REPORT

AIR PERMIT REVISION APPLICATION FOR THE PASCO COGENERATION PLANT

Submitted To: Air Quality Division
Department of Environmental Protection
2600 Blair Stone Road
MS 5000
Tallahassee, FL 32399 USA

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 —Caithness Corporation
1 Copy —Golder Associates Inc.

January 2011

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January 31, 2011

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AIR REGULATION

10389628B

Mr. Jonathon Holtom, P.E.
North Permitting Section
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

RE: APPLICATION FOR AIR PERMIT REVISIONS
PASCO COGENERATION PLANT
FACILITY ID NO. 1010071

Project No.: 1010071-011-AC
1010071-012-AV

Dear Mr. Holtom:

Enclosed please find one original and three copies of an application for concurrent processing of revisions to the current Title V air permit, as well as the underlying air construction permit conditions upon which they were based, for the Pasco Cogeneration Plant located in Dade City, Pasco County, Florida. This permit revision application incorporates the provisions of Permit No. 1010071-010-AC, and, therefore, requires changes to conditions of the current Title V Air Operation Permit No. 1010071-008-AV to incorporate these new requirements. Permit No. 1010071-010-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units. This application also requests changes to conditions of the current Title V Air Operation Permit No. 1010071-008-AV, which requires concurrent air construction permit processing.

Pasco Cogeneration looks forward to working with you on this permitting effort. If you would like to discuss any issues regarding this application, please contact Mr. Tom Grace of Caithness Energy at (917) 472-4593 or me at (813) 287-1717 in Tampa.

Sincerely,

GOLDER ASSOCIATES INC.

Scott Osbourn, PE
Associate and Senior Consultant

Enclosure

Cc: David Zell, DEP SW District Office
Richard Christmas, Pasco Cogen
Tom Grace, Caithness Energy

Golder Associates Inc.
5100 W. Lemon Street, Suite 114
Tampa, FL 33609 USA
Tel: (813) 287-1717 Fax: (813) 287-1716 www.golder.com

Table of Contents

PART I

FDEP APPLICATION FOR AIR PERMIT

Department of Environmental Protection

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: **Pasco Cogeneration Ltd.**	
2. Site Name: **Pasco Cogeneration**	
3. Facility Identification Number: **1010071**	
4. Facility Location... Street Address or Other Locator: **14850 Old State Road 23** City: **Dade City** County: **Pasco** Zip Code: **33523**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Thomas Grace**
2. Application Contact Mailing Address... Organization/Firm: **Caithness Generation Services** Street Address: **565 Fifth Ave., 29th Floor** City: **New York** State: **NY** Zip Code: **10017**
3. Application Contact Telephone Numbers... Telephone: **(917) 472 - 4593** ext. Fax: **(732) 817 - 0101**
4. Application Contact E-mail Address: **tgrace@caithnessenergy.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 2-01-11	3. PSD Number (if applicable):
2. Project Number(s): 1010071-011-AC 1010071-012-AV	4. Siting Number (if applicable):

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 permit revision application incorporates the provisions of Permit No. 1010071-010-AC, and, therefore, requires changes to conditions of the current Title V Air Operation Permit No. 1010071-008-AV to incorporate these new requirements. Permit No. 1010071-010-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units. This application also requests changes to conditions of the current Title V Air Operation Permit No. 1010071-008-AV, which requires concurrent air construction permit processing. The requested revisions are described in PC-FI-C2.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
001	Unit No. 1 – CT with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG	AV02	NA
002	Unit No. 2 – CT with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG	AV02	NA

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:
   Richard Christmas, Plant Manager

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

   ☒ 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.

   ☒ The designated representative at an Acid Rain source or CAIR source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: **Pasco Cogeneration Ltd.**
   Street Address: **14850 Old State Road 23**
   City: **Dade City** State: **Florida** Zip Code: **33523**

4. Application Responsible Official Telephone Numbers...
   Telephone: **(352) 523-0062** ext. Fax: **(352) 523-0572**

5. Application Responsible Official E-mail Address: **rchristmas@caithnessenergy.com**

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 West Lemon St., Suite 208**
   City: **Tampa** State: **FL** Zip Code: **33609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(813) 287-1717** ext. **53304** 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.

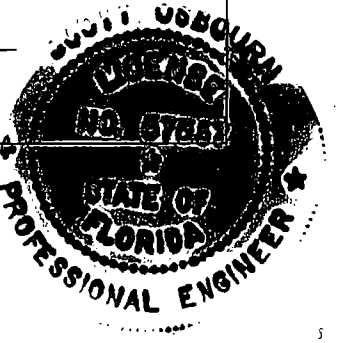
(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application 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 ☒, 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 1/31/11 Date

(seal)



*** Attach any exception to certification statement.**
**** Board of Professional Engineers Certificate of Authorization # 00001670**

APPLICATION INFORMATION

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.

Signature

Jan. 31, 2011
Date

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **383.5** North (km) **3139.0**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **28° 22' 28"** Longitude (DD/MM/SS) **82° 11' 21"**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s): **4931**

7. Facility Comment :

Pasco Cogeneration facility consists of two GE LM-6000 combustion turbine units (CTs), each unit equipped with an inlet chiller and a supplementary fired duct burner (DB) and exhausting through Heat Recovery Steam Generator (HRSG) stacks. The CTs have dual fuel (natural gas and distillate fuel) capability. Both CTs recently underwent SPRINT upgrade for enhanced efficiency. Permit No. 1010071-010-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units.

Facility Contact

1. Facility Contact Name:
   Richard Christmas, Plant Manager
2. Facility Contact Mailing Address...
   Organization/Firm: **Pasco Cogeneration Ltd.**
   Street Address: **12850 Old State Road 23**
   City: **Dade City** State: **FL** Zip Code: **33532**
3. Facility Contact Telephone Numbers:
   Telephone: **(352) 523 - 0062** ext. Fax: **(352) 523 - 0572**
4. Facility Contact E-mail Address: **rchristmas@caithnessenergy.com**

Facility Primary Responsible Official

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

1. Facility Primary Responsible Official Name:
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 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. ☒ Title V Source	
4. ☒ 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. ☒ 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:	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM/PM_{10}	A	N
CO	A	N
VOC	A	N
SO_2	A	N
NO_x	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) ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date: **June 1, 2009**
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) ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date: **June 1, 2009**
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) ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date: **June1, 2009**

Additional Requirements for Air Construction Permit Applications -- NA

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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications -- NA

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)
   ☐ Attached, Document ID:_____ ☒ Not Applicable (revision application)

2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
   ☒ Attached, Document ID: PC-FI-C1
   ☐ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
   ☐ Attached, Document ID:_____
   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
   ☒ Not Applicable

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

6. Requested Changes to Current Title V Air Operation Permit:
   ☒ Attached, Document ID: PC-FI-C2 ☐ 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)):
   ☐ Attached, Document ID: ☒ Previously Submitted, Date: **June 1, 2009**
   ☐ 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)):
   ☐ Attached, Document ID: ☒ Previously Submitted, Date: **June 1, 2009**
   ☐ Not Applicable (not a CAIR source)

Additional Requirements Comment

Attachment PC-FI-C3: CAM Plan

Attachment PC-FI-C4: Compliance Demonstration Reports/Records

PART II

APPLICATION REPORT

INTRODUCTION

This permit revision application incorporates the provisions of Permit No. 1010071-010-AC, and, therefore, requires changes to conditions of the current Title V Air Operation Permit No. 1010071-008-AV to incorporate these new requirements. Permit No. 1010071-010-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units. This application also requests changes to conditions of the current Title V Air Operation Permit No. 1010071-008-AV, which requires concurrent air construction permit processing.

PROJECT DESCRIPTION

Permit No. 1010071-010-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units. Carbon Monoxide (CO) is controlled or reduced by the use of a catalytic oxidation system, which is effectively a passive control system. The catalyst (stainless steel foil coated with calcined alumina with platinum metal) enhances the chemical reaction between oxygen and carbon monoxide and forms carbon dioxide as the end product. This reaction generally provides for emission control in the range of 50 to 70%, depending on the exhaust gas temperature. The catalyst normally operates at a temperature around 700° F with corresponding CO removal efficiencies of approximately 70%. This system is designed and certified by the manufacturer to operate while the plant is burning either natural gas or new No. 2 diesel fuel oil.

A plant operator occupies the plant control room 24 hours per day, which allows the plant personnel to monitor two key catalyst operating parameters. Namely, catalyst inlet temperature and pressure drop across the catalyst bed. A high temperature alarm is proposed to alert the operator if the catalyst inlet temperature becomes excessive to protect the bed from thermal damage, and a high-pressure alarm sounds if the pressure drop across the catalyst bed becomes excessive. The pressure reading serves two purposes: to ensure that there is airflow across the bed, thus verifying that the system is operating, and to alert the plant operator if a possible plugging or fouling has occurred. Please see Attachment PC-FI-C3 for a copy of the CO control Compliance Assurance Monitoring (CAM) plan.

REQUESTED PERMIT CHANGES

This Title V Operation Permit Revision application also requests changes to conditions of the current Title V Air Operation Permit No. 1010071-008-AV, please see Attachment PC-FI-C2 for a list of requested changes.

Attachment PC-FI-C4 provides a summary list of previously submitted compliance demonstration reports/records.

ATTACHMENT PC-FI-CI

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT PC-FI-C1
Identification of Applicable Requirements

In addition to the requirements identified in the TV Core List (Effective: 03/01/02), the following emission unit specific requirements are:

- 40 CFR 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines ;
- 40 CFR 60 Subpart A – General Provisions;
- 40 CFR 60 Appendix A – Test Methods;
- 40 CFR 75 Acid Rain Monitoring Provisions;
- 40 CFR 75 – Acid Rain Monitoring Provision;
- Chapter 403 F.S.; and
- Chapter 62-204 – Air Pollution Control – General Provisions

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

Florida Department of Environmental Protection

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

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

PERMITTEE

Pasco Cogeneration, Ltd.
14850 Old State Road 23
Dade City, Florida 33523

Authorized Representative:
Richard Christmas, Plant Manager

Air Permit No. 1010071-010-AC
Permit Expires: June 1, 2011
Pasco Cogeneration Facility
Minor Source Air Construction Permit
Installation of Oxidation Catalyst
Control Systems

PROJECT AND LOCATION

This permit authorizes the installation of oxidation catalyst control systems to the existing two General Electric (GE) LM-6000 combustion turbine (CT) units. The proposed work will be conducted at the Pasco Cogeneration Facility, which is a combined cycle combustion turbine cogeneration plant (Standard Industrial Classification No. 4911). The facility is located in Pasco County at 14850 Old State Road 23 in Dade City, Florida. The UTM coordinates are Zone 17, 383.5 km East, and 3,139.0 km North.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

CONTENTS

Executed in Tallahassee, Florida

Joseph Kahn, Director
Division of Air Resource Management

(Date)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on _____ to the persons listed below.

Richard Christmas, Pasco Cogeneration Facility: rchristmas@caithnessenergy.com
Thomas Grace, Caithness Energy: tgrace@caithness.com
Scott Osbourn, Golder Associates: sosbourn@golder.com
Kathy Forney, EPA Region 4: forney.kathleen@epa.gov
Heather Abrams, EPA Region 4: abrams.heather@epa.gov
Ana M. Oquendo, EPA Region 4: oquendo.ana@epa.gov
David Zell, DEP SW: david.zell@dep.state.fl.us
Vickie Gibson, DEP BAR Reading File: victoria.gibson@dep.state.fl.us

Clerk Stamp

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

_____ _____
(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

Pasco Cogeneration, Ltd. owns the Pasco Cogeneration Facility, which is a combined cycle CT cogeneration plant. The facility consists of two GE LM-6000 CT units. Each unit is equipped with an inlet chiller and supplementary fired duct burner and exhausts through a Heat Recovery Steam Generator (HRSG) stack. Natural gas is the primary fuel fired in the CT, with distillate oil used as a restricted alternate fuel.

In 2008, a spray inter-cooling (SPRINT) system was installed on each CT unit. A continuous emission monitoring system (CEMS) for monitoring and reporting nitrogen oxide (NO_X) emissions was also installed on each unit. The facility consists of the emission units given below.

Facility ID No. 1010071

ID No.	Emission Unit Description
001	Unit No. 1 - Combustion Turbine with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG.
002	Unit No. 1 - Combustion Turbine with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG.

Proposed Project

The proposed project authorizes the installation of an oxidation catalyst system in the HRSG associated with each of the two CT units. The oxidation catalyst system is used to control or reduce carbon monoxide (CO) emissions. The catalyst (stainless steel foil coated with calcined alumina with platinum metal) enhances the chemical reaction between oxygen and CO and forms carbon dioxide. This project generally provides for emission control of CO in the range of 50 to 70%. The project will also result in an emission reduction of volatile organic compounds (VOC). This project will modify the following emissions units.

Facility ID No. 1010071

ID No.	Emission Unit Description
001	Unit No. 1 - Combustion Turbine with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG.
002	Unit No. 1 - Combustion Turbine with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG.

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Bureau of Air Regulation, Division of Air Resource Management, Florida Department of Environmental Protection (Department). The Bureau of Air Regulation's mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the Air Resource Section of the Department's Southwest District Office at 13051 N. Telecom Parkway, Temple Terrace, FL 33637-0926.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resources Section of the Department's Southwest District Office at 13051 N. Telecom Parkway, Temple Terrace, FL 33637-0926.

3. Appendices: The following Appendices are attached as part of this permit:

   a. Appendix A. Citation Formats and Glossary of Common Terms;

   b. Appendix B. General Conditions;

   c. Appendix C. Common Conditions; and

   d. Appendix D. Common Testing Requirements.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Bureau of Air Regulation at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

Emissions Units 001 and 002

Description: Each unit consists of a GE Model LM-6000 CT, HRSG with duct firing, chiller system, and SPRINT spray inter-cooling. Steam generated in the HRSG is directed to a common steam turbine-electrical generator (STG), which is rated at 26.5 megawatts (MW).

Fuel: Each unit fires pipeline natural gas as the primary fuel and distillate oil as a restricted alternate fuel.

Capacity: At a turbine inlet temperature of 51°F, the maximum heat input rate from gas firing based on the lower heating value (LHV) is: 424 million British thermal units (MMBtu) per hour without SPRINT, which produces approximately 45 MW; or 450 MMBtu per hour with SPRINT, which produces approximately 52 MW.

NO_X Controls: A water injection system is used to reduce NO_X emissions. The water-to-fuel ratio is monitored continuously and adjusted by the automatic control system based on load conditions.

CO Controls: This project adds an oxidation catalyst system to each CT unit to reduce CO and VOC emissions.

Stack Parameters: The stack is a maximum of 11 feet in diameter and at least 100 feet tall. At base load conditions and a compressor inlet temperature of 51°F, exhaust gas exits the stack at approximately 250°F with a volumetric flow rate of approximately 320,253 actual cubic feet per minute (acfm)

CEMS: Each unit is equipped with a CEMS to monitor NO_X emissions.

EQUIPMENT

1. Oxidation Catalyst System: The permittee is authorized to install an EmeraChem (or equivalent) oxidation catalyst system in the HRSG of each CT unit. The catalyst, which is stainless steel foil coated with calcined alumina with platinum metal, enhances the chemical reaction between oxygen and CO. The use of this oxidation catalyst system generally provides for an emission reduction of CO in the range of 50% to 70%, depending on the exhaust gas temperature. [Application No. 1010071-010-AC]

EMISSION LIMITS AND PERFORMANCE STANDARDS

{Permitting Note: This project adds an oxidation catalyst system to each CT unit. There are no changes to any permitted capacities, operational restrictions or emission standards in any previously issued air construction or Title V permits.}

TESTING REQUIREMENTS

2. Initial Compliance Tests: Each unit shall be tested to demonstrate initial compliance with the CO emissions standards specified in the Title V air operations permit. The initial tests shall be conducted within 60 days after completing construction of the oxidation catalyst project and achieving maximum production capacity, but not later than 180 days after initial operation of the unit with the oxidation catalyst. Satisfactory test results may be used to demonstrate annual compliance required by the Title V air operation permit for the year that the initial compliance test took place. [Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

3. Test Notifications: At least 15 days prior to the date on which each required test is to begin, the permittee shall notify the Compliance Authority of the date, time, and place of each test. The notification shall also include the name and phone number of the contact person who will be responsible for coordinating and having the tests conducted. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

4. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
10	Determination of Carbon Monoxide Emissions from Stationary Sources (The method shall be based on a continuous sampling train.)
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and Appendix A of 40 CFR 60]

RECORDS AND REPORTS

5. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. For each test run, the report shall also indicate load (MW), the heat input rate (MMBtu per hour), fuel firing rate, NO_X emissions monitored by the CEMS, ambient temperature (°F), turbine inlet temperature (°F), and water-to-fuel ratio. [Rule 62-297.310(8), F.A.C.]

6. Testing Capacity: The permittee shall conduct compliance testing of emissions with each CT operating at capacity. Capacity is defined as 90-100 percent of the manufacturer's rated heat input achievable for the average compressor inlet conditions during the test. If it is impracticable to test at capacity, then each CT may be tested at less than capacity. In such cases, the entire curve or table shall be adjusted downward by the increment that reflects the reduced rate of operation at which compliance was demonstrated. This increment is equal to the difference between the manufacturer's heat input or fuel usage value and 110 percent of the value reached during the test. In this case, the data and calculations necessary to demonstrate the heat input or fuel usage rate correction shall be submitted to the department with the compliance test report. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) as given in Appendix D of this permit. [Rule 62-4.070(3), F.A.C.]

NOTIFICATIONS

7. Construction Notifications: Within 15 days of completing construction, the permittee shall notify the Compliance Authority that construction has been completed. The notification shall include an updated proposed schedule of activities through the initial shakedown period and initial testing. [Rule 62-4.070(3), F.A.C.]

ATTACHMENT PC-FI-C2

REQUESTED PERMIT CHANGES

ATTACHMENT PC-FI-C2
Requested Changes to Current Title V Air Operation Permit

A summary of the requested revisions is as follows:

- Revision in the nominal MW ratings of the facility;
  - Page 2, subsection A – Change from 52MW to 48 MW.
- Revise to reference the allowable permit limits to 51 F and delete the references to ISO conditions;
  - Page 6, section A1.a and section A1.b – Remove reference to ISO conditions (remove "at 51F or 429 MMBtu/hr/CT when corrected to International Organization for Standardization (ISO) conditions.")
  - Page 7, Table 1 – Remove limits for "@59F" , Just have one set of maximum limits, regardless of temperature/humidity conditions.
- Revise to remove the distinction between the normal operating mode and the SPRINT mode;
  - Page 6, section A1.a and section A1.b – Remove the differentiation between operating with and without SPRINT and use 450 MMBTU (LHV) for all scenarios.
- Revise the annual test scheduling to be consistent with a FY basis; and
- The CO emission limit on distillate fuel oil should be 18 ppmvd and not 78 ppmvd.
- Finally, it is requested that a footnote be added to the CO emission limits in Condition A.8 of the current TV permit, indicating that the limits are corrected to 15 percent O_2. This is consistent with other similar BACT determinations for CO and may have been implied in the current permit, although not specifically addressed.

ATTACHMENT PC-FI-C3

CAM PLAN

COMPLIANCE ASSURANCE MONITORING PLAN
(CAM PLAN)
for

CARBON MONOXIDE

Pasco Cogeneration Plant

Caithness Corporations
Pasco County, Florida

January 2011

I. EMISSION UNITS REQUIRING CAM PLANS

A. CAM Rule Applicability Definition

This permit revision application requests incorporation of the provisions of Permit No. 1010071-010-AC, and, therefore, requires changes to conditions of the current Title V Air Operation Permit No. 1010071-008-AV to incorporate these provisions. As a result of the instillation of oxidation catalyst control systems for carbon monoxide (CO) control, a Compliance Assurance Monitoring (CAM) plan has been developed, since the CT units are not equipped with CO CEMS as a continuous compliance determination method.

As part of the Title V renewal/revision process, EPA, through regulations adopted in Title 40, Part 64 of the Code of Federal Regulations (40 CFR 64), is requiring submittal of Compliance Assurance Monitoring (CAM) Plans. This regulation has been incorporated by reference by FDEP in Rule 62-204.800 and implemented in Rule 62-213.440.

CAM plans are required for all Title V permitted emission units using control devices to meet federally enforceable emission limits or standards with pre-control emissions greater than "major" source thresholds. The term "major" is defined as in the Title V Regulations (40 CFR 70), but applied on a source-by-source basis. However, there are some specific exemptions to the applicability of the CAM Rule.

B. Emissions Units Requiring CAM Plans

A review of emission units at Pasco Cogeneration Plant was conducted to determine the applicability of the CAM Rule. This evaluation process resulted in a determination that both combustion turbines (CT)s (DEP Emission Unit ID Nos. 001, and 002) are subject to the CAM requirements for CO. Specific exemptions to the applicability of the CAM Rule were also considered in this evaluation.

Combined Cycle Combustion Turbines/ Duct Burner (E.U. ID No. 003 and 004)

The Pasco Cogeneration facility consists of two GE LM-6000 combustion turbine units, each unit equipped with an inlet chiller and a supplementary fired duct burner (DB) and exhausting through Heat Recovery Steam Generator (HRSG) stacks. The CTs have dual fuel (natural gas and distillate fuel) capability. Both CTs recently underwent a SPRay INTercooling (SPRINT) upgrade for enhanced efficiency. Permit No. 1010071-010-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units.

II. CAM PLAN FOR CARBON MONOXIDE EMISSIONS

A. Control Technology

Carbon Monoxide (CO) is controlled or reduced by the use of a catalytic oxidation system, which is effectively a passive control system. The catalyst (stainless steel foil coated with calcined alumina with platinum metal) enhances the chemical reaction between oxygen and carbon monoxide and forms carbon dioxide as the end product. This reaction generally provides for emission control in the range of 50 to 70%, depending on the exhaust gas temperature. The catalyst normally operates at a temperature around 700° F with corresponding CO removal efficiencies of approximately 70%. This system is designed and certified by the manufacturer to operate while the plant is burning either natural gas or new No. 2 diesel fuel oil.

A plant operator occupies the plant control room 24 hours per day, which allows the plant personnel to monitor two key catalyst operating parameters. Namely, catalyst inlet temperature and pressure drop across the catalyst bed. A high temperature alarm is proposed to alert the operator if the catalyst inlet temperature becomes excessive to protect the bed from thermal damage, and a high-pressure alarm sounds if the pressure drop across the catalyst bed becomes excessive. The pressure reading serves two purposes: to ensure that there is airflow across the bed, thus verifying that the system is operating, and to alert the plant operator if a possible plugging or fouling has occurred.

B. Monitoring Approach

The key elements of the monitoring approach are presented in Table 1. The selected performance indicators are catalyst inlet temperature, pressure drop across the catalyst bed, and annual analysis of a catalyst test plug. The plant operator manually logs the temperature and the pressure drop once a day, monitors the alarms, and takes action if the readings are outside the allowable operating range. The test plug is analyzed annually to enable the catalyst manufacture to certify the condition of the catalyst.

TABLE 1. MONITORING APPROACH

	Indicator No. 1	Indicator No. 2
I. Indicator	Catalyst inlet temperature and pressure differential	Annual test plug analysis.
Measurement Approach	Thermocouples Pressure sensors	A test plug of the catalytic material is removed for the manufacturer's laboratory analysis.
II. Indicator Range	Maximum Temperature: 1,250°F (677°C) Maximum Pressure Difference: 3" water column (w.c.)	Manufacturer certifies whether or not the catalyst is within operating specifications.
QIP Threshold (optional)	An excursion is defined as rising above 1,250°F (677°C), or rising above 3" w.c, during normal operations.	
III. Performance Criteria A. Data Representativeness	The thermocouples are located at the inlet face of the catalyst bed. The pressure sensors are located on the inlet and outlet faces of the catalyst bed.	A representative sample is removed from the catalyst bed in accordance with manufacturer's operational instructions.
B. Verification of Operational Status	Plant control room operators monitor the alarm system 24 hours/day and records data once per day.	Manufacturer certified condition of catalyst after initial installation and annually thereafter.
C. QA/QC Practices and Criteria	Annually testing/calibration of the temperature and pressure sensor transmitters.	NA
D. Monitoring Frequency	Daily	Annual
Data Collection Procedures	Temperature and pressure readings are recorded daily.	Test plugs are removed when the plant is shut down for annual maintenance.
Averaging Period	NA (monitoring data does not correspond to actual emissions rate.)	NA

ATTACHMENT PC-FI-C4

COMPLIANCE DEMONSTRATION REPORTS/NOTIFICATIONS

ATTACHMENT LC-FI-C4
Compliance Demonstration Reports/Records

Pasco Cogeneration Plant Permit No. 1010071-010-AC			
Permit Condition	**Description**	**Method or means used to determine compliance**	**Compliant/ non-compliant**
Section 2 Administrative Requirements			
7.	The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration date (June 1, 2011) of this construction permit, but no later than 180 days after commencing operations of the oxidation catalyst systems.	Compliance testing conducted on July 22, 2010.	In compliance
Section 3 Emissions Unit Specific Conditions			
1	The permittee shall install an EmeraChem (or equivalent) oxidation catalyst system in the HRSG of each CT unit.		In compliance
2	Each unit shall be tested to demonstrate initial compliance with the CO emissions standards specified in the Title V air operation permit. The initial tests shall be conducted within 60 days after completing construction of the oxidation catalyst project and achieving maximum production capacity, but not later than 180 days after initial operation of the unit with the oxidation catalyst.	CO CT NG Test Results: Attachment A CO DB NG Test Results: Attachment A CO CT & NG Combined Results: Attachment A	In compliance
3	At least 15 days prior to the date on which each required test is to begin, the permittee shall notify the Compliance Authority of the date, time, and place of each test.	CO CT NG Test Notification: Attachment B CO CT DFO Test Notification: Attachment B CO DB NG Test Notification: Attachment B	In compliance
4	The permittee shall conduct compliance testing of emissions with each CT operating at capacity.	CO CT NG Test Report: Attachment A CO DB NG Test Report: Attachment A	In compliance
5	Within 15-day of completing construction, the permittee shall notify the Compliance Authority that construction has been completed.	Construction completion letter: Attachment B	In compliance

ATTACHMENT A

COMPLIANCE TEST REPORTS

Air Emissions Compliance Test and Relative Accuracy Test Audit Report

Completed for:

Pasco Cogeneration Limited
Pasco Cogeneration Facility
Units 1 and 2
(EU -001 and -002)

Test Report Number: 20-4191-0102
Tests Completed: July 22, 2010

C.E.M. SOLUTIONS

1183 East Overdrive Circle • Hernando, FL 34442 • (352) 489-4337 • Fax: (352) 489-4801

Air Emissions Compliance Test and Relative Accuracy Test Audit Report

Pasco Cogeneration Limited
Pasco Cogeneration Facility, Unit 1 and 2
(EU -001 and -002)
Dade City, Florida

C.E.M. Solutions Project No. 4191

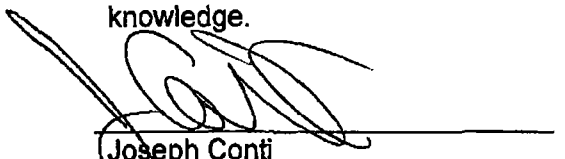
Testing Completed: July 22, 2010

C.E.M. Solutions, Inc Report Number: 20-4191-0102

C.E.M. Solutions, Inc.
1183 E. Overdrive Circle
Hernando, Florida 34442
Phone: 352-489-4337

Statement of Validity

I hereby certify the information and data provided in this emissions test report for tests performed at the Pasco Cogeneration Limited, Pasco Cogeneration Facility conducted on July 22, 2010 are complete and accurate to the best of my knowledge.



Joseph Conti
Quality Assurance Manager
C.E.M. Solutions, Inc.

Project Background

Name of Source Owner:	Pasco Cogeneration Limited
Address of Owner:	14850 Old State Road 23 Dade City, FL
Source Identification:	Facility ID: 1010071 Emissions Units: -001 and -002
Location of Source:	Pasco County, Florida
Type of Operation:	SIC Code: 4911
Tests Performed:	Method 1 – Traverse Points Method 3A – Determination of Oxygen and Carbon Dioxide Method 7E – Determination of Nitrogen Oxides Method 9 – Determination of Visible Emissions Method 10 – Determination of Carbon Monoxide Method 19 – Determination of Nitrogen Oxide Emissions Rates
Test Supervisor:	Mr. Robert Douglas
Date(s) Tests Conducted:	July 22, 2010: Unit 1 and Unit 2
Site Test Coordinator:	Mr. Warren Park
State Regulatory Observers:	Nedin Bahtic Florida Department of Environmental Protection

C.E.M. Solutions, Inc Test Personnel

Project Field Manager:	Mr. Robert Douglas
Test Technicians:	Mr. Ben Carrico Mr. Josh Cooper

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Appendices

1.0 Introduction

Pasco Cogeneration Limited retained C.E.M. Solutions, Inc. to perform emissions tests and Relative Accuracy Test Audits (RATA) on its Continuous Emissions Monitoring System (CEMS) located at its Pasco Cogeneration Facility Combustion Turbine facility in Dade City, Florida.

The test program was conducted in order to evaluate the compliance status of the Unit 1 and 2 exhaust, while firing natural gas, in reference to the Florida Department of Environmental Protection (FDEP) permit number 0950137-027-AV. In addition, relative accuracy of the CEMS was determined in accordance with the United States Environmental Protection Agency (USEPA) requirements in the Code of Federal Regulations, Title 40, Part 75, Appendix B, and Section 2.3.1 and Title 40, Part 60, Appendix F. The test program and results are presented and discussed in this report.

Mr. Warren Park of Pasco Cogeneration Limited coordinated plant operations throughout the test program. Mr. Nedin Bahtic of the Florida Department of Environmental Protection was present during portions of the test. All testing was conducted in accordance with test methods promulgated by the USEPA.

The Pasco Cogeneration Facility Units 1 and 2 each passed the RATAs and compliance tests conducted on July 22, 2010. Table 1 summarizes the test results:

Table 1: Summary of Compliance Test
Pasco Cogeneration Limited
Pasco Cogeneration Facility
Units 1 and 2

Unit Number	Emission	Result	Status
Unit 1CT	NO_X lbs/mmBtu RATA	5.82%	PASS
	NO_X ppm @ 15% O_2 RATA	5.9%	PASS
	CO (DB off)	7.4 ppmvd, 6.2 lb/hr	PASS
	CO (DB on)	4.6 lb/hr	PASS
	V.E. % (DB off)	0.0 %	PASS
	V.E. % (DB on)	0.0 %	PASS
Unit 1 DB	NO_X	0.0 lb/hr, 0.000 lb/mmBtu	PASS
	CO	0.0 lb/hr 0.000 lb/mmBtu	PASS
Unit 2 CT	NO_X lbs/mmBtu RATA	4.73%	PASS
	NO_X ppm @ 15% O_2 RATA	4.3%	PASS
	CO (DB off)	7.4 ppmvd, 6.0 lb/hr	PASS
	CO (DB on)	3.9 lb/hr	PASS
	V.E. % (DB off)	0.0 %	PASS
	V.E. % (DB on)	0.0 %	PASS
Unit 2 DB	NO_X	0.0 lb/hr, 0.000 lb/mmBtu	PASS
	CO	0.1 lb/hr 0.003 lb/mmBtu	PASS

2.0 Facility Description

Units 1 and 2 of the Pasco Cogeneration Facility are General Electric LM-6000 combustion turbine-electrical generators equipped with inlet chillers, SPRINT cooling, duct burners and heat recovery steam generators (HRSG). Both units are permitted to fire pipeline natural gas and diesel fuel oil and each turbine is capable of generating 52 MW of electricity. Emissions from each unit are exhausted through separate 160 foot stacks.

2.1 Process Equipment

In a combustion turbine, ambient air is pulled into the engine by the compressor. The compressor pressurizes the air and feeds it into the combustion chamber. The combustion system is made up of a ring of fuel injectors that inject a steady stream of fuel into the combustion chamber where it mixes with the air. The air/fuel mixture is then burned, creating very high temperature, high pressure gas stream that enters and expands through the turbine section. The turbine section is made up of rotating blades. As the hot combustion gas expands through the turbine, it spins the rotating blades. The rotating blades drive the compressor and spin a generator to produce electricity.

Emissions from the combustion turbine units are controlled by a water injection system for control of NO_X emissions.

2.2 Regulatory Requirements

The facility is required to conduct annual emissions tests for the following pollutants while operating at 90-100 percent of the heat input curve. Emission testing was conducted to determine the compliance status of the following pollutants:

- Visible emissions in percent
- CO in ppmvd and lb/hr

In accordance with permit condition A7, ongoing NO_X compliance is determined by the Continuous Emissions Monitoring System (CEMS) located on each HRSG stack. A Part 75 NO_X RATA and a Part 60 CO RATA were conducted simultaneously with the compliance test in order to validate emissions data collected by the CEMS.

Table 2 summarizes the applicable emissions and CEMS accuracy limits for Units 1 and 2.

Table 2: Summary of Emissions and CEMS Accuracy Limits
Pasco Cogeneration Limited
Pasco Cogeneration Facility
Units 1 and 2

Pollutant	Unit	Control Technology	Emission Limit, Performance Specification	Permit Condition
NO_X lb/mmBtu	CT 1 & 2	Water Injection	RA ≤ 7.5% of average RM value or ± 0.015 lb/mmBtu[a]	Part 75
NO_X ppm @ 15% O_2	CT 1 & 2	Water Injection	RA ≤ 20% of average RM	A7
NO_X	DB 1 & 2	Water Injection	0.1 lb/mmBtu, 18.0 lb/hr	A7
CO	CT 1 & 2	Good Combustion	≤ 28ppmvd, 56.0 lb/hr (CT) 92.0 lb/hr (CT & DB)	A7
CO	DB 1 & 2	Good Combustion	0.2 lb/mmBtu, 36.0 lb/hr	A7
Visible Emissions	CT 1 & 2	Good Combustion	≤10%	A6

[a] **The difference between monitor and reference method mean values applies to low emitters only**

3.0 Test Program/Operating Conditions

Emissions tests were completed at the Pasco Cogeneration Facility to determine the compliance status of Units 1 and 2 on July 22, 2010.

Visible emissions and carbon monoxide compliance testing was performed concurrently with 40CFR, Part 60 and Part 75 Relative Accuracy Test Audits on each unit at base load while firing natural gas.

Turbine operating data was collected and provided by facility personnel during the entire test program. Data provided include, but was not limited to:

- Unit Generation (MW)
- Combustor inlet air temperature
- Fuel flow rate

Table 3 presents the percentage of the maximum heat input, for each Unit, during each test.

Table 3: CT Heat Input During Test
Pasco Cogeneration Limited
Pasco Cogeneration Facility
Units 1 and 2

Unit/Fuel	Calculated Heat Input mmBtu/hr	Maximum Heat Input mmBtu/hr	Percent Max H.I.
Unit 1, DB Off	422	450	93.7%
Unit 1,DB On	419	450	93.1%
Unit 2, DB Off	412	450	91.6%
Unit 2, DB On	408	450	90.7%

Plant operating data are located in Appendix F.

4.0 Test Methods

All testing was performed in accordance with methods approved by the USEPA and FL DEP. The following discusses the methods, as well as quality assurance and sample handling procedures.

4.1 Instrument Analyzer Procedures

NO_X and CO reference method (RM) data were determined using instrument analyzer procedures. In addition, diluent gas concentrations of oxygen (O_2) were also measured via instrumental methods. O_2 data was used to calculate NO_x lbs/mmBtu for the RATA conducted on the Combustion Turbine CEMS.

Mathematical equations used to determine calculated emissions standards and RATA accuracy are located in Appendix A. Table 4 summarizes the EPA methods and instrumentation:

Table 4: Summary of EPA Reference Methods and Instrumentation
Pasco Cogeneration Limited
Pasco Cogeneration Facility
Units 1 and 2

Pollutant	Unit	EPA Method	Instrument	Serial Number
NO_X	Unit 1	7E	TEI Model 42C	42CHL-59277-322
CO	Unit 1	10	TEI Model 48C	48C-74094-375
O_2	Unit 1	3A	Servomex	1420D/3379
NO_X	Unit 2	7E	TEI Model 42C	42CHL-74122-375
CO	Unit 2	10	TEI Model 48C	48C-68844-361
O_2	Unit 2	3A	Servomex	1420C/2784

All reference method analyzers used meet or exceed applicable performance specifications detailed in the appropriate method.

Gas samples were continuously extracted from the stack by a gas sample probe. Samples were then transported to a gas sample conditioner via a heated sample line operating at 250°F or above. The gas sample conditioner lowers the dew point of the sample gas to approximately 5°C through minimum interference heat exchangers. The dry, cool sample is then sent to the gas analyzers, located in the environmentally controlled test trailer for analysis by the reference method analyzers.

Instrument outputs were recorded continuously with a Windows compatible personal computer, compiled into 15 second averages, and stored in a database for future reference.

Instrument ranges and calibration gases were chosen in accordance with each pollutant's applicable EPA method. Instrument ranges and calibration gases used are shown in Table 5:

Table 5: Reference Method Calibration Span and Calibration Gases
Pasco Cogeneration Limited
Pasco Cogeneration Facility
Units 1 and 2

Pollutant	Test Location	Calibration Span	Calibration Gases[a]
NO_X	Unit 1, Unit 2	45.64 ppm	0.0 ppm NO 19.82 ppm NO 45.64 ppm NO
CO	Unit 1, Unit 2	45.55 ppm	0.0 ppm CO 19.81 ppm CO 45.55 ppm CO
O_2	Unit 1, Unit 2	20.44%	0.0 % O_2 10.34 % O_2 20.44 % O_2

[a] Concentrations of NO, CO and O_2 are in a balance of purified nitrogen (N_2). All analyzers were zeroed with ultra high purity N_2. All calibration gases have been certified to NIST traceable standards.

Calibration gas Certificates of Analysis can be found in Appendix B.

4.2 Sampling Location/Traverse Points/Test Run Duration

The Combustion Turbine's exhaust stack inner diameter, at the sample location, is 11" (132"). The emissions sampling location is 45 feet downstream from the nearest flow disturbance, and 11 feet upstream from the stack exhaust. A diagram of the sample location and stratification test results can be viewed in Appendix C.

A gaseous stratification test was completed during the first RATA run in accordance with 40CFR, Part 75, Appendix A, Section 6.5.6.1.

The stratification test (Run 1) was 37 minutes in duration. The remaining RATA test runs were 21 minutes in duration. Each CO compliance test run is compiled from three consecutive RATA runs. CO compliance test runs conducted during the "DB on" testing were 60 minutes in duration.

During the first RATA run (which was also the stratification test), 12 points were used. A single reference method measurement point was used for the remainder of the test program, located no less than 1.0 meter from the stack wall along one of the measurement lines used in the stratification test in accordance with 40CFR, Part 75, Appendix A, Section 6.5.6(b)(4).

4.3 Quality Assurance/Quality Control Procedures

All sampling, analytical, and Quality Assurance/Quality Control (QA/QC) procedures outlined in the EPA methods were followed. All test equipment was calibrated before or during use in the field. Interference checks and response time checks were performed on each instrumental analyzer, as applicable, before field use. In the field, each analyzer and the entire instrument measurement system was checked for system bias before and following each test run using the calibration gases listed in Table 5. NO_2 to NO converter checks were conducted prior to and after each test.

Appendix D contains the QA/QC checks.

4.4 Determination of Visible Emissions

USEPA Method 9 was utilized to determine visible emissions.

Visible emissions observations were performed by a FDEP certified visible emissions reader. Readings were taken at 15 second intervals and reduced into six minute averages as required by the applicable EPA standard. One-sixty minute visible emissions run was performed while the unit was operating at maximum capacity.

5.0 Relative Accuracy Test Audit Results

The following presents the results of the test program. Tables 7 through 12 summarize the NO_X Relative Accuracy Test Audit and CO compliance results. Supporting RM field data and calculated values are presented in Appendices E and F. CEMS support data are located in Appendix G.

5.1 Unit 1

5.1.1 Nitrogen Oxides (NO_X)

The Unit 1 NO_X lb/mmBtu CEMS relative accuracy was 5.82% passing the Part 75 annual performance specification of ≤7.5 % RA. Unit 1 NO_X-diluent CEMS passed the BAF test. A BAF of 1.000 has been assigned to the Unit 1 NO_X lb/mmBtu CEMS.

The Unit 1 NO_X ppm @ 15% O_2 CEMS relative accuracy was 5.9% passing the Part 60 annual performance specification of ≤ 20.0 % RA.

The three-run average NO_X emission for the duct burner was calculated to be 0.0 lb/hr and 0.000 lb/mmBtu, passing the 18.0 lb/hr and 0.100 lb/mmBtu permit limitation.

5.1.2 Carbon Monoxide (CO)

The average of the three (3) carbon monoxide (CO) test runs on Unit 1 while the duct burners were OFF was 7.4 ppmvd, passing the permit limitation of 28 ppmvd. The average CO lb/hr during duct burner OFF operation was 6.2 lb/hr, passing the permit limitation of 56.0 lb/hr.

The average CO lb/hr during duct burner ON operation was 4.6 lb/hr, passing the permit limitation of 92.0 lb/hr.

The three-run average CO emission for the Unit 1 duct burner was calculated to be 0.0 lb/hr and 0.000 lb/mmBtu, passing the 36.0 lb/hr and 0.200 lb/mmBtu permit limitation.

5.1.3 Visible Emissions

The highest visible emissions observed in any six-minute average on Unit 1 during the 30 minute test runs conducted during duct burner on and duct burner off operation was 0.0%, passing the 10% emission limitation.

5.2 Unit 2

5.2.1 Nitrogen Oxides (NO_X)

The Unit 2 NO_X lb/mmBtu CEMS relative accuracy was 4.73% passing the Part 75 annual performance specification of ≤7.5 % RA. Unit 2 NO_X-diluent CEMS passed the BAF test. A BAF of 1.000 has been assigned to the Unit 2 NO_X lb/mmBtu CEMS.

The Unit 2 NO_X ppm @ 15% O_2 CEMS relative accuracy was 4.3% passing the Part 60 annual performance specification of ≤ 20.0 % RA.

The three-run average NO_X emission for the duct burner was calculated to be 0.0 lb/hr and 0.000 lb/mmBtu, passing the 18.0 lb/hr and 0.100 lb/mmBtu permit limitation.

5.2.2 Carbon Monoxide (CO)

The average of the three (3) carbon monoxide (CO) test runs on Unit 2 while the duct burners were OFF was 7.4 ppmvd, passing the permit limitation of 28 ppmvd. The average CO lb/hr during duct burner OFF operation was 6.0 lb/hr, passing the permit limitation of 56.0 lb/hr.

The average CO lb/hr during duct burner ON operation was 3.9 lb/hr, passing the permit limitation of 92.0 lb/hr.

The three-run average CO emission for the Unit 2 duct burner was calculated to be 0.1 lb/hr and 0.003 lb/mmBtu, passing the 36.0 lb/hr and 0.200 lb/mmBtu permit limitation.

5.2.3 Visible Emissions

The highest visible emissions observed in any six-minute average on Unit 2 during the 30 minute test runs conducted during duct burner on and duct burner off operation was 0.0%, passing the 10% emission limitation.

Table 7: Unit 1 NO_x lbs/mmBtu RATA Summary

Test Performed For:
Caithness
Pasco Cogen
Unit 1
RATA and Compliance
Date:7/22/10

Test Performed By:
C.E.M. Solutions, Inc.
1183 E. Overdrive Circle
Hernando, FL 34442
Ph: 352-489-4337

Run Number	Date of Run	Start Time	Stop Time	Unit Load MW	NO_X RM lbs/mmBtu	CEM lbs/mmBtu	Difference Like lbs/mmBtu
Run 1	22-Jul	10:10:00	10:47:00	47	0.079	0.081	-0.002
Run 2	22-Jul	11:03:00	11:24:00	47	0.077	0.081	-0.004
Run 3	22-Jul	11:41:00	12:02:00	47	0.077	0.081	-0.004
Run 4	22-Jul	12:16:00	12:37:00	47	0.077	0.081	-0.004
Run 5	22-Jul	12:53:00	13:14:00	47	0.077	0.081	-0.004
Run 6	22-Jul	13:29:00	13:50:00	47	0.077	0.081	-0.004
Run 7	22-Jul	14:05:00	14:26:00	47	0.077	0.081	-0.004
Run 8	22-Jul	14:43:00	15:04:00	47	0.076	0.081	-0.005
Run 9	22-Jul	15:18:00	15:39:00	47	0.077	0.081	-0.004
		Average:		47	0.077	0.081	-0.004 lbs/mmBtu

Bias Test (pass/fail): Passed
Bias Adjustment Factor: 1.000
Method of RA Determination: Part 75, Standard Emitter

Standard Deviation:	0.0008
Confidence Coefficient:	0.0006
T-Factor:	2.306
Number of runs Reported:	9
Relative Accuracy:	**5.82**
Maximum RA	10.00
RA Status	**Passed**

Note:
All ppm values are corrected to lbs/mmBtu NO_X
using RM O2 and CEM O2 as diluents

Table 8: Unit 1 NO_x ppm @ 15% O_2 RATA Summary

Relative Accuracy Determination

Test Performed For:
Caithness
Pasco Cogen
Unit 1
RATA and Compliance
Date:7/22/10

Test Performed By:
C.E.M. Solutions, Inc.
1183 E. Overdrive Circle
Hernando, FL 34442
Ph: 352-489-4337

Run Number	Date of Run	Start Time	Stop Time	Unit Load MW	NO_X RM (Dry) ppm@15% O2	NO_X CEM (Dry) ppm@15% O2	Difference ppm@15% O2
Run 1	22-Jul	10:10:00	10:47:00	46.70	21.5	22.0	-0.5
Run 2	22-Jul	11:03:00	11:24:00	46.60	20.9	22.0	-1.1
Run 3	22-Jul	11:41:00	12:02:00	46.60	20.9	22.0	-1.1
Run 4	22-Jul	12:16:00	12:37:00	46.60	20.8	21.9	-1.1
Run 5	22-Jul	12:53:00	13:14:00	46.60	20.9	21.9	-1.0
Run 6	22-Jul	13:29:00	13:50:00	46.60	21.0	22.0	-1.0
Run 7	22-Jul	14:05:00	14:26:00	46.60	21.0	22.1	-1.1
Run 8	22-Jul	14:43:00	15:04:00	46.50	20.7	22.1	-1.4
Run 9	22-Jul	15:18:00	15:39:00	46.50	20.9	22.1	-1.2
		Average:		46.59	21.0	22.0	-1.0 ppm

Method of RA Determination: Average RM Value

Note:
All ppm values are corrected to 15 % O2
using RM O2 and CEM O2 as diluents

Standard Deviation:	0.2451
Confidence Coefficient:	0.1884
T-Factor:	2.306
Number of runs Reported:	9
Applicable Standard:	0.0 ppm
Relative Accuracy:	**5.9 %**
Maximum RA	20.0 %
RA Status	**Passed**

Table 9: Unit 1 Compliance Summary

Unit 1 DB OFF (CT Only) Run Data Run Number	Units	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8	Run 9	Average	Standard
Date of Run	2010	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul		
Start Time		10:10:15	11:03:00	11:41:00	12:16:00	12:53:00	13:29:00	14:05:00	14:43:00	15:18:00		
Stop Time		10:34:15	11:24:00	12:02:00	0:21:00	0:21:00	0:21:00	14:26:00	15:04:00	15:39:00		
Unit Load	MW	46.70	46.60	46.60	46.60	46.60	46.60	46.60	46.50	46.50	46.6	
Fuel Flow	Cu-Ft/Hr	459720	458820	458700	459960	459300	458760	460080	458820	458460	459180	
Fuel Heat Value	Btu/Cu-Ft	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	
Heat Input	mmBtu/Hr	422	421	421	422	422	421	423	421	421	422	
NO_X / O_2	Lbs/mmBtu	0.079	0.077	0.077	0.077	0.077	0.077	0.077	0.076	0.077	0.077	
NO_X / O_2	Lbs/Hr	33.35	32.45	32.44	32.53	32.48	32.44	32.54	32.02	32.42	32.5	
CO	ppmvd	7.3	7.4	7.5	7.6	7.4	7.4	7.3	7.2	7.1	7.4	
CO / O_2	Lbs/mmBtu	0.015	0.015	0.015	0.015	0.015	0.015	0.014	0.014	0.014	0.015	
CO / O_2	Lbs/Hr	6.33	6.32	6.32	6.34	6.33	6.32	5.92	5.90	5.89	6.2	
Compliance Run Data			1			2			3			
Heat Input	mmBtu/Hr		422			422			422		422	
NOX	lbs/mmBtu		0.078			0.077			0.077		0.077	
NOX	lbs/Hr		32.7			32.5			32.3		32.5	
CO	ppm, dry		7.4			7.5			7.2		7.4	28.0
CO	lbs/mmBtu		0.015			0.015			0.014		0.015	
CO	lbs/Hr		6.3			6.3			5.9		6.2	56.0
V.E. Start Time			13:35									
V.E. End Time			14:05									
V.E.	%		0.0								0.0	10.0
Unit 1 DB ON (CT + DB) Run Data Run Number	Units		Run 1			Run 2			Run 3			
Date of Run	2006		22-Jul			22-Jul			22-Jul			
Start Time			16:28:00			17:43:00			19:00:00			
Stop Time			17:28:00			18:43:00			20:00:00			
Unit Load	MW		46.2			46.0			46.3		46.2	
CT Fuel Flow	Cu-Ft/hr		455880			454680			457560		456040	
DB Fuel Flow	Cu-Ft/hr		43730			44010			44290		44010	
Fuel Heat Value (LHV)	Btu/Cu-Ft		918.9			918.9			918.9		918.9	
Fuel Heat Value (HHV)	Btu/Cu-Ft		1019			1019			1019		1019	
CT Heat Input (LHV)	mmBtu/hr		419			418			420		419	
DB Heat Input (HHV)	mmBtu/hr		45			45			45		45	
NO_X / O_2	Lbs/mmBtu		0.077			0.076			0.076		0.1	
NO_X / O_2	Lbs/Hr		32.26			31.75			31.95		32.0	
NOx / Flow	Lbs/Hr		8888.88			8888.88			8888.88		8888.9	
CO	ppm, dry		6.0			5.9			5.9		5.9	
CO / O_2	Lbs/mmBtu		0.011			0.011			0.011		0.011	
CO / O_2	Lbs/Hr		4.6			4.6			4.6		4.6	92.0
V.E. Start Time			18:48									
V.E. End Time			19:18									
V.E.	%		0.0								0.0	10.0
Unit 1 Duct Burner Only (CT - DB) Calculations												
NO_X (CT + DB)	lb/hr		32.3			32.3			32.3		32.3	
NO_X (CT)	lb/hr		32.5			32.5			32.5		32.5	
NO_X (DB)	lb/hr		0.0			0.0			0.0		0.0	18.0
NO_X (DB)	lb/mmBtu		0.000			0.000			0.000		0.000	0.1
CO (CT + DB)	lb/hr		4.6			4.6			4.6		4.6	
CO (CT)	lb/hr		6.2			6.2			6.2		6.2	
CO (DB)	lb/hr		0.0			0.0			0.0		0.0	36.0
CO (DB)*	lb/mmBtu		0.000			0.000			0.000		0.000	0.200

* CO (DB) / DB Heat Input = lb/mmbtu

Table 10: Unit 2 NO_x lbs/mmBtu RATA Summary

Relative Accuracy Determination

Test Performed For:
Caithness
Pasco Cogen
Unit 2
RATA and Compliance
Date:7/22/10

Test Performed By:
C.E.M. Solutions, Inc.
1183 E. Overdrive Circle
Hernando, FL 34442
Ph: 352-489-4337

Run Number	Date of Run	Start Time	Stop Time	Unit Load MW	NO_X RM lbs/mmBtu	CEM lbs/mmBtu	Difference Like lbs/mmBtu
Run 1	22-Jul	10:10:00	10:47:00	47	0.082	0.082	0.000
Run 2	22-Jul	11:03:00	11:24:00	47	0.079	0.083	-0.004
Run 3	22-Jul	11:41:00	12:02:00	46	0.079	0.083	-0.004
Run 4	22-Jul	12:16:00	12:37:00	46	0.080	0.083	-0.003
Run 5	22-Jul	12:53:00	13:14:00	46	0.080	0.083	-0.003
Run 6	22-Jul	13:29:00	13:50:00	46	0.080	0.083	-0.003
Run 7	22-Jul	14:05:00	14:26:00	46	0.080	0.083	-0.003
Run 8	22-Jul	14:43:00	15:04:00	46	0.080	0.083	-0.003
Run 9	22-Jul	15:18:00	15:39:00	46	0.080	0.083	-0.003
		Average:		46	0.080	0.083	-0.003 lbs/mmBtu

Bias Test (pass/fail): Passed
Bias Adjustment Factor: 1.000
Method of RA Determination: Part 75, Standard Emitter

Standard Deviation:	0.0012
Confidence Coefficient:	0.0009
T-Factor:	2.306
Number of runs Reported:	9
Relative Accuracy:	**4.73**
Maximum RA	10.00
RA Status	**Passed**

Note:
All ppm values are corrected to lbs/mmBtu NO_X
using RM O2 and CEM O2 as diluents

Table 11: Unit 2 NO_x ppm @ 15% O_2 RATA Summary

Relative Accuracy Determination

Test Performed For:
Caithness
Pasco Cogen
Unit 2
RATA and Compliance
Date:7/22/10

Test Performed By:
C.E.M. Solutions, Inc.
1183 E. Overdrive Circle
Hernando, FL 34442
Ph: 352-489-4337

Run Number	Date of Run	Start Time	Stop Time	Unit Load MW	NO_X RM (Dry) ppm@15% O2	NO_X CEM (Dry) ppm@15% O2	Difference ppm@15% O2
Run 1	22-Jul	10:10:00	10:47:00	46.70	22.2	22.3	-0.1
Run 2	22-Jul	11:03:00	11:24:00	46.60	21.4	22.4	-1.0
Run 3	22-Jul	11:41:00	12:02:00	46.40	21.5	22.5	-1.0
Run 4	22-Jul	12:16:00	12:37:00	46.40	21.8	22.4	-0.6
Run 5	22-Jul	12:53:00	13:14:00	46.30	21.8	22.5	-0.7
Run 6	22-Jul	13:29:00	13:50:00	46.40	21.6	22.5	-0.9
Run 7	22-Jul	14:05:00	14:26:00	46.30	21.6	22.5	-0.9
Run 8	22-Jul	14:43:00	15:04:00	46.30	21.8	22.5	-0.7
Run 9	22-Jul	15:18:00	15:39:00	46.20	21.8	22.4	-0.6
		Average:		46.40	21.7	22.5	-0.7 ppm

Method of RA Determination: Average RM Value

Note:
All ppm values are corrected to 15 % O2
using RM O2 and CEM O2 as diluents

Standard Deviation:	0.2732
Confidence Coefficient:	0.2100
T-Factor:	2.306
Number of runs Reported:	9
Applicable Standard:	0.0 ppm
Relative Accuracy:	**4.3 %**
Maximum RA	20.0 %
RA Status	**Passed**

Table 12: Unit 2 Compliance Summary

Unit 2 DB Off (CT only) Run Data Run Number	Units	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8	Run 9	Average	Standard
Date of Run	2010	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul	22-Jul		
Start Time		10:10:00	11:03:00	11:41:00	12:16:00	12:53:00	13:29:00	14:05:00	14:43:00	15:18:00		
Stop Time		10:47:00	11:24:00	12:02:00	12:37:00	13:14:00	13:50:00	14:26:00	15:04:00	15:39:00		
Unit Load	MW	46.70	46.60	46.40	46.40	46.30	46.40	46.30	46.30	46.20	46.4	
Fuel Flow	Cu-Ft/Hr	450120	448680	447840	449040	447120	447960	448380	447420	446760	448147	
Fuel Heat Value	Btu/Cu-Ft	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	
Heat Input	mmBtu/Hr	413	412	411	412	411	411	412	411	410	412	
NO_X / O_2	Lbs/mmBtu	0.082	0.079	0.079	0.080	0.080	0.080	0.080	0.080	0.080	0.080	
NO_X / O_2	Lbs/Hr	33.90	32.55	32.49	32.99	32.85	32.91	32.94	32.87	32.82	32.9	
CO	ppmd	7.4	7.3	7.1	7.6	7.3	7.3	7.6	7.5	7.4	7.4	
CO / O_2	Lbs/mmBtu	0.015	0.014	0.014	0.015	0.014	0.014	0.015	0.015	0.015	0.015	
CO / O_2	Lbs/Hr	6.2	5.8	5.8	6.2	5.7	5.8	6.2	6.2	6.2	6.0	
Compliance Run Data			1			2			3			
Heat Input	mmBtu/Hr		412			411			411		412	
NOX	lbs/mmBtu		0.080			0.080			0.080		0.080	
NOX	lbs/Hr		33.0			32.9			32.9		32.9	
CO	ppm, dry		7.3			7.4			7.5		7.4	28.0
CO	lbs/mmBtu		0.014			0.014			0.015		0.015	
CO	lbs/Hr		5.9			5.9			6.2		6.0	56.0
V.E. Start Time			13:35									
V.E. End Time			14:05									
V.E.	%		0.0								0.0	10.0
Unit 2 DB On (CT +DB) Run Data Run Number	Units		Run 1			Run 2			Run 3			
Date of Run	2006		22-Jul			22-Jul			22-Jul			
Start Time			16:28:00			17:43:00			19:00:00			
Stop Time			17:28:00			18:43:00			20:00:00			
Unit Load	MW		45.7			45.5			46.0		45.7	
CT Fuel Flow	Cu-Ft/hr		443400			442140			445140		443560	
DB Fuel Flow	Cu-Ft/hr		44390			44950			45520		44953	
Fuel Heat Value (LHV)	Btu/Cu-Ft		918.9			918.9			918.9		918.9	
Fuel Heat Value (HHV)	Btu/Cu-Ft		1019			1019			1019		1019	
CT Heat Input (LHV)	mmBtu/hr		407			406			409		408	
DB Heat Input (HHV)	mmBtu/hr		45			46			46		46	
NOX / O2	Lbs/mmBtu		0.080			0.080			0.080		0.080	
NOX / O2	Lbs/Hr		32.6			32.5			32.7		32.6	
CO	ppm, dry		5.5			5.3			5.5		5.4	
CO / O2	Lbs/mmBtu		0.010			0.009			0.010		0.010	
CO / O2	Lbs/Hr		4.1			3.7			4.1		3.9	92.0
V.E. Start Time			18:48									
V.E. End Time			19:18									
V.E.	%		0.0								0.0	10.0
Unit 1 Duct Burner Only (CT - DB) Calculations												
NO_X (CT + DB)	lb/hr		32.6			32.5			32.7		32.6	
NO_X (CT)	lb/hr		32.9			32.9			32.9		32.9	
NO_X (DB)	lb/hr		0.0			0.0			0.0		0.0	18.0
NO_X (DB)	lb/mmBtu		0.000			0.000			0.000		0.000	0.1
CO (CT + DB)	lb/hr		4.1			3.7			4.1		4.0	
CO (CT)	lb/hr		3.9			3.9			3.9		3.9	
CO (DB)	lb/hr		0.2			0.0			0.2		0.1	36.0
CO (DB)*	lb/mmBtu		0.004			0.000			0.004		0.003	0.200

* CO (DB) / DB Heat Input = lb/mmbtu

ATTACHMENT B

AGENCY NOTIFICATIONS

PASCO COGEN, LTD.

14850 Old State Road 23 • Dade City, FL 33523
Tel (352) 523-0062 • Fax (352) 523-0572

August 27, 2010

Mr. Nedin Bahtic
Florida Department of Environmental Protection
Southwestern Region
Division of Air Resources
13051 North Telecom Parkway
Temple Terrace, FL 33637
(813) 632-7600

RE: Pasco Cogeneration, Ltd., FLDEP ID No. 1010071; 2010 Air Emissions Compliance Test and RATA Report Submittal

Dear Mr. Bahtic:

Attached for your information and use are two hard copies of the compliance source test and RATA performed at Pasco on July 22, 2010. This testing was performed following the installation of the CO catalysts on both Units 1 and 2, as authorized under FLDEP construction permit 1010071-010-AC.

The testing and report demonstrate that the CO catalyst installation was successfully completed and that Pasco Cogen can now say the work authorized by the construction permit is complete. In addition the testing and report serve to meet the testing requirements of the construction permit and to meet the annual emission and RATA requirement of the existing operating permit for 2010.

Thanks once again for the Department's help in both securing the construction permit for the CO catalyst installation and guidance through the testing process. If there are any questions or comments with regard to this submittal, please feel free to contact me.

For Pasco Cogen
Sincerely,

Thomas A. Grace
Director - Environmental Health & Safety

w/attachments

Cc: USEPA Region IV
Atlanta Federal Center
Attn: Air and EPCRA Enforcement Branch
61 Forsyth Street SW
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