12**	**0.27**	**42.5**

TABLE 2
NOx COMPLIANCE
CT1

RUN #	NOx ppmvd @ 15 % O2	Allowable ppmvd @ 15 % O2	NOx lb/hr @ ISO	Allowable lb/hr @ ISO
1	7.33	9	42.45	64.1
2	7.50	9	44.04	64.1
3	7.68	9	45.42	64.1
Avg.	**7.50**	**9**	**43.97**	**64.1**

TABLE 3
OPACITY
CT1

Fuel	Opacity %	Allowable %
Gas	0.0	10

TABLE 4
CO COMPLIANCE
CT2

RUN #	LOAD (MW)	CO ppmvd	Allowable ppmvd	CO lb/hr @ ISO	Allowable lb/hr @ ISO
1	163	0.05	12	0.16	42.5
2	160	0.28	12	0.80	42.5
3	160	0.12	12	0.32	42.5
Avg.	**161**	**0.15**	**12**	**0.43**	**42.5**

TABLE 5
NOx COMPLIANCE
CT 2

RUN #	NOx ppmvd @ 15 % O2	Allowable ppmvd @ 15 % O2	NOx lb/hr @ ISO	Allowable lb/hr @ ISO
1	7.80	9	45.77	64.1
2	8.04	9	47.52	64.1
3	8.11	9	46.88	64.1
Avg.	**7.98**	**9**	**46.72**	**64.1**

TABLE 6
OPACITY
CT 2

Fuel	Opacity %	Allowable %
Gas	0.0	10

TABLE 7
CO COMPLIANCE
CT 3

RUN #	LOAD (MW)	CO ppmvd	Allowable ppmvd	CO lb/hr @ ISO	Allowable lb/hr @ ISO
1	161	0.32	12	0.98	42.5
2	157	0.08	12	0.32	42.5
3	158	0.49	12	1.47	42.5
Avg.	**159**	**0.30**	**12**	**0.92**	**42.5**

TABLE 8
NOx COMPLIANCE
CT 3

RUN #	NOx ppmvd @ 15 % O2	Allowable ppmvd @ 15 % O2	NOx lb/hr @ ISO	Allowable lb/hr @ ISO
1	7.00	9	41.98	64.1
2	7.10	9	42.28	64.1
3	7.21	9	43.60	64.1
Avg.	**7.10**	**9**	**42.62**	**64.1**

TABLE 9
OPACITY
CT 3

Fuel	Opacity %	Allowable %
Gas	0.0	10

3.0 Results of Testing

These results indicate that CT'S 1, 2 & 3 were in compliance at the time of testing under normal operating conditions while firing natural gas.

4.0 Description of Source

Shady Hills Power Company CT'S 1, 2 & 3 are 170 megawatt (maximum capacity) simple cycle combustion turbines. The units have dual fuel capabilities and can be fired with natural gas and No. 2 distillate fuel oil. The maximum heat input rates are based on the lower heating value (LHV) of each fuel at ambient conditions of 59 ^{0}F, 60% RH, 100% load, and 14.7 psi pressure shall not exceed 1,704 mmBtu/hr while firing natural gas, nor 1,889 mmBtu/hr when firing No. 2 distillate oil. The maximum heat input rates were corrected for intake temperature at ISO conditions using a performance correction curve for heat consumption.

The flue gas is exhausted through the CT'S stacks. A schematic of the process and stack sampling location is included in Appendix 6 "Figures".

5.0 Sampling Procedures

EPA testing protocols utilized during this test program include the following;

EPA Method 3A	Gas Analysis for CO_2, O_2, Excess Air and Dry Molecular Weight (Instrumental Analyzer Method)
EPA Method 7E	Determination of Nitrogen Oxides Emissions From Stationary Sources (Instrumental Analyzer Method)
EPA Method 9	Visual Determination of The Opacity of Emissions From Stationary Sources
EPA Method 10	Determination of Carbon Monoxide Emissions From Stationary Sources

6.0 Operating Conditions

Shady Hills Power Company personnel monitored operating conditions throughout the duration of the sampling program. The data is included in Appendix 2 "Plant Data".

7.0 Quality Assurance Procedures

Quality assurance procedures followed during these testing activities were applied consistent with the requirements outlined by the EPA methods referenced in 40 CFR Parts 60 & 75. The analyzer calibrations were performed prior to testing. System bias and drift checks were completed before and after each compliance test run utilizing EPA Protocol 1 calibration gases.

APPENDIX 1
REFERENCE DATA
CT 1

SHADY HILLS POWER COMPANY
CT 1

LOAD:	166.6 MW
FUEL:	100 % GAS
DATE:	3/13/2012
RUN:	1
WET BULB:	68 °F
DRY BULB:	75 °F
RH:	68%

AVG. ADJUSTED NOx ppmvd @ 15% O2	7.33
AVG. ADJUSTED CO ppmvd @ 15% O2	0.05
CORRECTED NOx ppmvd	8.56
CORRECTED O2 %	14.01
CORRECTED CO ppmvd	0.06
NOX LB/MBTU	0.0269
CO LB/MBTU	0.0001

CALIBRATION ERROR, SYSTEM BIAS AND SYSTEM DRIFT DATA

SPAN SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	SYSTEM BIAS VALUE	% SPAN	SYSTEM BIAS VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	PPM NOx	11.60	11.70	0.10	0.44	11.70	0.00	11.50	-0.88	-0.88	42CHL-72772-372
		22.80	22.70	-0.10	-0.44						
		0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.44	0.44	
25	% O2	12.20	12.20	0.00	0.00	12.20	0.00	12.20	0.00	0.00	1422B /53
		22.70	22.60	0.10	0.44						
		0.0	0.00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	
50	PPM CO	25.60	25.50	-0.10	-0.2	25.60	0.2	25.30	-0.4	-0.6	48C 68845-361
		49.80	50.00	0.20	0.4						

UNCORRECTED REFERENCE DATA

DATE & TIME	NOx PPM	O2 %	CO PPM	DATE & TIME	NOx PPM	O2 %	CO PPM
3/13/2012 8:50	8.72	14.07	0.03	3/13/2012 9:36	8.55	13.97	0.15
3/13/2012 8:51	8.75	14.07	0.03	3/13/2012 9:37	8.55	13.97	0.13
3/13/2012 8:52	8.83	14.06	0.03	3/13/2012 9:38	8.60	13.97	0.13
3/13/2012 8:53	8.75	14.06	0.00	3/13/2012 9:39	8.55	13.97	0.13
3/13/2012 8:54	8.80	14.06	0.03	3/13/2012 9:40	8.50	13.97	0.08
3/13/2012 8:55	8.72	14.06	0.00	3/13/2012 9:41	8.60	13.97	0.10
3/13/2012 8:56	8.72	14.06	0.05	3/13/2012 9:42	8.60	13.97	0.08
3/13/2012 8:57	8.72	14.06	0.00	3/13/2012 9:43	8.60	13.97	0.10
3/13/2012 8:58	8.70	14.06	0.00	3/13/2012 9:44	8.58	13.97	0.13
3/13/2012 8:59	8.65	14.06	0.00	3/13/2012 9:45	8.55	13.97	0.10
3/13/2012 9:00	8.65	14.07	0.00	3/13/2012 9:46	8.55	13.98	0.10
3/13/2012 9:01	8.67	14.07	0.00	* 3/13/2012 9:57	8.53	13.98	0.13
3/13/2012 9:02	8.67	14.06	0.03	3/13/2012 9:58	8.60	13.98	0.10
3/13/2012 9:03	8.67	14.06	0.00	3/13/2012 9:59	8.55	13.98	0.08
3/13/2012 9:04	8.70	14.06	0.00	3/13/2012 10:00	8.55	13.99	0.08
3/13/2012 9:05	8.72	14.06	0.00	3/13/2012 10:01	8.47	13.99	0.08
3/13/2012 9:06	8.78	14.06	0.00	3/13/2012 10:02	8.42	13.99	0.10
3/13/2012 9:07	8.75	14.06	0.00	3/13/2012 10:03	8.45	13.98	0.08
3/13/2012 9:08	8.75	14.06	0.00	3/13/2012 10:04	8.45	13.98	0.08
3/13/2012 9:09	8.83	14.06	0.00	3/13/2012 10:05	8.37	13.99	0.08
3/13/2012 9:10	8.83	14.06	0.00	3/13/2012 10:06	8.28	13.99	0.08
3/13/2012 9:11	8.85	14.06	0.00	3/13/2012 10:07	8.28	13.99	0.05
* 3/13/2012 9:25	8.42	13.87	0.13	3/13/2012 10:08	8.28	13.98	0.05
3/13/2012 9:26	8.67	13.93	0.18	3/13/2012 10:09	8.40	13.98	0.03
3/13/2012 9:27	8.67	13.94	0.18	3/13/2012 10:10	8.53	13.98	0.00
3/13/2012 9:28	8.62	13.94	0.15	3/13/2012 10:11	8.47	13.98	0.03
3/13/2012 9:29	8.55	13.95	0.18	3/13/2012 10:12	8.37	13.99	0.03
3/13/2012 9:30	8.55	13.96	0.15	3/13/2012 10:13	8.28	13.99	0.03
3/13/2012 9:31	8.55	13.96	0.15	3/13/2012 10:14	8.12	13.99	0.05
3/13/2012 9:32	8.85	13.96	0.15	3/13/2012 10:15	8.12	13.98	0.03
3/13/2012 9:33	8.60	13.96	0.10	3/13/2012 10:16	8.17	13.98	0.03
3/13/2012 9:34	8.50	13.97	0.13	3/13/2012 10:17	8.20	13.98	0.00
3/13/2012 9:35	8.47	13.97	0.13	3/13/2012 10:18	8.15	13.97	0.00

MEAN ANALYZER VALUES

Avg. NOx ppmvd	8.56

* Resumed after calibrations for RATA

SHADY HILLS POWER COMPANY
CT 1

LOAD:	164.5 MW
FUEL:	100 % GAS
DATE:	3/13/2012
RUN:	2
WET BULB:	68 °F
DRY BULB:	79 °F
RH:	58%

AVG. ADJUSTED NOx ppmvd @ 15% O2	7.50
AVG. ADJUSTED CO ppmvd @ 15% O2	0.00
CORRECTED NOx ppmvd	8.84
CORRECTED O2 %	13.95
CORRECTED CO ppmvd	0.00
NOX LB/MBTU	0.0276
CO LB/MBTU	0.0000

CALIBRATION ERROR, SYSTEM BIAS AND SYSTEM DRIFT DATA

SPAN SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	SYSTEM BIAS VALUE	% SPAN	SYSTEM BIAS VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.44	0.44	
25	PPM NOx	11.60	11.70	0.10	0.44	11.50	-0.88	11.50	-0.88	0.00	42CHL-72772-372
		22.80	22.70	-0.10	-0.44						
		0.00	0.00	0.00	0.00	0.10	0.44	0.10	0.44	0.00	
25	% O2	12.20	12.20	0.00	0.00	12.20	0.00	12.20	0.00	0.00	1422B /53
		22.70	22.80	0.10	0.44						
		0.00	0.00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	
50	PPM CO	25.60	25.50	-0.10	-0.2	25.30	-0.4	25.10	-0.8	-0.4	48C 68845-361
		49.80	50.00	0.20	0.4						

UNCORRECTED REFERENCE DATA

DATE & TIME	NOx PPM	O2 %	CO PPM	DATE & TIME	NOx PPM	O2 %	CO PPM
3/13/2012 10:30	8.67	13.88	0.05	3/13/2012 11:13	8.85	13.94	0.00
3/13/2012 10:31	8.72	13.90	0.03	3/13/2012 11:14	8.85	13.94	0.00
3/13/2012 10:32	8.72	13.91	0.03	3/13/2012 11:15	8.85	13.94	0.00
3/13/2012 10:33	8.65	13.92	0.03	3/13/2012 11:16	8.80	13.94	0.00
3/13/2012 10:34	8.65	13.93	0.03	3/13/2012 11:17	8.75	13.94	0.00
3/13/2012 10:35	8.70	13.93	0.03	3/13/2012 11:18	8.75	13.94	0.00
3/13/2012 10:36	8.75	13.93	0.00	3/13/2012 11:19	8.75	13.94	0.00
3/13/2012 10:37	8.75	13.93	0.00	3/13/2012 11:20	8.83	13.94	0.00
3/13/2012 10:38	8.78	13.94	0.00	3/13/2012 11:21	8.75	13.94	0.00
3/13/2012 10:39	8.78	13.94	0.00	3/13/2012 11:22	8.75	13.94	0.00
3/13/2012 10:40	8.85	13.94	0.00	3/13/2012 11:23	8.75	13.94	0.00
3/13/2012 10:41	8.85	13.95	0.00	3/13/2012 11:35	8.83	13.93	0.00
3/13/2012 10:42	8.87	13.94	0.00	3/13/2012 11:36	8.83	13.94	0.00
3/13/2012 10:43	8.85	13.94	0.00	3/13/2012 11:37	8.83	13.94	0.00
3/13/2012 10:44	8.83	13.94	0.00	3/13/2012 11:38	8.85	13.94	0.00
3/13/2012 10:45	8.78	13.94	0.00	3/13/2012 11:39	8.78	13.94	0.00
3/13/2012 10:46	8.85	13.94	0.00	3/13/2012 11:40	8.75	13.94	0.00
3/13/2012 10:47	8.83	13.94	0.00	3/13/2012 11:41	8.75	13.94	0.00
3/13/2012 10:48	8.85	13.94	0.00	3/13/2012 11:42	8.75	13.93	0.00
3/13/2012 10:49	8.78	13.94	0.00	3/13/2012 11:43	8.75	13.93	0.00
3/13/2012 10:50	8.80	13.94	0.03	3/13/2012 11:44	8.78	13.93	0.00
3/13/2012 10:51	8.85	13.94	0.00	3/13/2012 11:45	8.75	13.93	0.00
3/13/2012 11:02	8.87	13.98	0.00	3/13/2012 11:46	8.80	13.92	0.00
3/13/2012 11:03	8.75	13.96	0.00	3/13/2012 11:47	8.85	13.92	0.00
3/13/2012 11:04	8.75	13.95	0.00	3/13/2012 11:48	8.83	13.93	0.00
3/13/2012 11:05	8.75	13.94	0.00	3/13/2012 11:49	8.75	13.93	0.00
3/13/2012 11:06	8.72	13.94	0.00	3/13/2012 11:50	8.75	13.93	0.00
3/13/2012 11:07	8.72	13.94	0.00	3/13/2012 11:51	8.75	13.93	0.00
3/13/2012 11:08	8.72	13.94	0.00	3/13/2012 11:52	8.75	13.93	0.00
3/13/2012 11:09	8.62	13.94	0.00	3/13/2012 11:53	8.72	13.93	0.00
3/13/2012 11:10	8.70	13.94	0.00	3/13/2012 11:54	8.70	13.93	0.00
3/13/2012 11:11	8.80	13.94	0.00	3/13/2012 11:55	8.87	13.93	0.00
3/13/2012 11:12	8.80	13.94	0.00	3/13/2012 11:56	8.75	13.93	0.00

MEAN ANALYZER VALUES

Avg. NOx ppmvd	8.77

SHADY HILLS POWER COMPANY

CT 1

LOAD:	162.6 MW
FUEL:	100 % GAS
DATE:	3/13/2012
RUN:	3
WET BULB:	70 °F
DRY BULB:	84 °F
RH:	49%

AVG. ADJUSTED NOx ppmvd @ 15% O2	7.68
AVG. ADJUSTED CO ppmvd @ 15% O2	0.17
CORRECTED NOx ppmvd	8.96
CORRECTED O2 %	14.02
CORRECTED CO ppmvd	0.20
NOX LB/MBTU	0.0283
CO LB/MBTU	0.0004

CALIBRATION ERROR, SYSTEM BIAS AND SYSTEM DRIFT DATA

SPAN SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	SYSTEM BIAS VALUE	% SPAN	SYSTEM BIAS VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.00	0.00	0.00	0.10	0.44	0.20	0.88	0.44	
25	PPM NOx	11.60	11.70	0.10	0.44	11.50	-0.88	11.70	0.00	0.88	42CHL-72772-372
		22.80	22.70	-0.10	-0.44						
		0.00	0.00	0.00	0.00	0.10	0.44	0.10	0.44	0.00	
25	% O2	12.20	12.20	0.00	0.00	12.20	0.00	12.20	0.00	0.00	1422B /53
		22.70	22.80	0.10	0.44						
		0.00	0.00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	
50	PPM CO	25.60	25.50	-0.10	-0.2	25.10	-0.8	25.10	-0.8	0.0	48C 68845-361
		49.80	50.00	0.20	0.4						

UNCORRECTED REFERENCE DATA

DATE & TIME	NOx PPM	O2 %	CO PPM	DATE & TIME	NOx PPM	O2 %	CO PPM
3/13/2012 12:11	8.85	13.98	0.23	3/13/2012 12:53	8.97	14.00	0.23
3/13/2012 12:12	8.85	13.99	0.23	3/13/2012 12:54	8.97	14.01	0.23
3/13/2012 12:13	8.97	13.99	0.23	3/13/2012 12:55	8.97	14.01	0.18
3/13/2012 12:14	9.03	13.99	0.23	3/13/2012 12:56	9.00	14.01	0.20
3/13/2012 12:15	9.08	14.01	0.28	3/13/2012 12:57	9.00	14.00	0.18
3/13/2012 12:16	9.15	14.01	0.25	3/13/2012 12:58	8.97	14.01	0.18
3/13/2012 12:17	9.05	14.01	0.28	3/13/2012 12:59	8.95	14.01	0.20
3/13/2012 12:18	9.05	14.01	0.25	3/13/2012 13:00	8.85	14.01	0.15
3/13/2012 12:19	9.05	14.01	0.25	3/13/2012 13:01	8.85	14.00	0.18
3/13/2012 12:20	9.05	14.02	0.30	3/13/2012 13:02	8.92	13.99	0.20
3/13/2012 12:21	9.05	14.02	0.33	3/13/2012 13:03	8.95	13.99	0.18
3/13/2012 12:22	9.05	14.02	0.25	3/13/2012 13:13	8.87	14.01	0.13
3/13/2012 12:23	9.03	14.02	0.25	3/13/2012 13:14	8.95	14.00	0.10
3/13/2012 12:24	9.05	14.02	0.30	3/13/2012 13:15	8.95	14.01	0.13
3/13/2012 12:25	9.05	14.01	0.23	3/13/2012 13:16	8.85	14.01	0.13
3/13/2012 12:26	9.05	14.01	0.23	3/13/2012 13:17	8.92	14.01	0.10
3/13/2012 12:27	9.12	14.02	0.28	3/13/2012 13:18	8.90	14.01	0.10
3/13/2012 12:28	9.12	14.02	0.30	3/13/2012 13:19	8.95	14.01	0.10
3/13/2012 12:29	9.15	14.02	0.25	3/13/2012 13:20	8.95	14.01	0.08
3/13/2012 12:30	9.12	14.02	0.25	3/13/2012 13:21	8.95	14.00	0.15
3/13/2012 12:31	9.12	14.02	0.28	3/13/2012 13:22	8.95	14.00	0.18
3/13/2012 12:32	9.10	14.02	0.28	3/13/2012 13:23	8.95	14.00	0.13
3/13/2012 12:42	9.10	14.01	0.23	3/13/2012 13:24	8.95	14.00	0.13
3/13/2012 12:43	9.12	14.01	0.23	3/13/2012 13:25	8.95	14.00	0.15
3/13/2012 12:44	9.15	14.01	0.20	3/13/2012 13:26	8.95	14.00	0.10
3/13/2012 12:45	9.08	14.01	0.20	3/13/2012 13:27	8.95	14.00	0.13
3/13/2012 12:46	9.05	14.01	0.25	3/13/2012 13:28	8.95	13.99	0.10
3/13/2012 12:47	9.05	14.01	0.18	3/13/2012 13:29	8.95	13.99	0.13
3/13/2012 12:48	9.05	14.01	0.18	3/13/2012 13:30	8.87	13.99	0.13
3/13/2012 12:49	9.05	14.01	0.20	3/13/2012 13:31	8.85	13.99	0.13
3/13/2012 12:50	9.00	14.01	0.18	3/13/2012 13:32	8.85	13.98	0.13
3/13/2012 12:51	9.00	14.01	0.18	3/13/2012 13:33	8.87	13.99	0.13
3/13/2012 12:52	9.03	14.01	0.23	3/13/2012 13:34	8.95	13.99	0.18

MEAN ANALYZER VALUES

Avg. NOx ppmvd	8.99

12 POINT NOX TRAVERSE

Port	Point	Nox ppm Average	Nox ppm difference	O2 % Average	O2 % difference	Date & Time	NOx PPM	O2 %
N	1	9.01	-0.14	14.03	0.00	3/13/2012 7:45	9.05	14.03
						3/13/2012 7:46	8.95	14.03
						3/13/2012 7:47	9.03	14.03
						3/13/2012 7:48	9.03	14.03
	2	9.15	0.00	14.04	0.01	3/13/2012 7:49	9.05	14.04
						3/13/2012 7:50	9.20	14.04
						3/13/2012 7:51	9.15	14.04
						3/13/2012 7:52	9.20	14.04
	3	9.24	0.09	14.05	0.02	3/13/2012 7:53	9.28	14.04
						3/13/2012 7:54	9.22	14.05
						3/13/2012 7:55	9.22	14.05
						3/13/2012 7:56	9.22	14.05
W	1	9.36	0.21	14.06	0.03	3/13/2012 8:00	9.40	14.06
						3/13/2012 8:01	9.40	14.06
						3/13/2012 8:02	9.35	14.06
						3/13/2012 8:03	9.28	14.06
	2	9.27	0.13	14.06	0.04	3/13/2012 8:04	9.30	14.06
						3/13/2012 8:05	9.25	14.06
						3/13/2012 8:06	9.27	14.06
						3/13/2012 8:07	9.27	14.06
	3	9.33	0.18	14.06	0.04	3/13/2012 8:08	9.35	14.06
						3/13/2012 8:09	9.40	14.06
						3/13/2012 8:10	9.23	14.06
						3/13/2012 8:11	9.35	14.06
S	1	9.32	0.18	13.99	-0.04	3/13/2012 8:15	9.33	14.01
						3/13/2012 8:16	9.28	13.98
						3/13/2012 8:17	9.35	13.98
						3/13/2012 8:18	9.35	13.98
	2	9.29	0.14	13.98	-0.04	3/13/2012 8:19	9.35	13.98
						3/13/2012 8:20	9.33	13.98
						3/13/2012 8:21	9.25	13.98
						3/13/2012 8:22	9.25	13.98
	3	9.26	0.11	13.98	-0.04	3/13/2012 8:23	9.33	13.98
						3/13/2012 8:24	9.23	13.98
						3/13/2012 8:25	9.23	13.98
						3/13/2012 8:26	9.25	13.99
E	1	9.01	-0.14	14.01	-0.02	3/13/2012 8:34	9.02	14.01
						3/13/2012 8:35	9.02	14.01
						3/13/2012 8:36	9.03	14.01
						3/13/2012 8:37	9.00	14.01
	2	8.67	-0.47	14.00	-0.02	3/13/2012 8:41	8.48	14.00
						3/13/2012 8:40	9.00	14.01
						3/13/2012 8:41	8.48	14.00
						3/13/2012 8:42	8.75	14.01
	3	8.87	-0.28	14.04	0.02	3/13/2012 8:43	8.86	14.00
						3/13/2012 8:44	8.75	14.07
						3/13/2012 8:45	8.95	14.02
						3/13/2012 8:46	8.92	14.09
						Mean Average	**9.15**	**14.03**

Coastal Air Consulting, Inc.

(386) 451-0169

VISIBLE EMISSION TEST

Method Used (Circle One): Method 9 | 203A | 203B | Report

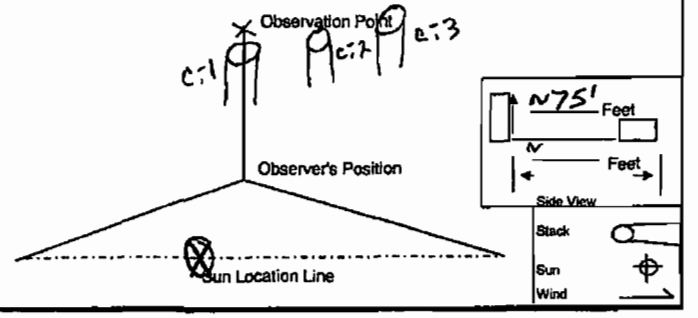
Company Name	Shady Hills Power Company
Facility Name	Shady Hills Plant
Street Address	14240 Merchant Energy Way
City	Shady Hills FL
Zip	34610
Phone No.	(727) 856-8608

Process: Combustion Turbine Unit # C-1	Operating Mode: Base
Control Equipment: DLN	Operating Mode: Normal on

Describe Emission Point: Round Stack Western most of 3	
Ht of Emis. Point: ~75'	Ht Rel to Observer: ~70'
Distance to Emis. Pt.: ~800'	Direction to Emis. Pt (Degrees): ~300°
Vehicle Angle to Obs.: <180°	Direction to Obs. Pt. (Degrees): ~300°
Distance and Direction to Obs. Pt from Emission Pt: ~1' above	
Describe Emissions: None	
Emission Color: None	Water Droplet Plume Attached / Detached: None X
Describe Plume Background: Sky	
Background Color: Blue	Sky Conditions: Clear
Wind Speed: ~6-9 MPH	Wind Direction: East
Ambient Temp.: 79°F	Wet Bulb Temp.: 68°F; % RH: 50%

Source Layout Sketch

Draw North Arrow: ☐ IN ☐ MN



Latitude W	Longitude N	Declination

Comments: * Resumed after RATA Calibrations

Observation Date: 3-13-12 | Start Time: 1035 | Stop Time: 1156

Min / Sec	0	15	30	45	Min / Sec	0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	*40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
*21	0	0	0	0	51	0	0	0	0
*22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

Number of Readings Above: 10 % were 0	Average Opacity for Highest 6 Min Period: 0
Range of opacity Readings: Min 0 Max 0	Average Opacity for 2nd Highest 6 Min Period: 0
Observers Name (Print): Steve Webb	
Observers Signature: Stephen C. Webb	Date: 3-13-12
Organization: Coastal Air Consulting, Inc.	
Certified By: Whitlow Enterprises	Date: 1/13/12

REFERENCE DATA
CT 2

SHADY HILLS POWER COMPANY
CT 2

LOAD:	162.5 MW
FUEL:	100 % GAS
DATE:	3/14/2012
RUN:	1
WET BULB:	69 °F
DRY BULB:	83 °F
RH:	50%

AVG. ADJUSTED NOx ppmvd @ 15% O2	7.80
AVG. ADJUSTED CO ppmvd @ 15% O2	0.04
CORRECTED NOx ppmvd	9.09
CORRECTED O2 %	14.03
CORRECTED CO ppmvd	0.05
NOX LB/MBTU	0.0287
CO LB/MBTU	0.0001

CALIBRATION ERROR, SYSTEM BIAS AND SYSTEM DRIFT DATA

SPAN SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	SYSTEM BIAS VALUE	% SPAN	SYSTEM BIAS VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.44	0.44	
25	PPM NOx	11.60	11.50	-0.10	-0.44	11.60	0.44	11.40	-0.44	-0.88	42CHL-72772-372
		22.80	22.80	0.00	0.00						
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	% O2	12.20	12.20	0.00	0.00	12.20	0.00	12.20	0.00	0.00	1422B /53
		22.70	22.70	0.00	0.00						
		0.0	0.00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	
50	PPM CO	25.80	25.40	-0.20	-0.4	25.30	-0.2	25.40	0.0	0.2	48C 68845-361
		49.80	49.90	0.10	0.2						

UNCORRECTED REFERENCE DATA

DATE & TIME	NOx PPM	O2 %	CO PPM	DATE & TIME	NOx PPM	O2 %	CO PPM
3/14/2012 10:30	9.08	14.03	0.15	3/14/2012 11:16	9.10	14.03	0.05
3/14/2012 10:31	9.12	14.03	0.10	3/14/2012 11:17	9.10	14.03	0.03
3/14/2012 10:32	9.12	14.03	0.15	3/14/2012 11:18	9.05	14.03	0.03
3/14/2012 10:33	9.15	14.03	0.13	3/14/2012 11:19	9.10	14.03	0.03
3/14/2012 10:34	9.15	14.03	0.15	3/14/2012 11:20	9.05	14.03	0.00
3/14/2012 10:35	9.20	14.03	0.15	3/14/2012 11:21	9.03	14.03	0.03
3/14/2012 10:36	9.20	14.03	0.15	3/14/2012 11:22	9.05	14.03	0.03
3/14/2012 10:37	9.12	14.03	0.13	3/14/2012 11:23	9.05	14.03	0.03
3/14/2012 10:38	9.10	14.03	0.10	3/14/2012 11:24	9.05	14.03	0.03
3/14/2012 10:39	9.10	14.03	0.15	3/14/2012 11:25	9.03	14.03	0.03
3/14/2012 10:40	9.12	14.03	0.10	3/14/2012 11:26	9.03	14.03	0.03
3/14/2012 10:41	9.10	14.03	0.08	* 3/14/2012 11:38	9.00	14.03	0.03
3/14/2012 10:42	9.10	14.03	0.10	3/14/2012 11:39	8.95	14.03	0.00
3/14/2012 10:43	9.10	14.03	0.05	3/14/2012 11:40	8.92	14.03	0.00
3/14/2012 10:44	9.05	14.03	0.13	3/14/2012 11:41	8.97	14.03	0.00
3/14/2012 10:45	9.05	14.03	0.10	3/14/2012 11:42	9.03	14.03	0.00
3/14/2012 10:46	9.03	14.03	0.10	3/14/2012 11:43	8.97	14.03	0.00
3/14/2012 10:47	9.08	14.03	0.05	3/14/2012 11:44	9.00	14.03	0.00
3/14/2012 10:48	9.05	14.03	0.03	3/14/2012 11:45	8.97	14.03	0.00
3/14/2012 10:49	9.10	14.03	0.05	3/14/2012 11:46	8.95	14.03	0.00
3/14/2012 10:50	9.03	14.03	0.08	3/14/2012 11:47	8.95	14.03	0.00
3/14/2012 10:51	9.05	14.03	0.18	3/14/2012 11:48	8.90	14.03	0.00
* 3/14/2012 11:05	9.03	14.03	0.05	3/14/2012 11:49	8.90	14.03	0.00
3/14/2012 11:06	9.05	14.03	0.00	3/14/2012 11:50	8.90	14.03	0.00
3/14/2012 11:07	9.03	14.03	0.05	3/14/2012 11:51	8.87	14.03	0.00
3/14/2012 11:08	9.03	14.03	0.03	3/14/2012 11:52	8.87	14.03	0.00
3/14/2012 11:09	9.05	14.03	0.05	3/14/2012 11:53	8.83	14.03	0.00
3/14/2012 11:10	9.03	14.03	0.05	3/14/2012 11:54	8.85	14.03	0.00
3/14/2012 11:11	9.03	14.03	0.10	3/14/2012 11:55	8.85	14.03	0.00
3/14/2012 11:12	9.00	14.03	0.08	3/14/2012 11:56	8.83	14.03	0.00
3/14/2012 11:13	9.05	14.03	0.05	3/14/2012 11:57	8.85	14.03	0.00
3/14/2012 11:14	9.12	14.03	0.03	3/14/2012 11:58	8.83	14.03	0.00
3/14/2012 11:15	9.05	14.03	0.03	3/14/2012 11:59	8.85	14.03	0.00

MEAN ANALYZER VALUES

Avg. NOx ppmvd	9.02

* Resumed after calibrations for RATA

SHADY HILLS POWER COMPANY
CT 2

LOAD:	160.3 MW
FUEL:	100 % GAS
DATE:	3/14/2012
RUN:	2
WET BULB:	74 °F
DRY BULB:	84 °F
RH:	62%

AVG. ADJUSTED NOx ppmvd @ 15% O2	8.04
AVG. ADJUSTED CO ppmvd @ 15% O2	0.24
CORRECTED NOx ppmvd	9.36
CORRECTED O2 %	14.04
CORRECTED CO ppmvd	0.28
NOX LB/MBTU	0.0296
CO LB/MBTU	0.0005

CALIBRATION ERROR, SYSTEM BIAS AND SYSTEM DRIFT DATA

SPAN SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	SYSTEM BIAS VALUE	% SPAN	SYSTEM BIAS VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.00	0.00	0.00	0.10	0.44	0.10	0.44	0.00	
25	PPM NOx	11.60	11.50	-0.10	-0.44	11.40	-0.44	11.50	0.00	0.44	42CHL-72772-372
		22.80	22.80	0.00	0.00						
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	% O2	12.20	12.20	0.00	0.00	12.20	0.00	12.20	0.00	0.00	1422B /53
		22.70	22.70	0.00	0.00						
		0.00	0.00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	
50	PPM CO	25.60	25.40	-0.20	-0.4	25.40	0.0	25.50	0.2	0.2	48C 68845-361
		49.80	49.90	0.10	0.2						

UNCORRECTED REFERENCE DATA

DATE & TIME	NOx PPM	O2 %	CO PPM	DATE & TIME	NOx PPM	O2 %	CO PPM
3/14/2012 12:15	9.42	14.03	0.35	3/14/2012 12:57	9.28	14.04	0.25
3/14/2012 12:16	9.40	14.04	0.35	3/14/2012 12:58	9.28	14.04	0.28
3/14/2012 12:17	9.35	14.04	0.33	3/14/2012 12:59	9.25	14.04	0.23
3/14/2012 12:18	9.37	14.04	0.35	3/14/2012 13:00	9.22	14.04	0.28
3/14/2012 12:19	9.37	14.04	0.33	3/14/2012 13:01	9.25	14.04	0.30
3/14/2012 12:20	9.28	14.05	0.35	3/14/2012 13:02	9.25	14.04	0.30
3/14/2012 12:21	9.33	14.05	0.35	3/14/2012 13:03	9.25	14.04	0.28
3/14/2012 12:22	9.28	14.05	0.33	3/14/2012 13:04	9.28	14.03	0.28
3/14/2012 12:23	9.33	14.05	0.33	3/14/2012 13:05	9.28	14.03	0.25
3/14/2012 12:24	9.30	14.05	0.33	3/14/2012 13:06	9.25	14.03	0.25
3/14/2012 12:25	9.25	14.05	0.30	3/14/2012 13:07	9.20	14.04	0.25
3/14/2012 12:26	9.25	14.06	0.30	3/14/2012 13:17	9.25	14.02	0.23
3/14/2012 12:27	9.28	14.05	0.28	3/14/2012 13:18	9.22	14.03	0.23
3/14/2012 12:28	9.25	14.05	0.30	3/14/2012 13:19	9.22	14.03	0.23
3/14/2012 12:29	9.25	14.05	0.30	3/14/2012 13:20	9.15	14.03	0.25
3/14/2012 12:30	9.25	14.05	0.28	3/14/2012 13:21	9.22	14.03	0.23
3/14/2012 12:31	9.28	14.05	0.33	3/14/2012 13:22	9.20	14.03	0.23
3/14/2012 12:32	9.28	14.05	0.30	3/14/2012 13:23	9.22	14.03	0.20
3/14/2012 12:33	9.25	14.05	0.28	3/14/2012 13:24	9.22	14.02	0.20
3/14/2012 12:34	9.25	14.05	0.30	3/14/2012 13:25	9.22	14.03	0.33
3/14/2012 12:35	9.28	14.05	0.33	3/14/2012 13:26	9.22	14.03	0.25
3/14/2012 12:36	9.28	14.05	0.30	3/14/2012 13:27	9.17	14.03	0.25
3/14/2012 12:46	9.30	14.04	0.25	3/14/2012 13:28	9.20	14.03	0.20
3/14/2012 12:47	9.22	14.04	0.30	3/14/2012 13:29	9.20	14.03	0.23
3/14/2012 12:48	9.25	14.04	0.28	3/14/2012 13:30	9.20	14.02	0.25
3/14/2012 12:49	9.28	14.04	0.28	3/14/2012 13:31	9.20	14.03	0.18
3/14/2012 12:50	9.28	14.04	0.28	3/14/2012 13:32	9.22	14.03	0.20
3/14/2012 12:51	9.25	14.04	0.28	3/14/2012 13:33	9.20	14.02	0.25
3/14/2012 12:52	9.25	14.04	0.28	3/14/2012 13:34	9.22	14.02	0.25
3/14/2012 12:53	9.22	14.04	0.33	3/14/2012 13:35	9.17	14.02	0.23
3/14/2012 12:54	9.22	14.04	0.33	3/14/2012 13:36	9.25	14.02	0.23
3/14/2012 12:55	9.20	14.04	0.30	3/14/2012 13:37	9.25	14.01	0.23
3/14/2012 12:56	9.28	14.04	0.30	3/14/2012 13:38	9.22	14.02	0.23

MEAN ANALYZER VALUES

Avg. NOx ppmvd	9.25

SHADY HILLS POWER COMPANY
CT 2

LOAD:	159.5 MW
FUEL:	100 % GAS
DATE:	3/14/2012
RUN:	3
WET BULB:	70 °F
DRY BULB:	84 °F
RH:	48%

AVG. ADJUSTED NOx ppmvd @ 15% O2	8.11
AVG. ADJUSTED CO ppmvd @ 15% O2	0.10
CORRECTED NOx ppmvd	9.48
CORRECTED O2 %	14.01
CORRECTED CO ppmvd	0.12
NOX LB/MBTU	0.0298
CO LB/MBTU	0.0002

CALIBRATION ERROR, SYSTEM BIAS AND SYSTEM DRIFT DATA

SPAN SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	SYSTEM BIAS VALUE	% SPAN	SYSTEM BIAS VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.00	0.00	0.00	0.10	0.44	0.10	0.44	0.00	
25	PPM NOx	11.60	11.50	-0.10	-0.44	11.50	0.00	11.40	-0.44	-0.44	42CHL-72772-372
		22.80	22.80	0.00	0.00						
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	% O2	12.20	12.20	0.00	0.00	12.20	0.00	12.20	0.00	0.00	1422B /53
		22.70	22.70	0.00	0.00						
		0.00	0.00	0.00	0.0	0.00	0.0	0.10	0.2	0.2	
50	PPM CO	25.60	25.40	-0.20	-0.4	25.50	0.2	25.80	1.0	0.8	48C 68845-361
		48.80	48.80	0.10	0.2						

UNCORRECTED REFERENCE DATA

DATE & TIME	NOx PPM	O2 %	CO PPM	DATE & TIME	NOx PPM	O2 %	CO PPM
3/14/2012 13:48	9.75	13.96	0.20	3/14/2012 14:31	9.35	14.01	0.18
3/14/2012 13:49	9.67	13.97	0.25	3/14/2012 14:32	9.35	14.01	0.20
3/14/2012 13:50	9.60	13.98	0.18	3/14/2012 14:33	9.35	14.01	0.20
3/14/2012 13:51	9.55	13.99	0.20	3/14/2012 14:34	9.35	14.01	0.15
3/14/2012 13:52	9.55	13.99	0.23	3/14/2012 14:35	9.35	14.01	0.15
3/14/2012 13:53	9.42	13.99	0.23	3/14/2012 14:36	9.37	14.01	0.15
3/14/2012 13:54	9.47	14.00	0.13	3/14/2012 14:37	9.33	14.01	0.15
3/14/2012 13:55	9.45	14.01	0.15	3/14/2012 14:38	9.35	14.01	0.15
3/14/2012 13:56	9.45	14.01	0.18	3/14/2012 14:39	9.35	14.01	0.13
3/14/2012 13:57	9.45	14.01	0.23	3/14/2012 14:40	9.37	14.01	0.13
3/14/2012 13:58	9.47	14.01	0.13	3/14/2012 14:41	9.33	14.01	0.10
3/14/2012 13:59	9.40	14.01	0.18	3/14/2012 14:51	9.30	14.00	0.13
3/14/2012 14:00	9.42	14.01	0.15	3/14/2012 14:52	9.28	14.00	0.13
3/14/2012 14:01	9.37	14.02	0.18	3/14/2012 14:53	9.30	14.00	0.13
3/14/2012 14:02	9.37	14.02	0.20	3/14/2012 14:54	9.35	14.01	0.13
3/14/2012 14:03	9.35	14.02	0.18	3/14/2012 14:55	9.33	14.01	0.13
3/14/2012 14:04	9.37	14.01	0.15	3/14/2012 14:56	9.35	14.01	0.15
3/14/2012 14:05	9.40	14.02	0.20	3/14/2012 14:57	9.35	14.01	0.15
3/14/2012 14:06	9.35	14.02	0.20	3/14/2012 14:58	9.35	14.01	0.13
3/14/2012 14:07	9.37	14.02	0.20	3/14/2012 14:59	9.40	14.01	0.15
3/14/2012 14:08	9.33	14.02	0.18	3/14/2012 15:00	9.30	14.01	0.15
3/14/2012 14:09	9.35	14.02	0.20	3/14/2012 15:01	9.30	14.01	0.15
3/14/2012 14:20	9.35	14.01	0.20	3/14/2012 15:02	9.30	14.01	0.13
3/14/2012 14:21	9.35	14.01	0.13	3/14/2012 15:03	9.28	14.01	0.18
3/14/2012 14:22	9.35	14.01	0.23	3/14/2012 15:04	9.25	14.01	0.15
3/14/2012 14:23	9.33	14.01	0.23	3/14/2012 15:05	9.28	14.01	0.16
3/14/2012 14:24	9.30	14.01	0.20	3/14/2012 15:06	9.30	14.01	0.13
3/14/2012 14:25	9.35	14.01	0.23	3/14/2012 15:07	9.33	14.01	0.13
3/14/2012 14:26	9.37	14.01	0.15	3/14/2012 15:08	9.35	14.01	0.15
3/14/2012 14:27	9.33	14.01	0.23	3/14/2012 15:09	9.28	14.01	0.15
3/14/2012 14:28	9.35	14.01	0.20	3/14/2012 15:10	9.28	14.01	0.13
3/14/2012 14:29	9.42	14.01	0.18	3/14/2012 15:11	9.42	14.00	0.18
3/14/2012 14:30	9.37	14.01	0.18	3/14/2012 15:12	9.42	14.01	0.13

MEAN ANALYZER VALUES

Avg. NOx ppmvd	9.37

12 POINT NOX TRAVERSE

Port	Point	Nox ppm Average	Nox ppm difference	O2 % Average	O2 % difference	Date & Time	NOx PPM	O2 %
N	1	9.03	-0.14	13.97	-0.07	3/14/2012 9:30	9.10	13.94
						3/14/2012 9:31	9.02	13.99
						3/14/2012 9:32	9.03	13.96
						3/14/2012 9:33	8.95	13.98
	2	9.04	-0.13	13.99	-0.05	3/14/2012 9:34	8.95	13.99
						3/14/2012 9:35	9.08	13.98
						3/14/2012 9:36	9.08	13.99
						3/14/2012 9:37	9.05	13.99
	3	9.09	-0.07	14.00	-0.03	3/14/2012 9:38	9.05	14.00
						3/14/2012 9:39	9.05	13.99
						3/14/2012 9:40	9.05	14.00
						3/14/2012 9:41	9.22	14.01
W	1	9.21	0.04	14.05	0.02	3/14/2012 9:45	9.25	14.01
						3/14/2012 9:46	9.20	14.03
						3/14/2012 9:47	9.17	14.14
						3/14/2012 9:48	9.22	14.03
	2	9.21	0.04	14.03	0.00	3/14/2012 9:49	9.25	14.03
						3/14/2012 9:50	9.28	14.04
						3/14/2012 9:51	9.20	14.03
						3/14/2012 9:52	9.10	14.03
	3	9.11	-0.06	14.03	0.00	3/14/2012 9:53	9.08	14.03
						3/14/2012 9:54	9.08	14.04
						3/14/2012 9:55	9.12	14.03
						3/14/2012 9:56	9.15	14.03
S	1	9.27	0.10	14.00	-0.03	3/14/2012 10:00	9.08	14.03
						3/14/2012 10:01	9.55	13.99
						3/14/2012 10:02	9.28	14.00
						3/14/2012 10:03	9.17	13.98
	2	9.23	0.06	13.98	-0.05	3/14/2012 10:04	9.15	13.98
						3/14/2012 10:05	9.25	13.98
						3/14/2012 10:06	9.25	13.99
						3/14/2012 10:07	9.27	13.99
	3	9.29	0.13	14.00	-0.04	3/14/2012 10:08	9.27	13.99
						3/14/2012 10:09	9.27	13.99
						3/14/2012 10:10	9.33	14.00
						3/14/2012 10:11	9.30	14.00
E	1	9.23	0.06	14.28	0.25	3/14/2012 10:15	9.17	14.01
						3/14/2012 10:16	9.16	14.96
						3/14/2012 10:17	9.25	14.14
						3/14/2012 10:18	9.35	14.04
	2	9.21	0.04	14.03	0.00	3/14/2012 10:19	9.25	14.03
						3/14/2012 10:20	9.28	14.04
						3/14/2012 10:21	9.20	14.03
						3/14/2012 10:22	9.10	14.03
	3	9.11	-0.06	14.03	0.00	3/14/2012 10:23	9.08	14.03
						3/14/2012 10:24	9.08	14.04
						3/14/2012 10:25	9.12	14.03
						3/14/2012 10:26	9.15	14.03
						Mean Average	**9.17**	**14.03**

Coastal Air Consulting, Inc.

(386) 451-0169

VISIBLE EMISSION TEST

Method Used (Circle One): Method 9 | 203A | 203B | Report

Company Name	Shady Hills Power Company
Facility Name	Shady Hills Plant
Street Address	14240 Merchant Energy Way
City	Shady Hills FL
Zip	34610
Phone No.	(727) 856-8608

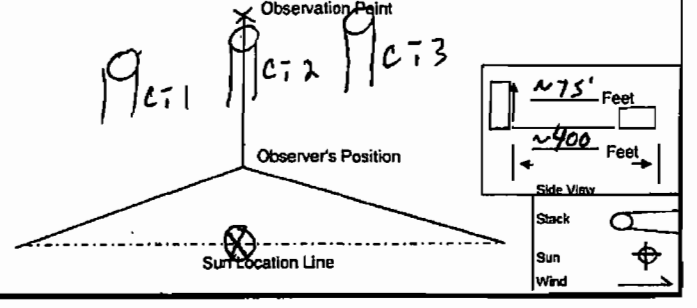
Process	Combustion Turbine	Unit # CT 2	Operating Mode Base
Control Equipment	DLN		Operating Mode Normal ops

Describe Emission Point	Round Stack middle of 3
Ht of Emis. Point	~75'
Ht Rel to Observer	~70'
Distance to Emis. Pt.	~400'
Direction to Emis. Pt (Degrees)	~309°
Vertical Angle to Obs.	∠180°
Direction to Obs. Pt. (Degrees)	~309°
Distance and Direction to Obs. Pt from Emission Pt	~1' above
Describe Emissions	None
Emission Color	NA
Water Droplet Plume	Attached Detached None X

Describe Plume Background	Sky	
Background Color	Blue	Sky Conditions Clear
Wind Speed	5-8 MPH	Wind Direction ENE
Ambient Temp.	83°F	Wet Bulb Temp. 69°F / % RH 50

Source Layout Sketch

Draw North Arrow ☐ IN ☐ MN



Latitude 82° 33' 24" W	Longitude 28° 21' 55" N	Declination

Comments: * Resumed after RATA calibrations

Observation Date	Start Time	Stop Time
3-14-12	1030	1159

Min / Sec	0	15	30	45	Min / Sec	0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	*41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
*21	0	0	0	0	61	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

Number of Readings Above 10 % were 0	Average Opacity for Highest 6 Min Period 0
Range of opacity Readings Min 0 Max 0	Average Opacity for 2nd Highest 6 Min Period 0
Observers Name (Print)	Steve Webb
Observers Signature	Stephen C. Webb — Date 3-14-12
Organization	Coastal Air Consulting, Inc.
Certified By	Whitlow Enterprises — Date 1/13/12

REFERENCE DATA
CT 3

SHADY HILLS POWER COMPANY
CT 3

LOAD:	160.8 MW
FUEL:	100 % GAS
DATE:	3/15/2012
RUN:	1
WET BULB:	70 °F
DRY BULB:	80 °F
RH:	60%

AVG. ADJUSTED NOx ppmvd @ 15% O2	7.00
AVG. ADJUSTED CO ppmvd @ 15% O2	0.28
CORRECTED NOx ppmvd	8.19
CORRECTED O2 %	14.00
CORRECTED CO ppmvd	0.32
NOX LB/MBTU	0.0257
CO LB/MBTU	0.0006

CALIBRATION ERROR, SYSTEM BIAS AND SYSTEM DRIFT DATA

SPAN SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	SYSTEM BIAS VALUE	% SPAN	SYSTEM BIAS VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.20	0.20	0.87	0.20	0.00	0.20	0.00	0.00	
25	PPM NOx	11.60	11.60	0.00	0.00	11.60	0.00	11.60	0.00	0.00	42CHL-72772-372
		22.80	22.90	0.10	0.44						
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	% O2	12.20	12.20	0.00	0.00	12.20	0.00	12.20	0.00	0.00	1422B /53
		22.70	22.70	0.00	0.00						
		0.0	0.00	0.00	0.0	0.00	0.0	0.10	0.2	0.2	
50	PPM CO	25.60	25.40	-0.20	-0.4	25.50	0.2	25.50	0.2	0.0	48C 68845-361
		49.80	50.10	0.30	0.6						

UNCORRECTED REFERENCE DATA

DATE & TIME	NOx PPM	O2 %	CO PPM	DATE & TIME	NOx PPM	O2 %	CO PPM
3/15/2012 10:00	8.35	14.01	0.43	3/15/2012 10:46	8.12	14.02	0.35
3/15/2012 10:01	8.25	14.00	0.43	3/15/2012 10:47	8.12	14.02	0.38
3/15/2012 10:02	8.25	14.01	0.48	3/15/2012 10:48	8.12	14.02	0.35
3/15/2012 10:03	8.30	14.01	0.43	3/15/2012 10:49	8.12	14.02	0.35
3/15/2012 10:04	8.30	14.01	0.45	3/15/2012 10:50	8.12	14.02	0.33
3/15/2012 10:05	8.35	14.01	0.45	3/15/2012 10:51	8.12	14.02	0.40
3/15/2012 10:06	8.25	14.01	0.45	3/15/2012 10:52	8.12	14.02	0.38
3/15/2012 10:07	8.25	14.01	0.40	3/15/2012 10:53	8.12	14.02	0.33
3/15/2012 10:08	8.25	14.01	0.40	3/15/2012 10:54	8.12	14.02	0.33
3/15/2012 10:09	8.25	14.01	0.38	3/15/2012 10:55	8.12	14.02	0.30
3/15/2012 10:10	8.25	14.01	0.40	3/15/2012 10:56	8.12	14.02	0.33
3/15/2012 10:11	8.25	14.01	0.43	* 3/15/2012 11:10	8.33	13.94	0.33
3/15/2012 10:12	8.28	14.01	0.45	3/15/2012 11:11	8.33	13.94	0.33
3/15/2012 10:13	8.28	14.01	0.40	3/15/2012 11:12	8.33	13.95	0.33
3/15/2012 10:14	8.25	14.02	0.43	3/15/2012 11:13	8.33	13.95	0.33
3/15/2012 10:15	8.22	14.02	1.58	3/15/2012 11:14	8.33	13.96	0.35
3/15/2012 10:16	8.22	14.02	0.43	3/15/2012 11:15	8.42	13.97	0.30
3/15/2012 10:17	8.22	14.02	0.38	3/15/2012 11:16	8.40	13.96	0.28
3/15/2012 10:18	8.20	14.02	0.43	3/15/2012 11:17	8.37	13.96	0.30
3/15/2012 10:19	8.25	14.02	0.38	3/15/2012 11:18	8.35	13.97	0.30
3/15/2012 10:20	8.25	14.02	0.40	3/15/2012 11:19	8.35	13.97	0.28
3/15/2012 10:21	8.15	14.02	0.38	3/15/2012 11:20	8.33	13.98	0.30
* 3/15/2012 10:35	8.20	14.03	0.43	3/15/2012 11:21	8.33	13.98	0.28
3/15/2012 10:36	8.12	14.03	0.35	3/15/2012 11:22	8.35	13.98	0.28
3/15/2012 10:37	8.12	14.03	0.35	3/15/2012 11:23	8.40	13.98	0.28
3/15/2012 10:38	8.12	14.03	0.40	3/15/2012 11:24	8.35	13.98	0.25
3/15/2012 10:39	8.12	14.02	0.38	3/15/2012 11:25	8.35	13.98	0.30
3/15/2012 10:40	8.12	14.02	0.38	3/15/2012 11:26	8.37	13.98	0.28
3/15/2012 10:41	8.12	14.02	0.35	3/15/2012 11:27	8.37	13.98	0.30
3/15/2012 10:42	8.12	14.02	0.40	3/15/2012 11:28	8.35	13.98	0.23
3/15/2012 10:43	8.12	14.02	0.35	3/15/2012 11:29	8.30	13.98	0.25
3/15/2012 10:44	8.12	14.02	0.35	3/15/2012 11:30	8.35	13.98	0.25
3/15/2012 10:45	8.12	14.02	0.35	3/15/2012 11:31	8.35	13.98	0.18

MEAN ANALYZER VALUES

Avg. NOx ppmvd	8.25

* Resumed after calibrations for RATA

SHADY HILLS POWER COMPANY
CT 3

LOAD:	166.5 MW
FUEL:	100 % GAS
DATE:	3/15/2012
RUN:	2
WET BULB:	70 °F
DRY BULB:	84 °F
RH:	48%

AVG. ADJUSTED NOx ppmvd @ 15% O2	7.10
AVG. ADJUSTED CO ppmvd @ 15% O2	0.07
CORRECTED NOx ppmvd	8.35
CORRECTED O2 %	13.86
CORRECTED CO ppmvd	0.08
NOX LB/MBTU	0.0261
CO LB/MBTU	0.0002

CALIBRATION ERROR, SYSTEM BIAS AND SYSTEM DRIFT DATA

SPAN SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	SYSTEM BIAS VALUE	% SPAN	SYSTEM BIAS VALUE	% SPAN	% DRIFT	ANALYZER SERIAL#
		0.00	0.20	0.20	0.87	0.20	0.00	0.00	-0.87	-0.87	
25	PPM NOx	11.60	11.60	0.00	0.00	11.60	0.00	11.40	-0.87	-0.87	42CHL-72772-372
		22.80	22.90	0.10	0.44						
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	% O2	12.20	12.20	0.00	0.00	12.20	0.00	12.20	0.00	0.00	1422B /53
		22.70	22.70	0.00	0.00						
		0.00	0.00	0.00	0.0	0.10	0.2	0.00	0.0	-0.2	
50	PPM CO	25.60	25.40	-0.20	-0.4	25.50	0.2	25.10	-0.6	-0.8	48C 68845-381
		49.80	50.10	0.30	0.6						

UNCORRECTED REFERENCE DATA

DATE & TIME	NOx PPM	O2 %	CO PPM	DATE & TIME	NOx PPM	O2 %	CO PPM
3/15/2012 11:42	8.37	13.98	0.20	3/15/2012 12:24	8.25	13.97	0.15
3/15/2012 11:43	8.37	13.98	0.18	3/15/2012 12:25	8.35	13.96	0.10
3/15/2012 11:44	8.37	13.98	0.20	3/15/2012 12:26	8.33	13.96	0.13
3/15/2012 11:45	8.37	13.98	0.23	3/15/2012 12:27	8.35	13.97	0.10
3/15/2012 11:46	8.37	13.98	0.18	3/15/2012 12:28	8.30	13.97	0.15
3/15/2012 11:47	8.37	13.98	0.18	3/15/2012 12:29	8.35	13.97	0.13
3/15/2012 11:48	8.37	13.98	0.23	3/15/2012 12:30	8.25	13.97	0.15
3/15/2012 11:49	8.35	13.97	0.18	3/15/2012 12:31	8.25	13.96	0.10
3/15/2012 11:50	8.35	13.97	0.23	3/15/2012 12:32	8.25	13.96	0.08
3/15/2012 11:51	8.37	13.96	0.18	3/15/2012 12:33	8.35	13.96	0.05
3/15/2012 11:52	8.35	13.97	0.20	3/15/2012 12:34	8.35	13.96	0.03
3/15/2012 11:53	8.35	13.97	0.18	3/15/2012 12:45	8.25	13.95	0.10
3/15/2012 11:54	8.37	13.97	0.23	3/15/2012 12:46	8.25	13.95	0.10
3/15/2012 11:55	8.35	13.97	0.18	3/15/2012 12:47	8.25	13.95	0.08
3/15/2012 11:56	8.35	13.97	0.23	3/15/2012 12:48	8.30	13.95	0.10
3/15/2012 11:57	8.35	13.97	0.18	3/15/2012 12:49	8.25	13.94	0.08
3/15/2012 11:58	8.35	13.97	0.18	3/15/2012 12:50	8.25	13.94	0.10
3/15/2012 11:59	8.35	13.97	0.23	3/15/2012 12:51	8.25	13.95	0.03
3/15/2012 12:00	8.35	13.97	0.15	3/15/2012 12:52	8.17	13.94	0.05
3/15/2012 12:01	8.35	13.97	0.18	3/15/2012 12:53	8.22	13.94	0.05
3/15/2012 12:02	8.35	13.97	0.23	3/15/2012 12:54	8.25	13.94	0.05
3/15/2012 12:03	8.35	13.97	0.15	3/15/2012 12:55	8.25	13.94	0.05
3/15/2012 12:13	8.37	13.98	0.15	3/15/2012 12:56	8.25	13.94	0.08
3/15/2012 12:14	8.28	13.98	0.13	3/15/2012 12:57	8.25	13.94	0.08
3/15/2012 12:15	8.30	13.97	0.15	3/15/2012 12:58	8.20	13.94	0.08
3/15/2012 12:16	8.30	13.97	0.13	3/15/2012 12:59	8.22	13.94	0.08
3/15/2012 12:17	8.25	13.96	0.20	3/15/2012 13:00	8.22	13.94	0.08
3/15/2012 12:18	8.30	13.98	0.15	3/15/2012 13:01	8.25	13.94	0.05
3/15/2012 12:19	8.35	13.98	0.15	3/15/2012 13:02	8.22	13.94	0.03
3/15/2012 12:20	8.35	13.97	0.15	3/15/2012 13:03	8.22	13.93	0.08
3/15/2012 12:21	8.35	13.96	0.15	3/15/2012 13:04	8.25	13.93	0.05
3/15/2012 12:22	8.30	13.97	0.13	3/15/2012 13:05	8.22	13.94	0.03
3/15/2012 12:23	8.28	13.98	0.18	3/15/2012 13:06	8.25	13.94	0.05

MEAN ANALYZER VALUES

Avg. NOx ppmvd	8.30

SHADY HILLS POWER COMPANY
CT 3

LOAD:	158.3 MW
FUEL:	100 % GAS
DATE:	3/15/2012
RUN:	3
WET BULB:	71 °F
DRY BULB:	86 °F
RH:	46%

AVG. ADJUSTED NOx ppmvd @ 15% O2	7.21
AVG. ADJUSTED CO ppmvd @ 15% O2	0.41
CORRECTED NOx ppmvd	8.63
CORRECTED O2 %	13.92
CORRECTED CO ppmvd	0.49
NOX LB/MBTU	0.0265
CO LB/MBTU	0.0009

CALIBRATION ERROR, SYSTEM BIAS AND SYSTEM DRIFT DATA

SPAN SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	SYSTEM BIAS VALUE	% SPAN	SYSTEM BIAS VALUE	% SPAN	% DRIFT	ANALYZER SERIAL#
		0.00	0.20	0.20	0.87	0.00	-0.87	0.10	-0.44	0.44	
25	PPM NOx	11.60	11.60	0.00	0.00	11.40	-0.87	11.50	-0.44	0.44	42CHL-72772-372
		22.80	22.90	0.10	0.44						
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	% O2	12.20	12.20	0.00	0.00	12.20	0.00	12.20	0.00	0.00	1422B /53
		22.70	22.70	0.00	0.00						
		0.00	0.00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	
50	PPM CO	25.60	25.40	-0.20	-0.4	25.10	-0.6	25.20	-0.4	0.2	48C 68845-361
		49.80	50.10	0.30	0.6						

UNCORRECTED REFERENCE DATA

DATE & TIME	NOx PPM	O2 %	CO PPM	DATE & TIME	NOx PPM	O2 %	CO PPM
3/15/2012 13:16	8.55	13.82	0.10	3/15/2012 13:57	8.35	13.92	0.73
3/15/2012 13:17	8.55	13.86	0.03	3/15/2012 13:58	8.37	13.92	0.73
3/15/2012 13:18	8.55	13.88	0.03	3/15/2012 13:59	8.45	13.93	0.73
3/15/2012 13:19	8.55	13.89	0.03	3/15/2012 14:00	8.37	13.93	0.70
3/15/2012 13:20	8.55	13.89	0.03	3/15/2012 14:01	8.37	13.93	0.70
3/15/2012 13:21	8.55	13.90	0.00	3/15/2012 14:02	8.37	13.93	0.68
3/15/2012 13:22	8.47	13.91	0.00	3/15/2012 14:03	8.37	13.93	0.73
3/15/2012 13:23	8.50	13.91	0.05	3/15/2012 14:04	8.37	13.93	0.68
3/15/2012 13:24	8.45	13.91	0.03	3/15/2012 14:05	8.40	13.93	0.70
3/15/2012 13:25	8.45	13.92	0.05	3/15/2012 14:06	8.47	13.92	0.73
3/15/2012 13:26	8.45	13.92	0.03	3/15/2012 14:07	8.45	13.92	0.73
3/15/2012 13:27	8.45	13.92	0.03	3/15/2012 14:16	8.47	13.92	0.68
3/15/2012 13:28	8.45	13.92	0.03	3/15/2012 14:17	8.47	13.92	0.73
3/15/2012 13:29	8.45	13.92	0.05	3/15/2012 14:18	8.47	13.92	0.70
3/15/2012 13:30	8.45	13.92	0.03	3/15/2012 14:19	8.47	13.93	0.65
3/15/2012 13:31	8.45	13.92	0.05	3/15/2012 14:20	8.42	13.93	0.73
3/15/2012 13:32	8.45	13.92	0.00	3/15/2012 14:21	8.45	13.93	0.70
3/15/2012 13:33	8.45	13.92	0.03	3/15/2012 14:22	8.47	13.94	0.70
3/15/2012 13:34	8.45	13.92	0.03	3/15/2012 14:23	8.47	13.94	0.70
3/15/2012 13:35	8.45	13.93	0.03	3/15/2012 14:24	8.47	13.94	0.65
3/15/2012 13:36	8.42	13.93	0.05	3/15/2012 14:25	8.47	13.93	0.68
3/15/2012 13:37	8.45	13.93	0.03	3/15/2012 14:26	8.47	13.93	0.70
3/15/2012 13:46	8.40	13.91	0.78	3/15/2012 14:27	8.40	13.93	0.70
3/15/2012 13:47	8.42	13.92	0.75	3/15/2012 14:28	8.42	13.93	0.68
3/15/2012 13:48	8.40	13.92	0.75	3/15/2012 14:29	8.37	13.93	0.73
3/15/2012 13:49	8.37	13.92	0.75	3/15/2012 14:30	8.37	13.93	0.70
3/15/2012 13:50	8.37	13.92	0.78	3/15/2012 14:31	8.37	13.93	0.68
3/15/2012 13:51	8.37	13.92	0.73	3/15/2012 14:32	8.37	13.93	0.70
3/15/2012 13:52	8.37	13.92	0.73	3/15/2012 14:33	8.37	13.94	0.68
3/15/2012 13:53	8.35	13.92	0.73	3/15/2012 14:34	8.37	13.94	0.68
3/15/2012 13:54	8.35	13.92	0.70	3/15/2012 14:35	8.37	13.97	0.65
3/15/2012 13:55	8.35	13.92	0.70	3/15/2012 14:36	8.40	13.97	0.68
3/15/2012 13:56	8.35	13.92	0.68	3/15/2012 14:37	8.37	13.98	0.65

MEAN ANALYZER VALUES

Avg. NOx ppmvd 8.43

12 POINT NOX TRAVERSE

Port	Point	Nox ppm Average	Nox ppm difference	O2 % Average	O2 % difference	Date & Time	NOx PPM	O2 %
N	1	8.84	0.45	13.92	-0.09	3/15/2012 9:13	8.90	13.90
						3/15/2012 9:14	8.83	13.91
						3/15/2012 9:15	8.85	13.92
						3/15/2012 9:16	8.80	13.93
	2	8.65	0.26	13.97	-0.04	3/15/2012 9:17	8.70	13.96
						3/15/2012 9:18	8.65	13.96
						3/15/2012 9:19	8.60	13.97
						3/15/2012 9:20	8.65	13.98
	3	8.56	0.17	13.98	-0.03	3/15/2012 9:21	8.60	13.98
						3/15/2012 9:22	8.58	13.98
						3/15/2012 9:23	8.58	13.98
						3/15/2012 9:24	8.50	13.98
W	1	8.45	0.06	13.98	-0.02	3/15/2012 9:28	8.47	13.98
						3/15/2012 9:29	8.47	13.98
						3/15/2012 9:30	8.45	13.98
						3/15/2012 9:31	8.40	13.98
	2	8.33	-0.06	13.99	-0.02	3/15/2012 9:32	8.35	13.99
						3/15/2012 9:33	8.33	13.99
						3/15/2012 9:34	8.33	13.99
						3/15/2012 9:35	8.33	13.99
	3	8.27	-0.12	14.23	0.22	3/15/2012 9:36	8.22	13.99
						3/15/2012 9:37	8.30	13.99
						3/15/2012 9:38	8.25	13.99
						3/15/2012 9:39	8.32	14.96
S	1	8.04	-0.35	13.99	-0.01	3/15/2012 9:43	8.55	13.99
						3/15/2012 9:44	8.20	13.99
						3/15/2012 9:45	7.57	13.99
						3/15/2012 9:46	7.85	13.99
	2	8.34	-0.05	14.00	-0.01	3/15/2012 9:47	8.15	14.00
						3/15/2012 9:48	8.37	14.00
						3/15/2012 9:49	8.42	14.00
						3/15/2012 9:50	8.42	14.00
	3	8.34	-0.05	14.00	-0.01	3/15/2012 9:51	8.37	14.00
						3/15/2012 9:52	8.33	14.00
						3/15/2012 9:53	8.33	13.99
						3/15/2012 9:54	8.35	13.99
E	1	8.29	-0.10	14.00	0.00	3/15/2012 9:58	8.25	14.01
						3/15/2012 9:59	8.33	14.01
						3/15/2012 10:00	8.35	14.01
						3/15/2012 10:01	8.25	14.00
	2	8.30	-0.09	14.01	0.00	3/15/2012 10:02	8.25	14.01
						3/15/2012 10:03	8.30	14.01
						3/15/2012 10:04	8.30	14.01
						3/15/2012 10:05	8.35	14.01
	3	8.25	-0.14	14.01	0.00	3/15/2012 10:06	8.25	14.01
						3/15/2012 10:07	8.25	14.01
						3/15/2012 10:08	8.25	14.01
						3/15/2012 10:09	8.25	14.01
						Mean Average	**8.39**	**14.01**

Coastal Air Consulting, Inc.

(386) 451-0169

VISIBLE EMISSION TEST

Method Used (Circle One): Method 9 | 203A | 203B | Report

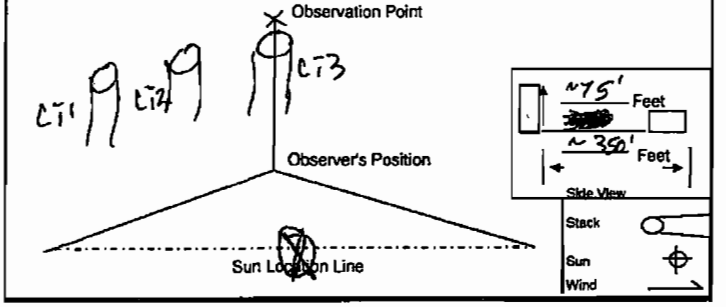
Company Name	Shady Hills Power Company
Facility Name	Shady Hills Plant
Street Address	14240 Merchant Energy Way
City	Shady Hills FL Zip 34610
Phone No.	(727) 856-8608

Process	Combustion Turbine Unit # CT3
Operating Mode	Base
Control Equipment	DLN
Operating Mode	Normal on

Describe Emission Point	Round Stack Eastern most of Three
Ht of Emis. Point	~75'
Ht Rel to Observer	~70'
Distance to Emis. Pt.	~350'
Direction to Emis. Pt (Degrees)	~339°
Vertical Angle to Obs.	<18°
Direction to Obs. Pt. (Degrees)	~339°
Distance and Direction to Obs. Pt from Emission Pt	~1' above
Describe Emissions	None
Emission Color	NA
Water Droplet Plume: Attached / Detached / None	None X
Describe Plume Background	Sky
Background Color	Blue
Sky Conditions	clear
Wind Speed	0-3 MPH
Wind Direction	E
Ambient Temp.	80°F
Wet Bulb Temp.	70°F
% RH	60

Source Layout Sketch

Draw North Arrow: ☐ IN ☐ MN



Latitude 28°, 33' 30"	Longitude 82°, 28' 21' 55"	Declination

Comments: * Resumed after RATA Calibrations

Observation Date	Start Time	Stop Time
3-15-12	1000	1130

Min / Sec	0	15	30	45	Min / Sec	0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	*41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
*21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

Number of Readings Above: 10 % were 0	Average Opacity for Highest 6 Min Period: 0
Range of opacity Readings: Min 0 Max 0	Average Opacity for 2nd Highest 6 Min Period: 0

Observers Name (Print)	Steve Webb
Observers Signature	Stephen C. Webb
Date	3-15-12
Organization	Coastal Air Consulting, Inc.
Certified By	Whitlow Enterprises
Date	1/13/12

APPENDIX 2
PLANT DATA
CT 1

CeDAR 1-Minute Data

Shady Hills Power Company LLC

Data for 3/13/2012 8:50 AM thru 3/13/2012 10:18 AM

Timestamp	(Turbine 1) Gas Flow kscf/hr 1-Min	(Turbine 1) Megawatts 1-Min
3/13 8:50	1690.00	168.8
3/13 8:51	1692.00	168.9
3/13 8:52	1687.50	169.0
3/13 8:53	1687.17	168.9
3/13 8:54	1690.67	168.9
3/13 8:55	1690.33	168.8
3/13 8:56	1691.33	168.8
3/13 8:57	1687.50	168.7
3/13 8:58	1686.00	168.6
3/13 8:59	1694.00	168.6
3/13 9:00	1690.17	168.6
3/13 9:01	1686.33	168.7
3/13 9:02	1688.17	168.3
3/13 9:03	1687.00	167.9
3/13 9:04	1683.67	168.0
3/13 9:05	1680.67	167.9
3/13 9:06	1684.83	168.0
3/13 9:07	1682.33	168.0
3/13 9:08	1685.17	167.8
3/13 9:09	1684.50	168.0
3/13 9:10	1681.50	167.9
3/13 9:11	1682.50	167.7
3/13 9:12	1677.50	167.4
3/13 9:13	1673.33	167.3
3/13 9:14	1679.00	167.4
3/13 9:15	1680.17	167.4
3/13 9:16	1675.17	167.1
3/13 9:17	1678.50	167.0
3/13 9:18	1678.00	167.0
3/13 9:19	1675.33	167.1
3/13 9:20	1676.83	167.1
3/13 9:21	1677.17	167.0
3/13 9:22	1671.00	166.8
3/13 9:23	1675.17	166.7
3/13 9:24	1677.33	166.6
3/13 9:25	1674.33	166.7
3/13 9:26	1671.83	166.6
3/13 9:27	1678.83	166.7
3/13 9:28	1670.00	166.6
3/13 9:29	1670.17	166.6
3/13 9:30	1670.00	166.4
3/13 9:31	1674.67	166.2
3/13 9:32	1670.50	166.4
3/13 9:33	1672.00	166.4
3/13 9:34	1669.67	166.2
3/13 9:35	1669.83	166.0

Timestamp	(Turbine 1) Gas Flow kscf/hr 1-Min	(Turbine 1) Megawatts 1-Min
3/13 9:36	1664.83	165.8
3/13 9:37	1666.67	165.8
3/13 9:38	1667.17	165.9
3/13 9:39	1669.33	165.9
3/13 9:40	1671.17	165.8
3/13 9:41	1667.00	165.7
3/13 9:42	1666.17	165.5
3/13 9:43	1668.67	165.6
3/13 9:44	1666.33	165.9
3/13 9:45	1667.50	166.2
3/13 9:46	1664.17	165.8
3/13 9:47	1669.17	165.5
3/13 9:48	1666.33	165.4
3/13 9:49	1666.83	165.4
3/13 9:50	1666.17	165.5
3/13 9:51	1663.67	165.6
3/13 9:52	1668.67	165.7
3/13 9:53	1667.00	165.6
3/13 9:54	1666.83	165.5
3/13 9:55	1667.00	165.5
3/13 9:56	1662.33	165.4
3/13 9:57	1662.33	165.3
3/13 9:58	1661.83	165.3
3/13 9:59	1664.67	165.3
3/13 10:00	1659.50	165.6
3/13 10:01	1662.67	165.6
3/13 10:02	1664.33	165.6
3/13 10:03	1662.67	165.5
3/13 10:04	1665.50	165.8
3/13 10:05	1670.00	166.2
3/13 10:06	1663.00	165.7
3/13 10:07	1662.00	165.4
3/13 10:08	1659.33	165.0
3/13 10:09	1660.83	165.0
3/13 10:10	1661.83	164.9
3/13 10:11	1661.33	165.1
3/13 10:12	1664.33	165.5
3/13 10:13	1667.67	165.8
3/13 10:14	1665.00	165.8
3/13 10:15	1663.83	165.8
3/13 10:16	1661.67	165.7
3/13 10:17	1667.50	166.0
3/13 10:18	1665.83	165.8

Timestamp	(Turbine 1) Gas Flow kscf/hr 1-Min	(Turbine 1) Megawatts 1-Min
Average (all)	1673.04	166.6
Total (all)	--	--
Minimum (all)	1659.33	164.9
Maximum (all)	1694.00	169.0
Average (valid values only)	1673.04	166.6
Total (valid values only)	--	--
Count (valid values only)	89	89

CeDAR 1-Minute Data

Shady Hills Power Company LLC

Data for 3/13/2012 10:30 AM thru 3/13/2012 11:56 AM

Timestamp	(Turbine 1) Gas Flow kscf/hr 1-Min	(Turbine 1) Megawatts 1-Min
3/13 10:30	1657.67	164.9
3/13 10:31	1663.33	165.2
3/13 10:32	1666.67	165.6
3/13 10:33	1666.33	165.5
3/13 10:34	1665.17	165.5
3/13 10:35	1661.50	165.5
3/13 10:36	1666.83	165.7
3/13 10:37	1664.33	165.2
3/13 10:38	1662.50	165.3
3/13 10:39	1661.33	165.2
3/13 10:40	1662.50	165.5
3/13 10:41	1664.83	165.7
3/13 10:42	1666.17	165.6
3/13 10:43	1664.33	165.5
3/13 10:44	1661.33	165.5
3/13 10:45	1663.50	165.6
3/13 10:46	1668.50	165.8
3/13 10:47	1671.00	165.8
3/13 10:48	1667.00	165.6
3/13 10:49	1663.83	165.7
3/13 10:50	1663.50	165.7
3/13 10:51	1666.17	165.7
3/13 10:52	1661.67	165.2
3/13 10:53	1660.67	164.6
3/13 10:54	1663.33	164.5
3/13 10:55	1659.67	164.6
3/13 10:56	1657.00	164.8
3/13 10:57	1659.83	164.8
3/13 10:58	1657.17	164.4
3/13 10:59	1654.50	164.3
3/13 11:00	1660.17	164.4
3/13 11:01	1659.00	164.6
3/13 11:02	1660.17	164.6
3/13 11:03	1658.67	164.6
3/13 11:04	1658.00	164.7
3/13 11:05	1657.83	164.7
3/13 11:06	1659.67	164.4
3/13 11:07	1656.00	164.5
3/13 11:08	1660.00	164.6
3/13 11:09	1658.33	164.6
3/13 11:10	1661.83	165.0
3/13 11:11	1661.67	164.8
3/13 11:12	1658.33	164.5
3/13 11:13	1658.50	164.5
3/13 11:14	1656.17	164.5
3/13 11:15	1660.17	164.5

Timestamp	(Turbine 1) Gas Flow kscf/hr 1-Min	(Turbine 1) Megawatts 1-Min
3/13 11:16	1653.83	164.2
3/13 11:17	1647.67	164.3
3/13 11:18	1652.83	164.1
3/13 11:19	1650.17	163.6
3/13 11:20	1655.67	164.4
3/13 11:21	1656.00	164.4
3/13 11:22	1654.50	164.4
3/13 11:23	1653.17	164.6
3/13 11:24	1657.00	164.5
3/13 11:25	1655.50	164.4
3/13 11:26	1655.33	164.6
3/13 11:27	1650.00	164.3
3/13 11:28	1650.67	164.5
3/13 11:29	1655.00	164.5
3/13 11:30	1656.67	164.5
3/13 11:31	1657.67	164.6
3/13 11:32	1658.17	164.6
3/13 11:33	1653.67	164.3
3/13 11:34	1648.17	163.7
3/13 11:35	1648.17	163.6
3/13 11:36	1648.67	163.5
3/13 11:37	1655.67	163.7
3/13 11:38	1653.83	164.1
3/13 11:39	1648.83	163.8
3/13 11:40	1646.33	163.6
3/13 11:41	1647.17	163.4
3/13 11:42	1648.67	163.8
3/13 11:43	1652.33	163.7
3/13 11:44	1652.50	164.3
3/13 11:45	1649.67	163.9
3/13 11:46	1650.33	163.3
3/13 11:47	1646.00	163.0
3/13 11:48	1648.83	163.5
3/13 11:49	1654.33	163.6
3/13 11:50	1653.17	163.5
3/13 11:51	1642.33	163.0
3/13 11:52	1648.33	163.5
3/13 11:53	1649.83	163.7
3/13 11:54	1646.50	163.7
3/13 11:55	1648.33	163.7
3/13 11:56	1645.50	163.7
Average (all)	1656.82	164.5
Total (all)	–	–
Minimum (all)	1642.33	163.0
Maximum (all)	1671.00	165.8
Average (valid values only)	1656.82	164.5
Total (valid values only)	–	–
Count (valid values only)	87	87

CeDAR 1-Minute Data

Shady Hills Power Company LLC

Data for 3/13/2012 12:11 PM thru 3/13/2012 1:34 PM

Timestamp	(Turbine 1) Gas Flow kscf/hr 1-Min	(Turbine 1) Megawatts 1-Min
3/13 12:11	1646.50	163.4
3/13 12:12	1647.67	163.6
3/13 12:13	1650.17	163.6
3/13 12:14	1648.17	163.8
3/13 12:15	1653.67	164.0
3/13 12:16	1654.17	164.0
3/13 12:17	1654.33	164.0
3/13 12:18	1656.67	163.9
3/13 12:19	1653.33	163.9
3/13 12:20	1645.17	163.6
3/13 12:21	1649.17	163.5
3/13 12:22	1647.67	163.6
3/13 12:23	1650.00	163.6
3/13 12:24	1643.67	163.4
3/13 12:25	1642.83	163.1
3/13 12:26	1640.83	163.2
3/13 12:27	1642.33	163.3
3/13 12:28	1646.33	163.6
3/13 12:29	1646.17	163.5
3/13 12:30	1646.17	163.2
3/13 12:31	1645.17	162.7
3/13 12:32	1637.33	161.8
3/13 12:33	1637.33	162.3
3/13 12:34	1643.00	162.5
3/13 12:35	1643.17	162.5
3/13 12:36	1643.50	162.6
3/13 12:37	1640.83	162.6
3/13 12:38	1644.67	162.7
3/13 12:39	1644.17	162.8
3/13 12:40	1644.00	162.8
3/13 12:41	1643.50	162.8
3/13 12:42	1641.83	163.0
3/13 12:43	1642.33	162.7
3/13 12:44	1643.00	162.6
3/13 12:45	1645.50	162.8
3/13 12:46	1642.83	163.0
3/13 12:47	1641.83	162.6
3/13 12:48	1639.00	162.6
3/13 12:49	1638.00	162.6
3/13 12:50	1639.17	162.3
3/13 12:51	1639.00	162.6
3/13 12:52	1644.00	162.3
3/13 12:53	1640.00	162.5
3/13 12:54	1643.50	162.7
3/13 12:55	1641.50	162.9
3/13 12:56	1637.50	162.3

Timestamp	(Turbine 1) Gas Flow kscf/hr 1-Min	(Turbine 1) Megawatts 1-Min
3/13 12:57	1637.50	161.7
3/13 12:58	1638.83	161.9
3/13 12:59	1641.50	162.1
3/13 13:00	1639.00	162.5
3/13 13:01	1635.83	162.1
3/13 13:02	1633.83	161.8
3/13 13:03	1630.67	161.2
3/13 13:04	1630.50	161.2
3/13 13:05	1632.67	161.4
3/13 13:06	1628.17	161.5
3/13 13:07	1625.67	160.9
3/13 13:08	1626.00	160.8
3/13 13:09	1632.67	161.4
3/13 13:10	1635.00	161.8
3/13 13:11	1637.67	162.2
3/13 13:12	1639.83	162.4
3/13 13:13	1639.33	162.5
3/13 13:14	1639.50	162.4
3/13 13:15	1639.00	162.4
3/13 13:16	1635.50	162.6
3/13 13:17	1642.67	162.6
3/13 13:18	1636.50	162.3
3/13 13:19	1639.00	162.3
3/13 13:20	1640.67	162.0
3/13 13:21	1632.83	161.8
3/13 13:22	1632.17	161.8
3/13 13:23	1636.83	161.8
3/13 13:24	1636.17	162.0
3/13 13:25	1637.50	162.2
3/13 13:26	1638.17	162.5
3/13 13:27	1636.00	162.0
3/13 13:28	1637.50	161.6
3/13 13:29	1632.33	161.6
3/13 13:30	1632.33	161.5
3/13 13:31	1632.50	161.5
3/13 13:32	1628.67	161.5
3/13 13:33	1625.00	160.8
3/13 13:34	1625.00	160.5
Average (all)	1640.13	162.5
Total (all)	–	–
Minimum (all)	1625.00	160.5
Maximum (all)	1656.67	164.0
Average (valid values only)	1640.13	162.5
Total (valid values only)	–	–
Count (valid values only)	84	84

PLANT DATA
CT 2

CeDAR 1-Minute Data

Shady Hills Power Company LLC

Data for 3/14/2012 10:30 AM thru 3/14/2012 11:59 AM

Timestamp	(Turbine 2) Gas Flow kscf/hr 1-Min	(Turbine 2) Megawatts 1-Min
3/14 10:30	1648.33	163.9
3/14 10:31	1645.00	163.6
3/14 10:32	1644.50	163.5
3/14 10:33	1643.50	163.7
3/14 10:34	1644.67	163.7
3/14 10:35	1647.00	163.7
3/14 10:36	1646.83	163.4
3/14 10:37	1646.83	163.4
3/14 10:38	1646.33	163.8
3/14 10:39	1647.50	163.7
3/14 10:40	1645.50	163.6
3/14 10:41	1646.00	163.6
3/14 10:42	1647.33	163.7
3/14 10:43	1647.67	163.8
3/14 10:44	1646.50	163.7
3/14 10:45	1647.50	163.5
3/14 10:46	1645.50	163.5
3/14 10:47	1644.17	163.2
3/14 10:48	1645.50	163.1
3/14 10:49	1642.17	163.3
3/14 10:50	1641.83	163.1
3/14 10:51	1645.50	163.4
3/14 10:52	1646.33	163.3
3/14 10:53	1641.50	163.2
3/14 10:54	1643.33	163.4
3/14 10:55	1646.00	163.5
3/14 10:56	1641.50	163.4
3/14 10:57	1643.33	163.4
3/14 10:58	1641.50	163.2
3/14 10:59	1641.83	162.8
3/14 11:00	1634.67	162.5
3/14 11:01	1641.00	162.7
3/14 11:02	1640.67	162.7
3/14 11:03	1638.00	162.7
3/14 11:04	1634.67	162.4
3/14 11:05	1636.17	162.7
3/14 11:06	1635.67	162.4
3/14 11:07	1634.83	162.3
3/14 11:08	1636.83	162.3
3/14 11:09	1636.67	162.3
3/14 11:10	1635.00	162.3
3/14 11:11	1636.17	162.3
3/14 11:12	1632.83	162.4
3/14 11:13	1635.33	162.2
3/14 11:14	1637.50	162.3
3/14 11:15	1637.67	162.7

Timestamp	(Turbine 2) Gas Flow kscf/hr 1-Min	(Turbine 2) Megawatts 1-Min
3/14 11:16	1638.83	162.7
3/14 11:17	1640.33	162.5
3/14 11:18	1637.50	162.5
3/14 11:19	1641.00	162.5
3/14 11:20	1639.33	162.4
3/14 11:21	1634.67	162.3
3/14 11:22	1635.67	162.2
3/14 11:23	1635.50	162.3
3/14 11:24	1638.17	162.4
3/14 11:25	1639.83	162.4
3/14 11:26	1637.67	162.2
3/14 11:27	1633.17	162.0
3/14 11:28	1633.83	162.0
3/14 11:29	1634.17	161.9
3/14 11:30	1633.17	161.8
3/14 11:31	1632.67	161.6
3/14 11:32	1631.33	161.5
3/14 11:33	1630.00	161.3
3/14 11:34	1631.00	161.7
3/14 11:35	1626.17	161.7
3/14 11:36	1626.33	161.6
3/14 11:37	1629.33	161.7
3/14 11:38	1628.67	162.1
3/14 11:39	1632.67	162.1
3/14 11:40	1632.17	162.2
3/14 11:41	1631.50	162.0
3/14 11:42	1631.83	162.0
3/14 11:43	1626.17	161.3
3/14 11:44	1622.67	161.2
3/14 11:45	1627.33	161.8
3/14 11:46	1628.17	162.2
3/14 11:47	1627.33	162.0
3/14 11:48	1632.67	162.1
3/14 11:49	1629.33	161.5
3/14 11:50	1626.50	161.2
3/14 11:51	1627.00	161.2
3/14 11:52	1624.83	161.2
3/14 11:53	1624.33	161.2
3/14 11:54	1626.50	161.2
3/14 11:55	1625.33	161.1
3/14 11:56	1624.67	161.1
3/14 11:57	1620.67	161.2
3/14 11:58	1629.00	161.3
3/14 11:59	1628.33	161.7

Timestamp	(Turbine 2) Gas Flow kscf/hr 1-Min	(Turbine 2) Megawatts 1-Min
Average (all)	1636.69	162.5
Total (all)	--	--
Minimum (all)	1620.67	161.1
Maximum (all)	1648.33	163.9
Average (valid values only)	1636.69	162.5
Total (valid values only)	--	--
Count (valid values only)	90	90

CeDAR 1-Minute Data

Shady Hills Power Company LLC

Data for 3/14/2012 12:15 PM thru 3/14/2012 1:38 PM

Timestamp	(Turbine 2) Gas Heat Input mmBtu/hr 1-Min	(Turbine 2) Megawatts 1-Min
3/14 12:15	1649.6	161.2
3/14 12:16	1646.1	161.0
3/14 12:17	1645.0	161.1
3/14 12:18	1646.6	161.2
3/14 12:19	1647.7	161.2
3/14 12:20	1648.6	161.2
3/14 12:21	1649.7	161.2
3/14 12:22	1651.7	161.3
3/14 12:23	1647.9	161.1
3/14 12:24	1644.1	160.6
3/14 12:25	1646.1	160.4
3/14 12:26	1646.1	160.8
3/14 12:27	1643.3	160.3
3/14 12:28	1648.9	160.7
3/14 12:29	1650.6	160.9
3/14 12:30	1644.3	160.5
3/14 12:31	1644.6	160.4
3/14 12:32	1642.8	160.3
3/14 12:33	1645.5	160.5
3/14 12:34	1645.6	160.6
3/14 12:35	1648.7	160.7
3/14 12:36	1644.3	160.2
3/14 12:37	1644.6	160.5
3/14 12:38	1645.6	160.7
3/14 12:39	1648.7	161.1
3/14 12:40	1646.1	160.9
3/14 12:41	1647.9	160.7
3/14 12:42	1646.3	160.6
3/14 12:43	1647.1	160.6
3/14 12:44	1644.1	160.6
3/14 12:45	1643.5	160.5
3/14 12:46	1646.5	160.4
3/14 12:47	1639.7	160.1
3/14 12:48	1642.6	160.3
3/14 12:49	1639.9	160.3
3/14 12:50	1640.5	160.1
3/14 12:51	1644.1	160.7
3/14 12:52	1645.0	160.3
3/14 12:53	1639.5	160.2
3/14 12:54	1645.5	160.3
3/14 12:55	1644.0	160.6
3/14 12:56	1645.3	160.5
3/14 12:57	1641.3	160.2
3/14 12:58	1643.8	160.3
3/14 12:59	1640.4	160.3
3/14 13:00	1642.3	160.3

Timestamp	(Turbine 2) Gas Heat Input mmBtu/hr 1-Min	(Turbine 2) Megawatts 1-Min
3/14 13:01	1644.5	160.4
3/14 13:02	1644.5	160.3
3/14 13:03	1643.1	160.4
3/14 13:04	1642.6	160.2
3/14 13:05	1639.5	160.1
3/14 13:06	1638.2	159.9
3/14 13:07	1635.2	159.8
3/14 13:08	1637.4	159.8
3/14 13:09	1641.1	160.0
3/14 13:10	1640.2	160.2
3/14 13:11	1640.7	160.2
3/14 13:12	1641.3	160.0
3/14 13:13	1639.7	159.9
3/14 13:14	1634.2	159.5
3/14 13:15	1638.9	160.0
3/14 13:16	1640.4	160.1
3/14 13:17	1637.5	160.1
3/14 13:18	1638.4	160.1
3/14 13:19	1637.9	160.1
3/14 13:20	1641.8	160.2
3/14 13:21	1644.0	160.2
3/14 13:22	1641.6	160.2
3/14 13:23	1638.4	160.1
3/14 13:24	1641.0	159.9
3/14 13:25	1635.0	159.8
3/14 13:26	1639.0	160.0
3/14 13:27	1638.0	159.8
3/14 13:28	1636.7	159.9
3/14 13:29	1633.3	159.4
3/14 13:30	1629.8	159.2
3/14 13:31	1633.3	159.3
3/14 13:32	1636.7	159.7
3/14 13:33	1635.5	159.7
3/14 13:34	1637.9	160.0
3/14 13:35	1636.4	160.1
3/14 13:36	1641.0	160.0
3/14 13:37	1640.7	160.2
3/14 13:38	1642.0	160.2
Average (all)	1642.4	160.3
Total (all)	–	–
Minimum (all)	1629.8	159.2
Maximum (all)	1651.7	161.3
Average (valid values only)	1642.4	160.3
Total (valid values only)	–	–
Count (valid values only)	84	84

CeDAR 1-Minute Data

Shady Hills Power Company LLC

Data for 3/14/2012 1:48 PM thru 3/14/2012 3:12 PM

Timestamp	(Turbine 2) Gas Flow kscf/hr 1-Min	(Turbine 2) Megawatts 1-Min
3/14 13:48	1608.83	159.5
3/14 13:49	1609.50	159.7
3/14 13:50	1612.83	160.1
3/14 13:51	1613.50	160.0
3/14 13:52	1610.83	159.8
3/14 13:53	1612.50	159.7
3/14 13:54	1614.33	160.1
3/14 13:55	1615.33	160.1
3/14 13:56	1614.67	160.2
3/14 13:57	1616.67	160.1
3/14 13:58	1614.83	160.0
3/14 13:59	1610.67	159.8
3/14 14:00	1612.83	159.9
3/14 14:01	1609.50	159.8
3/14 14:02	1613.83	160.0
3/14 14:03	1611.83	159.6
3/14 14:04	1605.00	159.1
3/14 14:05	1606.17	159.2
3/14 14:06	1606.67	159.1
3/14 14:07	1604.00	158.9
3/14 14:08	1607.00	159.2
3/14 14:09	1607.00	159.3
3/14 14:10	1611.00	159.6
3/14 14:11	1610.83	159.9
3/14 14:12	1612.00	159.7
3/14 14:13	1616.67	159.7
3/14 14:14	1608.00	159.4
3/14 14:15	1606.67	159.4
3/14 14:16	1609.50	159.5
3/14 14:17	1610.67	159.3
3/14 14:18	1609.33	159.3
3/14 14:19	1608.17	159.1
3/14 14:20	1610.17	159.3
3/14 14:21	1607.00	159.2
3/14 14:22	1605.83	159.1
3/14 14:23	1607.50	159.2
3/14 14:24	1607.33	159.3
3/14 14:25	1608.50	159.4
3/14 14:26	1611.83	159.6
3/14 14:27	1611.50	159.6
3/14 14:28	1606.00	159.4
3/14 14:29	1606.17	159.1
3/14 14:30	1606.83	159.1
3/14 14:31	1606.17	159.1
3/14 14:32	1607.17	159.1
3/14 14:33	1607.67	159.2

Timestamp	(Turbine 2) Gas Flow kscf/hr 1-Min	(Turbine 2) Megawatts 1-Min
3/14 14:34	1608.00	159.2
3/14 14:35	1609.00	159.3
3/14 14:36	1608.83	159.3
3/14 14:37	1604.17	159.1
3/14 14:38	1610.50	159.3
3/14 14:39	1607.67	159.6
3/14 14:40	1609.33	159.6
3/14 14:41	1612.67	159.6
3/14 14:42	1610.50	159.7
3/14 14:43	1610.17	159.6
3/14 14:44	1611.67	159.6
3/14 14:45	1609.17	159.7
3/14 14:46	1610.50	159.4
3/14 14:47	1610.83	159.4
3/14 14:48	1609.17	159.4
3/14 14:49	1612.00	159.6
3/14 14:50	1612.50	159.8
3/14 14:51	1611.83	159.7
3/14 14:52	1609.33	159.6
3/14 14:53	1610.33	159.7
3/14 14:54	1607.67	159.4
3/14 14:55	1610.83	159.6
3/14 14:56	1611.50	159.8
3/14 14:57	1609.67	159.5
3/14 14:58	1608.50	159.5
3/14 14:59	1609.67	159.6
3/14 15:00	1610.00	159.7
3/14 15:01	1608.83	159.7
3/14 15:02	1608.00	159.5
3/14 15:03	1608.17	159.4
3/14 15:04	1604.83	159.2
3/14 15:05	1608.00	159.3
3/14 15:06	1607.83	159.1
3/14 15:07	1607.00	159.2
3/14 15:08	1604.67	159.1
3/14 15:09	1609.00	159.1
3/14 15:10	1604.33	159.2
3/14 15:11	1607.67	159.3
3/14 15:12	1605.17	159.1
Average (all)	1609.42	159.5
Total (all)	–	–
Minimum (all)	1604.00	158.9
Maximum (all)	1616.67	160.2
Average (valid values only)	1609.42	159.5
Total (valid values only)	–	–
Count (valid values only)	85	85

PLANT DATA
CT 3

CeDAR 1-Minute Data

Shady Hills Power Company LLC

Data for 3/15/2012 10:00 AM thru 3/15/2012 11:31 AM

Timestamp	(Turbine 3) Gas Flow kscf/hr 1-Min	(Turbine 3) Megawatts 1-Min
3/15 10:00	1696.17	162.0
3/15 10:01	1693.67	162.0
3/15 10:02	1699.67	162.0
3/15 10:03	1693.67	161.9
3/15 10:04	1696.83	162.0
3/15 10:05	1705.33	162.1
3/15 10:06	1702.67	162.1
3/15 10:07	1697.67	162.0
3/15 10:08	1703.00	162.0
3/15 10:09	1700.00	162.0
3/15 10:10	1703.50	162.0
3/15 10:11	1704.17	161.9
3/15 10:12	1697.50	161.8
3/15 10:13	1697.00	161.9
3/15 10:14	1696.83	161.4
3/15 10:15	1693.83	161.4
3/15 10:16	1694.83	161.3
3/15 10:17	1693.17	161.8
3/15 10:18	1695.67	161.9
3/15 10:19	1699.17	161.7
3/15 10:20	1701.67	161.9
3/15 10:21	1702.33	161.8
3/15 10:22	1700.67	161.4
3/15 10:23	1692.17	161.1
3/15 10:24	1700.00	161.3
3/15 10:25	1698.67	161.1
3/15 10:26	1694.17	161.1
3/15 10:27	1695.67	161.1
3/15 10:28	1689.00	161.0
3/15 10:29	1706.00	161.4
3/15 10:30	1697.50	161.6
3/15 10:31	1705.00	161.7
3/15 10:32	1701.00	161.6
3/15 10:33	1703.00	161.1
3/15 10:34	1697.17	161.2
3/15 10:35	1696.83	161.1
3/15 10:36	1703.33	161.2
3/15 10:37	1692.83	161.1
3/15 10:38	1691.00	161.0
3/15 10:39	1694.67	161.1
3/15 10:40	1695.67	161.0
3/15 10:41	1698.17	161.1
3/15 10:42	1698.00	161.1
3/15 10:43	1698.50	160.9
3/15 10:44	1690.50	160.3
3/15 10:45	1689.50	160.6

Timestamp	(Turbine 3) Gas Flow kscf/hr 1-Min	(Turbine 3) Megawatts 1-Min
3/15 10:46	1688.00	160.7
3/15 10:47	1699.17	161.0
3/15 10:48	1701.17	161.0
3/15 10:49	1693.33	161.0
3/15 10:50	1693.50	161.1
3/15 10:51	1700.50	161.0
3/15 10:52	1692.17	161.1
3/15 10:53	1695.83	161.0
3/15 10:54	1695.83	161.1
3/15 10:55	1700.67	161.0
3/15 10:56	1694.00	161.0
3/15 10:57	1689.00	160.6
3/15 10:58	1690.00	160.7
3/15 10:59	1697.17	160.9
3/15 11:00	1687.00	160.9
3/15 11:01	1691.00	160.9
3/15 11:02	1687.33	160.7
3/15 11:03	1688.83	160.6
3/15 11:04	1690.50	160.3
3/15 11:05	1689.17	160.1
3/15 11:06	1678.17	159.8
3/15 11:07	1680.17	159.4
3/15 11:08	1688.17	159.8
3/15 11:09	1690.67	159.9
3/15 11:10	1683.33	159.9
3/15 11:11	1685.17	160.0
3/15 11:12	1682.17	159.7
3/15 11:13	1684.50	159.8
3/15 11:14	1683.33	159.9
3/15 11:15	1686.83	159.8
3/15 11:16	1686.83	159.1
3/15 11:17	1683.17	159.0
3/15 11:18	1681.67	159.0
3/15 11:19	1685.00	159.3
3/15 11:20	1679.00	159.1
3/15 11:21	1686.50	159.1
3/15 11:22	1680.50	159.1
3/15 11:23	1678.67	158.9
3/15 11:24	1681.67	158.9
3/15 11:25	1676.83	158.9
3/15 11:26	1682.83	158.9
3/15 11:27	1683.00	159.0
3/15 11:28	1679.83	159.5
3/15 11:29	1682.67	159.8
3/15 11:30	1685.67	160.0
3/15 11:31	1688.17	159.8

Timestamp	(Turbine 3) Gas Flow kscf/hr 1-Min	(Turbine 3) Megawatts 1-Min
Average (all)	1692.68	160.8
Total (all)	–	–
Minimum (all)	1676.83	158.9
Maximum (all)	1706.00	162.1
Average (valid values only)	1692.68	160.8
Total (valid values only)	–	–
Count (valid values only)	92	92

CeDAR 1-Minute Data

Shady Hills Power Company LLC
Data for 3/15/2012 1:16 PM thru 3/15/2012 2:37 PM

Timestamp	(Turbine 3) Gas Flow kscf/hr 1-Min	(Turbine 3) Megawatts 1-Min
3/15 13:16	1658.67	156.8
3/15 13:17	1660.67	156.3
3/15 13:18	1676.50	157.1
3/15 13:19	1665.83	157.4
3/15 13:20	1662.83	157.4
3/15 13:21	1658.00	156.8
3/15 13:22	1659.17	156.6
3/15 13:23	1655.67	156.2
3/15 13:24	1660.17	156.4
3/15 13:25	1664.00	156.9
3/15 13:26	1667.67	157.2
3/15 13:27	1662.83	157.1
3/15 13:28	1664.17	157.6
3/15 13:29	1665.17	157.2
3/15 13:30	1658.17	157.0
3/15 13:31	1654.50	156.8
3/15 13:32	1660.17	156.8
3/15 13:33	1662.50	156.7
3/15 13:34	1658.33	156.4
3/15 13:35	1657.33	156.5
3/15 13:36	1661.50	156.7
3/15 13:37	1662.50	157.2
3/15 13:38	1662.83	157.1
3/15 13:39	1664.83	156.9
3/15 13:40	1656.50	156.4
3/15 13:41	1660.17	156.1
3/15 13:42	1658.00	156.0
3/15 13:43	1654.33	155.8
3/15 13:44	1658.00	156.3
3/15 13:45	1661.83	156.6
3/15 13:46	1659.50	156.4
3/15 13:47	1656.67	156.5
3/15 13:48	1658.67	155.8
3/15 13:49	1653.00	155.8
3/15 13:50	1650.17	155.6
3/15 13:51	1648.50	155.8
3/15 13:52	1653.67	155.9
3/15 13:53	1651.67	156.0
3/15 13:54	1653.17	156.3
3/15 13:55	1650.83	156.4
3/15 13:56	1652.17	156.1
3/15 13:57	1649.50	155.9
3/15 13:58	1645.83	155.8
3/15 13:59	1651.83	155.7
3/15 14:00	1655.50	155.8
3/15 14:01	1653.33	155.8

Timestamp	(Turbine 3) Gas Flow kscf/hr 1-Min	(Turbine 3) Megawatts 1-Min
3/15 14:02	1656.17	156.4
3/15 14:03	1655.33	156.8
3/15 14:04	1656.50	156.9
3/15 14:05	1660.33	156.9
3/15 14:06	1662.83	156.9
3/15 14:07	1663.50	157.0
3/15 14:08	1658.33	157.0
3/15 14:09	1664.33	156.9
3/15 14:10	1662.33	157.0
3/15 14:11	1656.67	156.9
3/15 14:12	1660.67	156.9
3/15 14:13	1655.83	156.9
3/15 14:14	1652.50	156.8
3/15 14:15	1661.17	156.9
3/15 14:16	1659.00	156.1
3/15 14:17	1655.33	156.0
3/15 14:18	1656.17	156.2
3/15 14:19	1650.67	156.7
3/15 14:20	1658.33	156.7
3/15 14:21	1651.00	156.1
3/15 14:22	1656.67	156.1
3/15 14:23	1651.83	156.6
3/15 14:24	1652.33	156.7
3/15 14:25	1653.33	156.7
3/15 14:26	1653.67	156.5
3/15 14:27	1655.17	156.1
3/15 14:28	1658.50	156.1
3/15 14:29	1647.67	155.9
3/15 14:30	1649.67	155.8
3/15 14:31	1649.00	156.1
3/15 14:32	1657.33	156.7
3/15 14:33	1655.67	156.7
3/15 14:34	1655.83	156.7
3/15 14:35	1650.83	156.4
3/15 14:36	1656.33	156.5
3/15 14:37	1659.00	156.3
Average (all)	1657.28	156.5
Total (all)	–	–
Minimum (all)	1645.83	155.6
Maximum (all)	1676.50	157.6
Average (valid values only)	1657.28	156.5
Total (valid values only)	–	–
Count (valid values only)	82	82

CeDAR 1-Minute Data

Shady Hills Power Company LLC

Data for 3/15/2012 11:42 AM thru 3/15/2012 1:06 PM

Timestamp	(Turbine 3) Gas Flow kscf/hr 1-Min	(Turbine 3) Megawatts 1-Min
3/15 11:42	1673.17	158.9
3/15 11:43	1680.50	158.9
3/15 11:44	1680.50	158.8
3/15 11:45	1679.50	159.0
3/15 11:46	1679.50	159.0
3/15 11:47	1683.50	159.1
3/15 11:48	1684.83	159.3
3/15 11:49	1685.17	159.6
3/15 11:50	1683.17	159.8
3/15 11:51	1683.83	159.8
3/15 11:52	1681.50	159.6
3/15 11:53	1681.17	159.5
3/15 11:54	1680.00	159.9
3/15 11:55	1685.33	159.6
3/15 11:56	1687.17	159.5
3/15 11:57	1681.50	159.3
3/15 11:58	1678.67	159.4
3/15 11:59	1678.83	159.3
3/15 12:00	1679.17	158.9
3/15 12:01	1680.83	158.9
3/15 12:02	1681.33	159.3
3/15 12:03	1677.83	159.1
3/15 12:04	1676.50	158.9
3/15 12:05	1679.00	158.7
3/15 12:06	1675.33	158.5
3/15 12:07	1672.83	158.5
3/15 12:08	1672.67	158.3
3/15 12:09	1669.17	157.9
3/15 12:10	1670.83	158.0
3/15 12:11	1672.83	158.1
3/15 12:12	1669.33	157.9
3/15 12:13	1672.50	158.1
3/15 12:14	1670.50	158.2
3/15 12:15	1669.17	158.5
3/15 12:16	1670.50	158.7
3/15 12:17	1678.50	158.7
3/15 12:18	1674.33	158.8
3/15 12:19	1679.00	158.5
3/15 12:20	1673.67	158.5
3/15 12:21	1671.50	158.2
3/15 12:22	1672.50	157.9
3/15 12:23	1669.33	158.1
3/15 12:24	1667.17	158.0
3/15 12:25	1665.33	157.8
3/15 12:26	1664.33	157.9
3/15 12:27	1670.50	158.2

Timestamp	(Turbine 3) Gas Flow kscf/hr 1-Min	(Turbine 3) Megawatts 1-Min
3/15 12:28	1671.83	158.2
3/15 12:29	1673.67	158.3
3/15 12:30	1672.50	158.4
3/15 12:31	1669.50	158.0
3/15 12:32	1664.00	157.9
3/15 12:33	1662.50	157.8
3/15 12:34	1665.50	157.7
3/15 12:35	1666.33	157.8
3/15 12:36	1669.17	157.8
3/15 12:37	1672.33	157.9
3/15 12:38	1662.17	157.8
3/15 12:39	1666.00	157.4
3/15 12:40	1665.83	157.6
3/15 12:41	1666.00	157.8
3/15 12:42	1667.50	157.9
3/15 12:43	1667.67	158.0
3/15 12:44	1667.83	158.0
3/15 12:45	1665.50	157.9
3/15 12:46	1672.67	158.0
3/15 12:47	1672.33	157.9
3/15 12:48	1664.83	157.3
3/15 12:49	1665.33	156.8
3/15 12:50	1662.33	157.1
3/15 12:51	1668.33	157.7
3/15 12:52	1670.50	157.9
3/15 12:53	1673.50	157.9
3/15 12:54	1664.00	157.8
3/15 12:55	1672.00	157.8
3/15 12:56	1673.33	157.9
3/15 12:57	1666.50	157.9
3/15 12:58	1666.00	157.9
3/15 12:59	1671.83	157.8
3/15 13:00	1674.67	157.9
3/15 13:01	1669.67	158.0
3/15 13:02	1674.67	157.9
3/15 13:03	1667.00	157.1
3/15 13:04	1663.50	157.0
3/15 13:05	1661.17	157.2
3/15 13:06	1661.83	157.3
Average (all)	1672.54	158.3
Total (all)	–	–
Minimum (all)	1661.17	156.8
Maximum (all)	1687.17	159.9
Average (valid values only)	1672.54	158.3
Total (valid values only)	–	–
Count (valid values only)	85	85

APPENDIX 3
QUALITY ASSURANCE

COASTAL AIR CONSULTING, INC.

Plant: Shady Hills
Unit: CT'S 1-3

Test Date: 3/13-15/2012
Check Date: 3/12/2012

NO_2 to NO Converter Efficiency Check

Analyzer : Thermo 42C HL

Serial Number: 72772-372

Method: 7E

NO_2 Audit Gas Value (C_v): 44.3

NO Calibration Gas Value: 45.9

Date & Time	NOx ppm	
3/12/2012 15:30	0.00	zero gas
3/12/2012 15:33	46.10	span gas
3/12/2012 15:38	43.20	
3/12/2012 15:39	43.00	
AVERAGE	43.10	(C_{Dir})

NO_2 to NO Conversion Efficiency Test using Equation 7E-7

$$Eff_{NO_2} = \frac{C_{Dir}}{C_v} \times 100$$

Eff_{NO_2} = **97.3**

Method 7E NO_2 to NO Conversion Efficiency Test

8.2.4.1. Introduce NO_2 converter efficiency gas to the analyzer in direct calibration mode and record the NOX concentration displayed by the analyzer. Calculate the converter efficiency using Equation 7E–7 in Section 12.7. The specification for converter efficiency in Section 13.5 must be met. The NO_2 to NO conversion efficiency, calculated according to Equation 7E-7, must be greater than or equal to 90 percent.

Eff_{NO_2} = NO_2 to NO converter efficiency, percent.
CDir = Measured concentration of a calibration gas when introduced in direct calibration mode, ppmv.
Cv = Manufacturer certified concentration of a calibration gas, ppmv.

COASTAL AIR CONSULTING, INC.

Plant: Shady Hills
Unit: CT'S 1-3

Test Date: 3/13-15/2012
Check Date: 3/16/2012

NO_2 to NO Converter Efficiency Check

Analyzer : Thermo 42C HL

Serial Number: 72772-372

Method: 7E

NO_2 Audit Gas Value (C_v): 44.3

NO Calibration Gas Value: 45.9

Date & Time	NOx ppm	
3/16/2012 11:10	0.10	zero gas
3/16/2012 11:13	46.30	span gas
3/16/2012 11:16	43.40	
3/16/2012 11:17	43.30	
AVERAGE	43.35	(C_{Dir})

NO_2 to NO Conversion Efficiency Test using Equation 7E-7

$$Eff_{NO_2} = \frac{C_{Dir}}{C_v} \times 100$$

Eff_{NO_2} = **97.9**

Method 7E NO_2 to NO Conversion Efficiency Test

8.2.4.1. Introduce NO_2 converter efficiency gas to the analyzer in direct calibration mode and record the NOx concentration displayed by the analyzer. Calculate the converter efficiency using Equation 7E–7 in Section 12.7. The specification for converter efficiency in Section 13.5 must be met. The NO2 to NO conversion efficiency, calculated according to Equation 7E-7, must be greater than or equal to 90 percent.

Eff_{NO_2} = NO_2 to NO converter efficiency, percent.
C_{Dir} = Measured concentration of a calibration gas when introduced in direct calibration mode, ppmv.
C_v = Manufacturer certified concentration of a calibration gas, ppmv.

LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

Customer	Coastal Air Consulting (Deland, FL)
Date	October 13, 2011
Delivery Receipt	DR-39020
Product:	Nitrogen, CEMS Grade
Lot Number:	LTK031-PG

Mixture Specifications

Cylinder Number EB-0029722

Components	Requested	Actual
Moisture	2.0 ppm	< 2.0 ppm
Hydrocarbons	0.1 ppm	< 0.1 ppm
Oxygen	1.0 ppm	< 1.0 ppm
Carbon Monoxide	1.0 ppm	< 1.0 ppm
Carbon Dioxide	1.0 ppm	< 1.0 ppm

Cylinder Data

Cylinder Valve:	CGA 580
Cylinder Volume:	140 Cubic Feet
Cylinder Pressure:	2000 psig, 70°F
Expiration Date:	October 13, 2014

Certified by:

Adam Strickland

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LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	November 04, 2011
Delivery Receipt	DR-39324
Gas Standard	45.0 ppm Nitrogen Dioxide/Air - EPA PROTOCOL
Final Analysis Date	November 01, 2011
Expiration Date	November 01, 2013

DO NOT USE BELOW 150 psig

Cylinder Data

Cylinder Serial Number:	EB-0026837	Cylinder Outlet:	CGA 660
Cylinder Volume:	70 Cubic Feet	Cylinder Pressure:	1900 psig, 70°F
Expiration Date:	November 01, 2013		

Analytical Data

EPA Protocol, Section No. 2.2, Procedure G-1

- Replicate Concentrations (NO_2) -

Nitrogen Dioxide: 44.3 ppm +/- 0.44 ppm

Air: Balance

Reference Standard(s):

SRM/GMIS:	GMIS
Cylinder Number:	EB-0015832
Concentration:	51.686 ppm NO_2/Nitrogen
Expiration Date:	04/21/13

Certification Instrumentation

Component:	Nitrogen Dioxide
Make/Model:	Horiba - CLA 510
Serial Number:	43331870031
Principal of Measurement:	Chemiluminescence
Last Calibration:	October 10, 2011

Analytical uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Adam Strickland

PGVP Vendor ID: E12011

Original Data: 46.7 ppm NO_2/Air (April 04, 2011)

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"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	July 18, 2011
Delivery Receipt	DR-37975
Gas Standard	45.0 - 50.0 ppm Nitric Oxide/Nitrogen - EPA PROTOCOL
Final Analysis Date	July 18, 2011
Expiration Date	July 18, 2013

DO NOT USE BELOW 150 psig

Cylinder Data

Cylinder Serial Number:	CC-100812	Cylinder Outlet:	CGA 660
Cylinder Volume:	133 Cubic Feet	Cylinder Pressure:	1900 psig, 70°F
Expiration Date:	July 18, 2013		

Analytical Data

EPA Protocol, Section No. 2.2, Procedure G-1

- Reported Concentrations -

Nitric Oxide: 45.9 ppm +/- 0.45 ppm

Nitrogen: Balance

Total NOx: 46.3 ppm

** Total NOx for Reference Use Only **

Reference Standard(s):

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	EB-0019823	CC-233272
Concentration:	24.479 ppm NO/Nitrogen	49.23 ppm NO/Nitrogen
Expiration Date:	12/01/12	01/08/13

Certification Instrumentation

Component:	Nitric Oxide
Make/Model:	Horiba - CLA510
Serial Number:	43331870031
Principal of Measurement:	Chemiluminescence
Last Calibration:	July 07, 2011

Analytical uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Adam Strickland

PGVP Vendor ID: E12011 ✓

"UNMATCHED EXCELLENCE"

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"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	November 01, 2011
Delivery Receipt	DR-39306
Gas Standard	12.0 ppm Nitric Oxide, 25.0 ppm Carbon Monoxide/Nitrogen
Final Analysis Date	November 01, 2011
Expiration Date	November 01, 2013

DO NOT USE BELOW 150 psig

Analytical Data:
EPA Protocol, Section No. 2.2, Procedure G-1.

Reported Concentrations:
Nitric Oxide: 11.6 ppm +/- 0.11 ppm
Carbon Monoxide: 25.6 ppm +/- 0.25 ppm
Nitrogen: Balance
Total NOx: 12.3 ppm
** Total NOx for Reference Use Only **

Reference Standards

SRM/GMIS	GMIS	GMIS
Cylinder Number:	CC-56775	EB-0023880
Concentration:	24.802 ppm NO	25.47 ppm CO
Expiration Date:	12/01/12	10/20/12

Certification Instrumentation

Component:	Nitric Oxide	Carbon Monoxide
Make/Model:	Thermo 42i-LS	Horiba - VIA 510
Serial Number:	1033445889	UUBKWXYV
Principal of Measurement:	Chemiluminescence	NDIR
Last Calibration:	October 10, 2011	October 28, 2011

Cylinder Data

Cylinder Number:	CC-88759	Cylinder Volume:	135 Cubic Feet
Cylinder Outlet:	CGA 660	Cylinder Pressure:	1925 psig, 70°F
Expiration Date:	November 01, 2013		

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Adam Strickland

PGVP Vendor ID: EI2011 ✓

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LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis
- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	November 22, 2011
Delivery Receipt	DR-39442
Gas Standard	23.5 ppm Nitric Oxide, 47.5 ppm Carbon Monoxide/Nitrogen
Final Analysis Date	November 09, 2011
Expiration Date	November 09, 2013

DO NOT USE BELOW 150 psig

Analytical Data:
EPA Protocol, Section No. 2.2, Procedure G-1.

Reported Concentrations:

Nitric Oxide: 22.8 ppm +/- 0.22 ppm

Carbon Monoxide: 48.9 ppm +/- 0.48 ppm

Nitrogen: Balance

Total NOx: 23.2 ppm

** Total NOx for Reference Use Only **

Reference Standards

SRM/GMIS	GMIS	GMIS/GMIS
Cylinder Number:	CC-56775	EB-0023880/CC-128982
Concentration:	24.802 ppm NO/Nitrogen	25.47 ppm CO/50.89 ppm CO
Expiration Date:	12/01/12	10/20/12 - 10/20/12

Certification Instrumentation

Component:	Nitric Oxide	Carbon Monoxide
Make/Model:	Thermo 42i-LS	Horiba - VIA 510
Serial Number:	1033445889	UUBKWXYV
Principal of Measurement:	Chemiluminescence	NDIR
Last Calibration:	November 05, 2011	November 05, 2011

Cylinder Data

Cylinder Number:	CC-159100	Cylinder Volume:	133 Cubic Feet
Cylinder Outlet:	CGA 660	Cylinder Pressure:	1900 psig, 70°F
Expiration Date:	November 09, 2013		

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Adam Strickland

PGVP Vendor ID: EI2011 ✓

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"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	November 01, 2011
Delivery Receipt	DR-39306
Gas Standard	8.00-10.0% CO2, 11.0-13.0% Oxygen/Nitrogen - EPA PROTOCOL
Final Analysis Date	November 01, 2011
Expiration Date	November 01, 2014
Component	Carbon Dioxide, Oxygen
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Carbon Dioxide: 8.63% +/- 0.08%

Oxygen: 12.2% +/- 0.12%

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS/GMIS	GMIS
Cylinder Number:	CC-159114/CC-165377	CC-231332
Concentration:	7.048% CO2/9.924% CO2	10.087% Oxygen/Nitrogen
Expiration Date:	10/14/12 - 10/14/12	03/07/13

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Horiba - VIA 510	Servomex 244a
Serial Number:	SN075GSF	1847
Principal of Measurement:	NDIR	Paramagnetic
Last Calibration:	October 10, 2011	October 09, 2011

Cylinder Data

Cylinder Serial Number:	EB-0029162	Cylinder Outlet:	CGA 590
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

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PGVP Vendor ID: E12011 ✓

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"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis
- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	November 01, 2011
Delivery Receipt	DR-39306
Gas Standard	17.0-18.0% CO2, 22.0-23.0% Oxygen/Nitrogen - EPA PROTOCOL
Final Analysis Date	November 01, 2011
Expiration Date	November 01, 2014
Component	Carbon Dioxide, Oxygen
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Carbon Dioxide: 17.1% +/- 0.17%

Oxygen: 22.7% +/- 0.22%

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS/GMIS	GMIS
Cylinder Number:	CC-252091/CC-184404	CC-159090
Concentration:	15.816% CO2/19.87% CO2	20.72% Oxygen/Nitrogen
Expiration Date:	02/04/13 - 02/04/13	05/06/12

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Horiba - VIA 510	Servomex 244a
Serial Number:	SN075GSF	1847
Principal of Measurement:	NDIR	Paramagnetic
Last Calibration:	October 10, 2011	October 09, 2011

Cylinder Data

Cylinder Serial Number:	CC-159134	Cylinder Outlet:	CGA 590
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Adam Strickland

PGVP Vendor ID: E12011 ✓

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APPENDIX 4
FUEL AND HEAT INPUT

Heat Input Calculation
Shady Hills Energy Park
Unit 1 Gas
March 13, 2012

Run #	Ambient Temp. ^{0}F	Fuel Flow (KSCFH)	Low Heating Value Btu/SCF	GE Correction Factor	Heat Input mmBtu/hr @ ISO	Permit Limit mmBtu/hr @ ISO
1	75	1673	913	0.968	1578.0	1704
2	79	1657	913	0.948	1595.8	1704
3	84	1640	913	0.933	1604.8	1704
Avg.	79	1657	913	0.948	1595.8	1704

Example Calculation: (1657 KSCFH) (913 Btu/SCF) / 1000 = 1512.8 mmBtu/hr

1512.8 mmBtu/hr / 0.948 = 1595.8 mmBtu @ ISO

Unit 2 Gas
March 14, 2012

Run #	Ambient Temp. ^{0}F	Fuel Flow (KSCFH)	Low Heating Value Btu/SCF	GE Correction Factor	Heat Input mmBtu/hr @ ISO	Permit Limit mmBtu/hr @ ISO
1	83	1636.7	912	0.936	1594.8	1704
2	84	1642.4	912	0.933	1605.5	1704
3	84	1609.4	912	0.933	1573.2	1704
Avg.	84	1629.5	912	0.933	1592.8	1704

Example Calculation: (1629.5 KSCFH) (912 Btu/SCF) / 1000 = 1486.1 mmBtu/hr

1486.1 mmBtu/hr / 0.933 = 1592.8 mmBtu @ ISO

Unit 3 Gas
March 15, 2012

Run #	Ambient Temp. ^{0}F	Fuel Flow (KSCFH)	Low Heating Value Btu/SCF	GE Correction Factor	Heat Input mmBtu/hr @ ISO	Permit Limit mmBtu/hr @ ISO
1	80	1692.7	912	0.945	1633.5	1704
2	84	1657.3	912	0.933	1620.0	1704
3	86	1672.5	912	0.927	1645.4	1704
Avg.	83	1674.2	912	0.936	1631.3	1704

Example Calculation: (1674.2 KSCFH) (912 Btu/SCF) / 1000 = 1526.9 mmBtu/hr

1526.9 mmBtu/hr / 0.936 = 1631.3 mmBtu @ ISO

SHADY HILLS ENERGY PARK CT 1

FLORIDA GAS ANALYSIS 03/13/12 8041 - Mirant Shady Hills

FUEL BURNED DURING TEST ON March 13, 2012

GAS	MOLE %	Ht of Comb BTU/LB	LOW Ht of Comb BTU/LB	HIGH BTU/LB	LOW BTU/LB	HIGH BTU/CuFt	LOW BTU/CuFt	HIGH BTU/CuFt	LOW BTU/CuFt
HEXANE	0.002	20940	19403	42	39	4762	4412	9.524	8.824
PROPANE	0.184	21661	19944	3986	3670	2590	2385	476.56	438.84
I-BUTANE	0.032	21257	19629		628	3363	3105	107.616	99.36
N-BUTANE	0.031	21308	19680	661	610	3370	3113	104.47	96.503
I-PENTANE	0.006	21052	19478	126	117	4008	3716	24.048	22.296
N-PENTANE	0.009	21091	19517	190	176	4016	3709	36.144	33.381
NITROGEN	0.410	0	0	0	0	0	0	0	0
METHANE	96.390	23879	21520	2301697	2074313	1013	913	97643.07	88004.07
CO2	1.381	0	0	0	0	0	0	0	0
ETHANE	1.536	22320	20432	34284	31384	1792	1641	2752.512	2520.576
TOTAL	99.98			2.34E+06	2.11E+06			1011.54	912.24
COMPRESSIBILITY FACTOR			1.0005					HHV	**LHV**
						HEATING VALUE OF GAS		1012	**913**

id	BTU	Date	CO2	N2	Grav	Methane	Ethane	Propane	Ibutane
8041	1014	3/13/2012	1.381	0.41	0.581	96.39	1.536	0.184	0.032
		Nbutane	IPentan	NPentan	C6	C7	C8	Wobbe	CHDP
		0.031	0.006	0.009	0.002	0.002	0	1330	-65

SHADY HILLS ENERGY PARK CT 2

FLORIDA GAS ANALYSIS 03/14/12 8041 - Mirant Shady Hills

FUEL BURNED DURING TEST ON March 14, 2012

GAS	MOLE %	Ht of Comb BTU/LB	LOW Ht of Comb BTU/LB	HIGH BTU/LB	LOW BTU/LB	HIGH BTU/CuFt	LOW BTU/CuFt	HIGH BTU/CuFt	LOW BTU/CuFt
HEXANE	0.002	20940	19403	42	39	4762	4412	9.524	8.824
PROPANE	0.170	21661	19944	3682	3390	2590	2385	440.3	405.45
I-BUTANE	0.031	21257	19629		608	3363	3105	104.253	96.255
N-BUTANE	0.029	21308	19680	618	571	3370	3113	97.73	90.277
I-PENTANE	0.005	21052	19478	105	97	4008	3716	20.04	18.58
N-PENTANE	0.008	21091	19517	169	156	4016	3709	32.128	29.672
NITROGEN	0.382	0	0	0	0	0	0	0	0
METHANE	96.565	23879	21520	2305876	2078079	1013	913	97820.345	88163.845
CO2	1.353	0	0	0	0	0	0	0	0
ETHANE	1.438	22320	20432	32096	29381	1792	1641	2576.896	2359.758
TOTAL	99.98			2.34E+06	2.11E+06			1011.01	911.73
COMPRESSIBILITY FACTOR			1.0005					HHV	**LHV**
						HEATING VALUE OF GAS		1012	**912**

id	BTU	Date	CO2	N2	Grav	Methane	Ethane	Propane	Ibutane
8041	1013	3/14/2012	1.353	0.382	0.58	96.565	1.438	0.17	0.031
		Nbutane	IPentan	NPentan	C6	C7	C8	Wobbe	CHDP
		0.029	0.005	0.008	0.002	0.002	0	1330	-69

SHADY HILLS ENERGY PARK CT 3

FLORIDA GAS ANALYSIS 03/15/12 8041 - Mirant Shady Hills

FUEL BURNED DURING TEST ON March 15, 2012

GAS	MOLE %	Ht of Comb BTU/LB	LOW Ht of Comb BTU/LB	HIGH BTU/LB	LOW BTU/LB	HIGH BTU/CuFt	LOW BTU/CuFt	HIGH BTU/CuFt	LOW BTU/CuFt
HEXANE	0.001	20940	19403	21	19	4762	4412	4.762	4.412
PROPANE	0.157	21661	19944	3401	3131	2590	2385	406.63	374.445
I-BUTANE	0.030	21257	19629		589	3363	3105	100.89	93.15
N-BUTANE	0.025	21308	19680	533	492	3370	3113	84.25	77.825
I-PENTANE	0.005	21052	19478	105	97	4008	3716	20.04	18.58
N-PENTANE	0.008	21091	19517	169	156	4016	3709	32.128	29.672
NITROGEN	0.377	0	0	0	0	0	0	0	0
METHANE	96.642	23879	21520	2307714	2079736	1013	913	97898.346	88234.146
CO2	1.356	0	0	0	0	0	0	0	0
ETHANE	1.387	22320	20432	30958	28339	1792	1641	2485.504	2276.067
TOTAL	99.99			2.34E+06	2.11E+06			1010.33	911.08
COMPRESSIBILITY FACTOR			1.0005					HHV	**LHV**
						HEATING VALUE OF GAS		1011	**912**

id	BTU	Date	CO2	N2	Grav	Methane	Ethane	Propane	Ibutane
8041	1012	3/15/2012	1.356	0.377	0.579	96.642	1.387	0.157	0.03

Nbutane	IPentan	NPentan	C6	C7	C8	Wopbbe	CHDP
0.025	0.005	0.008	0.001	0.001	0	1330	-77

TSP Name/TSP: Florida Gas Transmission Company, LLC (006924518)

Date Requested: Mar 19 2012 7:51 AM

The data contained herein is preliminary data and therefore should be used for contemporaneous operational purposes only and may be subject to change at month end. This data is provided to assist our customers in tracking their gas usage as closely as possible on a real-time basis. The information contained on this web page is not to be considered billable information. This data will be subject to additional verification and possible modification prior to billing. Florida Gas is not responsible for any reliance on this information by any party.

FGT Chromatograph By Id

Chromatograph Name: 8041 - Mirant - Shady Hills

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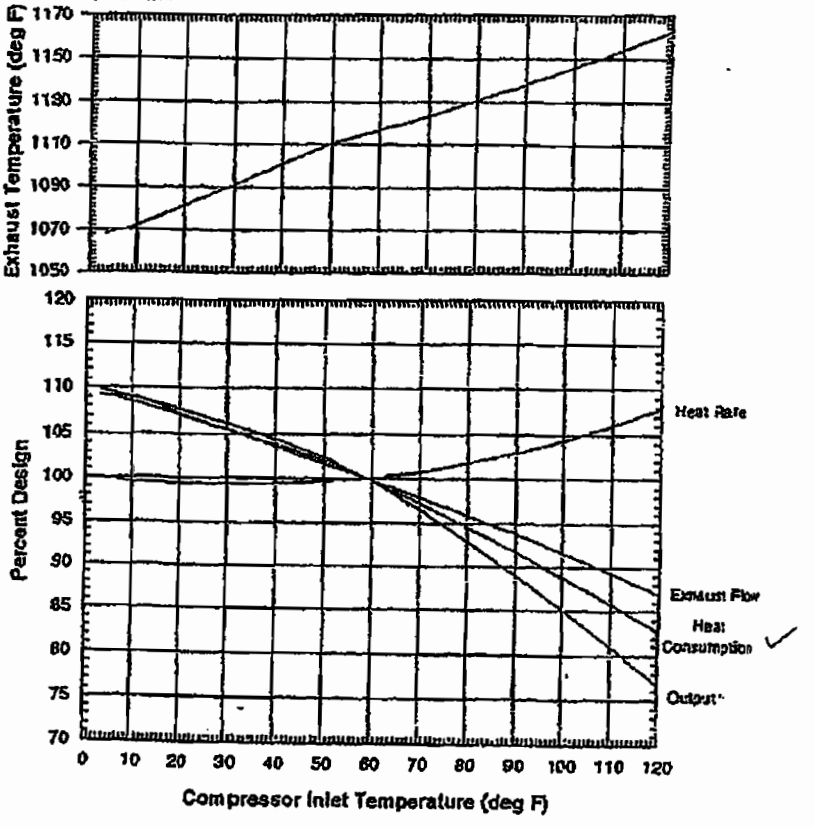
Date	BTU	CO2	N2	Grav	Methan	Ethane	Propan	Ibutan	Nbutan	Ipenta	Npenta	C6	C7	C8	C9	Wobbe	CHDP
03/17/2012	1012	1.356	0.377	0.579	96.642	1.387	0.157	0.030	0.025	0.005	0.008	0.001	0.001	0.000	0.000	1330	-77
03/16/2012	1012	1.356	0.377	0.579	96.642	1.387	0.157	0.030	0.025	0.005	0.008	0.001	0.001	0.000	0.000	1330	-77
03/15/2012	1012	1.356	0.377	0.579	96.642	1.387	0.157	0.030	0.025	0.005	0.008	0.001	0.001	0.000	0.000	1330	-77
03/14/2012	1013	1.353	0.382	0.580	96.565	1.438	0.170	0.031	0.029	0.005	0.008	0.002	0.002	0.000	0.000	1330	-69
03/13/2012	1014	1.381	0.411	0.581	96.390	1.536	0.184	0.032	0.031	0.006	0.009	0.002	0.002	0.000	0.000	1330	-65
03/12/2012	1014	1.360	0.386	0.581	96.454	1.514	0.182	0.033	0.031	0.006	0.009	0.002	0.002	0.000	0.000	1331	-66
03/11/2012	1013	1.411	0.370	0.581	96.451	1.473	0.188	0.035	0.033	0.006	0.010	0.002	0.002	0.000	0.000	1330	-66
03/10/2012	1014	1.433	0.359	0.581	96.408	1.490	0.197	0.037	0.035	0.007	0.010	0.002	0.002	0.000	0.000	1329	-66
03/09/2012	1016	1.397	0.327	0.582	96.404	1.512	0.221	0.044	0.043	0.008	0.014	0.003	0.003	0.000	0.000	1332	-59
03/08/2012	1014	1.383	0.337	0.581	96.531	1.439	0.190	0.037	0.036	0.007	0.012	0.003	0.003	0.000	0.000	1331	-61
03/07/2012	1013	1.369	0.326	0.580	96.688	1.343	0.169	0.033	0.032	0.006	0.010	0.002	0.002	0.000	0.000	1331	-64
03/06/2012	1016	1.369	0.326	0.581	96.686	1.344	0.169	0.034	0.032	0.006	0.010	0.002	0.002	0.000	0.000	1333	-66
03/05/2012	1013	1.368	0.327	0.580	96.683	1.344	0.169	0.034	0.032	0.006	0.010	0.002	0.002	0.000	0.000	1331	-63
03/04/2012	1013	1.354	0.343	0.580	96.628	1.395	0.169	0.034	0.031	0.006	0.010	0.002	0.002	0.000	0.000	1331	-64
03/03/2012	1014	1.344	0.344	0.580	96.653	1.377	0.171	0.034	0.032	0.007	0.011	0.002	0.002	0.000	0.000	1331	-62
03/02/2012	1015	1.316	0.346	0.580	96.580	1.438	0.197	0.040	0.038	0.007	0.011	0.002	0.002	0.000	0.000	1332	-64
03/01/2012	1014	1.317	0.369	0.580	96.564	1.450	0.185	0.037	0.035	0.007	0.010	0.002	0.002	0.000	0.000	1332	-64
02/29/2012	1015	1.305	0.346	0.580	96.638	1.409	0.184	0.038	0.036	0.007	0.012	0.002	0.002	0.000	0.000	1332	-63
02/28/2012	1014	1.321	0.336	0.580	96.635	1.403	0.186	0.039	0.036	0.007	0.012	0.002	0.002	0.000	0.000	1332	-65
02/27/2012	1014	1.336	0.316	0.580	96.707	1.342	0.180	0.038	0.035	0.007	0.012	0.002	0.002	0.000	0.000	1332	-62
02/26/2012	1013	1.369	0.313	0.580	96.703	1.324	0.175	0.038	0.035	0.007	0.012	0.002	0.002	0.000	0.000	1331	-63
02/25/2012	1014	1.353	0.312	0.580	96.691	1.343	0.181	0.039	0.036	0.007	0.012	0.002	0.002	0.000	0.000	1332	-63
02/23/2012	1015	1.317	0.316	0.580	96.655	1.387	0.197	0.042	0.039	0.008	0.013	0.002	0.002	0.000	0.000	1333	-62
02/22/2012	1015	1.296	0.317	0.579	96.714	1.367	0.189	0.038	0.037	0.008	0.012	0.002	0.002	0.000	0.000	1333	-62
02/21/2012	1015	1.296	0.314	0.579	96.723	1.358	0.190	0.039	0.038	0.007	0.011	0.002	0.002	0.000	0.000	1333	-65
02/20/2012	1016	1.302	0.330	0.580	96.635	1.415	0.191	0.040	0.037	0.007	0.012	0.003	0.003	0.000	0.000	1333	-58
02/19/2012	1016	1.323	0.329	0.580	96.555	1.457	0.203	0.042	0.040	0.008	0.013	0.002	0.002	0.000	0.000	1333	-61
02/18/2012	1017	1.366	0.318	0.582	96.364	1.550	0.246	0.049	0.046	0.010	0.018	0.003	0.003	0.000	0.000	1333	-57
02/17/2012	1016	1.375	0.324	0.582	96.412	1.512	0.231	0.048	0.043	0.010	0.015	0.002	0.002	0.000	0.000	1332	-61
02/16/2012	1015	1.350	0.330	0.581	96.548	1.443	0.201	0.042	0.039	0.007	0.013	0.002	0.002	0.000	0.000	1332	-63
02/13/2012	1015	1.220	0.307	0.579	96.815	1.364	0.180	0.036	0.033	0.006	0.011	0.003	0.003	0.000	0.000	1335	-61
02/12/2012	1016	1.303	0.305	0.580	96.590	1.463	0.208	0.042	0.039	0.007	0.013	0.002	0.002	0.000	0.000	1334	-62
02/11/2012	1015	1.373	0.311	0.581	96.624	1.354	0.202	0.046	0.039	0.008	0.014	0.003	0.003	0.000	0.000	1332	-58
02/10/2012	1014	1.378	0.310	0.580	96.626	1.351	0.202	0.046	0.039	0.008	0.014	0.002	0.002	0.000	0.000	1331	-61
02/09/2012	1014	1.375	0.310	0.580	96.628	1.352	0.202	0.046	0.039	0.008	0.014	0.002	0.002	0.000	0.000	1331	-62
02/08/2012	1015	1.364	0.308	0.581	96.610	1.372	0.205	0.045	0.039	0.008	0.014	0.003	0.003	0.000	0.000	1332	-58
02/07/2012	1016	1.355	0.313	0.581	96.532	1.464	0.205	0.042	0.038	0.007	0.013	0.003	0.003	0.000	0.000	1333	-60
02/06/2012	1015	1.356	0.314	0.581	96.551	1.450	0.200	0.041	0.038	0.007	0.013	0.002	0.002	0.000	0.000	1332	-62
02/05/2012	1015	1.347	0.318	0.580	96.587	1.430	0.190	0.040	0.036	0.008	0.013	0.002	0.002	0.000	0.000	1332	-62
02/04/2012	1015	1.347	0.301	0.580	96.611	1.422	0.194	0.040	0.037	0.008	0.013	0.002	0.002	0.000	0.000	1332	-64
02/03/2012	1016	1.323	0.302	0.580	96.639	1.409	0.199	0.041	0.039	0.008	0.013	0.003	0.003	0.000	0.000	1333	-59
02/02/2012	1015	1.339	0.315	0.580	96.590	1.435	0.193	0.040	0.037	0.008	0.013	0.003	0.003	0.000	0.000	1333	-59
02/01/2012	1015	1.350	0.322	0.581	96.574	1.424	0.197	0.042	0.039	0.009	0.015	0.002	0.002	0.000	0.000	1332	-61
01/31/2012	1017	1.291	0.325	0.581	96.541	1.492	0.208	0.045	0.041	0.009	0.015	0.003	0.003	0.000	0.000	1334	-59
01/30/2012	1017	1.298	0.327	0.581	96.484	1.513	0.224	0.051	0.044	0.009	0.017	0.003	0.003	0.000	0.000	1334	-58
01/29/2012	1016	1.350	0.332	0.581	96.503	1.471	0.204	0.045	0.040	0.008	0.016	0.002	0.002	0.000	0.000	1332	-60
01/28/2012	1016	1.329	0.334	0.581	96.544	1.465	0.194	0.042	0.039	0.008	0.015	0.003	0.003	0.000	0.000	1333	-59
01/27/2012	1015	1.326	0.335	0.580	96.571	1.446	0.188	0.041	0.038	0.009	0.015	0.003	0.003	0.000	0.000	1333	-59
01/26/2012	1016	1.345	0.329	0.581	96.543	1.457	0.193	0.042	0.039	0.009	0.014	0.003	0.003	0.000	0.000	1333	-57
01/25/2012	1015	1.388	0.328	0.581	96.433	1.520	0.200	0.041	0.038	0.008	0.013	0.003	0.003	0.000	0.000	1332	-60
01/24/2012	1016	1.370	0.333	0.582	96.372	1.607	0.195	0.039	0.035	0.007	0.013	0.003	0.003	0.000	0.000	1332	-60
01/23/2012	1015	1.357	0.335	0.581	96.451	1.544	0.189	0.039	0.035	0.008	0.013	0.002	0.002	0.000	0.000	1332	-62
01/22/2012	1016	1.326	0.338	0.581	96.453	1.555	0.199	0.041	0.037	0.008	0.013	0.002	0.002	0.000	0.000	1333	-63

PERFORMANCE CORRECTION CURVES

GENERAL ELECTRIC MODEL *PG7241(FA)* GAS TURBINE

Effect of Compressor Inlet Temperature on Output, Heat Rate, Heat Consumption, Exhaust Flow And Exhaust Temperature at Baseload

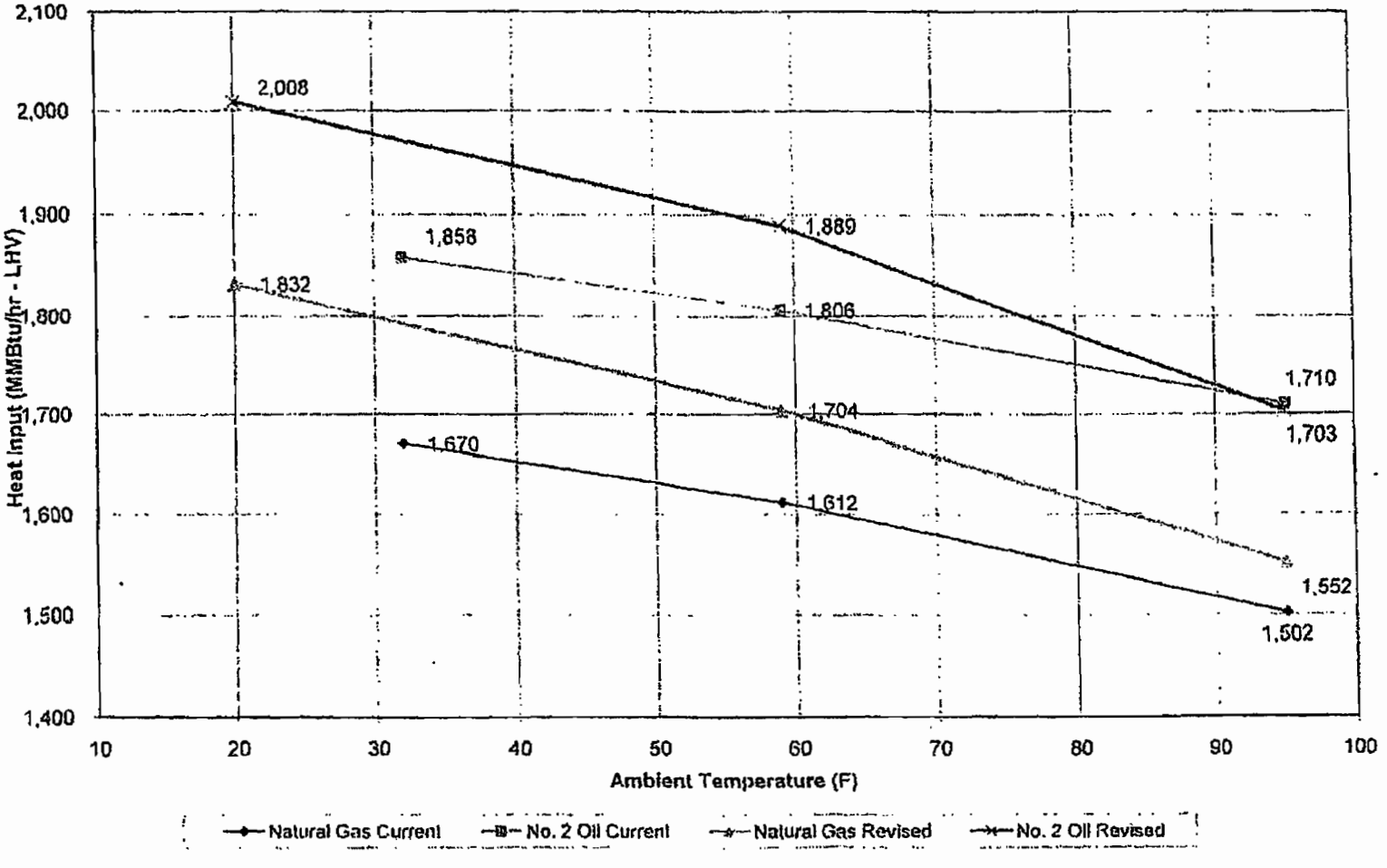
Fuel: Natural Gas
Design Values as Curve S22HA051 Rev A
DLN Combustor



J. Van Deusen
#17790

S22HA052
Rev - A

Shady Hills GE 7FA CTs



APPENDIX 5
SAMPLE CALCULATIONS

CT 1

RUN ONE SAMPLE POLLUTANT CALCULATION

CORRECTED CONCENTRATION (CO), 15 % O2, Eq. 20-4:

$$C = (\quad) * \frac{5.9}{(20.9 - \quad)} \quad NA$$

Cd = Pollutant concentration measured, dry, basis, ppm.

% O2 = Measured O2 concentration, dry basis, percent.

POLLUTANT CONCENTRATION (CO), lb/mmBtu, Eq. 19-1:

$E = (4.0 \times 10^{-9}) * (8710) * [(20.9/20.9 - 14.01,)] = 0.0001$

Cd = (0.06) * (2.59 x 10E-9) * (28.00) = 0.000000004

Fd = 8710 for gas, 9190 for oil

%O2d = dry O2 concentration, %

Mole. Wt. = 28.00

CORRECTED CONCENTRATION (NOx), 15 % O2, Eq. 20-4:

$$C = (8.56) * \frac{5.9}{(20.9 - 14.01)} = 7.33$$

Cd = Pollutant concentration measured, dry, basis, ppm.

% O2 = Measured O2 concentration, dry basis, percent.

POLLUTANT CONCENTRATION (NOx), lb/mmBtu, Eq. 19-1:

$E = (0.000001)^{02} * (8710) * [(20.9/20.9 - 14.01)] = 0.0269$

Cd = (8.56) * (2.59 x 10E-9) * (46.01) = 0.00000102

Fd = 8710 for gas, 9190 for oil

%O2d = dry O2 concentration, %

Mole. Wt. = 46.01

AVERAGE EMISSION RATE

EMISSION RATE CO (lb/hr) = (0.0001) (lb/mmBtu) * (1578.9) (mmBtu/hr) = (0.16) (CO lb/hr)

EMISSION RATE Nox (lb/hr) = (0.0269) (lb/mmBtu) * (1578.0) (mmBtu/hr) = (42.45) (NO_x lb/hr)

CT2

RUN ONE SAMPLE POLLUTANT CALCULATION

CORRECTED CONCENTRATION (CO), 15 % O2, Eq. 20-4:

$$C = (\quad) * \frac{5.9}{(20.9 - \quad)}$$ NA

Cd = Pollutant concentration measured, dry, basis, ppm.

% O2 = Measured O2 concentration, dry basis, percent.

POLLUTANT CONCENTRATION (CO), lb/mmBtu, Eq. 19-1:

E = (4.0×10^{-9}) * (8710) * [(20.9/20.9 - 14.03,] = 0.0001

Cd = (0.05) * (2.59 x 10E-9) * (28.00) = 0.0000000004

Fd = 8710 for gas, 9190 for oil

%O2d = dry O2 concentration, %

Mole. Wt. = 28.00

CORRECTED CONCENTRATION (NOx), 15 % O2, Eq. 20-4:

$$C = (9.09) * \frac{5.9}{(20.9 - 14.03)} = 7.80$$

6.87

Cd = Pollutant concentration measured, dry, basis, ppm.

% O2 = Measured O2 concentration, dry basis, percent.

POLLUTANT CONCENTRATION (NOx), lb/mmBtu, Eq. 19-1:

E = (1.08×10^{-6}) * (8710) * [(20.9/20.9 - 14.03)] = 0.0287

Cd = (9.09) * (2.59 x 10E-9) * (46.01) = 0.000001083

Fd = 8710 for gas, 9190 for oil

%O2d = dry O2 concentration, %

Mole. Wt. = 46.01

AVERAGE EMISSION RATE

EMISSION RATE CO (lb/hr) = (0.0001) * (1594.8) = (0.16)
(lb/mmBtu) (mmBtu/hr) (CO lb/hr)

EMISSION RATE Nox (lb/hr) = (0.0287) * (1594.8) = (45.77)
(lb/mmBtu) (mmBtu/hr) (NO_x lb/hr)

CT 3

RUN ONE SAMPLE POLLUTANT CALCULATION

CORRECTED CONCENTRATION (CO), 15 % O2, Eq. 20-4:

$$C = (\quad) * \frac{5.9}{(20.9 - \quad)} \quad NA$$

Cd = Pollutant concentration measured, dry, basis, ppm.

% O2 = Measured O2 concentration, dry basis, percent.

POLLUTANT CONCENTRATION (CO), lb/mmBtu, Eq. 19-1:

$E = (2.3 \times 10^{-8}) * (8710) * [(20.9/20.9 - 14.00,)] = 0.0006$

$Cd = (0.32) * (2.59 \times 10E{-}9) * (28.00) = 0.00000000023$

Fd = 8710 for gas, 9190 for oil

%O2d = dry O2 concentration, %

Mole. Wt. = 28.00

CORRECTED CONCENTRATION (NOx), 15 % O2, Eq. 20-4:

$$C = (8.19) * \frac{5.9}{(20.9 - 14.00)} = 7.00$$

Cd = Pollutant concentration measured, dry, basis, ppm.

% O2 = Measured O2 concentration, dry basis, percent.

POLLUTANT CONCENTRATION (NOx), lb/mmBtu, Eq. 19-1:

$E = (9.76 \times 10^{-7}) * (8710) * [(20.9/20.9 - 14.00)] = 0.0257$

$Cd = (8.19) * (2.59 \times 10E{-}9) * (46.01) = 0.000000976$

Fd = 8710 for gas, 9190 for oil

%O2d = dry O2 concentration, %

Mole. Wt. = 46.01

AVERAGE EMISSION RATE

EMISSION RATE CO (lb/hr) = (0.0006) (lb/mmBtu) * (1633.5) (mmBtu/hr) = (0.98) (CO lb/hr)

EMISSION RATE Nox (lb/hr) = (0.0257) (lb/mmBtu) * (1633.5) (mmBtu/hr) = (41.98) (NO_x lb/hr)

SAMPLE POLLUTANT CALCULATIONS

CORRECTED CONCENTRATION (CO), % O2, Eq. 20-4:

$$C = (Cd) * \frac{5.9}{(20.9 - \%\ O2)}$$

Cd = Pollutant concentration measured, dry, basis, ppm.

% O2 = Measured O2 concentration, dry basis, percent.

CORRECTED CONCENTRATION (NOx), % O2, Eq. 20-4:

$$C = (Cd) * \frac{5.9}{(20.9 - \%\ O2)}$$

Cd = Pollutant concentration measured, dry, basis, ppm.

% O2 = Measured O2 concentration, dry basis, percent.

POLLUTANT CONCENTRATION (CO), lb/mmBtu, Eq. 19-1:

E = (Cd) * (Fd) * [(20.9/20.9 - %O2d)]

Cd = (conc. dry,ppm) * (2.59 x 10E-9) * (mole. wt.)

Fd = 8710 for gas, 9190 for oil

%O2d = dry O2 concentration,%

POLLUTANT CONCENTRATION (NOx), lb/mmBtu, Eq. 19-1:

E = (Cd) * (Fd) * [(20.9/20.9 - %O2d)]

Cd = (conc. dry,ppm) * (2.59 x 10E-9) * (mole. wt.)

Fd = 8710 for gas, 9190 for oil

%O2d = dry O2 concentration,%

EMISSION RATE CO (lb/hr) = Emission Rate * Heat Input
(lb/mmBtu) (mmBtu/hr)

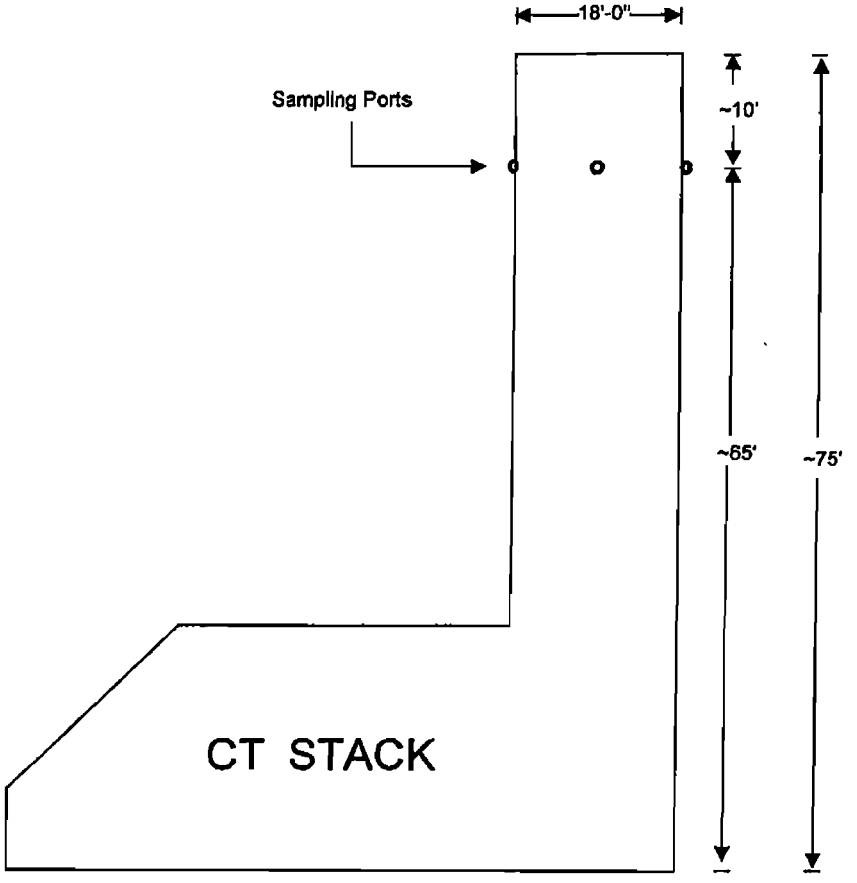
EMISSION RATE NOx (lb/hr) = Emission Rate * Heat Input
(lb/mmBtu) (mmBtu/hr)

APPENDIX 6
FIGURES

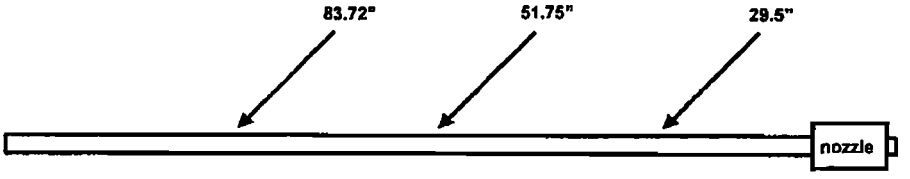
COMBUSTION TURBINE CT1, CT2, CT3 STACK
SHADY HILLS ENERGY PARK
SAMPLING SPECIFICATIONS

STACK SPECIFICATIONS

SAMPLING DIAMETER: 216 in.
SAMPLING AREA: 254.5 sq. ft.
SAMPLING PORT DEPTH: 20.0 in.
NOTE: DRAWING IS NOT TO SCALE



GAS PROBE MARKINGS



Traverse point markings in inches from nozzle.

PROBE MARKINGS FOR TWELVE POINT TRAVERSE

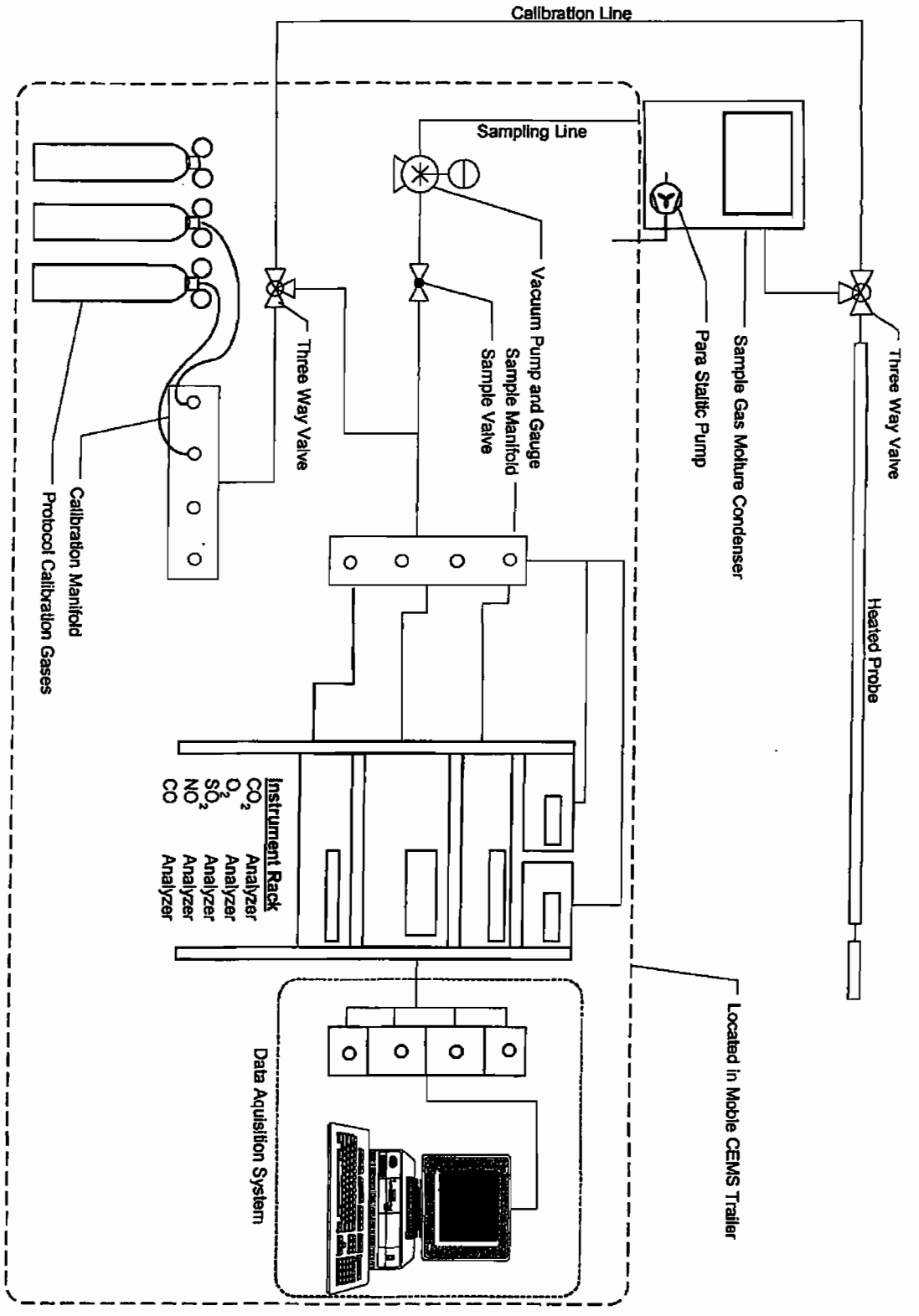
Diameter: 216 Inches

	Number of Points on a diameter				
	4	6	8	10	12
1	14.47	9.50	7.13	5.40	4.54
2	54.00	31.75	22.68	17.71	14.47
3	162.00	63.72	41.90	31.54	25.49
4	201.53	152.28	69.77	48.82	38.23
5		184.25	146.23	73.87	54.00
6		206.50	174.10	142.13	76.68
7			193.32	167.18	139.32
8			208.87	184.46	162.00
9				198.29	177.77
10				210.60	190.51
11					201.53
12					211.46

*Stacks having diameters > 24" no points within 1" from stack wall
*Stacks having diameters < 24" no points within 0.5" from stack wall

Shady Hills CT'S 1-3
18' = 216"
20" Port

Pt 1 = 29.5"
Pt 2 = 51.75"
Pt 3 = 83.72"



DRAWN BY R F Cobb		**TITLE** EPA Instrumental Sample Train	**Coastal Air Consulting, Inc** 1531 Wyngate Drive, Deland FL (386) 943-9241 Fax (386) 943 9212
DATE 4/15/02	**SCALE** NONE	**DESCRIPTION** Sample Train Schematic	

ATTACHMENT SH-EU1-TV1
IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT SH-EU1-TV1
APPLICABLE REQUIREMENTS LISTING

EMISSION UNIT IDs: 001, 002 and 003

FDEP Rules:

Air Pollution Control-General Provisions:

62-204.800(8)(b)39. (State Only)	NSPS Subpart KKKK
62-204.800(8)(c) (State Only)	NSPS Authority
62-204.800(8)(d) (State Only)	NSPS General Provisions
62-204.800(16) (State Only)	Acid Rain Program
62-204.800(17) (State Only)	Allowances
62-204.800(18) (State Only)	Acid Rain Program Monitoring
62-204.800(20) (State Only)	Excess Emissions (Potentially applicable over term of permit)

Stationary Sources-General:

62-210.650	Circumvention; EUs with control device
62-210.700(1)	Excess Emissions;
62-210.700(4)	Excess Emissions; poor maintenance
62-210.700(6)	Excess Emissions; notification

Acid Rain:

62-214.300	All Acid Rain Units (Applicability)
62-214.320	All Acid Rain Units (Application Shield)
62-214.330(1)(a)	Compliance Options (if 214.430)
62-214.340	Exemptions (retired units)
62-214.350(2);(3);(5);(6)	All Acid Rain Units (Certification)
62-214.370	All Acid Rain Units (Revisions; correction; potentially applicable if a need arises)
62-214.430	All Acid Rain Units (Compliance Options-if required)

Stationary Sources-Emission Standards:

62-296.320(4)(b)(State Only)	All Units (General Visible Emissions Standard)

Stationary Sources-Emission Monitoring (where stack test is required):

62-297.310(1)	All Units (Test Runs-Mass Emission)
62-297.310(2)	All Units (Operating Rate)
62-297.310(3)	All Units (Calculation of Emission)
62-297.310(4)	All Units (Applicable Test Procedures)

62-297.310(5)	All Units (Determination of Process Variables)
62-297.310(6)(a)	All Units (Permanent Test Facilities-general)
62-297.310(6)(c)	All Units (Sampling Ports)
62-297.310(6)(d)	All Units (Work Platforms)
62-297.310(6)(e)	All Units (Access)
62-297.310(6)(f)	All Units (Electrical Power)
62-297.310(6)(g)	All Units (Equipment Support)
62-297.310(7)(a)1.	Applies mainly to CTs/Diesels
62-297.310(7)(a)3.	Permit Renewal Test Required
62-297.310(7)(a)4.	Annual Test
62-297.310(7)(a)5.	PM exemption if <400 hrs/yr
62-297.310(7)(a)8.	VE Compliance Test if > 400 hrs/yr
62-297.310(7)(a)9.	FDEP Notification - 15 days
62-297.310(7)(c)	Waiver of Compliance Tests (Fuel Sampling)
62-297.310(8)	Test Reports

Federal Rules:

National Emission Standards for Hazardous Air Pollutants (NESHAP) from Coal- and Oil-fired Electric Utility Steam Generating Units and Standards of Performance for Electric Utility Steam Generating Units a.k.a. MACT and NSPS for Utilities - Mercury & Air Toxics Standards (MATS)

NSPS Subpart KKKK:	Standards of Performance for Stationary Combustion Turbines.

NSPS General Requirements:

40 CFR 60.7(a)(1)	Notification of Construction
40 CFR 60.7(a)(3)	Notification of Actual Start-Up
40 CFR 60.7(a)(4)	Notification and Recordkeeping (Physical/Operational Cycle)
40 CFR 60.7(a)(5)	Notification of CEM Demonstration
40 CFR 60.7(b)	Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(c)	Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(d)	Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(f)	Recordkeeping (maintain records-2 yrs)
40 CFR 60.8(a)	Performance Test Requirements
40 CFR 60.8(b)	Performance Test Requirements
40 CFR 60.8(c)	Performance Tests (representative conditions)
40 CFR 60.8(d)	Performance Test Notification
40 CFR 60.8(e)	Provide Stack Sampling Facilities
40 CFR 60.8(f)	Test Runs
40 CFR 60.11(a)	Compliance (ref. S. 60.8 or Subpart; other than opacity)

40 CFR 60.11(b)	Compliance (opacity determined EPA Method 9)
40 CFR 60.11(c)	Compliance (opacity; excludes startup/shutdown/malfunction)
40 CFR 60.11(d)	Compliance (maintain air pollution control equip.)
40 CFR 60.11(e)(2)	Compliance (opacity; ref. S. 60.8)
40 CFR 60.12	Circumvention
40 CFR 60.13(a)	Monitoring (Appendix B; Appendix F)
40 CFR 60.13(d)(1)	Monitoring (CEMS; span, drift, etc.)
40 CFR 60.13(e)	Monitoring (frequency of operation)
40 CFR 60.13(f)	Monitoring (frequency of operation)

Acid Rain-Permits:

40 CFR 72.9(a)	Permit Requirements
40 CFR 72.9(b)	Monitoring Requirements
40 CFR 72.9(c)(1)	SO_2 Allowances-hold allowances
40 CFR 72.9(c)(2)	SO_2 Allowances-violation
40 CFR 72.9(c)(3)(iv)	SO_2 Allowances-Phase II Units
40 CFR 72.9(c)(4)	SO_2 Allowances-allowances held in ATS
40 CFR 72.9(c)(5)	SO_2 Allowances-no deduction for 72.9(c)(1)(i)
40 CFR 72.9(e)	Excess Emission Requirements
40 CFR 72.9(f)	Recordkeeping and Reporting
40 CFR 72.9(g)	Liability
40 CFR 72.20(a)	Designated Representative; required
40 CFR 72.20(b)	Designated Representative; legally binding
40 CFR 72.20(c)	Designated Representative; certification requirements
40 CFR 72.21	Submissions
40 CFR 72.22	Alternate Designated Representative
40 CFR 72.23	Changing representatives; owners
40 CFR 72.24	Certificate of representation
40 CFR 72.30(a)	Requirements to Apply
40 CFR 72.30(b)(2)	Requirements to Apply (Phase II-Complete)
40 CFR 72.30(c)	Requirements to Apply (reapply before expiration)
40 CFR 72.30(d)	Requirements to Apply (submittal requirements)
40 CFR 72.31	Information Requirements; Acid Rain Applications
40 CFR 72.32	Permit Application Shield
40 CFR 72.33(b)	Dispatch System ID; unit/system ID
40 CFR 72.33(c)	Dispatch System ID; ID requirements
40 CFR 72.33(d)	Dispatch System ID; ID change
40 CFR 72.40(a)	General; compliance plan
40 CFR 72.40(b)	General; multi-unit compliance options

40 CFR 72.40(d)	General; termination of compliance options
40 CFR 72.51	Permit Shield
40 CFR 72.90	Annual Compliance Certification
Allowances:	
40 CFR 73.33(a),(c)	Authorized account representative
40 CFR 73.35(c)(1)	Compliance: ID of allowances by serial number
Monitoring Part 75:	
40 CFR 75.4	Compliance Dates;
40 CFR 75.5	Prohibitions
40 CFR 75.10(a)(1)	Primary Measurement; SO_2;
40 CFR 75.10(a)(2)	Primary Measurement; NO_x;
40 CFR 75.10(a)(3)(iii)	Primary Measurement; CO_2; O_2 monitor
40 CFR 75.10(b)	Primary Measurement; Performance Requirements
40 CFR 75.10(c)	Primary Measurement; Heat Input; Appendix F
40 CFR 75.10(f)	Primary Measurement; Minimum Measurement
40 CFR 75.10(g)	Primary Measurement; Minimum Recording
40 CFR 75.11(d)	SO_2 Monitoring; Gas- and Oil-fired units
40 CFR 75.11(e)	SO_2 Monitoring; Gaseous firing
40 CFR 75.12(a)	NO_x Monitoring; Coal; Non-peaking oil/gas units
40 CFR 75.12(c)	NO_x Monitoring; Determination of NO_x emission rate; Appendix F
40 CFR 75.13(b)	CO_2 Monitoring; Appendix G
40 CFR 75.13(c)	CO_2 Monitoring; Appendix F
40 CFR 75.14(c)	Opacity Monitoring; Gas units; exemption
40 CFR 75.20(a)	Initial Certification Approval Process; Loss of Certification
40 CFR 75.20(b)	Recertification Procedures (if recertification necessary)
40 CFR 75.20(c)	Certification Procedures (if recertification necessary)
40 CFR 75.21(a)	QA/QC; CEMS; Appendix B (Suspended 7/17/95-12/31/96)
40 CFR 75.21(c)	QA/QC; Calibration Gases
40 CFR 75.21(d)	QA/QC; Notification of RATA
40 CFR 75.21(e)	QA/QC; Audits
40 CFR 75.22	Reference Methods
40 CFR 75.24	Out-of-Control Periods; CEMS
40 CFR 75.30(a)(3)	General Missing Data Procedures; NO_x
40 CFR 75.30(a)(4)	General Missing Data Procedures; CO_2
40 CFR 75.30(d)	General Missing Data Procedures; SO_2
40 CFR 75.31	Initial Missing Data Procedures (new/re-certified CMS)
40 CFR 75.32	Monitoring Data Availability for Missing Data

40 CFR 75.33	Standard Missing Data Procedures
40 CFR 75.36	Missing Data for Heat Input
40 CFR 75.53	Monitoring Plan; revisions
40 CFR 75.57(a)	Recordkeeping Requirements for Affected Sources
40 CFR 75.57(b)	Operating Parameter Record Provisions
40 CFR 75.57(d)	NO_x Emission Record Provisions
40 CFR 75.57(e)	CO_2 Emission Record Provisions
40 CFR 75.57(h)	Missing Data Records
40 CFR 75.58(c)	Specific SO_2 Emission Record Provisions
40 CFR 75.58(e)	Specific SO_2 Emission Record Provisions
40 CFR 75.59	Certification; QA/QC Provisions
40 CFR 75.60	Reporting Requirements-General
40 CFR 75.61	Reporting Requirements-Notification cert/recertification
40 CFR 75.62	Reporting Requirements-Monitoring Plan
40 CFR 75.63	Reporting Requirements-Certification/Recertification
40 CFR 75.64(a)	Reporting Requirements-Quarterly reports; submission
40 CFR 75.64(b)	Reporting Requirements-Quarterly reports; DR statement
40 CFR 75.64(c)	Rep. Req.; Quarterly reports; Compliance Certification
40 CFR 75.64(d)	Rep. Req.; Quarterly reports; Electronic format
40 CFR 75.64(f)	Method of Submission
40 CFR 75.64(g)	Submission Requirements
40 CFR 75.66	Petitions to the Administrator (if required)
Appendix A	Specifications and Test Procedures
Appendix B	QA/QC Procedures
Appendix C.	Missing Data Estimation Procedures
Appendix D	Optional SO_2; Oil-/gas-fired units
Appendix F	Conversion Procedures

Acid Rain Program-Excess Emissions:

40 CFR 77.3	Offset Plans
40 CFR 77.5(b)	Deductions of Allowances
40 CFR 77.6	Excess Emissions Penalties (SO_2)

GAS HEATER (EMISSION UNIT ID TBD)

FDEP Rules:

Air Pollution Control-General Provisions:

40 CFR 60 Subpart A	General Provisions
40 CFR 60 Subpart Dc	Small Industrial, Commercial or Institutional Boilers

ATTACHMENT SH-EU1-TV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT SH-EU1-TV3
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 1,889 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 1,704 MMBtu/hr when firing natural gas.

APPENDIX A

EU 004 EMISSION ESTIMATES AND EPA TANKS OUTPUT

APPENDIX A
FUEL OIL STORAGE TANK, SHADY HILLS GENERATING STATION PROJECT

Parameters	CT #1, 2, 3
Fuel usage (lb/hr)	284,631
Fuel usage (gallons/hr)	41,674
Maximum operation (hours)	3000
Maximum fuel usage (gallons/yr)	125,020,866

VOC Potential Engine Emissions

Diesel/Fuel Tanks	Quantity	Tank Capacity (gal)	Height of Tank (ft)	Diameter of Tank (ft)	Net Throughput (gal/year)	Color/condition of tank shell	VOC Annual Emission Rate (lb/year)		VOC Annual Emission Rate (ton/year)
							Working Losses	Breathing Losses	
Distillate Oil (No. 2)	1	2,800,000	39	110	125,020,866	White/Good	3,321.55	28.42	**1.67**

Source:
EPA's TANKS, Version 4.0.9d program to estimate emissions of organic chemicals from storage tanks.
Assumed a Vertical Fixed roof Tank

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Shady Hills EU 004
City:	Tampa
State:	Florida
Company:	Shady Hills
Type of Tank:	Vertical Fixed Roof Tank
Description:	2.8 million gallon distillate fuel oil storage tank

Tank Dimensions

Shell Height (ft):	39.00
Diameter (ft):	110.00
Liquid Height (ft) :	39.00
Avg. Liquid Height (ft):	39.00
Volume (gallons):	2,772,509.58
Turnovers:	45.09
Net Throughput(gal/yr):	125,020,866.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	2.00
Radius (ft) (Dome Roof)	55.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Tampa, Florida (Avg Atmospheric Pressure = 14.76 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Shady Hills EU 004 - Vertical Fixed Roof Tank
Tampa, Florida

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	All	74.39	69.20	79.58	72.33	0.0103	0.0088	0.0119	130.0000			188.00	Option 1: VP70 = .009 VP80 = .012

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Shady Hills EU 004 - Vertical Fixed Roof Tank
Tampa, Florida

Annual Emission Calcaulations	
Standing Losses (lb):	28.4206
Vapor Space Volume (cu ft)	9,507.5066
Vapor Density (lb/cu ft):	0.0002
Vapor Space Expansion Factor:	0.0350
Vented Vapor Saturation Factor:	0.9995
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	9,507.5066
Tank Diameter (ft):	110.0000
Vapor Space Outage (ft):	1.0004
Tank Shell Height (ft):	39.0000
Average Liquid Height (ft):	39.0000
Roof Outage (ft):	1.0004
Roof Outage (Dome Roof)	
Roof Outage (ft):	1.0004
Dome Radius (ft):	55.0000
Shell Radius (ft):	55.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.0103
Daily Avg. Liquid Surface Temp. (deg. R)	534.0608
Daily Average Ambient Temp. (deg. F):	72.3125
Ideal Gas Constant R (psia cuft / (lb-mol-deg R))	10.731
Liquid Bulk Temperature (deg. R):	532.0025
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,539.1581
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0350
Daily Vapor Temperature Range (deg. R):	20.7604
Daily Vapor Pressure Range (psia)	0.0031
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0103
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0088
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0119
Daily Avg. Liquid Surface Temp. (deg R):	534.0608
Daily Min. Liquid Surface Temp. (deg R):	528.8707
Daily Max. Liquid Surface Temp. (deg R):	539.2509
Daily Ambient Temp. Range (deg R)	18.6583
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9995
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia)	0.0103
Vapor Space Outage (ft):	1.0004
Working Losses (lb):	3,321.5537
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.0103
Annual Net Throughput (gal/yr.):	125,020,866.0000
Annual Turnovers:	45.0930
Turnover Factor:	0.8320
Maximum Liquid Volume (gal):	2,772,509.5770
Maximum Liquid Height (ft):	39.0000
Tank Diameter (ft):	110.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	3,349.9743

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Shady Hills EU 004 - Vertical Fixed Roof Tank
Tampa, Florida

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	3,321.55	28.42	3,349.97

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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South America	+ 55 21 3095 9500

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