


Memorandum

Florida Department of Environmental Protection

TO: Michael G. Cooke, Division of Air Resources Management

THROUGH: Trina Vielhauer, Bureau of Air Regulation
Al Linero, New Source Review Section

FROM: Jeff Koerner, New Source Review Section 

DATE: December 8, 2003

SUBJECT: Draft Air Permit No. 1010071-002-AC
Pasco Cogeneration, Limited
Combined Cycle Units 1 and 2, SPRINT Project

The Final Permit for this project is attached for your approval and signature, which authorizes the installation of "SPRINT" spray inter-cooling technology on the two existing LM6000 gas turbines. The two gas turbines form a 2-on-1 combined cycle unit with approximately 80 MW of direct electrical generating capacity and 26.5 MW of steam-generated electrical capacity. The new equipment will be installed at the existing Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida. The addition of SPRINT is expected to result in only slight increases in CO and NOx emissions and the project does not trigger PSD preconstruction review.

The Department distributed an "Intent to Issue Permit" package on November 6, 2003. The applicant published the "Public Notice of Intent to Issue" in The Tampa Tribune (Pasco County Edition) on November 21, 2003. The Department received the proof of publication on November 25, 2003. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed. Only minor changes were made to the draft permit as noted in the attached Final Determination.

Day #90 is February 20, 2004. I recommend your approval of the attached Final Permit for this project.

Attachments

FINAL DETERMINATION

PERMITTEE

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida, 32399-2400

PROJECT

Air Permit No. 1010071-002-AC
Pasco Cogeneration Plant

This permit authorizes construction to add "SPRINT" spray inter-cooling technology to the two existing gas turbines (EU-001 and EU-002) at the Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525.

NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on November 6, 2003. The applicant published the "Public Notice of Intent to Issue" in The Tampa Tribune (Pasco County Edition) on November 21, 2003. The Department received the proof of publication on November 25, 2003. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed.

COMMENTS

No comments on the Draft Permit were received from the public, the Department's Southwest District Office, EPA Region 4 or the National Park Service. The applicant had the following minor comments on the draft permit package:

Technical Evaluation and Preliminary Determination

1. Page 2 of 9, Project Description, Line 2: The gas turbines began operation in 1993 and not 1995. Response: The Department corrected the information.
2. Page 2 of 9, Project Description, Line 8: Change "39.5 MW" to "42.5 MW". Response: The Department made the change, but notes that power generation is dependent on ambient conditions.
3. Page 4 of 9, Description of SPRINT Technology, Line 2: Change "6-7 gpm" to "9-12 gpm". Response: The Department corrected the information.
4. Page 5 of 9, Schematic of CT: Change "43.4 MW" under the Basic LM6000 to "42.5 MW" and change the "47.3 MW" under the SPRINT LM6000 to "50.2 MW". Response: Although the capacities requested are valid, the Department did not change the schematic, which was taken from the article, "LM6000 Now with SPRINT Power Boost" in a 1999 Company Brochure by S&S Energy Products.

Draft Permit

1. Page 1 of 6, Project and Location, Line 2: Insert the text "at the" between "... EU-002)" and "Pasco Cogeneration ...". Response: The Department made the correction.

FINAL DETERMINATION

2. Page 4 of 6, Description of Emissions Units 001 and 002, Line 1: Correct "LM06000" to "LM6000".
Response: The Department made the correction.
3. Page 4 of 6, Equipment and Performance Restrictions, Line 3: Change "6-7 gpm" to "9-12 gpm".
Response: The Department corrected the information.

CONCLUSION

As noted above, only minor revisions were made to the draft permit. The final action of the Department is to issue the permit with the changes described.

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

Authorized Representative:

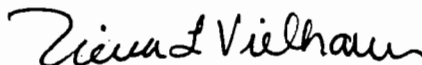
Mr. Leo Rajter, Vice President

Pasco Cogeneration Plant
Air Permit No. 1010071-002-AC
Combined Cycle Units 1 and 2
SPRINT Project
Pasco County, Florida

Enclosed is Final Air Permit No. 1010071-002-AC, which authorizes construction to add "SPRINT" spray inter-cooling technology to the two existing gas turbines (EU-001 and EU-002) at the Pasco Cogeneration Plant located Dade City, Florida. As noted in the attached Final Determination, only minor changes and clarifications were made. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Trina Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

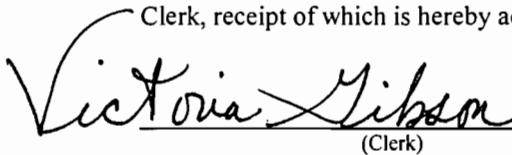
The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12/18/03 to the persons listed:

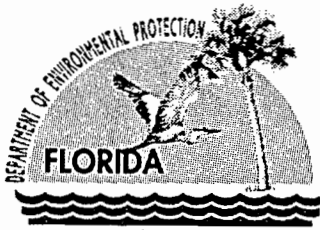
Mr. Leo Rajter, Pasco*
Mr. Richard Christmas, Pasco
Mr. Tom Grace, Pasco c/o Aquila
Mr. John L. McKelvey, Case Engineering, Inc.

Mr. Gerald Kissel, SWD Office
Mr. Gregg Worley, EPA Region 4 Office
Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date,
pursuant to §120.52, Florida Statutes, with the designated Department
Clerk, receipt of which is hereby acknowledged.

 12/18/03
(Clerk) (Date)



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

PERMITTEE:

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

Authorized Representative:

Mr. Leo Rajter, Vice President

Pasco Cogeneration, Limited
Air Permit No. 1010071-002-AC
Facility ID No. 1010072
SIC No. 4931
Permit Expires: December 1, 2004

PROJECT AND LOCATION

This permit authorizes construction to add "SPRINT" spray inter-cooling technology to the two existing gas turbines (EU-001 and EU-002) at the Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525. The UTM coordinates are Zone 17, 383.5 km East, and 3139.0 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 install the proposed equipment 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. The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements.

CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

Michael G. Cooke, Director
Division of Air Resources Management

12/17/03

(Effective Date)

FACILITY AND PROJECT DESCRIPTION

The existing facility consists of the following emissions units:

| ID | Emission Unit Description |
|-----------|---|
| 001 | Unit 1 - Combined cycle gas turbine with duct burner system |
| 002 | Unit 2 - Combined cycle gas turbine with duct burner system |
| 003 | Oil storage tank |
| 004 | Emergency diesel generators |
| 005 | Fugitive VOC emissions |

REGULATORY CLASSIFICATION

Title III: Based on the application, the existing facility is not a major source of hazardous air pollutants (HAP).

Title IV: Based on the application, the existing facility has no units subject to the acid rain provisions.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The existing facility operates units subject to the New Source Performance Standards of 40 CFR 60.

RELEVANT DOCUMENTS

The permit application and additional information received to make it complete are not a part of this permit; however, the information is specifically related to this permitting action and is on file with the Department.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: Applications for permits regarding PSD preconstruction review shall be submitted to the New Source Review Section of the Department's Bureau of Air Regulation at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Applications for permits regarding operation or minor sources shall be submitted to the Air Resources Section of the Department's Southwest District Office at 3804 Coconut Palm Drive, Tampa, Florida 33619-8218.
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 3804 Coconut Palm Drive, Tampa, Florida 33619-8218.
3. Appendices: The following Appendices are attached as part of this permit: Appendix A (Citation Format); Appendix B (General Conditions); and Appendix C (Common State Regulatory Requirements).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
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 emissions unit or facility subject to this permit shall be constructed or 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. Title V Permit Revision: Pursuant to Rule 62-213.420(1)(a)2, F.A.C., the permittee shall submit an application for a revised Title V air operation permit at least 90 days before the expiration of this permit, but no later than 180 days after commencing operation. In accordance with Rule 62-213.412(2), F.A.C., the permittee may immediately implement the changes authorized by this air construction permit after submitting the application for a revised Title V air operation permit to the Permitting Authority and providing copies of the application to EPA Region 4 and each Compliance Authority. To apply for a revised 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. As necessary, the application shall include a Compliance Assurance Monitoring Plan. The application shall be submitted to the Department's Southwest District Office at the address identified above. [Rules 62-4.030, 62-4.050, 62-4.220, 62-213.412, and 62-213.420, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU-001/002, Units 1 and 2 Combined Cycle Gas Turbines

This section of the permit addresses the following emissions units.

Emissions Units 001 and 002

Description: Each unit consists of a General Electric Model LM6000 gas turbine, heat recovery steam generator (HRSG) with duct firing, chiller system, and SPRINT spray inter-cooling. Steam generated in the HRSGs is directed to a common steam turbine-electrical generator, which is rated at 26.5 MW. Alternatively, steam can be directed to an independent steam host (an adjacent citrus processing facility).

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 (LHV) without SPRINT is 423 MMBtu per hour, which produces approximately 42 MW. At a turbine inlet temperature of 51° F, the maximum heat input rate from gas firing (LHV) with SPRINT is 427 MMBtu per hour, which produces approximately 52 MW.

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

Stack Parameters: The stack is a maximum of 11 feet in diameter and at least 100 feet tall. After the HRSGs and steam turbine-electrical generator, the exhaust exits at approximately 232° F with a volumetric flow rate of approximately 325,000 acfm.

{Permitting Note: The units remain subject to the applicable requirements of previous air construction Permit No. PSD-FL-177 (Project No. AC51-196460) and current Title V air operation Permit No. 1010071-001-V.}

PREVIOUS APPLICABLE REQUIREMENTS

1. **Other Permits:** The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements. The permittee shall continue to comply with the conditions of these permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, record keeping, reporting, etc. [Rule 62-4.070, F.A.C.]

EQUIPMENT AND PERFORMANCE RESTRICTIONS

2. **SPRINT Upgrade:** This permit authorizes the construction activities necessary to add General Electric's "SPRINT" spray inter-cooling technology. In general, the equipment consists of a system that will automatically meter approximately 9 to 12 gpm of de-mineralized water to a series of 24 spray nozzles. [Applicant Request]
3. **Permitted Capacity:** At a turbine inlet temperature of 51° F, the maximum heat input rate from firing natural gas (LHV) when utilizing the SPRINT system is 427 MMBtu per hour, which produces approximately 52 MW of direct power. [Rule 62-210.200(PTE), F.A.C.]

{Permitting Note: This permit does not alter any previous requirements for other methods of operation or modify any specifications related to authorized fuels, fuel consumption, or allowable hours of operation.}

EMISSIONS STANDARDS

4. **Carbon Monoxide (CO)**
 - a. **Combustion Turbines (CTs):** When firing natural gas and utilizing SPRINT, CO emissions from each unit shall not exceed 28 ppmvd. In addition, the maximum CO mass emission rate from both units combined shall not exceed 56.5 pounds per hour based on a turbine inlet temperature of 51° F.
{Permitting Note: The concentration-based standard (ppmvd) remains consistent with the BACT determination made in Permit No. PSD-FL-177.}

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU-001/002, Units 1 and 2 Combined Cycle Gas Turbines

- b. **Combustion Turbines and Duct Burners (CTs+DBs):** When firing natural gas, operating the duct burner system, and utilizing SPRINT, the maximum CO mass emission rate from both units combined shall not exceed 92.5 pounds per hour based on a turbine inlet temperature of 51° F.

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

5. **Nitrogen Oxides (NOx)**

- c. **Combustion Turbines (CTs):** When firing natural gas and utilizing SPRINT, NOx emissions from each unit shall not exceed 25 ppmvd corrected to 15% oxygen. In addition, the maximum NOx mass emission rate from both units combined shall not exceed 86.0 pounds per hour based on a turbine inlet temperature of 51° F. *{Permitting Note: The concentration-based standard (ppmvd corrected to 15% oxygen) remains consistent with the initial BACT determination made in Permit No. PSD-FL-177.}*

- d. **Combustion Turbines and Duct Burners (CTs+DBs):** When firing natural gas, operating the duct burner system, and utilizing SPRINT, the maximum NOx mass emission rate from both units combined shall not exceed 104.0 pounds per hour based on a turbine inlet temperature of 51° F.

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

6. **Other Emissions Standards:** Unless otherwise specified above, the emissions standards specified in current Title V air operation Permit No.1010071-001-AV also apply when utilizing the SPRINT spray inter-cooling system with each corresponding operational configuration. [Rule 62-4.070(3), F.A.C.]

EMISSIONS PERFORMANCE TESTING

7. **Initial Compliance Tests:** Each unit shall be tested to demonstrate initial compliance with the CO and NOx emissions standards specified in this permit. CO and NOx emissions test shall be conducted concurrently. The initial tests shall be conducted within 60 days after completing construction of the SPRINT project and achieving maximum production capacity, but not later than 180 days after initial operation of the unit with SPRINT. [Rule 62-297.310(7)(a)1, F.A.C.]
8. **Annual Compliance Tests:** During each federal fiscal year (October 1st to September 30th), each unit shall be tested to demonstrate compliance with the CO and NOx emissions standards specified in this permit. CO and NOx emissions test shall be conducted concurrently. [Rule and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]
9. **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. [Rule 62-4.297.310(7)(a)9, F.A.C.]
10. **Test Methods:** Required tests shall be performed in accordance with the following reference methods.

| Method | Description of Method and Comments |
|--------|---|
| 1-4 | Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. |
| 7E | Determination of Nitrogen Oxide Emissions from Stationary Sources. |
| 10 | Determination of Carbon Monoxide Emissions from Stationary Sources. <i>{Permitting Note: The method shall be based on a continuous sampling train.}</i> |
| 19 | Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates. <i>{Permitting Note: The F-factor method may also be used to determine flow rates and gas analysis to calculate mass emission rates in lieu of Methods 1-4.}</i> |

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU-001/002, Units 1 and 2 Combined Cycle Gas Turbines

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. Tests shall also be conducted in accordance with the requirements specified in Appendix C of this permit. No other methods may be used without prior written approval from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

NOTIFICATIONS, RECORDS AND REPORTS

11. Construction Notifications: Within 15 days of beginning construction, the permittee shall notify the Compliance Authority that construction has commenced. Within 15 days of completing construction, the permittee shall notify the Compliance Authority that construction has concluded. Each 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.]
12. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix C of this permit. For each test run, the report shall also indicate the operating load (MW), maximum heat input rate (MMBtu per hour), ambient temperature (° F), turbine inlet temperature (° F), and water-to-fuel ratio. [Rule 62-297.310(8), F.A.C.]
13. Operational Data: The permittee shall monitor and record the hours of operation utilizing SPRINT. [Rule 62-4.070(3), F.A.C.]
14. PSD Applicability Report: Before March 1st of each year, the permittee shall submit a report to the Bureau of Air Regulation and the Compliance Authority summarizing actual annual emissions for the previous calendar year. The reports shall be submitted for five separate years that are representative of normal post-change operations after completing construction of the SPRINT project. The reports shall begin during the first full year that the SPRINT technology is in use and continue for five years. Reports are subject to the following conditions.
 - a. Actual emissions for a given year shall be determined by the tested emission rates for that year and the actual hours of operation during the calendar year.
 - b. The total "past actual emissions" for Units 1 and 2 (2-year average) are 238 tons per year of carbon monoxide and 328 tons per year of nitrogen oxides.
 - c. In accordance with 40 CFR 52.21(b)(33)(ii), the permittee shall, "Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole." The permittee shall quantify any excluded emissions and provide a rationale.
 - d. The annual report shall compare actual emissions calculated for a given year with the past actual emissions identified above. If the comparison shows an increase in actual emissions greater than the PSD significant emission rates defined in Table 212.400-2, F.A.C., then Units 1 and 2 shall be subject to PSD preconstruction review at that time. The review shall include a determination of the Best Available Control Technology (BACT) for each PSD-significant pollutant.

[Rules 62-204.800, 62-210.200(11) and 62-212.400, F.A.C.; 40 CFR 52.21(b)(33)(ii)]

SECTION 4. APPENDICES
CONTENTS

Appendix A. Citation Format

Appendix B. General Conditions

Appendix C. Common State Regulatory Requirements

SECTION 4. APPENDIX A

CITATION FORMATS

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit
“AO” identifies the permit as an Air Operation Permit
“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located
“2222” represents the specific facility ID number
“001” identifies the specific permit project
“AC” identifies the permit as an air construction permit
“AF” identifies the permit as a minor federally enforceable state operation permit
“AO” identifies the permit as a minor source air operation permit
“AV” identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the Prevention of Significant Deterioration of Air Quality
“FL” means that the permit was issued by the State of Florida
“317” identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

SECTION 4. APPENDIX B
GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - a. Have access to and copy and records that must be kept under the conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of non-compliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida

SECTION 4. APPENDIX B
GENERAL CONDITIONS

Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (not applicable to project);
 - b. Determination of Prevention of Significant Deterioration (not applicable to project); and
 - c. Compliance with New Source Performance Standards (previously applicable to gas turbines).
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - 1) The date, exact place, and time of sampling or measurements;
 - 2) The person responsible for performing the sampling or measurements;
 - 3) The dates analyses were performed;
 - 4) The person responsible for performing the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION 4. APPENDIX C
COMMON STATE REGULATORY REQUIREMENTS

{Permitting Note: Unless otherwise specified by permit, the following conditions apply to all emissions units and activities at the facility.}

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

SECTION 4. APPENDIX C
COMMON STATE REGULATORY REQUIREMENTS

11. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]
12. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
13. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.
 - a. *Required Sampling Time*. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.
 - b. *Minimum Sample Volume*. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.
 - c. *Calibration of Sampling Equipment*. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.[Rule 62-297.310(4), F.A.C.]
14. Determination of Process Variables
 - a. *Required Equipment*. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
 - b. *Accuracy of Equipment*. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.[Rule 62-297.310(5), F.A.C.]
15. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C.
16. Test Notification: The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9, F.A.C.]
17. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]
18. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the

SECTION 4. APPENDIX C
COMMON STATE REGULATORY REQUIREMENTS

test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

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

RECORDS AND REPORTS

19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]
20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Leo Rajter
Vice President
Pasco Cogeneration, Ltd.
20 West 9th Street
Kansas City, MO 64105

2. Article Number (Copy from service label)

7000 2870 0000 7028 3642

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly)

B. Date of Delivery

12-23-03

C. Signature

X Michael P. P...

☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

U.S. Postal Service

CERTIFIED MAIL RECEIPT

(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage \$

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(Endorsement Required)Restricted Delivery Fee
(Endorsement Required)

Total Postage & Fees \$

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Sent To

Leo Rajter

Street, Apt. No.; or PO Box No.

20 W. 9th Street

City, State, ZIP+4

Kansas City, MO 64105

PS Form 3800, May 2000

See Reverse for Instructions

PASCO COGEN, LTD.

NCP DADE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9th Street • Kansas City, MO 64105
Tel (816) 527-1160 • Fax (816) 527-4160

December 4, 2003

Mr. Jeffery F. Koerner, PE
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Rd., M.S. #5505
Tallahassee, FL 32399-2400

RECEIVED

DEC 05 2003

BUREAU OF AIR REGULATION

(850) 921-9536

RE: Pasco Cogen, Draft Air Permit No. 1010071-002-AC, Document Review
Comments

Dear Mr. Koerner:

We have taken the opportunity to review the draft Construction Permit along with the Department's Technical Evaluation and Preliminary Determination. We have several minor comments for the Department's review and incorporation. We do not deem any of the comments of serious nature, but are incorporated to correctly state the nature of the uprating process to the two LM-6000 Combustion Turbine units.

From the Technical Evaluation and Preliminary Determination:

1. Page 2 of 9, Project Description, line 2. The gas turbines began operation in 1993, not 1995.
2. Page 2 of 9, Project Description, line 8. Change "39.5" to "42.5".
3. Page 4 of 9, Description of SPRINT Technology, line 2. Change "6-7 gpm", to "9-12 gpm".
4. Page 5 of 9, Schematic of CT. Change LM6000 Basic "43.4" MW to "42.5 MW" and change "47.3" MW to "50.2 MW".

From the Draft Permit:

1. Page 1 of 6, Project and Location, line 2. Insert " at the" between "...EU-002)" and "Pasco Cogeneration..."
2. Page 4 of 6, Emissions Units Nos. 001 and 002, Description, line 1. Modify "LM06000" to "LM6000".
3. Page 4 of 6, Equipment and Performance restrictions, line 3. Change "approximately 6-7 gpm" to approximately "9-12 gpm".

This is the extent of our comments to the draft Construction Permit documents for the LM6000 uprating process. A marked up copy is also attached for your use.

If there are any questions or concerns regarding this submittal, please feel free to call me. My telephone no. is (816) 527-1160. Once again, on behalf of the Project, we thank-you for all of your help with this matter.

For Pasco Cogen Ltd.

Sincerely,



Thomas A. Grace, CHMM
Director-Environmental, Health and Safety

W/attachment

Cc: L. Rajter, w/o
R. Christmas, w/o
B. Andrew, w/o
A. Williams, w/o

File: 274-2010.1

J. Kirsch, SWD
B. Worley, EPA
G. Bunnah, NPS

**TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION**

PROJECT

Air Permit No. 1010071-002-AC
Addition of SPRINT Inter-Cooling to Existing 2-on-1 Combined Cycle Gas Turbine Unit
(Emissions Units 001 and 002)

COUNTY

Pasco County, Florida

APPLICANT

Pasco Cogeneration, Limited
ARMS Facility ID No. 1010071

**PERMITTING
AUTHORITY**

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section



October 28, 2003

{Filename: 1010071-002-AC - TEPD}

1. GENERAL PROJECT INFORMATION

Applicant Name and Address

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

Authorized Representative:

Mr. Leo Rajter, Vice President

Processing Schedule

06/10/03 Received the application for a minor source air pollution construction permit to avoid PSD review.
06/20/03 Department requested additional information.
09/17/03 Department received additional information.
10/07/03 Department requested additional information.
10/22/03 Department received additional information; application complete.

Facility Description and Location

The existing facility primarily consists of two 42 MW combined cycle gas turbines (EU-001 and EU-002) configured with chiller systems to maintain the inlet compressor air at 51° F and 100% relative humidity. Each combined cycle unit incorporates a 90 MMBtu per hour, gas-fired duct burner system in the heat recovery steam generator (HRSG). Each HRSG directs steam to a common steam turbine-electrical generator set, which produces another 26.5 MW of electricity. Alternatively, steam may be delivered to an adjacent citrus processing plant. The gas turbines primarily fire natural gas, but can also fire No. 2 distillate oil as a restricted alternate emergency backup fuel. Other sources of air pollution include a 170,000 gallon oil storage tank (EU-003), two 1274 kW diesel emergency generators (EU-004), and fugitive emissions (EU-005).¹

The existing facility is located in Pasco County at 14850 Old State Road 23, Dade City, Florida. The UTM Coordinates are Zone 17, 383.5 km East and 3139.0 km North.

SIC No. 4931 – Electric and other services combined (cogeneration)

Regulatory Categories

Title III: Based on the application, the existing facility is not a major source of hazardous air pollutants (HAP).

Title IV: Based on the application, the existing facility has no units subject to the acid rain provisions.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The existing facility operates units subject to the New Source Performance Standards of 40 CFR 60.

Project Description

Initial Permit No. PSD-FL-177 to construct the 2-on-1 combined cycle gas turbine system was issued on November 20, 1991. The gas turbines began operation in 1993. The applicant proposes to add SPRINT technology to the two existing gas turbines to enhance performance. "SPRINT" stands for *SP*Ray *INT*ercooling, which involves the injection of atomized water into the compressor between the high-pressure and low-pressure compressors. This results in evaporative cooling of the compressor inlet air and higher mass flow rates. Benefits include increased power output with more efficient fuel usage. The maximum heat input rate when firing natural gas is expected to increase from 423 to 427 MMBtu per hour. The power output is expected to increase from 39.5 to 50.2 MW depending on ambient conditions.² The applicant initially provided the

following PSD applicability analysis with regard to CO and NOx emissions.

Table 1A. Applicant's Initial CO and NOx PSD Applicability Analysis

| Pollutant | 2-Year Avg. TPY | Proposed Cap TPY | Difference TPY | PSD SER TPY | Subject to PSD? |
|-----------------------|--------------------|---------------------|-------------------|----------------|--------------------|
| Carbon Monoxide (CO) | 237.6 | 337.0 | 99.4 | 100 | No |
| Nitrogen Oxides (NOx) | 328.4 | 368.0 | 39.6 | 40 | No |

The 2-year average shown in the table is based on 1998 and 1999 operation data. During these years, the gas turbines averaged about 7850 hours per year of operation. The applicant initially proposed CO and NOx emission caps just below the PSD significant emissions rates to avoid PSD preconstruction review for the project.² However, the applicant later changed this request. As an electric utility steam generating unit, the applicant does not believe the proposed project will result in actual increased annual emissions discounting any emissions that can be attributed to demand growth. As such, the applicant requests a permit to authorize the construction and reporting requirements to demonstrate that the proposed project did not result in PSD-significant emissions increases.

2. APPLICABLE REGULATIONS

State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the applicable rules and regulations defined in the following Chapters of the Florida Administrative Code.

| <u>Chapter</u> | <u>Description</u> |
|----------------|---|
| 62-4 | Permitting Requirements |
| 62-204 | Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference |
| 62-210 | Required Permits, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms |
| 62-212 | Preconstruction Review, PSD Requirements, and BACT Determinations |
| 62-213 | Operation Permits for Major Sources of Air Pollution |
| 62-296 | Emission Limiting Standards |
| 62-297 | Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures |

Federal Regulations

This project is also subject to the applicable federal provisions regarding air quality as established by the EPA in the following sections of the Code of Federal Regulations (CFR).

| <u>Title 40, CFR</u> | <u>Description</u> |
|----------------------|--|
| Part 60 | Subpart A - General Provisions for NSPS Sources |
| | NSPS Subpart Dc - Small Industrial-Commercial-Institutional Steam Generating Units |
| | NSPS Subpart GG – Gas Turbines |
| | Applicable Appendices |

General PSD Applicability

The Department regulates major air pollution sources in accordance with Florida's Prevention of Significant Deterioration (PSD) program, as approved by the EPA in Florida's State Implementation Plan and defined in Rule 62-212.400, F.A.C. A PSD review is required only in areas currently in attainment with the National

Ambient Air Quality Standard (AAQS) or areas designated as “unclassifiable” for a given pollutant. A new facility is considered “major” with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant, or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the 28 PSD Major Facility Categories (Table 62-212.400-1, F.A.C.), or
- 5 tons per year of lead.

For new projects at existing PSD-major sources, actual pollutant emissions increases are reviewed for PSD applicability based on emissions thresholds known as the Significant Emission Rates listed in Table 62-212.400-2, F.A.C. Increases in actual pollutant emissions resulting from the project that exceed these rates are considered “significant” and the applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility may be “major” with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several “significant” regulated pollutants.

PSD Applicability for Project

The existing plant site is located in Pasco County, which is an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standard (AAQS). Actual and potential emissions of carbon monoxide (CO) and nitrogen oxides (NOx) are greater than 250 tons per year. Therefore, the existing plant is a PSD-major facility in accordance with Rule 62-212.400, F.A.C. Therefore, new projects must undergo a review for PSD applicability.

3. DEPARTMENT’S REVIEW

Description of SPRINT Technology

As previously mentioned, “SPRINT” is an acronym for *SPRay INTer-cooling*, which can provide up to 20% more power output for the given ambient conditions. An automated control system meters approximately 6-7 gpm of de-mineralized water to a series of 24 spray nozzles. The water is atomized into droplets that are less than 20 µm in diameter, which are then injected between the high-pressure and low-pressure compressors. The LM6000 is a high-pressure ratio gas turbine design, which carefully controls the compressor discharge temperature because the compressed air is used to cool the hot section components. Injecting atomized water just before the high-pressure compressor significantly reduces the temperature, which increases the mass flow rate and provides a greater compression ratio. The result is higher output and improved efficiency. The following figure is a half section view of the LM6000 SPRINT gas turbine, which shows the location of the spray nozzles between the low pressure and high pressure compressors. ^{3, 4, 5}

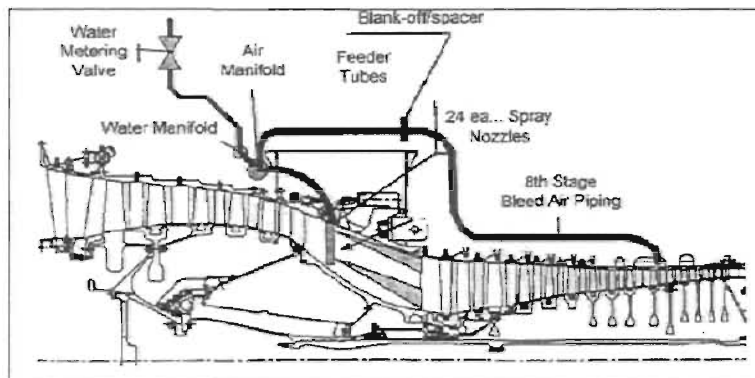


Figure 3-1. Half Section View of LM6000 Gas Turbine Compressor Section³

The benefits of SPRINT are more pronounced at high ambient temperatures. At ISO conditions (59° F), SPRINT can provide an additional 9% more power. However, at an ambient temperature of 90° F, SPRINT can provide 20% more power. The following figure schematically shows the impacts of SPRINT inter-cooling.

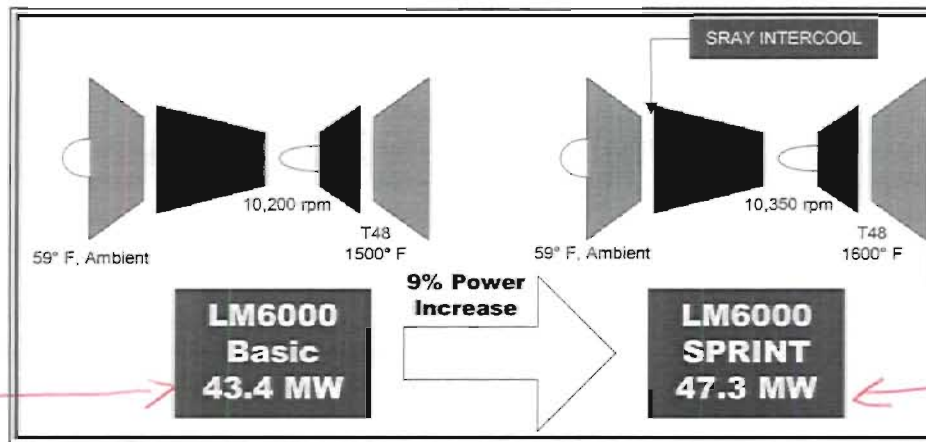


Figure 3-2. Schematic of SPRINT Inter-Cooling Technology⁴

SPRINT technology can be incorporated into new units or be retrofitted to either existing LM6000 PC model (conventional combustors) or the LM6000PD (dry low emissions combustors) model gas turbines systems. The Pasco Cogeneration gas turbines use the more conventional combustors with water injection to reduce NOx emissions. For the LM6000 gas turbine, SPRINT can improve the maximum output to nearly 55 MW with a thermal efficiency of 52%. In previous retrofit applications, SPRINT allowed some plants to shut off, or greatly reduce, usage of existing chiller systems to save associated operating and maintenance costs.

Hourly Emission Rates

The following table shows the maximum expected hourly emission rates before and after the addition of SPRINT.²

Table 3A. Comparison of Short Term Emission Rates

| Pollutant | Current, lb/hr | | Proposed, lb/hr | | SPRINT Difference, lb/hr | |
|-----------------------------------|----------------|----------|-----------------|----------|--------------------------|----------|
| | Gas Only | Gas w/DB | Gas Only | Gas w/DB | Gas Only | Gas w/DB |
| Carbon Monoxide (CO) | 56.0 | 92.0 | 56.5 | 92.5 | 0.5 | 0.5 |
| Nitrogen Oxides (NOx) | 85.5 | 103.5 | 86.0 | 104.0 | 0.5 | 0.5 |
| Particulate Matter (PM/PM10) | 5.0 | 7.6 | 5.0 | 7.6 | Neg. | Neg. |
| Sulfuric Acid Mist (SAM) | 0.2 | 0.3 | 0.2 | 0.3 | Neg. | Neg. |
| Sulfur Dioxide (SO ₂) | 4.6 | 5.6 | 4.6 | 5.6 | Neg. | Neg. |
| Volatile Organic Compounds (VOC) | 3.4 | 8.8 | 3.4 | 8.8 | Neg. | Neg. |

Notes:

- Consistent with the current permits, hourly emissions are the total for both gas turbine units.
- Maximum hourly emission rates are from the current Title V permit and the proposed application.
- SO₂ emissions from gas firing were estimated based on the maximum heat input rates and a conservative assumption for fuel sulfur of 2 grains of sulfur per 100 scf of natural gas.
- Similar to oil firing calculations, SAM emissions were assumed to be 4% of the SO₂ emissions.

The following table summarizes CO and NOx emissions test data as compiled from the Department's ARMS database.

Table 3B. Actual Hourly CO and NOx Emissions, Firing Natural Gas

| Test Date ¹ | Unit 1 | | Unit 2 | |
|------------------------|-------------------|-----------------------------------|-------------------|-----------------------------------|
| | CO ppmvd | NOx ppmvd @ 15% O ₂ | CO ppmvd | NOx ppmvd @ 15% O ₂ |
| 09/1996 | --- | 23.5 21.32 w/DB | --- | 23.4 22.5 w/DB |
| 09/1997 | 23.6 19.1 w/DB | 20.9 18.0 w/DB | 16.0 13.4 w/DB | 23.1 18.5 w/DB |
| 07/1998 | --- | 24.1 | --- | 24.6 |
| 03/1999 | 21.3 | 24.9 | --- | --- |
| 08/1999 | --- | 25.0 | --- | 24.9 |
| 07/2000 | --- | 25.0 | --- | 24.5 |
| 07/2001 | --- | --- | --- | 24.6 |
| 08/2001 | --- | 23.7 | --- | --- |
| 08/2002 | --- | 23.4 | --- | 23.8 |
| 07/2003 | --- | --- | --- | 24.3 |
| 08/2003 | --- | 24.5 | --- | --- |

Notes:

- a. Based on information in the Department's ARMS database.
- b. Tests conducted in September of 1995 were reported in terms of "lb/hour". The Department did not have enough information to estimate emissions in terms of "ppmvd".

In general, the test data shows that actual CO and NOx emissions are maintained below the emissions standards of 28 and 25 ppmvd, respectively. It is interesting to note that both the CO and NOx concentrations when duct firing were lower than without duct firing.

Annual Emission Rates

As shown in the table for hourly emission rates, the project is expected to have a negligible impact with regard to emissions of PM/PM₁₀, SAM, SO₂, and VOC. Therefore, the potential annual emissions increases from both gas turbines will remain less than the PSD significant emission rates for these pollutants. In addition, the gas turbines have fired little oil. Based on past Annual Operating Reports, the maximum oil firing occurred in 1998 when Unit 1 fired oil for approximately 7 hours (19,690 gallons) and Unit 2 for approximately 17 hours (48,380 gallons). According to the plant engineer, oil is only occasionally fired to prove to the steam host that it is reliable as a backup fuel.⁶ Therefore, this review does not consider oil firing because oil firing is restricted to emergency backup operation (≤ 240 hours per year) and the project will not change any conditions related to oil firing. The remainder of this review will focus on emissions of carbon monoxide (CO) and nitrogen oxides (NOx) from gas firing. The following table shows the future potential emissions with SPRINT compared to the two-year annual average emissions from the two gas turbines combined.

Table 3C. Comparison of Past Actual to Future Potential Annual Emissions

| Pollutant | 2-Year Avg. TPY | Future Potential TPY | Difference TPY | PSD SER TPY | Subject to PSD? |
|-----------------------|--------------------|-------------------------|-------------------|----------------|--------------------|
| Carbon Monoxide (CO) | 237.6 | 344.8 | 107.2 | 100 | Potentially |
| Nitrogen Oxides (NOx) | 328.4 | 406.9 | 78.5 | 40 | Potentially |

Notes:

- a. The 2-year average actual emission rate is based on the Annual Operating Reports for 1998 and 1999 and includes gas combustion in the duct burner system.
- b. Future potential emissions are based on the maximum expected hourly emissions from firing only natural gas and an average turbine inlet temperature of 59° F.
- c. Maximum annual emissions are based on 8760 hours per year of gas firing, of which 5833 hours include duct burning. Originally, each HRSG duct burner was specified at 150 MMBtu per hour and limited to 525,000 MMBtu per year, which is equivalent to 3500 hours per year of full load operation. Each installed HRSG duct burner is actually 90 MMBtu per hour, which results in about 5833 hours of operation per year based on the annual gas firing limitation.

The above table shows that a direct comparison of the past actual to future potential annual emissions could trigger PSD applicability. For this reason, the applicant initially requested a CO cap of 337 tons per year and a NOx cap of 368 tons per year, which result in net emissions increases just below the PSD significant emission rates. However, in accordance with Rule 62-210.200(97), F.A.C., the existing combined cycle unit is considered *electric utility steam generating unit*, which is defined as:

“Any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the unit.”

As previously mentioned, the rated capacity of the steam turbine electrical generator in the existing 2-on-1 combined cycle unit is 26.5 MW. In addition, steam that is supplied to the steam host represents only a small fraction of the potential capacity. Therefore, the existing 2-on-1 combined cycle system is considered an electric utility steam generating unit. Rule 62-212.200(11)(d), F.A.C. defines *actual emissions* for these units as:

“For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following a physical or operational change shall equal the representative actual annual emissions of the unit following the physical or operational change, provided the owner or operator maintains and submits to the Department on an annual basis, for a period of 5 years representative of normal post-change operations of the unit, within the period not longer than 10 years following the change, information demonstrating that the physical or operational change did not result in an emissions increase. The definition of “representative actual annual emissions” found in 40 CFR 52.21(b)(33) is adopted and incorporated by reference in Rule 62-204.800, F.A.C.”

40 CFR 52.21(b)(33) defines *representative actual annual emissions* as:

“Representative actual annual emissions means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

- (i) Consider all relevant information, including but not limited to, historical operational data, the company’s own representations, filings with the State or Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and
- (ii) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit’s emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to

the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.”

As an electric utility steam generating unit, Pasco Cogeneration Ltd. projects that the addition of SPRINT will have little impact with regard to actual emissions from these units. In other words, future representative actual emissions due to the addition of SPRINT technology would be less than the 2-year average actual annual emissions discounting any emissions due to demand growth that could have been accommodated prior to the change. The applicant agrees to submit the required reports for a period of 5 years demonstrating that the SPRINT project did not result in a net actual annual emissions increase.

Conclusion

Based on conversations with the applicant⁶, current operating practices for the plant include the following:

- Both units operate near capacity during the day;
- One unit shuts down at night and one unit continues to operate as necessary;
- Units are cycled each day for the nighttime shutdown to maintain equivalent hours on each unit;
- Duct burners are used for on-peak demand;
- Chiller system is used for on-peak demand, mostly during the summer; and
- Units only fire distillate oil as a restricted emergency backup fuel (< 240 hours per year).

Although the addition of SPRINT is a substantial investment (~ \$7 million for both units combined), it will not change the current operating practices at the plant. SPRINT will be used nearly all of the time, which is expected to decrease operation of the chiller system and duct firing in order to save on operational expenses. SPRINT will also be used when firing oil, but will have a negligible impact with regard to emissions for the 240 hours per year allowed for oil firing. For comparison purposes, the following table shows the maximum annual emissions increases due *solely* to the addition of SPRINT technology when firing natural gas and neglecting emissions from other operating conditions.

Table 3C. Potential Annual Emissions Increases Due Solely to the Addition of SPRINT

| Pollutant | Gas Only TPY | Gas w/DB TPY | Total TPY |
|-----------------------|-----------------|-----------------|--------------|
| Hours per Year | 2927 | 5833 | 8760 |
| Carbon Monoxide (CO) | 0.7 | 1.5 | 2.2 |
| Nitrogen Oxides (NOx) | 0.7 | 1.5 | 2.2 |

Notes:

- a. Potential annual emissions are the total for both units firing natural gas.
- b. Potential annual emissions are based on the difference between the current permitted maximum hourly emission rate and the proposed maximum hourly emissions rate with SPRINT.
- c. Maximum annual emissions are based on 8760 hours per year of gas firing, of which 5833 hours include duct burning.

As shown, the maximum expected impacts due only to SPRINT appear minimal. Although SPRINT allows operation at a higher generating capacity with slightly increased emissions, it will also tend to replace operation of the existing chiller and duct burner systems, which provide similar benefits. Therefore, it is unlikely that the SPRINT project will result in increased actual emissions.

4. PRELIMINARY DETERMINATION

The Department approves the applicant’s request and will issue a draft permit to authorize the project with the following requirements:

- Authorization to install SPRINT inter-cooling technology on each unit.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

- Modification of the maximum hourly CO and NOx mass emission rates (lb/hour) when using SPRINT.
- Requirement for initial and annual CO and NOx emissions tests that will establish the actual emission rates from each modified unit.
- Identification of the 2-year average CO and NOx annual emissions.
- Submittal of reports for at least 5 years following the SPRINT project to demonstrate that the project did not result in PSD-significant net emissions increases.
- Requirement for PSD preconstruction review should the SPRINT project result in actual net emissions increases greater than the PSD significant emission rates.

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in significant net emissions increases. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

REFERENCES

1. Title V Air Operation Permit No. 1010071-001-AV for Pasco Cogeneration Ltd.
2. Application by Pasco Cogeneration Ltd. Requesting an Air Construction Permit to Add SPRINT Technology to the Two Existing Gas Turbines (Project No. 1010071-002-AC).
3. "LM6000 SPRINT in Service with British REC"; Article from the magazine *International Turbomachinery* dated September/October 1998
4. "LM6000 Now with SPRINT Power Boost"; Article from a 1999 Company Brochure by S&S Energy Products: A GE Power Systems Business
5. "Inter-cooling for LM6000 Gas Turbines" by Mark McNeely; Article from the 1998 July/August Edition of the magazine *Diesel and Gas Turbine Worldwide*
6. Phone conference between the Department (Jeff Koerner) and the applicant (Tom Grace and plant engineer); October 1, 2003

DRAFT PERMIT

PERMITTEE:

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

Authorized Representative:

Mr. Leo Rajter, Vice President

| |
|---|
| Pasco Cogeneration, Limited Air Permit No. 1010071-002-AC Facility ID No. 1010072 SIC No. 4931 Permit Expires: December 1, 2004 |
|---|

PROJECT AND LOCATION

This permit authorizes construction to add "SPRINT" spray inter-cooling technology to the two existing gas turbines (EU-001 and EU-002) Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525. The UTM coordinates are Zone 17, 383.5 km East, and 3139.0 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 install the proposed equipment 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. The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements.

CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

(DRAFT)

Michael G. Cooke, Director
Division of Air Resources Management

(Effective Date)

FACILITY AND PROJECT DESCRIPTION

The existing facility consists of the following emissions units:

| ID | Emission Unit Description |
|-----------|---|
| 001 | Unit 1 - Combined cycle gas turbine with duct burner system |
| 002 | Unit 2 - Combined cycle gas turbine with duct burner system |
| 003 | Oil storage tank |
| 004 | Emergency diesel generators |
| 005 | Fugitive VOC emissions |

REGULATORY CLASSIFICATION

Title III: Based on the application, the existing facility is not a major source of hazardous air pollutants (HAP).

Title IV: Based on the application, the existing facility has no units subject to the acid rain provisions.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The existing facility operates units subject to the New Source Performance Standards of 40 CFR 60.

RELEVANT DOCUMENTS

The permit application and additional information received to make it complete are not a part of this permit; however, the information is specifically related to this permitting action and is on file with the Department.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

1. Permitting Authority: Applications for permits regarding PSD preconstruction review shall be submitted to the New Source Review Section of the Department's Bureau of Air Regulation at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Applications for permits regarding operation or minor sources shall be submitted to the Air Resources Section of the Department's Southwest District Office at 3804 Coconut Palm Drive, Tampa, Florida 33619-8218.
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 3804 Coconut Palm Drive, Tampa, Florida 33619-8218.
3. Appendices: The following Appendices are attached as part of this permit: Appendix A (Citation Format); Appendix B (General Conditions); and Appendix C (Standard Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
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 emissions unit or facility subject to this permit shall be constructed or 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. Title V Permit Revision: Pursuant to Rule 62-213.420(1)(a)2, F.A.C., the permittee shall submit an application for a revised Title V air operation permit at least 90 days before the expiration of this permit, but no later than 180 days after commencing operation. In accordance with Rule 62-213.412(2), F.A.C., the permittee may immediately implement the changes authorized by this air construction permit after submitting the application for a revised Title V air operation permit to the Permitting Authority and providing copies of the application to EPA Region 4 and each Compliance Authority. To apply for a revised 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. As necessary, the application shall include a Compliance Assurance Monitoring Plan. The application shall be submitted to the Department's Southwest District Office at the address identified above. [Rules 62-4.030, 62-4.050, 62-4.220, 62-213.412, and 62-213.420, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

C. EU-001/002, Units 1 and 2 Combined Cycle Gas Turbines

This section of the permit addresses the following emissions unit.

Emissions Unit Nos. 001 and 002

Description: Each unit consists of a General Electric Model LM06000 gas turbine, heat recovery steam generator (HRSG) with duct firing, chiller system, and SPRINT spray inter-cooling. Steam generated in the HRSGs is directed to a common steam turbine-electrical generator, which is rated at 26.5 MW. Alternatively, steam can be directed to an independent steam host (an adjacent citrus processing facility).

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 (LHV) without SPRINT is 423 MMBtu per hour, which produces approximately 42 MW. At a turbine inlet temperature of 51° F, the maximum heat input rate from gas firing (LHV) with SPRINT is 427 MMBtu per hour, which produces approximately 52 MW.

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

Stack Parameters: The stack is a maximum of 11 feet in diameter and at least 100 feet tall. After the HRSGs and steam turbine-electrical generator, the exhaust exits at approximately 232° F with a volumetric flow rate of approximately 325,000 acfm.

{Permitting Note: The units remain subject to the applicable requirements of previous air construction Permit No. PSD-FL-177 (Project No. AC51-196460) and current Title V air operation Permit No. 1010071-001-V.}

PREVIOUS APPLICABLE REQUIREMENTS

1. Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements. The permittee shall continue to comply with the conditions of these permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, record keeping, reporting, etc. [Rule 62-4.070, F.A.C.]

EQUIPMENT AND PERFORMANCE RESTRICTIONS

2. SPRINT Upgrade: This permit authorizes the construction activities necessary to add General Electric's "SPRINT" spray inter-cooling technology. In general, the equipment consists of a system that will automatically meter approximately 6-7 gpm of de-mineralized water to a series of 24 spray nozzles. [Applicant Request]
3. Permitted Capacity: At a turbine inlet temperature of 51° F, the maximum heat input rate from firing natural gas (LHV) when utilizing the SPRINT system is 427 MMBtu per hour, which produces approximately 52 MW of direct power. [Rule 62-210.200(PTE), F.A.C.]

{Permitting Note: This permit does not alter any previous requirements for other methods of operation or modify any specifications related to authorized fuels, fuel consumption, or allowable hours of operation.}

EMISSIONS STANDARDS

4. Carbon Monoxide (CO)
 - a. **Combustion Turbines (CTs):** When firing natural gas and utilizing SPRINT, CO emissions from each unit shall not exceed 28 ppmvd. In addition, the maximum CO mass emission rate from both units combined shall not exceed 56.5 pounds per hour based on a turbine inlet temperature of 51° F.
{Permitting Note: The concentration-based standard (ppmvd) remains consistent with the BACT determination made in Permit No. PSD-FL-177.}

PASCO COGEN, LTD.

NCP DADE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9th Street • Kansas City, MO 64105
Tel (816) 527-1160 • Fax (816) 527-4160

November 24, 2003

Mr. Jeffery F. Koerner, PE
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Rd., M.S. #5505
Tallahassee, FL 32399-2400

(850) 921-9536

RECEIVED

NOV 25 2003

BUREAU OF AIR REGULATION

RE: Pasco Cogen, Draft Air Permit No. 1010071-002-AC, Legal Notice Publication in
the Tampa Tribune Pasco County Edition, November 21, 2003

Dear Mr. Koerner:

Attached you will a Notary signed and sealed document attesting to the publication of the
Public Notice of Intent to issue the draft construction permit for the SPRINT Uprate project at
Pasco Cogen. Accompanying the certification is a copy of the article as published on Friday
November 21, 2003.

It is our understanding that all comments regarding the draft construction permit must be
submitted to you no later than Friday, December 5, 2003.

If there are any questions or concerns regarding this submittal, please feel free to call me.
My telephone no. is (816) 527-1160. Once again, on behalf of the Project thank you for all of
your help.

For Pasco Cogen Ltd.

Sincerely,



Thomas A. Grace, CHMM
Director-Environmental, Health and Safety

W/attachment

Cc: L. Rajter, w/o
R. Christmas, w/o
B. Andrew, w/o
A. Williams, w/o

File: 274-2010.1
G. Kissel, SWD

M. Worley, EPA
A. Bernal, NPS

RECEIVED

NOV 25 2003

BUREAU OF AIR REGULATION

THE TAMPA TRIBUNE

Published Daily

Tampa, Hillsborough County, Florida

State of Florida }
 County of Hillsborough } ss.

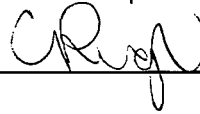
Before the undersigned authority personally appeared C. Pugh, who on oath says that she is the Advertising Billing Supervisor of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a

LEGAL NOTICE THE PASCO TRIBUNE

in the matter of PUBLIC NOTICE OF INTENT

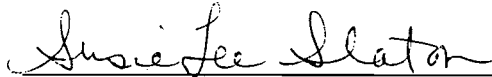
was published in said newspaper in the issues of
 NOVEMBER 21, 2003

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, this advertisement for publication in the said newspaper.



Sworn to and subscribed by me, this 21 day
 of NOVEMBER, A.D. 20 03

Personally Known ☒ or Produced Identification _____
 Type of Identification Produced _____


PUBLIC NOTICE OF INTENT
TO ISSUE AIR
CONSTRUCTION PERMITSTATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL
PROTECTIONDraft Air Permit No.
1010071-002-ACPasco Cogeneration,
Limited
SPRINT Project

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Pasco Cogeneration, Limited (Applicant) to install "SPRINT" spray inter-cooling technology on the two existing LM-6000 gas turbines (Emissions Units 001 and 002). The new equipment will be installed at the Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525. The applicant's authorized representative and mailing address is: Mr. Leo Rajter, Vice President, Pasco Cogeneration, Limited, 20 West 9th Street, Kansas City, MO 64105.

The applicant proposes to add SPRINT technology to the two existing gas turbines to enhance performance. "SPRINT" stands for SPRay INTER-cooling and involves the injection of atomized water into the compressor between the high-pressure and low-pressure

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 SUSIE LEE SLATON
 COUNTY CLERK
 HILLSBOROUGH COUNTY
 NOV 25 2003

compressors. This results in evaporative cooling of the compressor inlet air and higher mass flow rates. Benefits include increased power output with more efficient fuel usage. The maximum heat input rate when firing natural gas is expected to increase from 423 to 427 MMBtu per hour. The power output is expected to increase from 39.5 to 50.2 MW depending on ambient conditions.

As an electric utility steam generating unit, Pasco Cogeneration Ltd. projects that the addition of SPRINT will have little impact with regard to actual emissions from these units. In other words, future representative actual emissions due to the addition of SPRINT technology would be less than the 2-year average actual annual emissions discounting any emissions due to demand growth that could have been accommodated prior to the change. The draft permit authorizes the SPRINT project and specifies emissions standards for carbon monoxide and nitrogen oxides. Initial and annual testing is required for these pollutants. The permittee is required to submit reports comparing actual emissions after implementing SPRINT to the past actual emissions (2-year average) before the project. If the comparison shows an increase in actual emissions greater than the PSD significant emission rates defined in Table 212.400-2, F.A.C., then Units 1 and 2 shall be subject to PSD pre construction review at that time. The review shall include a determination of the Best Available Control Technology (BACT) for each PSD-significant pollutant.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written

comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address

indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact, if there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the

agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Florida Department of Environmental Protection
Bureau of Air Regulation,
New Source Review
Section
(111 S. Magnolia Drive,
Suite 4)
2600 Blair Stone Road, MS
#5505
Tallahassee, Florida,
32399-2400
Telephone: 850/488-0114

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

The complete project file includes the application, Technical Evaluation and Preliminary Determination, Draft Permit, and the


information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Bureau of Air Regulation's review engineer for this project for additional information at the address and phone number listed above.


3862 11/21/03

Florida Department of Environmental Protection

Memorandum

TO: Trina Vielhauer, Chief
Bureau of Air Regulation

THROUGH: Al Linero, Manager 
New Source Review Section

FROM: Jeff Koerner, New Source Review Section 

DATE: October 28, 2003

SUBJECT: Draft Air Permit No. 1010071-002-AC
Pasco Cogeneration, Limited
Combined Cycle Units 1 and 2, SPRINT Project

Attached for your review are the following items:

- Intent to Issue Permit and Public Notice Package;
- Technical Evaluation and Preliminary Determination;
- Draft Permit; and
- PE Certification

The draft permit authorizes the installation of "SPRINT" spray inter-cooling technology on the two existing LM-6000 gas turbines (Emissions Units 001 and 002). The two gas turbines form a 2-on-1 combined unit capable of producing approximately 80 MW of direct generation and 26.5 MW from steam. The new equipment will be installed at the existing Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525. The addition of SPRINT is expected to result in only slight increases in CO and NOx emissions and the project does not trigger PSD preconstruction review. The Technical Evaluation and Preliminary Determination provides a detailed description of the project, rule applicability, and emissions standards. The PE certification briefly summarizes the proposed project. Day #74 is January 3, 2004. I recommend your approval of the attached Draft Permit for this project.

Attachments

P.E. CERTIFICATION STATEMENT

PERMITTEE

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

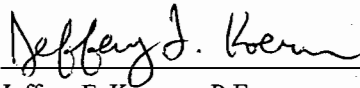
Draft Air Permit No. 1010071-002-AC
Combined Cycle Units 1 and 2
SPRINT Project
Pasco County, Florida

PROJECT DESCRIPTION

The applicant proposes to add SPRINT technology to the two existing gas turbines to enhance performance. "SPRINT" stands for *SP*Ray *IN*ter-cooling, which involves the injection of atomized water into the compressor between the high-pressure and low-pressure compressors. This results in evaporative cooling of the compressor inlet air and higher mass flow rates. Benefits include increased power output with more efficient fuel usage. The maximum heat input rate when firing natural gas is expected to increase from 423 to 427 MMBtu per hour. The power output is expected to increase from 39.5 to 50.2 MW depending on ambient conditions.

As an electric utility steam generating unit, Pasco Cogeneration Ltd. projects that the addition of SPRINT will have little impact with regard to actual emissions from these units. In other words, future representative actual emissions due to the addition of SPRINT technology would be less than the 2-year average actual annual emissions discounting any emissions due to demand growth that could have been accommodated prior to the change. The draft permit authorizes the SPRINT project and specifies emissions standards for carbon monoxide and nitrogen oxides. Initial and annual testing is required for these pollutants. The permittee is required to submit reports comparing actual emissions after implementing SPRINT to the past actual emissions (2-year average) before the project. If the comparison shows an increase in actual emissions greater than the PSD significant emission rates defined in Table 212.400-2, F.A.C., then Units 1 and 2 shall be subject to PSD preconstruction review at that time. The review shall include a determination of the Best Available Control Technology (BACT) for each PSD-significant pollutant.

I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, mechanical, structural, hydrological, geological, and meteorological features).

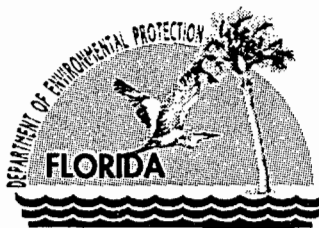


Jeffery F. Koerner, P.E.
Registration Number: 49441



10-28-03

(Date)



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

November 5, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

Authorized Representative:

Mr. Leo Rajter, Vice President

Re: Draft Air Permit No. 1010071-002-AC
Pasco Cogeneration, Limited
SPRINT Project

Dear Mr. Rajter:

Enclosed is one copy of the draft permit to install "SPRINT" spray inter-cooling technology on the two existing LM-6000 gas turbines (Emissions Units 001 and 002). The new equipment will be installed at the Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525. The Department's "Technical Evaluation and Preliminary Determination", "Intent to Issue Permit", and the "Public Notice of Intent to Issue Permit" are also included.

The "Public Notice of Intent to Issue Permit" must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, Administrator of the New Source Review Section, at the above letterhead address. If you have any other questions, please contact Jeff Koerner at 850/921-9536.

Sincerely,

Trina Vielhauer, Chief
Bureau of Air Regulation

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

In the Matter of an
Application for Air Permit by:

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

Authorized Representative:

Mr. Leo Rajter, Vice President

Draft Air Permit No. 1010071-002-AC
Units 1 and 2, SPRINT Project
Pasco County, Florida

INTENT TO ISSUE AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of Draft Permit attached) for the proposed project as detailed in the application and the enclosed Technical Evaluation and Preliminary Determination, for the reasons stated below. The applicant, Pasco Cogeneration, Limited, applied on June 10, 2003 to the Department for a permit to install "SPRINT" spray inter-cooling technology on the two existing LM-6000 gas turbines (Emissions Units 001 and 002). The new equipment will be installed at the Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525.

The Department has permitting jurisdiction under the provisions of Chapter 403, F.S., and Chapters 62-4, 62-210, and 62-212, F.A.C. The above actions are not exempt from permitting procedures. The Department has determined that an air construction permit is required to perform the proposed work. The Department intends to issue this air construction permit based on the belief that the applicant has provided reasonable assurances to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) and (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of Public Notice of Intent to Issue Air Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S. however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of

receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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

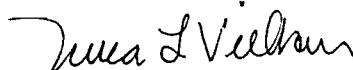
In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal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

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

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

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

Executed in Tallahassee, Florida.



Trina Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Permit package (including the Public Notice of Intent to Issue Permit, Technical Evaluation and Preliminary Determination, and the Draft Permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 11/6/03 to the persons listed:

Mr. Leo Rajter, Pasco*
Mr. Richard Christmas, Pasco
Mr. Tom Grace, Pasco c/o Aquila
Mr. John L. McKelvey, Case Engineering, Inc.
Mr. Gerald Kissel, SWD Office
Mr. Gregg Worley, EPA Region 4 Office
Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Victoria Gibson / November 6, 2003
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 1010071-002-AC

Pasco Cogeneration, Limited
SPRINT Project

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Pasco Cogeneration, Limited (Applicant) to install "SPRINT" spray inter-cooling technology on the two existing LM-6000 gas turbines (Emissions Units 001 and 002). The new equipment will be installed at the Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525. The applicant's authorized representative and mailing address is: Mr. Leo Rajter, Vice President, Pasco Cogeneration, Limited, 20 West 9th Street, Kansas City, MO 64105.

The applicant proposes to add SPRINT technology to the two existing gas turbines to enhance performance. "SPRINT" stands for *SP*Ray *INT*er-cooling and involves the injection of atomized water into the compressor between the high-pressure and low-pressure compressors. This results in evaporative cooling of the compressor inlet air and higher mass flow rates. Benefits include increased power output with more efficient fuel usage. The maximum heat input rate when firing natural gas is expected to increase from 423 to 427 MMBtu per hour. The power output is expected to increase from 39.5 to 50.2 MW depending on ambient conditions.

As an electric utility steam generating unit, Pasco Cogeneration Ltd. projects that the addition of SPRINT will have little impact with regard to actual emissions from these units. In other words, future representative actual emissions due to the addition of SPRINT technology would be less than the 2-year average actual annual emissions discounting any emissions due to demand growth that could have been accommodated prior to the change. The draft permit authorizes the SPRINT project and specifies emissions standards for carbon monoxide and nitrogen oxides. Initial and annual testing is required for these pollutants. The permittee is required to submit reports comparing actual emissions after implementing SPRINT to the past actual emissions (2-year average) before the project. If the comparison shows an increase in actual emissions greater than the PSD significant emission rates defined in Table 212.400-2, F.A.C., then Units 1 and 2 shall be subject to PSD preconstruction review at that time. The review shall include a determination of the Best Available Control Technology (BACT) for each PSD-significant pollutant.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Florida Department of Environmental Protection
Bureau of Air Regulation, New Source Review Section
(111 S. Magnolia Drive, Suite 4)
2600 Blair Stone Road, MS #5505
Tallahassee, Florida, 32399-2400
Telephone: 850/488-0114

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

The complete project file includes the application, Technical Evaluation and Preliminary Determination, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Bureau of Air Regulation's review engineer for this project for additional information at the address and phone number listed above.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

**TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION**

PROJECT

Air Permit No. 1010071-002-AC
Addition of SPRINT Inter-Cooling to Existing 2-on-1 Combined Cycle Gas Turbine Unit
(Emissions Units 001 and 002)

COUNTY

Pasco County, Florida

APPLICANT

Pasco Cogeneration, Limited
ARMS Facility ID No. 1010071

**PERMITTING
AUTHORITY**

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section



October 28, 2003

{Filename: 1010071-002-AC - TEPD}

1. GENERAL PROJECT INFORMATION

Applicant Name and Address

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

Authorized Representative:

Mr. Leo Rajter, Vice President

Processing Schedule

06/10/03 Received the application for a minor source air pollution construction permit to avoid PSD review.
06/20/03 Department requested additional information.
09/17/03 Department received additional information.
10/07/03 Department requested additional information.
10/22/03 Department received additional information; application complete.

Facility Description and Location

The existing facility primarily consists of two 42 MW combined cycle gas turbines (EU-001 and EU-002) configured with chiller systems to maintain the inlet compressor air at 51° F and 100% relative humidity. Each combined cycle unit incorporates a 90 MMBtu per hour, gas-fired duct burner system in the heat recovery steam generator (HRSG). Each HRSG directs steam to a common steam turbine-electrical generator set, which produces another 26.5 MW of electricity. Alternatively, steam may be delivered to an adjacent citrus processing plant. The gas turbines primarily fire natural gas, but can also fire No. 2 distillate oil as a restricted alternate emergency backup fuel. Other sources of air pollution include a 170,000 gallon oil storage tank (EU-003), two 1274 kW diesel emergency generators (EU-004), and fugitive emissions (EU-005).¹

The existing facility is located in Pasco County at 14850 Old State Road 23, Dade City, Florida. The UTM Coordinates are Zone 17, 383.5 km East and 3139.0 km North.

SIC No. 4931 – Electric and other services combined (cogeneration)

Regulatory Categories

Title III: Based on the application, the existing facility is not a major source of hazardous air pollutants (HAP).

Title IV: Based on the application, the existing facility has no units subject to the acid rain provisions.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The existing facility operates units subject to the New Source Performance Standards of 40 CFR 60.

Project Description

Initial Permit No. PSD-FL-177 to construct the 2-on-1 combined cycle gas turbine system was issued on November 20, 1991. The gas turbines began operation in 1995. The applicant proposes to add SPRINT technology to the two existing gas turbines to enhance performance. "SPRINT" stands for *SP*Ray *I*NTercooling, which involves the injection of atomized water into the compressor between the high-pressure and low-pressure compressors. This results in evaporative cooling of the compressor inlet air and higher mass flow rates. Benefits include increased power output with more efficient fuel usage. The maximum heat input rate when firing natural gas is expected to increase from 423 to 427 MMBtu per hour. The power output is expected to increase from 39.5 to 50.2 MW depending on ambient conditions.² The applicant initially provided the

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

following PSD applicability analysis with regard to CO and NOx emissions.

Table 1A. Applicant's Initial CO and NOx PSD Applicability Analysis

| Pollutant | 2-Year Avg. TPY | Proposed Cap TPY | Difference TPY | PSD SER TPY | Subject to PSD? |
|-----------------------|--------------------|---------------------|-------------------|----------------|--------------------|
| Carbon Monoxide (CO) | 237.6 | 337.0 | 99.4 | 100 | No |
| Nitrogen Oxides (NOx) | 328.4 | 368.0 | 39.6 | 40 | No |

The 2-year average shown in the table is based on 1998 and 1999 operation data. During these years, the gas turbines averaged about 7850 hours per year of operation. The applicant initially proposed CO and NOx emission caps just below the PSD significant emissions rates to avoid PSD preconstruction review for the project.² However, the applicant later changed this request. As an electric utility steam generating unit, the applicant does not believe the proposed project will result in actual increased annual emissions discounting any emissions that can be attributed to demand growth. As such, the applicant requests a permit to authorize the construction and reporting requirements to demonstrate that the proposed project did not result in PSD-significant emissions increases.

2. APPLICABLE REGULATIONS

State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the applicable rules and regulations defined in the following Chapters of the Florida Administrative Code.

| <u>Chapter</u> | <u>Description</u> |
|----------------|---|
| 62-4 | Permitting Requirements |
| 62-204 | Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference |
| 62-210 | Required Permits, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms |
| 62-212 | Preconstruction Review, PSD Requirements, and BACT Determinations |
| 62-213 | Operation Permits for Major Sources of Air Pollution |
| 62-296 | Emission Limiting Standards |
| 62-297 | Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures |

Federal Regulations

This project is also subject to the applicable federal provisions regarding air quality as established by the EPA in the following sections of the Code of Federal Regulations (CFR).

| <u>Title 40, CFR</u> | <u>Description</u> |
|----------------------|--|
| Part 60 | Subpart A - General Provisions for NSPS Sources |
| | NSPS Subpart Dc - Small Industrial-Commercial-Institutional Steam Generating Units |
| | NSPS Subpart GG - Gas Turbines |
| | Applicable Appendices |

General PSD Applicability

The Department regulates major air pollution sources in accordance with Florida's Prevention of Significant Deterioration (PSD) program, as approved by the EPA in Florida's State Implementation Plan and defined in Rule 62-212.400, F.A.C. A PSD review is required only in areas currently in attainment with the National

Ambient Air Quality Standard (AAQS) or areas designated as “unclassifiable” for a given pollutant. A new facility is considered “major” with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant, or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the 28 PSD Major Facility Categories (Table 62-212.400-1, F.A.C.), or
- 5 tons per year of lead.

For new projects at existing PSD-major sources, actual pollutant emissions increases are reviewed for PSD applicability based on emissions thresholds known as the Significant Emission Rates listed in Table 62-212.400-2, F.A.C. Increases in actual pollutant emissions resulting from the project that exceed these rates are considered “significant” and the applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility may be “major” with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several “significant” regulated pollutants.

PSD Applicability for Project

The existing plant site is located in Pasco County, which is an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standard (AAQS). Actual and potential emissions of carbon monoxide (CO) and nitrogen oxides (NOx) are greater than 250 tons per year. Therefore, the existing plant is a PSD-major facility in accordance with Rule 62-212.400, F.A.C. Therefore, new projects must undergo a review for PSD applicability.

3. DEPARTMENT’S REVIEW

Description of SPRINT Technology

As previously mentioned, “SPRINT” is an acronym for *SP*Ray *IN*ter-cooling, which can provide up to 20% more power output for the given ambient conditions. An automated control system meters approximately 6-7 gpm of de-mineralized water to a series of 24 spray nozzles. The water is atomized into droplets that are less than 20 μm in diameter, which are then injected between the high-pressure and low-pressure compressors. The LM6000 is a high-pressure ratio gas turbine design, which carefully controls the compressor discharge temperature because the compressed air is used to cool the hot section components. Injecting atomized water just before the high-pressure compressor significantly reduces the temperature, which increases the mass flow rate and provides a greater compression ratio. The result is higher output and improved efficiency. The following figure is a half section view of the LM6000 SPRINT gas turbine, which shows the location of the spray nozzles between the low pressure and high pressure compressors.^{3, 4, 5}

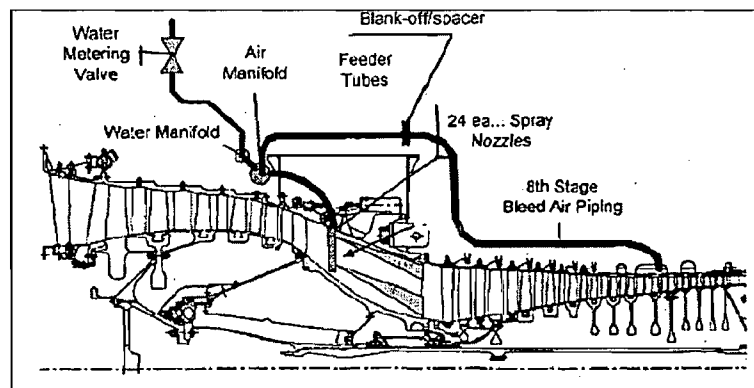


Figure 3-1. Half Section View of LM6000 Gas Turbine Compressor Section³

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The benefits of SPRINT are more pronounced at high ambient temperatures. At ISO conditions (59° F), SPRINT can provide an additional 9% more power. However, at an ambient temperature of 90° F, SPRINT can provide 20% more power. The following figure schematically shows the impacts of SPRINT inter-cooling.

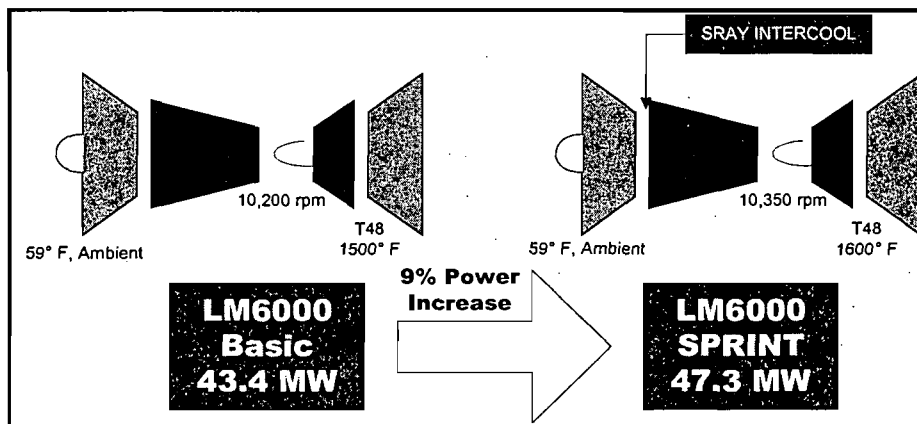


Figure 3-2. Schematic of SPRINT Inter-Cooling Technology⁴

SPRINT technology can be incorporated into new units or be retrofitted to either existing LM6000 PC model (conventional combustors) or the LM6000PD (dry low emissions combustors) model gas turbines systems. The Pasco Cogeneration gas turbines use the more conventional combustors with water injection to reduce NOx emissions. For the LM6000 gas turbine, SPRINT can improve the maximum output to nearly 55 MW with a thermal efficiency of 52%. In previous retrofit applications, SPRINT allowed some plants to shut off, or greatly reduce, usage of existing chiller systems to save associated operating and maintenance costs.

Hourly Emission Rates

The following table shows the maximum expected hourly emission rates before and after the addition of SPRINT.²

Table 3A. Comparison of Short Term Emission Rates

| Pollutant | Current, lb/hr | | Proposed, lb/hr | | SPRINT Difference, lb/hr | |
|----------------------------------|----------------|----------|-----------------|----------|--------------------------|----------|
| | Gas Only | Gas w/DB | Gas Only | Gas w/DB | Gas Only | Gas w/DB |
| Carbon Monoxide (CO) | 56.0 | 92.0 | 56.5 | 92.5 | 0.5 | 0.5 |
| Nitrogen Oxides (NOx) | 85.5 | 103.5 | 86.0 | 104.0 | 0.5 | 0.5 |
| Particulate Matter (PM/PM10) | 5.0 | 7.6 | 5.0 | 7.6 | Neg. | Neg. |
| Sulfuric Acid Mist (SAM) | 0.2 | 0.3 | 0.2 | 0.3 | Neg. | Neg. |
| Sulfur Dioxide (SO2) | 4.6 | 5.6 | 4.6 | 5.6 | Neg. | Neg. |
| Volatile Organic Compounds (VOC) | 3.4 | 8.8 | 3.4 | 8.8 | Neg. | Neg. |

Notes:

- Consistent with the current permits, hourly emissions are the total for both gas turbine units.
- Maximum hourly emission rates are from the current Title V permit and the proposed application.
- SO₂ emissions from gas firing were estimated based on the maximum heat input rates and a conservative assumption for fuel sulfur of 2 grains of sulfur per 100 scf of natural gas.
- Similar to oil firing calculations, SAM emissions were assumed to be 4% of the SO₂ emissions.

The following table summarizes CO and NOx emissions test data as compiled from the Department's ARMS database.

Table 3B. Actual Hourly CO and NOx Emissions, Firing Natural Gas

| Test Date ¹ | Unit 1 | | Unit 2 | |
|------------------------|-------------------|-----------------------------------|-------------------|-----------------------------------|
| | CO ppmvd | NOx ppmvd @ 15% O ₂ | CO ppmvd | NOx ppmvd @ 15% O ₂ |
| 09/1996 | --- | 23.5 21.32 w/DB | --- | 23.4 22.5 w/DB |
| 09/1997 | 23.6 19.1 w/DB | 20.9 18.0 w/DB | 16.0 13.4 w/DB | 23.1 18.5 w/DB |
| 07/1998 | --- | 24.1 | --- | 24.6 |
| 03/1999 | 21.3 | 24.9 | --- | --- |
| 08/1999 | --- | 25.0 | --- | 24.9 |
| 07/2000 | --- | 25.0 | --- | 24.5 |
| 07/2001 | --- | --- | --- | 24.6 |
| 08/2001 | --- | 23.7 | --- | --- |
| 08/2002 | --- | 23.4 | --- | 23.8 |
| 07/2003 | --- | --- | --- | 24.3 |
| 08/2003 | --- | 24.5 | --- | --- |

Notes:

- Based on information in the Department's ARMS database.
- Tests conducted in September of 1995 were reported in terms of "lb/hour". The Department did not have enough information to estimate emissions in terms of "ppmvd".

In general, the test data shows that actual CO and NOx emissions are maintained below the emissions standards of 28 and 25 ppmvd, respectively. It is interesting to note that both the CO and NOx concentrations when duct firing were lower than without duct firing.

Annual Emission Rates

As shown in the table for hourly emission rates, the project is expected to have a negligible impact with regard to emissions of PM/PM₁₀, SAM, SO₂, and VOC. Therefore, the potential annual emissions increases from both gas turbines will remain less than the PSD significant emission rates for these pollutants. In addition, the gas turbines have fired little oil. Based on past Annual Operating Reports, the maximum oil firing occurred in 1998 when Unit 1 fired oil for approximately 7 hours (19,690 gallons) and Unit 2 for approximately 17 hours (48,380 gallons). According to the plant engineer, oil is only occasionally fired to prove to the steam host that it is reliable as a backup fuel.⁶ Therefore, this review does not consider oil firing because oil firing is restricted to emergency backup operation (≤ 240 hours per year) and the project will not change any conditions related to oil firing. The remainder of this review will focus on emissions of carbon monoxide (CO) and nitrogen oxides (NOx) from gas firing. The following table shows the future potential emissions with SPRINT compared to the two-year annual average emissions from the two gas turbines combined.

Table 3C. Comparison of Past Actual to Future Potential Annual Emissions

| Pollutant | 2-Year Avg. TPY | Future Potential TPY | Difference TPY | PSD SER TPY | Subject to PSD? |
|-----------------------|--------------------|-------------------------|-------------------|----------------|--------------------|
| Carbon Monoxide (CO) | 237.6 | 344.8 | 107.2 | 100 | Potentially |
| Nitrogen Oxides (NOx) | 328.4 | 406.9 | 78.5 | 40 | Potentially |

Notes:

- a. The 2-year average actual emission rate is based on the Annual Operating Reports for 1998 and 1999 and includes gas combustion in the duct burner system.
- b. Future potential emissions are based on the maximum expected hourly emissions from firing only natural gas and an average turbine inlet temperature of 59° F.
- c. Maximum annual emissions are based on 8760 hours per year of gas firing, of which 5833 hours include duct burning. Originally, each HRSG duct burner was specified at 150 MMBtu per hour and limited to 525,000 MMBtu per year, which is equivalent to 3500 hours per year of full load operation. Each installed HRSG duct burner is actually 90 MMBtu per hour, which results in about 5833 hours of operation per year based on the annual gas firing limitation.

The above table shows that a direct comparison of the past actual to future potential annual emissions could trigger PSD applicability. For this reason, the applicant initially requested a CO cap of 337 tons per year and a NOx cap of 368 tons per year, which result in net emissions increases just below the PSD significant emission rates. However, in accordance with Rule 62-210.200(97), F.A.C., the existing combined cycle unit is considered *electric utility steam generating unit*, which is defined as:

“Any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the unit.”

As previously mentioned, the rated capacity of the steam turbine electrical generator in the existing 2-on-1 combined cycle unit is 26.5 MW. In addition, steam that is supplied to the steam host represents only a small fraction of the potential capacity. Therefore, the existing 2-on-1 combined cycle system is considered an electric utility steam generating unit. Rule 62-212.200(11)(d), F.A.C. defines *actual emissions* for these units as:

“For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following a physical or operational change shall equal the representative actual annual emissions of the unit following the physical or operational change, provided the owner or operator maintains and submits to the Department on an annual basis, for a period of 5 years representative of normal post-change operations of the unit, within the period not longer than 10 years following the change, information demonstrating that the physical or operational change did not result in an emissions increase. The definition of “representative actual annual emissions” found in 40 CFR 52.21(b)(33) is adopted and incorporated by reference in Rule 62-204.800, F.A.C.”

40 CFR 52.21(b)(33) defines *representative actual annual emissions* as:

“Representative actual annual emissions means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

- (i) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and
- (ii) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to

the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.”

As an electric utility steam generating unit, Pasco Cogeneration Ltd. projects that the addition of SPRINT will have little impact with regard to actual emissions from these units. In other words, future representative actual emissions due to the addition of SPRINT technology would be less than the 2-year average actual annual emissions discounting any emissions due to demand growth that could have been accommodated prior to the change. The applicant agrees to submit the required reports for a period of 5 years demonstrating that the SPRINT project did not result in a net actual annual emissions increase.

Conclusion

Based on conversations with the applicant⁶, current operating practices for the plant include the following:

- Both units operate near capacity during the day;
- One unit shuts down at night and one unit continues to operate as necessary;
- Units are cycled each day for the nighttime shutdown to maintain equivalent hours on each unit;
- Duct burners are used for on-peak demand;
- Chiller system is used for on-peak demand, mostly during the summer; and
- Units only fire distillate oil as a restricted emergency backup fuel (< 240 hours per year).

Although the addition of SPRINT is a substantial investment (~ \$7 million for both units combined), it will not change the current operating practices at the plant. SPRINT will be used nearly all of the time, which is expected to decrease operation of the chiller system and duct firing in order to save on operational expenses. SPRINT will also be used when firing oil, but will have a negligible impact with regard to emissions for the 240 hours per year allowed for oil firing. For comparison purposes, the following table shows the maximum annual emissions increases due *solely* to the addition of SPRINT technology when firing natural gas and neglecting emissions from other operating conditions.

Table 3C. Potential Annual Emissions Increases Due Solely to the Addition of SPRINT

| Pollutant | Gas Only TPY | Gas w/DB TPY | Total TPY |
|-----------------------|-----------------|-----------------|--------------|
| Hours per Year | 2927 | 5833 | 8760 |
| Carbon Monoxide (CO) | 0.7 | 1.5 | 2.2 |
| Nitrogen Oxides (NOx) | 0.7 | 1.5 | 2.2 |

Notes:

- a. Potential annual emissions are the total for both units firing natural gas.
- b. Potential annual emissions are based on the difference between the current permitted maximum hourly emission rate and the proposed maximum hourly emissions rate with SPRINT.
- c. Maximum annual emissions are based on 8760 hours per year of gas firing, of which 5833 hours include duct burning.

As shown, the maximum expected impacts due only to SPRINT appear minimal. Although SPRINT allows operation at a higher generating capacity with slightly increased emissions, it will also tend to replace operation of the existing chiller and duct burner systems, which provide similar benefits. Therefore, it is unlikely that the SPRINT project will result in increased actual emissions.

4. PRELIMINARY DETERMINATION

The Department approves the applicant’s request and will issue a draft permit to authorize the project with the following requirements:

- Authorization to install SPRINT inter-cooling technology on each unit.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

- Modification of the maximum hourly CO and NOx mass emission rates (lb/hour) when using SPRINT.
- Requirement for initial and annual CO and NOx emissions tests that will establish the actual emission rates from each modified unit.
- Identification of the 2-year average CO and NOx annual emissions.
- Submittal of reports for at least 5 years following the SPRINT project to demonstrate that the project did not result in PSD-significant net emissions increases.
- Requirement for PSD preconstruction review should the SPRINT project result in actual net emissions increases greater than the PSD significant emission rates.

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in significant net emissions increases. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

REFERENCES

1. Title V Air Operation Permit No. 1010071-001-AV for Pasco Cogeneration Ltd.
2. Application by Pasco Cogeneration Ltd. Requesting an Air Construction Permit to Add SPRINT Technology to the Two Existing Gas Turbines (Project No. 1010071-002-AC).
3. "LM6000 SPRINT in Service with British REC"; Article from the magazine *International Turbomachinery* dated September/October 1998
4. "LM6000 Now with SPRINT Power Boost"; Article from a 1999 Company Brochure by S&S Energy Products: A GE Power Systems Business
5. "Inter-cooling for LM6000 Gas Turbines" by Mark McNeely; Article from the 1998 July/August Edition of the magazine *Diesel and Gas Turbine Worldwide*
6. Phone conference between the Department (Jeff Koerner) and the applicant (Tom Grace and plant engineer); October 1, 2003

DRAFT PERMIT

PERMITTEE:

Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

Authorized Representative:

Mr. Leo Rajter, Vice President

| |
|---|
| Pasco Cogeneration, Limited Air Permit No. 1010071-002-AC Facility ID No. 1010072 SIC No. 4931 Permit Expires: December 1, 2004 |
|---|

PROJECT AND LOCATION

This permit authorizes construction to add "SPRINT" spray inter-cooling technology to the two existing gas turbines (EU-001 and EU-002) Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525. The UTM coordinates are Zone 17, 383.5 km East, and 3139.0 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 install the proposed equipment 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. The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements.

CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

(DRAFT)

Michael G. Cooke, Director
Division of Air Resources Management

(Effective Date)

FACILITY AND PROJECT DESCRIPTION

The existing facility consists of the following emissions units:

| ID | Emission Unit Description |
|-----------|---|
| 001 | Unit 1 - Combined cycle gas turbine with duct burner system |
| 002 | Unit 2 - Combined cycle gas turbine with duct burner system |
| 003 | Oil storage tank |
| 004 | Emergency diesel generators |
| 005 | Fugitive VOC emissions |

REGULATORY CLASSIFICATION

Title III: Based on the application, the existing facility is not a major source of hazardous air pollutants (HAP).

Title IV: Based on the application, the existing facility has no units subject to the acid rain provisions.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The existing facility operates units subject to the New Source Performance Standards of 40 CFR 60.

RELEVANT DOCUMENTS

The permit application and additional information received to make it complete are not a part of this permit; however, the information is specifically related to this permitting action and is on file with the Department.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

1. Permitting Authority: Applications for permits regarding PSD preconstruction review shall be submitted to the New Source Review Section of the Department's Bureau of Air Regulation at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Applications for permits regarding operation or minor sources shall be submitted to the Air Resources Section of the Department's Southwest District Office at 3804 Coconut Palm Drive, Tampa, Florida 33619-8218.
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 3804 Coconut Palm Drive, Tampa, Florida 33619-8218.
3. Appendices: The following Appendices are attached as part of this permit: Appendix A (Citation Format); Appendix B (General Conditions); and Appendix C (Standard Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
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 emissions unit or facility subject to this permit shall be constructed or 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. Title V Permit Revision: Pursuant to Rule 62-213.420(1)(a)2, F.A.C., the permittee shall submit an application for a revised Title V air operation permit at least 90 days before the expiration of this permit, but no later than 180 days after commencing operation. In accordance with Rule 62-213.412(2), F.A.C., the permittee may immediately implement the changes authorized by this air construction permit after submitting the application for a revised Title V air operation permit to the Permitting Authority and providing copies of the application to EPA Region 4 and each Compliance Authority. To apply for a revised 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. As necessary, the application shall include a Compliance Assurance Monitoring Plan. The application shall be submitted to the Department's Southwest District Office at the address identified above. [Rules 62-4.030, 62-4.050, 62-4.220, 62-213.412, and 62-213.420, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

C. EU-001/002, Units 1 and 2 Combined Cycle Gas Turbines

This section of the permit addresses the following emissions unit.

Emissions Unit Nos. 001 and 002

Description: Each unit consists of a General Electric Model LM06000 gas turbine, heat recovery steam generator (HRSG) with duct firing, chiller system, and SPRINT spray inter-cooling. Steam generated in the HRSGs is directed to a common steam turbine-electrical generator, which is rated at 26.5 MW. Alternatively, steam can be directed to an independent steam host (an adjacent citrus processing facility).

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 (LHV) without SPRINT is 423 MMBtu per hour, which produces approximately 42 MW. At a turbine inlet temperature of 51° F, the maximum heat input rate from gas firing (LHV) with SPRINT is 427 MMBtu per hour, which produces approximately 52 MW.

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

Stack Parameters: The stack is a maximum of 11 feet in diameter and at least 100 feet tall. After the HRSGs and steam turbine-electrical generator, the exhaust exits at approximately 232° F with a volumetric flow rate of approximately 325,000 acfm.

{Permitting Note: The units remain subject to the applicable requirements of previous air construction Permit No. PSD-FL-177 (Project No. AC51-196460) and current Title V air operation Permit No. 1010071-001-V.}

PREVIOUS APPLICABLE REQUIREMENTS

1. **Other Permits:** The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements. The permittee shall continue to comply with the conditions of these permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, record keeping, reporting, etc. [Rule 62-4.070, F.A.C.]

EQUIPMENT AND PERFORMANCE RESTRICTIONS

2. **SPRINT Upgrade:** This permit authorizes the construction activities necessary to add General Electric's "SPRINT" spray inter-cooling technology. In general, the equipment consists of a system that will automatically meter approximately 6-7 gpm of de-mineralized water to a series of 24 spray nozzles. [Applicant Request]
3. **Permitted Capacity:** At a turbine inlet temperature of 51° F, the maximum heat input rate from firing natural gas (LHV) when utilizing the SPRINT system is 427 MMBtu per hour, which produces approximately 52 MW of direct power. [Rule 62-210.200(PTE), F.A.C.]

{Permitting Note: This permit does not alter any previous requirements for other methods of operation or modify any specifications related to authorized fuels, fuel consumption, or allowable hours of operation.}

EMISSIONS STANDARDS

4. Carbon Monoxide (CO)

- a. **Combustion Turbines (CTs):** When firing natural gas and utilizing SPRINT, CO emissions from each unit shall not exceed 28 ppmvd. In addition, the maximum CO mass emission rate from both units combined shall not exceed 56.5 pounds per hour based on a turbine inlet temperature of 51° F.

{Permitting Note: The concentration-based standard (ppmvd) remains consistent with the BACT determination made in Permit No. PSD-FL-177.}

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

C. EU-001/002, Units 1 and 2 Combined Cycle Gas Turbines

- b. **Combustion Turbines and Duct Burners (CTs+DBs):** When firing natural gas, operating the duct burner system, and utilizing SPRINT, the maximum CO mass emission rate from both units combined shall not exceed 92.5 pounds per hour based on a turbine inlet temperature of 51°F.

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

5. Nitrogen Oxides (NOx)

- c. **Combustion Turbines (CTs):** When firing natural gas and utilizing SPRINT, NOx emissions from each unit shall not exceed 25 ppmvd corrected to 15% oxygen. In addition, the maximum NOx mass emission rate from both units combined shall not exceed 86.0 pounds per hour based on a turbine inlet temperature of 51° F. *{Permitting Note: The concentration-based standard (ppmvd corrected to 15% oxygen) remains consistent with the initial BACT determination made in Permit No. PSD-FL-177.}*
- d. **Combustion Turbines and Duct Burners (CTs+DBs):** When firing natural gas, operating the duct burner system, and utilizing SPRINT, the maximum NOx mass emission rate from both units combined shall not exceed 104.0 pounds per hour based on a turbine inlet temperature of 51° F.

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

6. Other Emissions Standards: Unless otherwise specified above, the emissions standards specified in current Title V air operation Permit No.1010071-001-AV also apply when utilizing the SPRINT spray inter-cooling system with each corresponding operational configuration. [Rule 62-4.070(3), F.A.C.]

EMISSIONS PERFORMANCE TESTING

7. Initial Compliance Tests: Each unit shall be tested to demonstrate initial compliance with the CO and NOx emissions standards specified in this permit. CO and NOx emissions test shall be conducted concurrently. The initial tests shall be conducted within 60 days after completing construction of the SPRINT project and achieving maximum production capacity, but not later than 180 days after initial operation of the unit with SPRINT. [Rule 62-297.310(7)(a)1, F.A.C.]
8. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each unit shall be tested to demonstrate compliance with the CO and NOx emissions standards specified in this permit. CO and NOx emissions test shall be conducted concurrently. [Rule and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]
9. 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. [Rule 62-4.297.310(7)(a)9, F.A.C.]
10. Test Methods: Required tests shall be performed in accordance with the following reference methods.

| Method | Description of Method and Comments |
|--------|---|
| 1-4 | Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. |
| 7E | Determination of Nitrogen Oxide Emissions from Stationary Sources. |
| 10 | Determination of Carbon Monoxide Emissions from Stationary Sources. <i>{Permitting Note: The method shall be based on a continuous sampling train.}</i> |
| 19 | Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates. <i>{Permitting Note: The F-factor method may also be used to determine flow rates and gas analysis to calculate mass emission rates in lieu of Methods 1-4.}</i> |

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

C. EU-001/002, Units 1 and 2 Combined Cycle Gas Turbines

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. Tests shall also be conducted in accordance with the requirements specified in Appendix C of this permit. No other methods may be used without prior written approval from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

NOTIFICATIONS, RECORDS AND REPORTS

11. Construction Notifications: Within 15 days of beginning construction, the permittee shall notify the Compliance Authority that construction has commenced. Within 15 days of completing construction, the permittee shall notify the Compliance Authority that construction has concluded. Each 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.]
12. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix C of this permit. For each test run, the report shall also indicate the operating load (MW), maximum heat input rate (MMBtu per hour), ambient temperature (° F), turbine inlet temperature (° F), and water-to-fuel ratio. [Rule 62-297.310(8), F.A.C.]
13. Operational Data: The permittee shall monitor and record the hours of operation utilizing SPRINT. [Rule 62-4.070(3), F.A.C.]
14. PSD Applicability Report: Before March 1st of each year, the permittee shall submit a report to the Bureau of Air Regulation and the Compliance Authority summarizing actual annual emissions for the previous calendar year. The reports shall be submitted for five separate years that are representative of normal post-change operations after completing construction of the SPRINT project. The reports shall begin during the first full year that the SPRINT technology is in use and continue for five years. Reports are subject to the following conditions.
 - a. Actual emissions for a given year shall be determined by the tested emission rates for that year and the actual hours of operation during the calendar year.
 - b. The total "past actual emissions" for Units 1 and 2 (2-year average) are 238 tons per year of carbon monoxide and 328 tons per year of nitrogen oxides.
 - c. In accordance with 40 CFR 52.21(b)(33)(ii), the permittee shall, "Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole." The permittee shall quantify any excluded emissions and provide a rationale.
 - d. The annual report shall compare actual emissions calculated for a given year with the past actual emissions identified above. If the comparison shows an increase in actual emissions greater than the PSD significant emission rates defined in Table 212.400-2, F.A.C., then Units 1 and 2 shall be subject to PSD preconstruction review at that time. The review shall include a determination of the Best Available Control Technology (BACT) for each PSD-significant pollutant.

[Rules 62-204.800, 62-210.200(11) and 62-212.400, F.A.C.; 40 CFR 52.21(b)(33)(ii)]

SECTION 4. APPENDICES

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Appendix A. Citation Format

Appendix B. General Conditions

Appendix C. Standard Conditions

SECTION 4. APPENDIX A

CITATION FORMATS

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit
“AO” identifies the permit as an Air Operation Permit
“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located
“2222” represents the specific facility ID number
“001” identifies the specific permit project
“AC” identifies the permit as an air construction permit
“AF” identifies the permit as a minor federally enforceable state operation permit
“AO” identifies the permit as a minor source air operation permit
“AV” identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the Prevention of Significant Deterioration of Air Quality
“FL” means that the permit was issued by the State of Florida
“317” identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

SECTION 4. APPENDIX B
GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - a. Have access to and copy and records that must be kept under the conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of non-compliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida

SECTION 4. APPENDIX B
GENERAL CONDITIONS

Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (not applicable to project);
 - b. Determination of Prevention of Significant Deterioration (not applicable to project); and
 - c. Compliance with New Source Performance Standards (previously applicable to gas turbines).
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - 1) The date, exact place, and time of sampling or measurements;
 - 2) The person responsible for performing the sampling or measurements;
 - 3) The dates analyses were performed;
 - 4) The person responsible for performing the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION 4. APPENDIX C

COMMON CONDITIONS

{Permitting Note: Unless otherwise specified by permit, the following conditions apply to all emissions units and activities at the facility.}

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

SECTION 4. APPENDIX C
COMMON CONDITIONS

11. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]
12. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
13. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.
 - a. *Required Sampling Time*. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.
 - b. *Minimum Sample Volume*. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.
 - c. *Calibration of Sampling Equipment*. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.[Rule 62-297.310(4), F.A.C.]
14. Determination of Process Variables
 - a. *Required Equipment*. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
 - b. *Accuracy of Equipment*. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.[Rule 62-297.310(5), F.A.C.]
15. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C.
16. Test Notification: The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9, F.A.C.]
17. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]
18. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the

SECTION 4. APPENDIX C
COMMON CONDITIONS

test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

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

RECORDS AND REPORTS

19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]
20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Leo Rajter
Vice President
Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

2. Article Number (Copy from service label)

7000 2870 0000 7028 3345

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly)

B. Date of Delivery
11-10-03

C. Signature

X Michael Palmer

☐ Agent☐ Addressee

D. Is delivery address different from item 1?

If YES, enter delivery address below:

☐ Yes☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

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

Postage

\$

Certified Fee

Return Receipt Fee
(Endorsement Required)Restricted Delivery Fee
(Endorsement Required)

Total Postage & Fees

\$

Postmark
Here

Sent To

Leo Rajter

Street, Apt. No.; or PO Box No.

20 W. 9th St.

City, State, ZIP+4

Kansas City, MO 64105

PS Form 3800, May 2000

See Reverse for Instructions

PASCO COGEN, LTD.

NCP DADE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9th Street, Kansas City 64105
Tel (816) 527-1160 • Fax (816) 527-4160

October 20, 2003

Mr. Jeffery F. Koerner, PE
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road, MS # 5505
Tallahassee, FL 32399-2400

RECEIVED

OCT 22 2003

BUREAU OF AIR REGULATION

RE: Pasco Cogen, Ltd., Project No. 1010071-002-AC (PSD-FL-177A),
SPRINT Uprate Project, Response to Comments from the Department

Dear Mr. Koerner:

Pursuant to our telephone conversation of October 1, 2003 and your letter to Leo Rajter dated October 7, 2003, for Pasco Cogen, I am submitting the following information.

1. Documentation explaining why the existing combined cycle unit is not subject to the Acid Rain program and does not have a NOx Continuous emission monitoring system.
2. A copy of the 2002 Annual Operating Report that has calculations attached that are used to calculate the annual emissions. This demonstrates how the data for as past actual emissions was derived.
3. A set of performance curves for each of the two units, identifying the water injection rate and the NOx emission rate versus heat input rate (load).
4. A PSD-applicability analysis considering the impact of installation of the SPRINT Uprating.

1. Acid Rain Program Exemption:

With regard to item no. 1, the Pasco Cogen Ltd. facility, along with it's sister facility Lake Cogen, Ltd., had in place a reasonable intent for construction of these facilities and had in fact by definition, under 40 CFR part 72.2, commenced construction of these facilities prior to the November 15, 1990 initiation date of the Acid Rain Program. This information was provided to the USEPA. Attached as Attachment 1 are copies of correspondence previously provided to the EPA to support this claim. Please note, I have had personal conversations with Ms. Kathy Barylski of EPA's Acid Rain Program, in 1995, where she verbally confirmed the facilities were not subject to the program. We have submitted written requests for Acid Rain Program exemption twice (In 1995 and 1997), but EPA has not provided a written response. With the fact that we have had these earlier contacts with the agency and the fact that the agency has reviewed Pasco Cogen's current Title V permit and did not have issue with the site not being in the Acid Rain program nor having a functional NOx CEMs, it is our belief that Pasco Cogen is not subject to the provisions of the Acid Rain program.

2. Emission Calculations:

With regard to item no. 2, attached as Attachment 2 is the annual operating report for 2002 which includes a set of data use to demonstrate how the annual emissions were calculated for the

facility. The data is provided by CT/DB unit and as a total site quantity. The data also demonstrates how ozone day emissions are calculated. Rather than using annual source test data for the generation of the NOx emission rate and the 5-year CO source test data for the generation of the CO emission rate, the permitted emission rate for each pollutant is used to generate the annual data. The reason for this is that typical source testing data was generally 0.5 ppm or less than allowed by the permit. Use of the permitted emission rate provided a consistent, but slightly conservative means of generating the annual emission calculation.

3. Performance Curves:

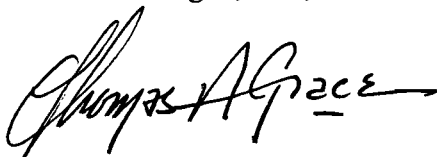
With regard to item no. 3, attached as Attachment 3 is a set of the performance curves that identify water injection rate and NOx emission rate versus heat input rate (and load). Individual curves for each of the two units are provided along with accompanying Water/Fuel Ration matrices. The curves represent those used by the facility to maintain the 25 ppm rate for NOX and the 28 ppm rate for CO emissions.

4. PSD Applicability to the SPRINT Uprate Installation:

Thank-you for the determination that Pasco Cogen qualifies as an electric utility steam generated unit and as such can use the regulatory guidance already set in place under the WEPCO Rule. Based upon information previously submitted to the Department concerning the emission characteristics the project expects to see with the addition of the SPRINT Uprating to the 2 LM-6000 CTs, we believe the modification will have little impact with regard to actual annual emission increases and as such will not trigger the PSD preconstruction review process. It is my understanding, based upon our earlier discussions, that the Department would view the increased emissions proposed in the project's initial application as minor in nature.

If you have any questions or concerns with regard to the attached material, please feel free to contact me at 816 527-1160.

For Pasco Cogen, Ltd.,



Thomas A. Grace, CHMM
Director, Environmental, Health and Safety

W/ Attachments

File 273-2010.3

Cc: L. Rajter, w/o
R. Christmas, w/a
A. Williams, w/o
J. Brook, w/o
G. Kissel, SW D
G. Worthy, EPA
G. Bandy, UPS

L03084pasco.

ATTACHMENT 1

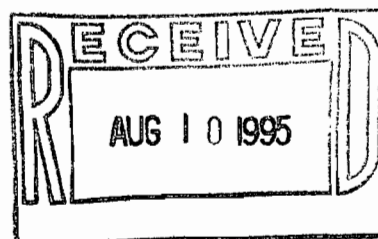
273-7030

LAKE COGEN, LTD.
NCP LAKE POWER, INC., GENERAL PARTNER

c/o Energy Initiatives, Inc.
One Upper Pond Road
Parsippany, NJ 07054
(201)263-6950
Fax (201)-263-6977

August 10, 1995

Ms. Kathy Barylski
USEPA (6204J)
401 'M' Street, SW
Washington, DC 20460



Dear Ms. Barylski:

RE: Lake Cogeneration Facility,
Pre-November, 1990 Letter of Intent
to Proceed with Project

Attached is a clean copy of the letter from Florida Power Corp. to Golden Gem Growers that I faxed you earlier today. I believe this June 25, 1990 letter from Florida Power Corp. to Golden Gem Growers, Inc. is the document we were looking for in that it clearly demonstrates the intent between Peoples Gas Corporation, Florida Power Corporation and Golden Gem Growers, Inc. to develop the Lake Cogeneration Facility, prior to November 15, 1990.

I look forward to a favorable reply from the EPA, with regard to both the Lake Cogeneration facility and the Pasco Cogeneration facility, in establishing the fact that EPA accepts the attached letter and our earlier documentation as clear intent to proceed with both facilities prior to the November 15, 1990 deadline for Title IV of the CAAA of 1990.

If I can be of further assistance please let me know. My telephone number is (201) 263-6913.

Sincerely,

Thomas A. Grace
Manager, Environmental and
Regulatory Compliance

w/attach.
l169tg.lak

cc:
J. McTear
R. Kokstein
K. Tomblin
B. Curatola
K. Trostle





June 25, 1990
Page 2

3. If at the end of the initial three hundred and sixty (360) day period, a mutually satisfactory proposal has not been developed, then either party hereto may without liability and upon written notice to the other terminate this letter agreement.
4. Nothing in this letter agreement shall obligate either party hereto to enter into any further agreements with respect to a cogeneration project except as such party shall, in its sole judgment, deem advisable.
5. FPC and Peoples shall treat as confidential all production, operating, and technical information disclosed to them and identified as such by Golden Gem in connection with the development of said proposal. FPC and Peoples shall not disclose any such information to third parties without Golden Gem's express prior written permission and shall not use such information except for the purpose of developing such proposal.

Sincerely,

Maurice H. Phillips

MHP/emh

June 25, 1990
Page 3

Agreed and Accepted:

GOLDEN GEM GROWERS, INC.

By: J. F. Nelson, Jr.

Title Executive Vice President

Date: 6-28-90

FLORIDA POWER CORPORATION

By: M. H. Phillips

Title: Executive Vice President

Date: 6/27/1990

PEOPLES COGENERATION CO.

By: E. L. Mize

Title: Vice President

Date: 6-27-90



TELECOPIER TRANSMITTAL

Telecopier Number (714) 547-9512

DATE: 10 Aug 95 SENT BY: _____
MESSAGE TO: TOM GRACE
COMPANY: _____
TELECOPIER NUMBER: _____
MESSAGE FROM: KEITH T.
NUMBER OF PAGES INCLUDING COVER: 4
REMARKS: _____

HERE IS THE ONLY THING I CAN
FIND

IT SHOWS PEOPLES CORPORATION CO
PAID \$100,000 ON JUL 31 90 FOR
4 LM 6000 GAS TURBINE GENERATORS
AND THAT TWO OF THOSE PACKAGES
ARE DESIGNATED TO LAKE

I HAVE NOT FOUND ANYTHING THAT SHOWS THE FORMAL TRANSITION
OF THE PROJECT FROM PEOPLES CORP CO TO WHAT IS NOW
LAKE COGEN. (MAYBE ACCOUNTING THERE IN N.J. WOULD HAVE
A RECORD OF THAT.)

IF YOU DO NOT RECEIVE ALL OF THE ABOVE TRANSMISSION, PLEASE CALL:
(714) 547-9413 x 10

PRIVILEGED AND CONFIDENTIAL -- All information transmitted hereby is intended only for the use of the addressee(s) named above. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient(s), please note that any distribution or copying of this communication in error should notify us immediately by telephone and return the original message to us at the address above via the U.S. Mail.



STEWART & STEVENSON SERVICES, INC.

WORLD HEADQUARTERS
P.O. BOX 1637 HOUSTON, TEXAS 77261-1637 (713) 868-7700
TELEX: 794221 / 201448 CPW HOU FAX: (713) 868-7692

June 10, 1991

Mr. Elliott White
Vice President
Peoples Cogeneration Co.
215 Madison Street
Tampa, FL 33602

Subject: Current Status of Peoples
Cogeneration Co. (PCC) Purchase
Order for (4) LM6000 Combustion Turbine Generator Set (CTGS)

Dear Elliott:

Thank you for your June 5, 1991 letter and wire transfer of the \$250,000 payment. As requested, the following will serve as confirmation and as a status report of the PCC purchase order to date:

1.0 PRICE & SHIPMENT SCHEDULE

PCC has made deposit payments to Stewart & Stevenson (S&S) for purchase of quantity (4) LM6000 CTGS. To date, PCC has made three payments totaling \$500,000 or \$125,000/unit. The CTGS's from this date forward will be designated as units #1,2,3 & 4 with the following corresponding price and shipment schedule:

| Unit / LM6000 CTGS | Price F.O.B. Plant Houston, Texas | Project Site Facility | Shipment F.O.B. Target Date Guarantee Date |
|--------------------------|--------------------------------------|-----------------------------------|--|
| 1 | \$10,550,000 | Pasco Cogen, LTD Dade City, FL | Nov. 6, 1992 Dec. 7, 1992 |
| 2 | \$10,550,000 | Pasco Cogen, LTD Dade City, FL | Nov. 13, 1992 Dec. 14, 1992 |
| 3 | \$10,550,000 | Lake Cogen, LTD Umatilla, FL | Nov. 20, 1992 Dec. 21, 1992 |
| 4 | \$10,550,000 | Lake Cogen, LTD Umatilla, FL | Nov. 27, 1992 Dec. 28, 1992 |

Notes:

- 1.1 S&S as agreed will make every effort possible to make the above target dates and possibly improve on these dates.
- 1.2 The LM6000 CTGS scope of supply is as defined in the Bechtel Specification developed with S&S dated 1-31-91 (55 pages).

Letter to Mr. Elliott White
June 10, 1991
Page 2 of 3

- 1.3 The aforementioned price does not include:
- 1.3.1 Inlet Chiller Coils
 - 1.3.2 On-jobsite erection reassembly labor
 - 1.3.3 Freight and insurance to jobsite
 - 1.3.4 Sales, use, or other taxes

2.0 PAYMENT SCHEDULE - (PER UNIT BASIS)

PCC payment schedule for each LM6000 CTGS (as modified on 4-25-91 to accommodate PCC) is as follows:

| Payment | Date or Event | Amount |
|----------------|---|--------------|
| 1 RECEIVED | 07/31/90 - \$100,000 12/18/90 - \$150,000 <u>\$500,000</u> = 06/05/91 - <u>\$250,000</u> 4 Units Total = \$500,000 | \$125,000 |
| 2 | July 31, 1991 | \$103,000 |
| 3 | October 31, 1991 | \$616,000 |
| 4 | Upon receipt of drawings for approval by date January 1, 1992 | \$1,793,500 |
| 5 | Upon completion of baseplate and super structure at factory but not before June 1, 1992 | \$1,055,000 |
| 6 | Upon receipt of gas turbine at factory, but not before July 1, 1992 | \$1,582,500 |
| 7 | Upon receipt of generator at factory but not before August 1, 1992 | \$1,055,000 |
| 8 | Upon placement of the GT set in the test line, but not before October 1, 1992 | \$1,055,000 |
| 9 | Upon Shipment at Plant, Houston, Texas | \$2,110,000 |
| 10 | Upon receipt at job site | \$527,500 |
| 11 | Upon official acceptance, but not later than "x" days after receipt at job site. | \$316,500 |
| 12 | Upon receipt of as-built drawings, manuals, and completion of punch list items, but not before payment #11. | \$211,000 |
| TOTAL AMOUNT - | | \$10,550,000 |

Letter to Mr. Elliott White
June 10, 1991
Page 3 of 3

3.0 CONTRACT DOCUMENTS

The contract documents for this purchase order have not been finalized. However, several documents since July 1991 have been prepared and mutually agreed upon by S&S and PCC to be used as a basis for this order. These documents are listed below:

- 3.1 Stewart & Stevenson Terms and Conditions RO# ADH331 NOV 83.
- 3.2 Bechtel Corp. and S&S Scope Specifications for the LM6000 CTGS dated 1-31-91 (55 pages).
- 3.3 General Terms and Conditions "draft" dated 1-31-91 by FPC (Power Cogen), Peoples Cogen Co., and S&S.
- 3.4 S&S/PCC signed Letter of Intent for Operating and Maintenance (Pasco and Lake Cogen Projects) dated 4-24-91. S&S draft contract submitted to PCC for both projects dated 4-25-91.
- 3.5 Pasco Cogen, LTD and Lake Cogen, LTD - RFP bid documents dated June 1991.

Further, it is PCC's intention to assign the Stewart & Stevenson's LM6000 CTGS order to a Turnkey Constructor. S&S has agreed to work in good faith with PCC's designated Contractor to finalize contract terms acceptable for project financing utilizing the above documents as a basis for negotiations.

S&S will be providing contractors bidding the RFP with a proposal on or about June 12, 1991. We will forward you a copy as soon as it's available.

Elliott - thanks for your continued good cooperation and let us know if you have any further questions.

Sincerely,



Len Shapiro
Manager, Business Development

LS/022/mv

cc: K. Smith - NCP
R. Stewart - S&S
M. Axford - S&S
I. Prochaska - S&S



GPU International, Inc.
 One Upper Pond Road
 Parsippany, NJ 07054
 Tel 201-263-6950
 Fax 201-263-6977

October 8, 1997

Robert Miller
 US EPA Acid Rain Division (6204J)
 401 M Street SW
 Washington, DC 20460

Dear Robert:

Per our phone conversation today, listed below is the information that you requested for Lake Cogen, Ltd. and Pasco Cogen, Ltd..

| | <u>LAKE</u> | <u>PASCO</u> |
|------------------|---------------|---------------|
| Name Plate | GT1 - 42 MW | GT1 - 42 MW |
| Capacity | GT2 - 42 MW | GT2 - 42 MW |
| | ST - 26.5 MW | ST - 26.5 MW |
| ID No.'s | GT1 - 185-101 | GT1 - 185-102 |
| | GT2 - 185-104 | GT2 - 185-103 |
| | ST - 155339 | ST - 155338 |
| Service Date | July 1993 | July 1993 |
| Owner & Operator | GPUI | GPUI |

It is my understanding that a determination is in the process of being finalized which will exclude Lake and Pasco from the Acid Rain Program. If I could get written confirmation of this, it would be greatly appreciated.

If you require any further information or assistance, please give me a call.

Sincerely,

A handwritten signature in cursive script that reads 'Daniel J. Means'.

Daniel J. Means
 Regulatory, Safety & Training Coordinator

(202) 233-9077

cc: John McTear
 Tom Grace
 Bob Kokstein
 Eric Williams

ATTACHMENT 2

PASCO COGEN, LTD.

NCP DADE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9th Street, Kansas City, MO 64105
Tel (816) 527-1160 • Fax (816) 527-4160

February 24, 2003

Florida Department of Environmental Protection
Southwest District Office
Air Resources Division
3084 Coconut Palm Drive
Tampa, FL 33619-8218

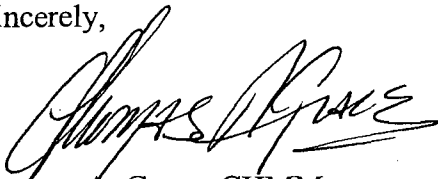
RE: Pasco Cogen, Ltd. Facility; ID No. 1010071
Annual Operating Report for 2002

To whom this concerns:

Attached for your information and review is the 2002 Annual Operating Report for the Pasco Cogen, Ltd. Facility, located in Dade City, Pasco County, Florida.

Should you have any questions concerning the attached report, please feel free to contact me. My telephone number is (816) 527-1160.

Sincerely,

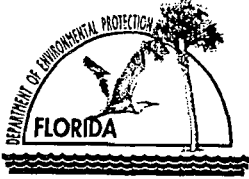


Thomas A. Grace, CHMM
Director – Environmental, Health and Safety

W/ Attachment

Cc: L. Rajter, w/o
R. Christmas, w/a
C. Holden, w/o
J. Brook, w/o
A. Williams, w/o

File: 274 -2010.4



Department of Environmental Protection

Division of Air Resources Management

ANNUAL OPERATING REPORT FOR AIR POLLUTANT EMITTING FACILITY

See Instructions for Form No. 62-210.900(5).

I. FACILITY REPORT

A. REPORT INFORMATION

| | | | |
|-------------------|-------------|--|----------|
| 1. Year of Report | 2002 | 2. Number of Emissions Units in Report | 4 |
|-------------------|-------------|--|----------|

B. FACILITY INFORMATION

| | | |
|--|---|---|
| 1. Facility ID 1010071 | 2. Facility Status ACTIVE | 3. Date of Permanent Facility Shutdown |
| 4. Facility Owner/Company Name PASCO COGEN LIMITED(PARENT CO: AQUILA) | | |
| 5. Site Name PASCO COGEN LIMITED | | |
| 6. Facility Location Street Address or Other Locator: 14850 OLD STATE ROAD 23 City: DADE CITY County: PASCO Zip Code: 33523-2845 | | |
| 7. Facility Compliance Tracking Code A | 8. Governmental Facility Code 0 | 9. Facility SIC(s) 4931 |
| 10. Facility Comment | | |

C. FACILITY HISTORY INFORMATION

| | | |
|--|---------------|-------------------|
| 1. Change in Facility Owner/ Company Name During Year? | Previous Name | 2. Date of Change |
|--|---------------|-------------------|

Facility ID : 1010071

Emissions Unit ID : 001

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

| | | |
|---|---|--|
| 1. Emissions Unit Description COMBUSTION TURBINE (CT) WITH HRSG AND DBS | | |
| 2. Emissions Unit ID 001 | 3. Emissions Unit Classification Regulated Emissions Unit | 4. Operated During Year? Yes |
| 5. DEP Permit or PPS Number 1010071001AV | 6. Emissions Unit Status ACTIVE | 7. Ozone SIP Base Year Emissions Unit? N |
| 8. Emissions Unit Startup Date 1995 | 9. Long-term Reserve Shutdown Date NA | 10. Permanent Shutdown Date NA |

B. EMISSION POINT/CONTROL INFORMATION

| |
|--|
| 1. Emissions Point Type SINGLE POINT SERVING A SINGLE EMISSIONS UNIT |
| 2a. Description of Control Equipment 'a' STEAM OR WATER INJECTION |
| 2b. Description of Control Equipment 'b' |

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

| | |
|---|--|
| 1. Average Annual Operation 18.4 hours/day 7 days/week | 2. Total Operation During Year (hours/year) 6708.39 |
| 3. Percent Hours of Operation by Season DJF : 26.0 MAM : 26.2 JJA : 24.4 SON : 23.4 | |
| 4. Average Ozone Season Operation (June 1 to August 31) 17.8 hours/day 7 days/week | 5. Total Operation During Ozone Season (days/season) 92 |

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 1-02-004-05

E. EMISSIONS INFORMATION BY PROCESS/FUEL

Duct Burner

(1) PROCESS/FUEL INFORMATION

| | | |
|--|---|--|
| 1. SCC 1-02-004-05 | 2. Description of Process or Type of Fuel External Combustion Boilers Residual Oil Industrial Cogeneration N/A nat gas only | |
| 3. Annual Process or Fuel Usage Rate NA | 4. Ozone Season Daily Process or Fuel Usage Rate NA | 5. SCC Unit 1000 Gallons Residual Oil Burn |
| 6. Fuel Average % Sulfur NA | 7. Fuel Average % Ash NA | 8. Fuel Heat Content (mmBtu/SCC Unit) NA |

(2) EMISSIONS INFORMATION

| | | | |
|---|--|--------------------------|--|
| 1. Pollutant * CO Carbon Monoxide | | CAS No. 630-08-0 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|--|--------------------------|--|
| 1. Pollutant H021 Beryllium Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

Unit cannot fire fuel oil. Page not applicable to site.

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 1-02-004-05

| | | | |
|---|---|--------------------------|---|
| 1. Pollutant PM10 Particulate Matter - PM10 | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|--------------------------|---|
| 1. Pollutant * SAM Sulfuric Acid Mist | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|--------------------------|---|
| 1. Pollutant * SO2 Sulfur Dioxide | | CAS No. 7446-09-5 | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|--------------------------|---|
| 1. Pollutant * VOC Volatile Organic Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

Unit cannot fire on fuel oil. Page not applicable to site.

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 1-02-006-04

| | | | |
|---|---|--------------------------|---|
| 1. Pollutant H114 Mercury Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|--------------------------------------|--|
| 1. Pollutant * NOX Nitrogen Oxides | | CAS No. 10102-44-0 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0.3 | 3. Ozone Season Daily Emissions (lb/day) 2.03 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |
| See attached | | | |

| | | | |
|---|---|--------------------------|---|
| 1. Pollutant PB Lead - Total (elemental lead and lead compounds) | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|--------------------------------------|--|
| 1. Pollutant * PM Particulate Matter - Total | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) ~ 0 | 3. Ozone Season Daily Emissions (lb/day) 0.12 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |
| See attached | | | |

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 2-02-001-03

E. EMISSIONS INFORMATION BY PROCESS/FUEL

CT Unit 1

(1) PROCESS/FUEL INFORMATION

| | | |
|---|--|---|
| 1. SCC 2-02-001-03 | 2. Description of Process or Type of Fuel Internal Combustion Engines Distillate Oil (Diesel) Industrial Turbine: Cogeneration | |
| 3. Annual Process or Fuel Usage Rate 1.375 | 4. Ozone Season Daily Process or Fuel Usage Rate 0 | 5. SCC Unit 1000 Gallons Distillate Oil (Dies |
| 6. Fuel Average % Sulfur 0.1% | 7. Fuel Average % Ash 0 | 8. Fuel Heat Content (mmBtu/SCC Unit) 140.37 |

(2) EMISSIONS INFORMATION

| | | |
|---|---|--|
| 1. Pollutant * CO Carbon Monoxide | CAS No. 630-08-0 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | |

| | | |
|---|---|--|
| 1. Pollutant H021 Beryllium Compounds | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) see attached | | |

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 2-02-001-03

| | | | |
|---|--|-----------------------------------|--|
| 1. Pollutant PM10 Particulate Matter - PM10 | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See PM section (PM & PM ₁₀ together) (See attached) | | | |

| | | | |
|---|--|-----------------------------------|--|
| 1. Pollutant * SAM Sulfuric Acid Mist | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|---|--|-----------------------------------|--|
| 1. Pollutant * SO2 Sulfur Dioxide | | CAS No. 7446-09-5 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|---|--|-----------------------------------|--|
| 1. Pollutant * VOC Volatile Organic Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 2-02-002-03

| | | | |
|---|---|------------------------------------|---|
| 1. Pollutant H114 Mercury Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code NA | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|-----------------------------------|--|
| 1. Pollutant * NOX Nitrogen Oxides | | CAS No. 10102-44-0 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 124.2 | 3. Ozone Season Daily Emissions (lb/day) 659.49 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|---|---|------------------------------------|---|
| 1. Pollutant PB Lead - Total (elemental lead and lead compounds) | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code NA | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|--|-----------------------------------|--|
| 1. Pollutant * PM Particulate Matter - Total | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 8.0 | 3. Ozone Season Daily Emissions (lb/day) 42.44 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

Facility ID : 1010071

Emissions Unit ID : 002

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

| | | |
|---|---|--|
| 1. Emissions Unit Description COMBUSTION TURBINE (CT) WITH HRSG AND DBS | | |
| 2. Emissions Unit ID 002 | 3. Emissions Unit Classification Regulated Emissions Unit | 4. Operated During Year? Yes |
| 5. DEP Permit or PPS Number 1010071001AV | 6. Emissions Unit Status ACTIVE | 7. Ozone SIP Base Year Emissions Unit? N |
| 8. Emissions Unit Startup Date 1995 | 9. Long-term Reserve Shutdown Date NA | 10. Permanent Shutdown Date NA |

B. EMISSION POINT/CONTROL INFORMATION

| |
|--|
| 1. Emissions Point Type SINGLE POINT SERVING A SINGLE EMISSIONS UNIT |
| 2a. Description of Control Equipment 'a' STEAM OR WATER INJECTION |
| 2b. Description of Control Equipment 'b' |

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

| | |
|---|--|
| 1. Average Annual Operation 18.1 hours/day 7 days/week | 2. Total Operation During Year (hours/year) 6601.91 |
| 3. Percent Hours of Operation by Season DJF : 26.9 MAM : 24.8 JJA : 24.7 SON : 23.6 | |
| 4. Average Ozone Season Operation (June 1 to August 31) 17.7 hours/day 7 days/week | 5. Total Operation During Ozone Season (days/season) 92 |

*: Pollutant subject to emissions limiting standard or emissions cap

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 1-02-004-05

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

DB

| | | |
|--|---|--|
| 1. SCC 1-02-004-05 | 2. Description of Process or Type of Fuel External Combustion Boilers Residual Oil Industrial Cogeneration nat gas only | |
| 3. Annual Process or Fuel Usage Rate NA | 4. Ozone Season Daily Process or Fuel Usage Rate NA | 5. SCC Unit 1000 Gallons Residual Oil Burn |
| 6. Fuel Average % Sulfur NA | 7. Fuel Average % Ash NA | 8. Fuel Heat Content (mmBtu/SCC Unit) NA |

(2) EMISSIONS INFORMATION

| | | | |
|---|--|--------------------------|--|
| 1. Pollutant * CO Carbon Monoxide | | CAS No. 630-08-0 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|--|--------------------------|--|
| 1. Pollutant H021 Beryllium Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

Unit does not fire on oil. Page not applicable to site.

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 1-02-004-05

| | | | |
|---|---|--------------------------|---|
| 1. Pollutant PM10 Particulate Matter - PM10 | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|--------------------------|--|
| 1. Pollutant * SAM Sulfuric Acid Mist | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|--------------------------|--|
| 1. Pollutant * SO2 Sulfur Dioxide | | CAS No. 7446-09-5 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|--------------------------|--|
| 1. Pollutant * VOC Volatile Organic Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

Unit does not fire on oil. Page not applicable to site.

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 1-02-006-04

| | | | |
|---|---|--------------------------------|--|
| 1. Pollutant H114 Mercury Compounds | | CAS No. | [] Below Threshold [X] Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code NA | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|-------------------------------|--|
| 1. Pollutant * NOX Nitrogen Oxides | | CAS No. 10102-44-0 | [] Below Threshold [] Not Emitted |
| 2. Annual Emissions (ton/year) 0.3 | 3. Ozone Season Daily Emissions (lb/day) 1.93 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|---|---|--------------------------------|--|
| 1. Pollutant PB Lead - Total (elemental lead and lead compounds) | | CAS No. | [] Below Threshold [X] Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code NA | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|-------------------------------|--|
| 1. Pollutant * PM Particulate Matter - Total | | CAS No. | [] Below Threshold [] Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0.12 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 2-02-001-03

E. EMISSIONS INFORMATION BY PROCESS/FUEL

CT

(1) PROCESS/FUEL INFORMATION

| | | |
|---|--|---|
| 1. SCC 2-02-001-03 | 2. Description of Process or Type of Fuel Internal Combustion Engines Distillate Oil (Diesel) Industrial Turbine: Cogeneration | |
| 3. Annual Process or Fuel Usage Rate 0 | 4. Ozone Season Daily Process or Fuel Usage Rate 0 | 5. SCC Unit 1000 Gallons Distillate Oil (Dies |
| 6. Fuel Average % Sulfur < 0.1% | 7. Fuel Average % Ash 0 | 8. Fuel Heat Content (mmBtu/SCC Unit) 140.37 |

(2) EMISSIONS INFORMATION

| | | | |
|---|--|-----------------------------------|--|
| 1. Pollutant * CO Carbon Monoxide | | CAS No. 630-08-0 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|---|--|-----------------------------------|--|
| 1. Pollutant H021 Beryllium Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

*: Pollutant subject to emissions limiting standard or emissions cap

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 2-02-001-03

| | | | |
|--|---|--|--|
| 1. Pollutant PM10 Particulate Matter - PM10 | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) Assume same as PM total | | | |

| | | | |
|---|--|--|--|
| 1. Pollutant * SAM Sulfuric Acid Mist | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|---|--|--|--|
| 1. Pollutant * SO2 Sulfur Dioxide | | CAS No. 7446-09-5 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|---|--|--|--|
| 1. Pollutant * VOC Volatile Organic Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0 | 3. Ozone Season Daily Emissions (lb/day) 0 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 2-02-002-03

| | | | |
|---|---|--------------------------------|---|
| 1. Pollutant H114 Mercury Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code NA | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|---|-------------------------------|--|
| 1. Pollutant * NOX Nitrogen Oxides | | CAS No. 10102-44-0 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 124.9 | 3. Ozone Season Daily Emissions (lb/day) 670.18 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|---|---|--------------------------------|---|
| 1. Pollutant PB Lead - Total (elemental lead and lead compounds) | | CAS No. | <input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) NA | 3. Ozone Season Daily Emissions (lb/day) NA | 4. Emissions Method Code NA | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | | |

| | | | |
|---|--|-------------------------------|--|
| 1. Pollutant * PM Particulate Matter - Total | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 8 | 3. Ozone Season Daily Emissions (lb/day) 43.13 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

Facility ID : 1010071

Emissions Unit ID : 003

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

| | | |
|---|---|--|
| 1. Emissions Unit Description Fuel Oil Storage tank | | |
| 2. Emissions Unit ID 003 | 3. Emissions Unit Classification Unregulated Emissions Unit | 4. Operated During Year? Yes |
| 5. DEP Permit or PPS Number 1010071001AV | 6. Emissions Unit Status ACTIVE | 7. Ozone SIP Base Year Emissions Unit? N |
| 8. Emissions Unit Startup Date 1995 | 9. Long-term Reserve Shutdown Date NA | 10. Permanent Shutdown Date NA |

B. EMISSION POINT/CONTROL INFORMATION

| |
|--|
| 1. Emissions Point Type NO TRUE EMISSION POINT (FUGITIVE EMISSION) |
| 2a. Description of Control Equipment 'a' |
| 2b. Description of Control Equipment 'b' |

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

| | |
|--|--|
| 1. Average Annual Operation 24 hours/day 7 days/week | 2. Total Operation During Year (hours/year) 8760 |
| 3. Percent Hours of Operation by Season DJF : 25 MAM : 25 JJA : 25 SON : 25 | |
| 4. Average Ozone Season Operation (June 1 to August 31) 24 hours/day 7 days/week | 5. Total Operation During Ozone Season (days/season) 92 |

Facility ID : 1010071

Emissions Unit ID : 003

SCC : 4-03-010-99

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

| | | |
|--|---|---|
| 1. SCC 4-03-010-99 | 2. Description of Process or Type of Fuel Petroleum and Solvent Evaporati Fixed Roof Tanks (Varying Sizes) Petroleum Product Storage at Re Specify Liquid: Working Loss (Ta | |
| 3. Annual Process or Fuel Usage Rate 14.13 | 4. Ozone Season Daily Process or Fuel Usage Rate 0.15 | 5. SCC Unit 1000 Gallons Liquid Throughpu |
| 6. Fuel Average % Sulfur < 0.1% | 7. Fuel Average % Ash 0 | 8. Fuel Heat Content (mmBtu/SCC Unit) 140.37 |

(2) EMISSIONS INFORMATION

| | | |
|---|---|---|
| 1. Pollutant VOC Volatile Organic Compounds | CAS No. | <input checked="" type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) | | |

*: Pollutant subject to emissions limiting standard or emissions cap

DEP Form No. 62-210.900(5) - Form

33

Effective: 2/11/99

Facility ID : 1010071

Emissions Unit ID : 004

) D. EMISSIONS UNIT COMMENT

*) Pollutant subject to emissions limiting standard or emissions cap

DEP Form No. 62-210.900(5) - Form

35

Effective: 2/11/99

Facility ID : 1010071

Emissions Unit ID : 004

SCC : 2-01-001-02

| | | | |
|---|--|-------------------------------|--|
| 1. Pollutant PM Particulate Matter - Total | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0.28 | 3. Ozone Season Daily Emissions (lb/day) 1.4 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|--|---|--------------------------|--|
| 1. Pollutant PM10 Particulate Matter - PM10 | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) | 3. Ozone Season Daily Emissions (lb/day) | 4. Emissions Method Code | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) Assume same as PM total | | | |

| | | | |
|---|--|-------------------------------|--|
| 1. Pollutant SO2 Sulfur Dioxide | | CAS No. 7446-09-5 | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0.26 | 3. Ozone Season Daily Emissions (lb/day) 1.3 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

| | | | |
|---|--|-------------------------------|--|
| 1. Pollutant VOC Volatile Organic Compounds | | CAS No. | <input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted |
| 2. Annual Emissions (ton/year) 0.31 | 3. Ozone Season Daily Emissions (lb/day) 1.6 | 4. Emissions Method Code 5 | |
| 5. Emissions Calculation (Show separately both annual and daily emissions calculations) See attached | | | |

Calculation of Actual Emissions for 2002, PASCO Cogen Ltd. - Uni

1/20/2003

| Pollutant | Source | Fuel | Per Unit | | Emission Rate (lb/MMBtu)^a | 2002 Natural Gas Usage (KSCF) | 2002 Fuel Oil Usage (gal) | Total Heat Input (MMBtu/yr)^b | Actual (lb/yr) | Emissions (TPY) |
|-----------------------------|--------|-------------|-----------------------------|------------|-------------------------------|----------------------------------|------------------------------|----------------------------------|-------------------|--------------------|
| | | | Permitted Maximum Allowable | Rate Units | | | | | | |
| NOx | CT | Natural Gas | 42.75 lb/hr | | 0.101 | 2,365,432 | NA | 2,460,049.3 | 248,465.0 | 124.2 |
| | CT | Fuel Oil | 74.15 lb/hr | | 0.175 | NA | 1,375.0 | 193.0 | 33.8 | 0.0 |
| | DB | Natural Gas | 0.1 lb/MMBtu | | 0.100 | 5,161 | NA | 5,367.4 | 536.7 | 0.3 |
| TOTAL NOx | | | | | | | | | | 124.5 |
| CO | CT | Natural Gas | 28 lb/hr | | 0.066 | 2,365,432 | NA | 2,460,049.3 | 162,363.3 | 81.2 |
| | CT | Fuel Oil | 17.25 lb/hr | | 0.041 | NA | 1,375.0 | 193.0 | 7.9 | 0.0 |
| | DB | Natural Gas | 0.2 lb/MMBtu | | 0.200 | 5,161 | NA | 5,367.4 | 1,073.5 | 0.5 |
| TOTAL CO | | | | | | | | | | 81.7 |
| PM | CT | Natural Gas | 0.0065 lb/MMBtu | | 0.0065 | 2,365,432 | NA | 2,460,049.3 | 15,990.3 | 8.0 |
| | CT | Fuel Oil | 0.026 lb/MMBtu | | 0.026 | NA | 1,375.0 | 193.0 | 5.0 | 0.0 |
| | DB | Natural Gas | 0.006 lb/MMBtu | | 0.006 | 5,161 | NA | 5,367.4 | 32.2 | 0.0 |
| TOTAL PM/PM10 | | | | | | | | | | 8.0 |
| SO2 | CT | Natural Gas | NA | | 0.003 c | 2,365,432 | NA | 2,460,049.3 | 7,380.1 | 3.7 |
| | CT | Fuel Oil | 43.8 lb/hr | | 0.10 | NA | 1,375.0 | 193.0 | 19.3 | 0.0 |
| | DB | Natural Gas | NA | | 0.003 c | 5,161 | NA | 5,367.4 | 16.1 | 0.0 |
| TOTAL SO2 | | | | | | | | | | 3.7 |
| VOC | CT | Natural Gas | 1.7 lb/hr | | 0.004 | 2,365,432 | NA | 2,460,049.3 | 9,840.2 | 4.9 |
| | CT | Fuel Oil | 4.35 lb/hr | | 0.010 | NA | 1,375.0 | 193.0 | 1.9 | 0.0 |
| | DB | Natural Gas | 2.7 lb/hr | | 0.030 | 5,161 | NA | 5,367.4 | 161.0 | 0.1 |
| TOTAL VOC | | | | | | | | | | 5.0 |
| Hg | CT | Fuel Oil | 0.0003 TPY | | 1.39E-05 | NA | 1,375.0 | 193.0 | 0.0 | 0.0 |
| Pb | CT | Fuel Oil | 0.0008 TPY | | 3.70E-05 | NA | 1,375.0 | 193.0 | 0.0 | 0.0 |
| Be | CT | Fuel Oil | 0.0002 TPY | | 9.26E-06 | NA | 1,375.0 | 193.0 | 0.0 | 0.0 |
| H2SO4 Mist | CT | Fuel Oil | 0.80 TPY | | 0.04 | NA | 1,375.0 | 193.0 | 7.1 | 0.0 |
| Total Comb. By-Prod. | | | | | | | | | | 0.0 |

Note: CT = combustion turbine
DB = duct burner
NG = natural gas
DFO = distillate fuel oil

^a Based on maximum heat input rates of 423, 424 and 90 MMBtu/hr for the CT (gas), CT (oil) and DB (gas).

^b Based on a HHV BTU rate of 1040 Btu scf for natural gas and 140,368 Btu 1 gal fuel oil

^c Based on factor of 1 grain of SO2 per 100 cubic feet of natural gas.

Calculation of Actual Emissions for 2002, PASCO Cogen Ltd. - Unit #2

| Pollutant | Source | Fuel | Per | Unit | Emission Rate (lb/MMBtu)^a | 2002 | 2002 | Total | Actual (lb/yr) | Emissions (TPY) |
|-----------------------------|--------|-------------|--------------------------------|-------------------------------|----------------------------------|--------------------------------|----------------------------|-------------------------------|-------------------|--------------------|
| | | | Permitted Allowable Rate | Maximum Emissions Units | | Natural Gas Usage (KSCF) | Fuel Oil Usage (gal) | Heat Input (MMBtu/yr)^b | | |
| NOx | CT | Natural Gas | 42.75 lb/hr | | 0.101 | 2,377,740 | NA | 2,472,849.6 | 249,757.8 | 124.9 |
| | CT | Fuel Oil | 74.15 lb/hr | | 0.000 | NA | 0 | 126.3 | 22.0 | 0.0 |
| | DB | Natural Gas | 0.1 lb/MMBtu | | 0.100 | 4,824 | NA | 5,017.0 | 501.7 | 0.3 |
| TOTAL NOx | | | | | | | | | 125.1 | |
| CO | CT | Natural Gas | 28 lb/hr | | 0.066 | 2,377,740 | NA | 2,472,849.6 | 163,208.1 | 81.6 |
| | CT | Fuel Oil | 17.25 lb/hr | | 0.041 | NA | 0 | 0.0 | 0.0 | 0.0 |
| | DB | Natural Gas | 0.2 lb/MMBtu | | 0.200 | 4,824 | NA | 5,017.0 | 1,003.4 | 0.5 |
| TOTAL CO | | | | | | | | | 82.1 | |
| PM | CT | Natural Gas | 0.0065 lb/MMBtu | | 0.0065 | 2,377,740 | NA | 2,472,849.6 | 16,073.5 | 8.0 |
| | CT | Fuel Oil | 0.026 lb/MMBtu | | 0.026 | NA | 0 | 0.0 | 0.0 | 0.0 |
| | DB | Natural Gas | 0.006 lb/MMBtu | | 0.006 | 4,824 | NA | 5,017.0 | 30.1 | 0.0 |
| TOTAL PM/PM10 | | | | | | | | | 8.1 | |
| SO2 | CT | Natural Gas | NA | | 0.003 c | 2,377,740 | NA | 2,472,849.6 | 7,418.5 | 3.7 |
| | CT | Fuel Oil | 43.8 lb/hr | | 0.10 | NA | 0 | 0.0 | 0.0 | 0.0 |
| | DB | Natural Gas | NA | | 0.003 c | 4,824 | NA | 5,017.0 | 15.1 | 0.0 |
| TOTAL SO2 | | | | | | | | | 3.7 | |
| VOC | CT | Natural Gas | 1.7 lb/hr | | 0.004 | 2,377,740 | NA | 2,472,849.6 | 9,891.4 | 4.9 |
| | CT | Fuel Oil | 4.35 lb/hr | | 0.010 | NA | 0 | 0.0 | 0.0 | 0.0 |
| | DB | Natural Gas | 2.7 lb/hr | | 0.030 | 4,824 | NA | 5,017.0 | 150.5 | 0.1 |
| TOTAL VOC | | | | | | | | | 5.0 | |
| Hg | CT | Fuel Oil | 0.0003 TPY | | 1.39E-05 | NA | 0 | 0.0 | 0.0 | 0.0 |
| Pb | CT | Fuel Oil | 0.0008 TPY | | 3.70E-05 | NA | 0 | 0.0 | 0.0 | 0.0 |
| Be | CT | Fuel Oil | 0.0002 TPY | | 9.26E-06 | NA | 0 | 0.0 | 0.0 | 0.0 |
| H2SO4 Mist | CT | Fuel Oil | 0.8 TPY | | 0.04 | NA | 0 | 0.0 | 0.0 | 0.0 |
| Total Comb. By-Prod. | | | | | | | | | 0.0 | |

Note: CT = combustion turbine
 DB = duct burner
 NG = natural gas
 DFO = distillate fuel oil

^a Based on maximum heat input rates of 423, 424 and 90 MMBtu/hr for the CT (gas), CT (oil) and DB (gas).

^b Based on a HHV BTU rate of 1040 Btu scf for natural gas and 140,368 Btu 1 gal fuel oil.

^c Based on factor of 1 grain of SO2 per 100 cubic feet of natural gas.

| | YEAR 2002 | |
|------------------|-----------------------------|--------------|
| | Actual Emissions | |
| Pollutant | (lb/yr) | (TPY) |
| NOx | 498,222.8 | 249.1 |
| | 55.8 | 0.0 |
| | 1,038.4 | 0.5 |
| | TOTAL NOx | 249.7 |
| CO | 325,571.3 | 162.8 |
| | 7.9 | 0.0 |
| | 2,076.9 | 1.0 |
| | TOTAL CO | 163.8 |
| PM | 32,063.8 | 16.0 |
| | 5.0 | 0.0 |
| | 62.3 | 0.0 |
| | TOTAL PM/PM10 | 16.1 |
| SO2 | 14,798.7 | 7.4 |
| | 19.3 | 0.0 |
| | 31.2 | 0.0 |
| | TOTAL SO2 | 7.4 |
| VOC | 19,731.6 | 9.9 |
| | 1.9 | 0.0 |
| | 311.5 | 0.2 |
| | TOTAL VOC | 10.0 |
| Hg | 0.0 | 0.0 |
| Pb | 0.0 | 0.0 |
| Be | 0.0 | 0.0 |
| H2SO4 Mist | 4.7 | 0.0 |
| | Total Comb. By-Prod. | |

Pasco Cogen 2002 Annual Emission ReportPasco Cogen Annual Emission
Report
2002

Unit 1 Data

| MONTH | GT 1 HOURS | GT 1 GAS (MCF) | GT 1 WATER INJECTION (GAL) | GT 1 F.O. (GAL) | # 1 DUCT BURNER (MCF) | # 1 DUCT BURNER HOURS |
|-----------|---------------|-------------------|----------------------------------|-----------------------|-----------------------------|-----------------------------|
| January | 604.28 | 208447.01 | 1206145.00 | 0.00 | 555.19 | 25.15 |
| February | 566.55 | 196883.72 | 1198823.00 | 0.00 | 30.31 | 1.70 |
| March | 632.73 | 218072.33 | 1168137.00 | 0.00 | 440.84 | 23.39 |
| April | 546.27 | 198059.14 | 1057822.00 | 0.00 | 208.25 | 14.88 |
| May | 580.64 | 207753.46 | 1135635.00 | 0.00 | 1.03 | 0.08 |
| June | 544.19 | 196184.11 | 1130068.00 | 0.00 | 360.38 | 25.87 |
| July | 577.99 | 202626.70 | 1151520.00 | 0.00 | 1297.90 | 73.81 |
| August | 515.95 | 190393.24 | 1101283.00 | 0.00 | 176.85 | 4.35 |
| September | 497.76 | 180565.79 | 1001122.00 | 0.00 | 1507.65 | 93.75 |
| October | 607.03 | 209496.97 | 1152565.00 | 1375.00 | 577.00 | 35.40 |
| November | 460.28 | 159245.72 | 864309.00 | 0.00 | 0.00 | 0.00 |
| December | 574.74 | 197703.57 | 1036734.00 | 0.00 | 5.92 | 0.25 |
| Total | 6708.39 | 2,365,431.76 | 13,204,163.00 | 1375.00 | 5161.32 | 298.63 |

Ozone Season 1638.13
24.4%

104.03
34.8%

Pasco Cogen Annual Emission Report 2002

Unit 2 Data

| MONTH | GT 2 HOURS | GT 2 GAS (MCF) | GT 2 WATER INJECTION (GAL) | GT 2 F.O. (GAL) | # 2 DUCT BURNER (MCF) | # 2 DUCT BURNER HOURS |
|-----------|---------------|-------------------|----------------------------------|--------------------|-----------------------------|-----------------------------|
| January | 626.21 | 217625.14 | 1317643.00 | 0.00 | 297.78 | 17.92 |
| February | 547.25 | 192845.00 | 1207327.00 | 0.00 | 28.76 | 1.77 |
| March | 611.35 | 215656.89 | 1290833.00 | 0.00 | 452.13 | 23.29 |
| April | 518.26 | 195148.74 | 1179895.00 | 0.00 | 29.79 | 2.20 |
| May | 505.52 | 190634.45 | 1147316.00 | 0.00 | 0.66 | 0.08 |
| June | 524.82 | 192760.34 | 1155084.00 | 0.00 | 320.01 | 24.68 |
| July | 517.76 | 192619.83 | 1162298.00 | 0.00 | 1242.78 | 68.70 |
| August | 587.22 | 203384.32 | 1228221.00 | 0.00 | 174.18 | 4.18 |
| September | 497.41 | 176508.00 | 1082449.00 | 0.00 | 1693.82 | 101.17 |
| October | 488.35 | 181823.76 | 1115231.00 | 0.00 | 580.86 | 32.74 |
| November | 572.34 | 203155.51 | 1201038.00 | 0.00 | 0.00 | 0.00 |
| December | 605.42 | 215577.54 | 1266678.00 | 0.00 | 3.36 | 0.00 |
| | | | | | | |
| Total | 6601.91 | 2,377,739.52 | 14,354,013.00 | 0.00 | 4824.13 | 276.74 |

Ozone Season 1629.8

~~0.24~~
24.7%

97.56

35.6%

Pasco Cogen Annual Emission Report
2002

Emergency Diesel Generator and Diesel Fire Pump Data

| MONTH | #1 EDG HOURS | # 2 EDG HOURS | DIESEL FIRE PUMP HOURS | EDG/DIESEL FIRE PUMP FUEL OIL USAGE (GAL) |
|--------------|-------------------------|--------------------------|-----------------------------------|--|
| January | 3.20 | 4.10 | .5 | 547.50 |
| February | 4.10 | 5.10 | .4 | 690.00 |
| March | 1.90 | 3.20 | 1.0 | 382.50 |
| April | 6.20 | 11.00 | 4.5 | 1150.90 |
| May | 13.90 | 8.90 | .7 | 1710.00 |
| June | 7.00 | 4.90 | 1.3 | 1530.00 |
| July | 4.20 | 4.30 | .8 | 637.50 |
| August | 4.90 | 3.90 | 1.2 | 552.50 |
| September | 12.90 | 7.90 | 1.7 | 1700.00 |
| October | 8.80 | 3.20 | .6 | 835.00 |
| November | 14.60 | 13.50 | .4 | 2107.50 |
| December | 8.60 | 4.50 | 1.4 | 911.77 |
| | | | | |
| Total | 90.30 | 74.50 | 14.5 | 12,755.18 |

Unit #1 **CO Calculations - Ozone Season**

| | |
|---------------------------------------|------------------|
| <i>GT hours during Ozone Season</i> | 1,638.13 hrs. |
| <i>GT hours for the year</i> | 6,708.39 hrs |
| <i>Percent of hrs in Ozone Season</i> | 24.42% |
| <i>GT emission in lb/yr</i> | 162,363.25 lb/yr |

GT emissions

| | |
|------------------------------------|----------------------|
| <i>162363.3 lb/hr X 24.42%</i> | 39,647.68 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 430.95 lb/day |

| | |
|---------------------------------------|----------------|
| <i>DB hours during Ozone Season</i> | 104.03 hrs. |
| <i>DB hours for the year</i> | 298.63 hrs. |
| <i>Percent of hrs in Ozone Season</i> | 34.84% |
| <i>DB emission in lb/yr</i> | 1,073.49 lb/yr |

DB emissions

| | |
|------------------------------------|--------------------|
| <i>1073.49 lb/yr X 34.84%</i> | 373.96 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 4.06 lb/day |

| | |
|--|-----------------------------|
| Total Ozone Season Daily Emission | <u>435.02 lb/day</u> |
|--|-----------------------------|

Unit #1 **NOx Calculations - Ozone Season**

| | |
|--------------------------------|------------------|
| GT hours during Ozone Season | 1,638.13 hrs. |
| GT hours for the year | 6,708.39 hrs |
| Percent of hrs in Ozone Season | 24.42% |
| GT emission in lb/yr | 248,464.98 lb/yr |

GT emissions

| | |
|-----------------------------|---------------|
| 248464.98 lb/hr X 24.42% | 60,672.97 lbs |
| Days in Ozone Season | 92 days |
| Ozone Season Daily emission | 659.49 lb/day |

| | |
|--------------------------------|--------------|
| DB hours during Ozone Season | 104.03 hrs. |
| DB hours for the year | 298.63 hrs. |
| Percent of hrs in Ozone Season | 34.84% |
| DB emission in lb/yr | 536.74 lb/yr |

DB emissions

| | |
|-----------------------------|-------------|
| 536.74 lb/yr X 34.84% | 186.98 lbs |
| Days in Ozone Season | 92 days |
| Ozone Season Daily emission | 2.03 lb/day |

| | |
|-----------------------------------|-----------------------------|
| Total Ozone Season Daily Emission | <u><u>661.52 lb/day</u></u> |
|-----------------------------------|-----------------------------|

Unit #1 **Particulate Matter (PM) Calculations - Ozone Season**

| | |
|---------------------------------------|-----------------|
| <i>GT hours during Ozone Season</i> | 1,638.13 hrs. |
| <i>GT hours for the year</i> | 6,708.39 hrs |
| <i>Percent of hrs in Ozone Season</i> | 24.42% |
| <i>GT emission in lb/yr</i> | 15,990.32 lb/yr |

GT emissions

| | |
|------------------------------------|---------------------|
| <i>15990.32 x 24.42</i> | 3,904.84 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 42.44 lb/day |

| | |
|---------------------------------------|-------------|
| <i>DB hours during Ozone Season</i> | 104.03 hrs. |
| <i>DB hours for the year</i> | 298.63 hrs. |
| <i>Percent of hrs in Ozone Season</i> | 34.84% |
| <i>DB emission in lb/yr</i> | 32.20 lb/yr |

DB emissions

| | |
|------------------------------------|--------------------|
| <i>32.2 lb/yr X 34.84%</i> | 11.22 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 0.12 lb/day |

| | |
|--|----------------------------|
| Total Ozone Season Daily Emission | <u>42.57 lb/day</u> |
|--|----------------------------|

Unit #1

SO2 Calculations - Ozone Season

| | |
|---------------------------------------|----------------|
| <i>GT hours during Ozone Season</i> | 1,638.13 hrs. |
| <i>GT hours for the year</i> | 6,708.39 hrs |
| <i>Percent of hrs in Ozone Season</i> | 24.42% |
| <i>GT emission in lb/yr</i> | 7,380.15 lb/yr |

GT emissions

| | |
|------------------------------------|---------------------|
| <i>7380.15 lb/hr X 24.42%</i> | 1,802.17 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 19.59 lb/day |

| | |
|---------------------------------------|-------------|
| <i>DB hours during Ozone Season</i> | 104.03 hrs. |
| <i>DB hours for the year</i> | 298.63 hrs. |
| <i>Percent of hrs in Ozone Season</i> | 34.84% |
| <i>DB emission in lb/yr</i> | 16.10 lb/yr |

DB emissions

| | |
|------------------------------------|--------------------|
| <i>16.1 lb/yr X 34.84%</i> | 5.61 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 0.06 lb/day |

| | |
|--|----------------------------|
| Total Ozone Season Daily Emission | <u>19.65 lb/day</u> |
|--|----------------------------|

Unit #1 **VOC Calculations - Ozone Season**

| | |
|---------------------------------------|----------------|
| <i>GT hours during Ozone Season</i> | 1,638.13 hrs. |
| <i>GT hours for the year</i> | 6,708.39 hrs |
| <i>Percent of hrs in Ozone Season</i> | 24.42% |
| <i>GT emission in lb/yr</i> | 9,840.20 lb/yr |

GT emissions

| | |
|------------------------------------|---------------------|
| <i>9840.2 lb/hr X 24.42%</i> | 2,402.89 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 26.12 lb/day |

| | |
|---------------------------------------|--------------|
| <i>DB hours during Ozone Season</i> | 104.03 hrs. |
| <i>DB hours for the year</i> | 298.63 hrs. |
| <i>Percent of hrs in Ozone Season</i> | 34.84% |
| <i>DB emission in lb/yr</i> | 161.02 lb/yr |

DB emissions

| | |
|------------------------------------|--------------------|
| <i>161.02 lb/yr X 34.84%</i> | 56.09 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 0.61 lb/day |

| | |
|--|----------------------------|
| Total Ozone Season Daily Emission | <u>26.73 lb/day</u> |
|--|----------------------------|

Unit #1 **Sulfuric Acid Mist Calculations - Ozone Season**

| | |
|--------------------------------|--------------|
| GT hours during Ozone Season | 0.00 hrs. |
| GT hours for the year | 6,708.39 hrs |
| Percent of hrs in Ozone Season | 0.00% |
| GT emission in lb/yr | 7.14 lb/yr |

GT emissions

| | |
|-----------------------------|-------------|
| 5.3 lb/hr X 23.6% | 0.00 lbs |
| Days in Ozone Season | 92 days |
| Ozone Season Daily emission | 0.00 lb/day |

| | |
|--------------------------------|-------------|
| DB hours during Ozone Season | 104.03 hrs. |
| DB hours for the year | 298.63 hrs. |
| Percent of hrs in Ozone Season | 34.84% |
| DB emission in lb/yr | 0.00 lb/yr |

DB emissions

| | |
|-----------------------------|-------------|
| 0lb/yr X 34.84% | 0.00 lbs |
| Days in Ozone Season | 92 days |
| Ozone Season Daily emission | 0.00 lb/day |

| | |
|-----------------------------------|--------------------|
| Total Ozone Season Daily Emission | <u>0.00 lb/day</u> |
|-----------------------------------|--------------------|

Unit #2 **CO Calculations - Ozone Season**

| | |
|---------------------------------------|------------------|
| <i>GT hours during Ozone Season</i> | 1,629.80 hrs. |
| <i>GT hours for the year</i> | 6,601.91 hrs |
| <i>Percent of hrs in Ozone Season</i> | 24.69% |
| <i>GT emission in lb/yr</i> | 162,208.10 lb/yr |

GT emissions

| | |
|------------------------------------|----------------------|
| <i>162208.1 lb/hr X 24.69%</i> | 40,043.98 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 435.26 lb/day |

| | |
|---------------------------------------|----------------|
| <i>DB hours during Ozone Season</i> | 97.60 hrs. |
| <i>DB hours for the year</i> | 276.40 hrs. |
| <i>Percent of hrs in Ozone Season</i> | 35.31% |
| <i>DB emission in lb/yr</i> | 1,003.50 lb/yr |

DB emissions

| | |
|------------------------------------|--------------------|
| <i>1003.5 lb/yr X 35.8%</i> | 359.25 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 3.90 lb/day |

| | |
|--|------------------------------------|
| Total Ozone Season Daily Emission | <u><u>439.17 lb/day</u></u> |
|--|------------------------------------|

Unit #2 **NOx Calculations - Ozone Season**

| | |
|--------------------------------|------------------|
| GT hours during Ozone Season | 1,629.80 hrs. |
| GT hours for the year | 6,601.91 hrs |
| Percent of hrs in Ozone Season | 24.69% |
| GT emission in lb/yr | 249,757.00 lb/yr |

GT emissions

| | |
|-----------------------------|---------------|
| 249757.0 lb/hr X 24.69% | 61,657.00 lbs |
| Days in Ozone Season | 92 days |
| Ozone Season Daily emission | 670.18 lb/day |

| | |
|--------------------------------|--------------|
| DB hours during Ozone Season | 97.60 hrs. |
| DB hours for the year | 276.40 hrs. |
| Percent of hrs in Ozone Season | 35.31% |
| DB emission in lb/yr | 501.70 lb/yr |

DB emissions

| | |
|-----------------------------|-------------|
| 501.7 lb/yr X 35.31% | 177.15 lbs |
| Days in Ozone Season | 92 days |
| Ozone Season Daily emission | 1.93 lb/day |

| | |
|-----------------------------------|-----------------------------|
| Total Ozone Season Daily Emission | <u><u>672.11 lb/day</u></u> |
|-----------------------------------|-----------------------------|

Unit #2 **Particulate Matter (PM) Calculations - Ozone Season**

| | |
|---------------------------------------|-----------------|
| <i>GT hours during Ozone Season</i> | 1,629.90 hrs. |
| <i>GT hours for the year</i> | 6,601.91 hrs |
| <i>Percent of hrs in Ozone Season</i> | 24.69% |
| <i>GT emission in lb/yr</i> | 16,073.52 lb/yr |

GT emissions

| | |
|------------------------------------|---------------------|
| <i>16073.52 lb/hr X 24.69%</i> | 3,968.28 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 43.13 lb/day |

| | |
|---------------------------------------|-------------|
| <i>DB hours during Ozone Season</i> | 97.60 hrs. |
| <i>DB hours for the year</i> | 276.40 hrs. |
| <i>Percent of hrs in Ozone Season</i> | 35.31% |
| <i>DB emission in lb/yr</i> | 30.10 lb/yr |

DB emissions

| | |
|------------------------------------|--------------------|
| <i>30.1 lb/yr X 35.31%</i> | 10.63 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 0.12 lb/day |

| | |
|--|----------------------------|
| Total Ozone Season Daily Emission | <u>43.25 lb/day</u> |
|--|----------------------------|

Unit #2

SO2 Calculations - Ozone Season

| | |
|---------------------------------------|----------------|
| <i>GT hours during Ozone Season</i> | 1,629.80 hrs. |
| <i>GT hours for the year</i> | 6,601.91 hrs |
| <i>Percent of hrs in Ozone Season</i> | 24.69% |
| <i>GT emission in lb/yr</i> | 7,418.55 lb/yr |

GT emissions

| | |
|------------------------------------|---------------------|
| <i>7418.55 lb/hr X 24.69%</i> | 1,831.40 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 19.91 lb/day |

| | |
|---------------------------------------|-------------|
| <i>DB hours during Ozone Season</i> | 97.60 hrs. |
| <i>DB hours for the year</i> | 276.40 hrs. |
| <i>Percent of hrs in Ozone Season</i> | 35.31% |
| <i>DB emission in lb/yr</i> | 15.05 lb/yr |

DB emissions

| | |
|------------------------------------|--------------------|
| <i>15.05 lb/yr X 35.31%</i> | 5.31 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 0.06 lb/day |

| | |
|--|----------------------------|
| Total Ozone Season Daily Emission | <u>19.96 lb/day</u> |
|--|----------------------------|

Unit #2 **VOC Calculations - Ozone Season**

| | |
|---------------------------------------|-----------------------|
| <i>GT hours during Ozone Season</i> | <i>1,629.80 hrs.</i> |
| <i>GT hours for the year</i> | <i>6,601.91 hrs</i> |
| <i>Percent of hrs in Ozone Season</i> | <i>24.69%</i> |
| <i>GT emission in lb/yr</i> | <i>9,891.40 lb/yr</i> |

GT emissions

| | |
|------------------------------------|---------------------|
| <i>9891.4 lb/hr X 24.69%</i> | <i>2,441.87 lbs</i> |
| <i>Days in Ozone Season</i> | <i>92 days</i> |
| Ozone Season Daily emission | 26.54 lb/day |

| | |
|---------------------------------------|---------------------|
| <i>DB hours during Ozone Season</i> | <i>97.60 hrs.</i> |
| <i>DB hours for the year</i> | <i>276.40 hrs.</i> |
| <i>Percent of hrs in Ozone Season</i> | <i>35.31%</i> |
| <i>DB emission in lb/yr</i> | <i>150.51 lb/yr</i> |

DB emissions

| | |
|------------------------------------|--------------------|
| <i>150.51 lb/yr X 35.31%</i> | <i>53.15 lbs</i> |
| <i>Days in Ozone Season</i> | <i>92 days</i> |
| Ozone Season Daily emission | 0.58 lb/day |

| | |
|--|----------------------------|
| Total Ozone Season Daily Emission | <u>27.12 lb/day</u> |
|--|----------------------------|

Unit #2 **Sulfuric Acid Mist Calculations - Ozone Season**

| | |
|---------------------------------------|---------------|
| <i>GT hours during Ozone Season</i> | 1,629.80 hrs. |
| <i>GT hours for the year</i> | 6,601.91 hrs |
| <i>Percent of hrs in Ozone Season</i> | 24.69% |
| <i>GT emission in lb/yr</i> | 0.00 lb/yr |

GT emissions

| | |
|------------------------------------|--------------------|
| <i>0 lb/hr X 25.0%</i> | 0.00 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 0.00 lb/day |

| | |
|---------------------------------------|-------------|
| <i>DB hours during Ozone Season</i> | 97.60 hrs. |
| <i>DB hours for the year</i> | 276.40 hrs. |
| <i>Percent of hrs in Ozone Season</i> | 35.31% |
| <i>DB emission in lb/yr</i> | 0.00 lb/yr |

DB emissions

| | |
|------------------------------------|--------------------|
| <i>0lb/yr X 24.77%</i> | 0.00 lbs |
| <i>Days in Ozone Season</i> | 92 days |
| Ozone Season Daily emission | 0.00 lb/day |

| | |
|--|---------------------------|
| Total Ozone Season Daily Emission | <u>0.00 lb/day</u> |
|--|---------------------------|

Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES^a

| Pollutant | Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01) | | Diesel Fuel (SCC 2-02-001-02, 2-03-001-01) | | EMISSION FACTOR RATING |
|------------------------------|---|---|---|---|------------------------------|
| | Emission Factor (lb/hp-hr) (power output) | Emission Factor (lb/MMBtu) (fuel input) | Emission Factor (lb/hp-hr) (power output) | Emission Factor (lb/MMBtu) (fuel input) | |
| NO _x | 0.011 | 1.63 | 0.031 | 4.41 | D |
| CO | 0.439 | 62.7 | 6.68 E-03 | 0.95 | D |
| SO _x | 5.91 E-04 | 0.084 | 2.05 E-03 | 0.29 | D |
| PM-10 ^b | 7.21 E-04 | 0.10 | 2.20 E-03 | 0.31 | D |
| CO ₂ ^c | 1.08 | 154 | 1.15 | 164 | B |
| Aldehydes | 4.85 E-04 | 0.07 | 4.63 E-04 | 0.07 | D |
| TOC | | | | | |
| Exhaust | 0.015 | 2.10 | 2.47 E-03 | 0.35 | D |
| Evaporative | 6.61 E-04 | 0.09 | 0.00 | 0.00 | E |
| Crankcase | 4.85 E-03 | 0.69 | 4.41 E-05 | 0.01 | E |
| Refueling | 1.08 E-03 | 0.15 | 0.00 | 0.00 | E |

^a References 2,5-6,9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

^b PM-10 = particulate matter less than or equal to 10 µm aerodynamic diameter. All particulate is assumed to be ≤ 1 µm in size.

^c Assumes 99% conversion of carbon in fuel to CO₂ with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and gasoline heating value of 20,300 Btu/lb.

For 004:

$$\begin{array}{l|l}
 12,755 \text{ gal. No 2 Fuel Oil} \times 140.36 \text{ MMBtu/1000 gal} = 1790 \text{ MMBtu} & \text{lb/day O}_3 \text{ season} \\
 \hline
 \text{NO}_x = 4.41 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 3.95 \text{ tons/yr} & 18.3 \\
 \text{CO} = 0.91 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 0.81 \text{ tons/yr} & 3.8 \\
 \text{PM}_{10} = 0.31 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 0.28 \text{ tons/yr} & 1.4 \\
 \text{SO}_2 = 0.29 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 0.26 \text{ tons/yr} & 1.3 \\
 \text{VOC} = 0.35 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 0.31 \text{ tons/yr.} & 1.6
 \end{array}$$

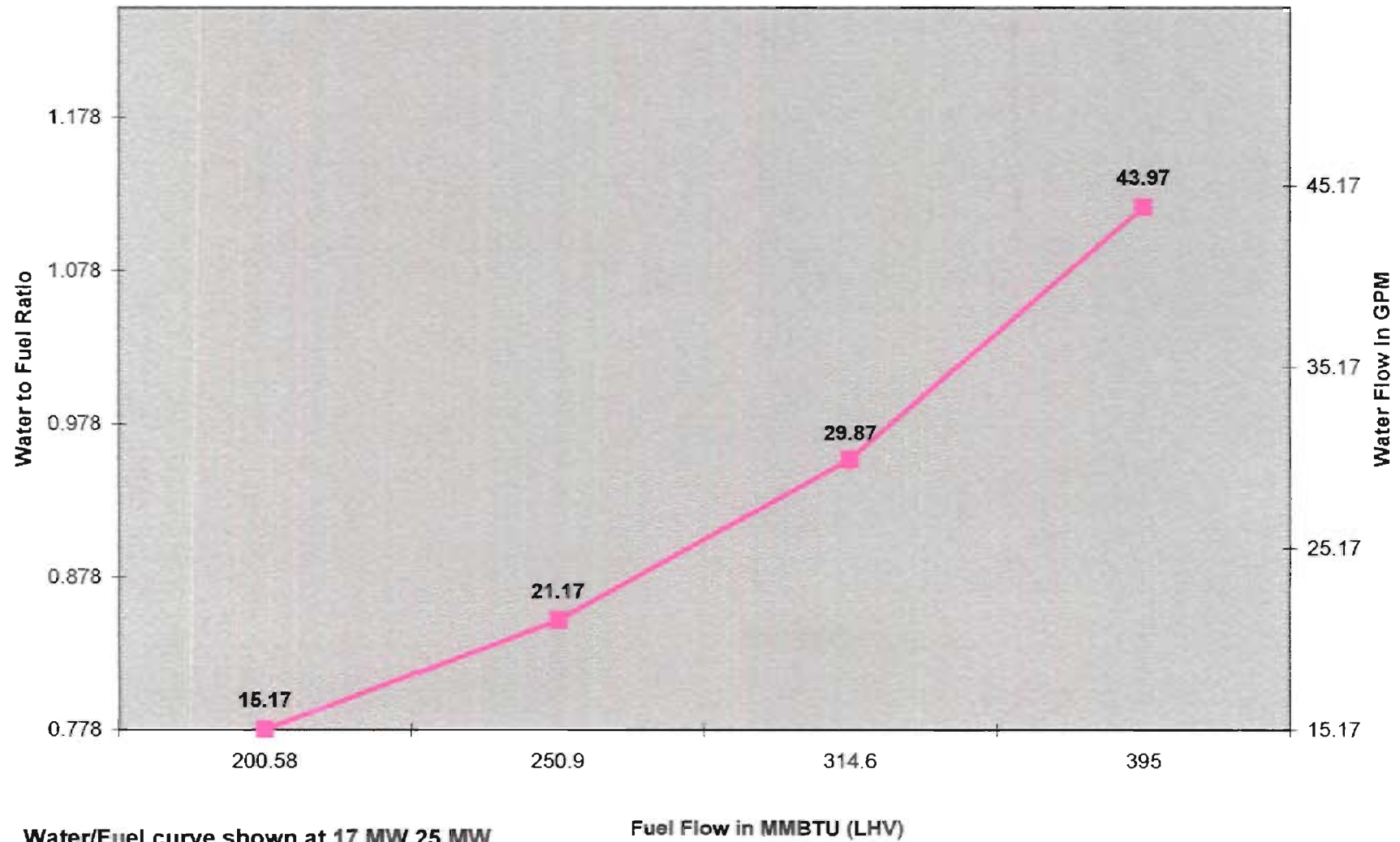
ATTACHMENT 3

**GT 1 Curves From Title V testing at low loads
and latest source test 08/03**

| MW | W/F Ratio | Fuel in MMBTU | GPM |
|-----------|------------------|----------------------|------------|
| 17.3 | 0.778 | 200.58 | 15.17 |
| 25 | 0.85 | 250.9 | 21.17 |
| 33 | 0.955 | 314.6 | 29.87 |
| Base | 1.12 | 395 | 43.97 |

Curve shown with NOx corrected
to 25 PPM @ 15% O2 and 28 PPM

ESN 185-102 Water to Fuel Curve

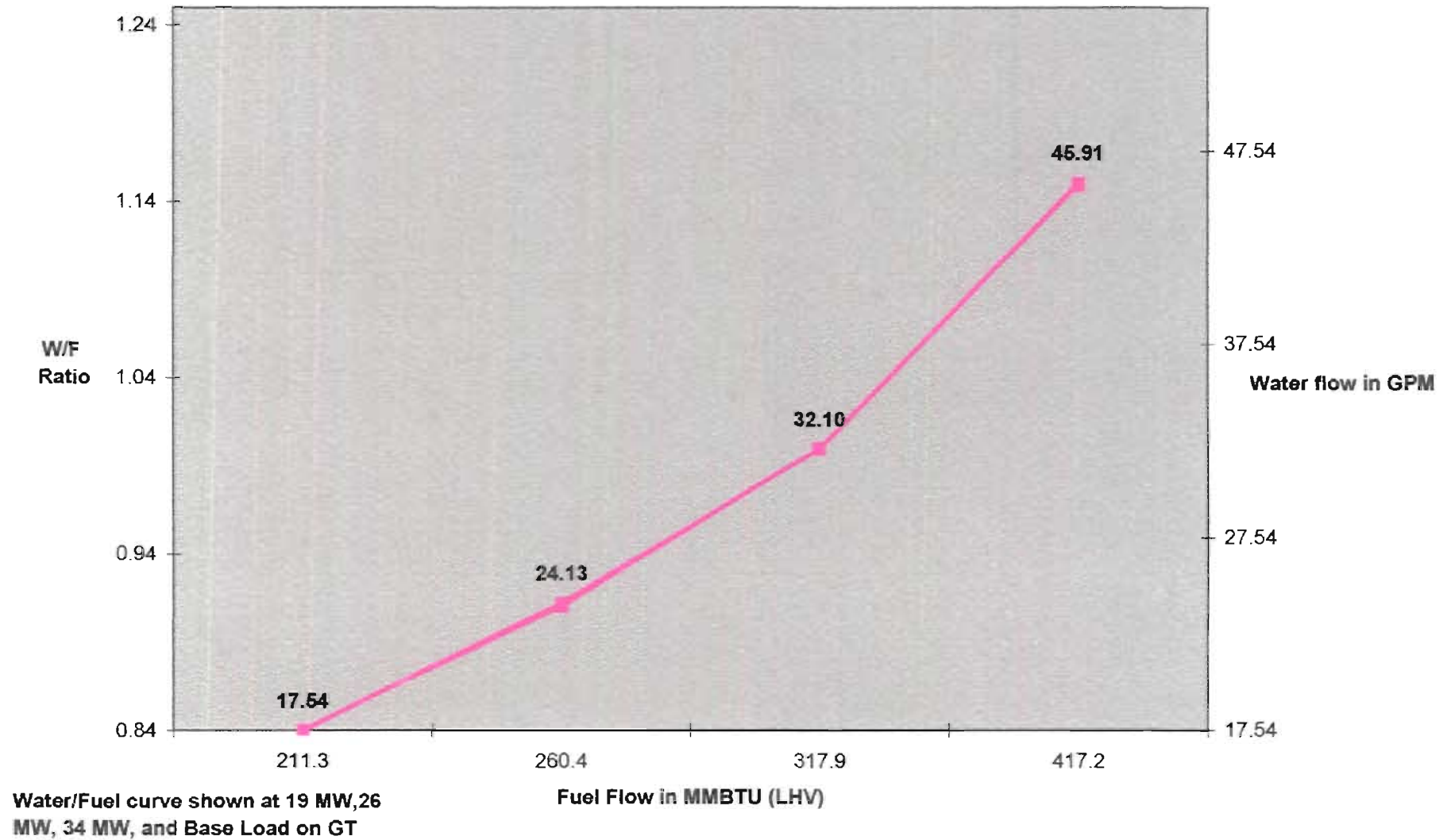


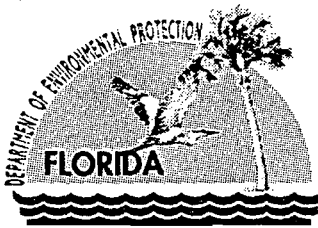
Water/Fuel curve shown at 17 MW, 25 MW,
33 MW, and Base Load on GT

| GT 2 Curves From Title V testing at low loads and latest source test 07/03 | | | |
|--|-----------|---------------|-------|
| MW | W/F Ratio | Fuel in MMBTU | GPM |
| 19 | 0.84 | 211.3 | 17.54 |
| 26 | 0.91 | 260.4 | 24.13 |
| 34 | 1.00 | 317.9 | 32.10 |
| Base | 1.149 | 417.2 | 45.91 |

Curve shown with NOx corrected
to 25 PPM @ 15% O2 and 28 PPM

ESN 185-103 Water to Fuel Curve





Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

October 7, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Leo Rajter, Vice President
Pasco Cogen, Limited c/o Aquila
20 West 9th Street
Kansas City, MO 64105

Re: **Request for Additional Information No. 2**
Project No. 1010071-002-AC (PSD-FL-177A)
SPRINT Upgrade Project

Dear Mr. Rajter:

On June 10, 2003, the Department received your application and sufficient fee for an air construction permit to upgrade the two existing LM6000 gas turbines with the "SPRINT" spray inter-cooling system. The units are installed at the existing plant in Dade City located at 14850 Old State Road 23 in Pasco County, Florida. On June 20, 2003 letter, the Department requested additional information. On September 17, 2003, the Department received a response to the additional information request. On September 30, 2003, the Department discussed additional details of the current operation and expected operation after the proposed SPRINT project is complete with your consultant and plant engineer. The application remains incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Provide documentation explaining why the existing combined cycle unit is not subject to the Acid Rain program and does not have a NO_x continuous emission monitoring system.
2. Provide a description or example of the methodology used to calculate past actual emissions identified in Attachment PC-B1-AC.
3. Provide a performance curve identifying the water injection rate and NO_x emission rate versus heat input rate (or load).
4. The Department believes that the 2-on-1 combined cycle unit meets the following definition of an *electric utility steam generating unit*.

"Any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the unit." [Rule 62-212.200(97), F.A.C.]

For units qualified as an *electric utility steam generating unit*, actual emissions are defined as follows.

"For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following a physical or operational change shall equal the representative actual annual emissions of the unit following the physical or operational change, provided the owner or operator maintains and submits to the Department on an annual basis, for a period of 5 years representative of normal post-change operations of the unit, within the period not longer than 10 years following the change, information demonstrating that the physical or operational change did not result in an emissions increase. The definition of "representative actual annual emissions" found in 40 CFR 52.21(b)(33) is adopted and incorporated by reference in Rule 62-204.800, F.A.C." [Rule 62-212.200(11)(d), F.A.C.]

40 CFR 52.21(b)(33) defines *representative actual annual emissions* as:

"More Protection, Less Process"

Printed on recycled paper.

"Representative actual annual emissions means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

- (i) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and
- (ii) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole."

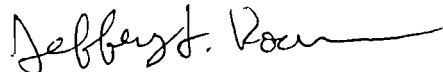
Note that PSD preconstruction review could apply later if the annual reports determine that the SPRINT project resulted in PSD-significant emissions increases (excluding emissions from any demand growth that could have been accommodated). Considering the 2-on-1 combined cycle unit to be an *electric utility steam generating unit*, Pasco Cogeneration may project *representative actual annual emissions* as indicated above. If Pasco Cogeneration believes that the SPRINT project will have little impact with regard to actual annual emissions increases, the project may not trigger PSD preconstruction review. If this is the case, it may be possible to authorize the addition of SPRINT in a minor source air construction permit and identify the appropriate testing and reporting requirements.

Please provide a PSD-applicability analysis based on the discussion of "representative actual annual emissions" or recommend a restriction on the hours of operation that will ensure the SPRINT project does not trigger PSD Preconstruction review.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,



Jeffery F. Koerner
New Source Review Section

cc: Mr. John L. McKelvey, Case Engineering, Inc.
Mr. Tom Grace, Pasco Cogen, Ltd. c/o Aquila
Mr. Richard Christmas, Pasco Cogen, Ltd.
Mr. Gerry Kissel, SWD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Leo Rajter
Vice President
Pasco Cogen, Ltd.
c/o Aquila
20 W. 9th Street
Kansas City, MO 64105

2. 7001 0320 0001 3692 6037

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

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10-14-03

C. Signature

X *Michael Belin*☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

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3. Service Type

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Leo Rajter

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or P.O. Box No. 20 W. 9th St.

City, State, ZIP+4

Kansas City, MO 64105

PS Form 3800, January 2001

See Reverse for Instructions

7001 0320 0001 3692 6037

PASCO COGEN, LTD.

NCP DADE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9th Street • Kansas City, MO 64105
Tel (816) 527-1160 • Fax (816) 527-4160

September 15, 2003

Mr. Jeffery F. Koerner, PE
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road, MS 5505
Tallahassee, FL 32399-2400

RECEIVED

SEP 17 2003

BUREAU OF AIR REGULATION

(850) 921-9536

RE: Pasco Cogeneration LP; Facility ID No. 1010071; Pasco County, Florida;
Air Construction Permit Application to Modify Two GE LM-6000
Combustion Turbine Units, Response to the FLDEP's letter of June 20, 2003

Dear Mr. Koerner:

The purpose for this letter is to respond to the questions you raised in your letter of June 20, 2003, concerning Pasco's request to uprate the two existing CTs currently operating at the Pasco Cogen facility

Our response consists of direct answers to the five questions you posed, as well as to provide you with supporting data. The project has had one significant reconsideration since the original modification application was submitted. This has been to modify the option for a total replacement of one of the existing CTs with a "comparable" unit from GE's existing stock. This option has been replaced with one that would have both existing CTs remain at Pasco and have both units uprated, rather than have one replaced. In this way PSD control can be more easily managed by Pasco Cogen.

At the Department's convenience, Pasco Cogen is prepared to meet with you and discuss this proposal further and go over the permit application. We believe that in performing this work we not only enhance the ability of Pasco Cogen to perform better, we will also be able to produce electricity with reduced emissions per MMBtu fired at the facility.

I will look forward to hearing back from you soon. My telephone number is (816) 527-1160 and my e-mail is thomas.grace@aquila.com

For Pasco Cogen,
Sincerely,



Thomas A. Grace, CHMM
Director – Environmental Health and Safety

W/ attachments

Cc: R. Christmas, w/a
L. Rajter, w/a
B. Miles, w/o
J. Kisel, SWP

File: 274-2010.3

Responses to questions from the FLDEP's letter of June 20, 2003

1. Which of the gas turbines will be replaced with an "equivalent reconditioned unit" upgraded with SPRINT technology? Identify the make/model of the replacement unit and provide maximum emission rates from the vendor.

Response: The period to exercise this option is gone. Hot section maintenance will be completed this fall which makes using an "equivalent reconditioned unit" uneconomical. The project has decided that if this uprating is to be accomplished in the most expedient and practical manner possible it would recondition both existing engines into the upgraded SPRINT technology, rather than bring in a "an equivalent reconditioned unit". In this manner the delta increase in emissions remains the same as was originally proposed in the Table shown originally as attachment PC-B1-AC.

2. Please provide vendor performance curves for the modified LM6000 gas turbine comparing maximum heat input rate (MMBtu/hour) and generating capacity (MW) to the turbine inlet temperature (° F).

Response: Representative curves from the vendor (GE), providing the data requested, are attached. See Attachment I to this letter.

3. Please provide a PSD netting analysis similar to the information provided in Attachment PC-B1-AC. Note that the replacement should be treated as the permanent shutdown of the old unit and the addition of a new unit. The shutdown unit will result in permanent emission decreases and the new unit will result in emission increases. Based upon your initial request to avoid PSD review, the netting analysis must show that net emissions increases do not exceed the PSD significant emissions rates. Please note that the net emissions increases for the project are the difference between past actual annual emissions before the modification and future potential annual emissions after modification. It is not the difference between the potential emissions before and after the project as suggested in Attachment PC-B1-AC.

Response: A revision of the Table provided originally as Attachment PC-B1-AC is attached to better explain this point. See Attachment II to this letter.

4. Please describe the general method for calculating the past emissions in Attachment PC-B1-AC. Past actual emissions should be based upon emission factors that reflect actual emission rates and the average actual production rate for the representative two-year period. An emissions summary report from the Department's ARMs database is attached for your review. It is based upon the Annual Operating Reports that Pasco Cogen, Limited filed with the Department as required by permit. The CO and NO_x emissions data for 2000 – 2002 are generally the same as reported on Attachment PC-B1-AC. However the CO and

NOx emissions data for 1998 – 1999 in this report are slightly lower than reported in Attachment PC-B1-AC. Please explain the discrepancies.

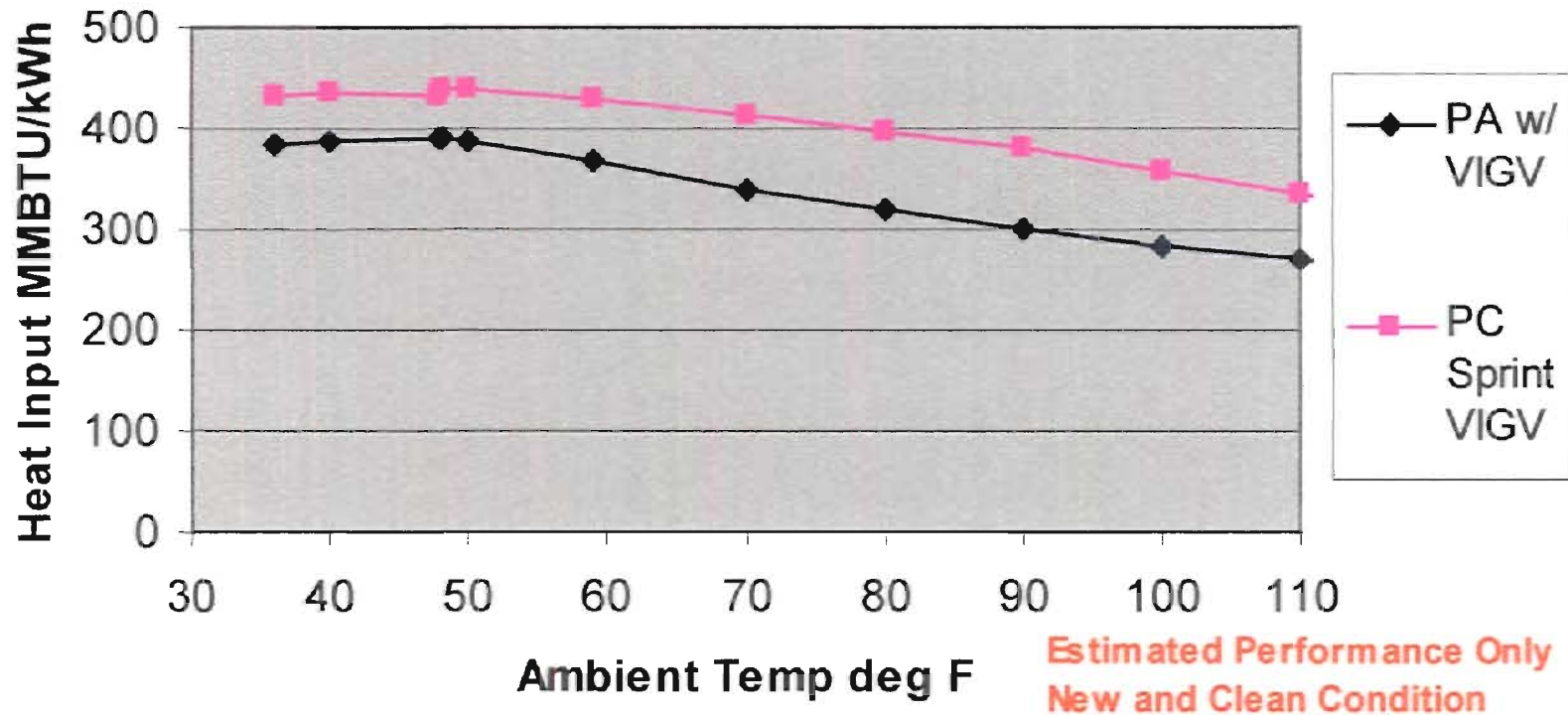
Response: For the years 1998 and 1999, the NOx, SOx, CO, PM and VOC emissions data provided in the AOR submittals for the Duct burners associated with each of the two Combustion Turbines was not carried over into the ARMs data base. The table provided in Attachment III to this letter compares the ARMs information against data submitted in the 5 AOR's and explains where the differences occurred as well as the quantity of the difference. If the Department deems it necessary we can provide copies of the reports previously submitted.

5. Based on estimated past actual emissions, test data, and requested emissions caps, the Department will likely require monitoring systems to continuously monitor and record CO and NOx emissions. The data will be used to demonstrate compliance with the permits standards and requested caps. The Department believes that the level of monitoring is necessary to ensure that the project does not trigger PSD review. This equipment is routinely required for new combined cycle gas turbine projects with much lower emission profiles than that of Pasco Cogen Limited. Previous NOx stack tests indicate that the gas turbines operate near the permit standard, but previous CO stack tests indicate that actual CO emissions may be about half of the permit standard. It may be possible to request a lower CO standard combined with a limitation on hours of operation to avoid a CO monitor. However, such a restriction may not provide the desired level of flexibility for this plant. Please comment.

Response: If the Department, as a result of this modification, determines it necessary the Pasco facility can prepare to install continuous monitoring for NOx and CO emissions on each stack. If this were to be the case, the facility would request that a compliance schedule be developed between the project and the FLDEP. The compliance schedule would allow the project sufficient time to install the CT uprate and have them tested to ensure each will meet and maintain the level of emissions described in the construction application. If the uprates meets the proposed emission limits then a decision between the Department and Pasco must be made as to whether or not a continuous monitoring system is necessary. If the uprate fails to meet its proposed emission limits, then time as determined with the compliance schedule, must be provided for to allow Pasco to either remove the upgrade and restore the units to their pre-uprate condition or to have a sufficient period of time to negotiate and install a sufficient emission monitoring and emission control systems. At present, the project does not want to choose the option of a lower CO limit.

Heat Input vs. Ambient Temp

60 % RH, 0 fast, 4"/6" Inlet/Exhaust Losses, Water Injection to 25ppm Nox, Standard Natural Gas



ATTACHMENT PC-B1-AC¹

FIVE YEAR SITE EMISSIONS DATA AND PROPOSED EMISSIONS CAP

| <u>Pollutant</u> | <u>1998</u> | | | <u>1999</u> | | | <u>2000</u> | | | <u>2001</u> | | | <u>2002</u> | | |
|------------------|--------------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|
| | U1 | U2 | Total | U1 | U2 | Total | U1 | U2 | Total | U1 | U2 | Total | U1 | U2 | Total |
| <u>NOx</u> | 173.1 ² | 173.5 | 346.5 | 160.2 | 159.1 | 310.3 | 147.0 | 147.0 | 294.0 | 126.0 | 127.2 | 253.2 | 124.2 | 125.2 | 249.4 |
| <u>CO</u> | 125.5 | 127.9 | 253.4 | 114.4 | 107.4 | 221.8 | 97.1 | 97.8 | 194.8 | 83.8 | 84.9 | 168.6 | 81.7 | 82.1 | 163.8 |
| <u>PM/PM10</u> | 11.1 | 11.2 | 22.3 | 10.3 | 9.6 | 19.9 | 9.5 | 9.5 | 18.9 | 8.1 | 8.2 | 16.3 | 8.0 | 8.0 | 16.0 |
| <u>SO2</u> | 5.3 | 5.4 | 10.8 | 4.8 | 4.5 | 9.2 | 4.4 | 4.4 | 8.7 | 3.7 | 3.8 | 7.5 | 3.7 | 3.7 | 7.4 |
| <u>VOC</u> | 9.3 | 9.7 | 19.0 | 8.2 | 7.8 | 16.0 | 6.0 | 6.2 | 12.2 | 5.2 | 5.4 | 10.8 | 5.0 | 5.0 | 10.0 |

| <u>Pollutant³</u> | Past Actual 1998/1999 <u>Mean Ave.</u> | PSD Significant <u>Emission Rate</u> | Proposed <u>Emissions Cap</u> |
|------------------------------|--|---|----------------------------------|
| <u>NOx</u> | 328.4 | 40 | 368.0 |
| <u>CO</u> | 237.6 | 100 | 337.0 |
| <u>PM/PM10</u> | 21.1 | 15 | 27.0 |
| <u>SO2</u> | 10.0 | 40 | 21.0 |
| <u>VOC</u> | 17.5 | 40 | 30.8 |

¹ Table revised September 2003

² All calculations are in tons per year (tpy).

³ Numbers represent total emissions from both site CTs

Annual Emissions for Pasco Cogen State Listed Data vs. Submitted Data

| Unit no. | Pollutant | State Listed | Plant Submitted | Difference (TPY) |
|---------------------|-----------|--------------|-----------------|-------------------------|
| <u>1998:</u> | | | | |
| 1 | CO | 107 | 125.5 | 18.6 ¹ |
| 1 | NOx | 163.7 | 173.1 | 9.3 |
| 1 | PM | 10.5 | 11.1 | 0.6 |
| 1 | SO2 | 5.0 | 5.3 | 0.3 |
| 1 | VOC | 6.5 | 9.3 | 2.8 |
| 2 | CO | 105.9 | 127.9 | 22.0 |
| 2 | NOx | 162.5 | 173.5 | 11.0 |
| 2 | PM | 10.5 | 11.2 | 0.7 |
| 2 | SO2 | 5.1 | 5.5 | 0.4 |
| 2 | VOC | 6.4 | 9.7 | 3.3 |
| <u>1999:</u> | | | | |
| 1 | CO | 100 | 114.4 | 14.4 ² |
| 1 | NOx | 153 | 160.2 | 7.2 |
| 1 | PM | 9.8 | 10.3 | 0.5 |
| 1 | SO2 | 4.5 | 4.8 | 0.3 |
| 1 | VOC | 6.1 | 8.2 | 2.2 |
| 2 | CO | 93.6 | 107.4 | 13.9 |
| 2 | NOx | 143.2 | 150.1 | 6.9 |
| 2 | PM | 9.2 | 9.6 | 0.4 |
| 2 | SO2 | 4.3 | 4.5 | 0.2 |
| 2 | VOC | 5.7 | 7.8 | 2.1 |
| <u>2000:</u> | | | | |
| 1 | CO | 97.1 | 97.1 | - |
| 1 | NOx | 147 | 147 | - |
| 1 | PM | 9.5 | 9.5 | - |
| 1 | SO2 | 4.4 | 4.4 | - |
| 1 | VOC | 6.0 | 6.0 | - |
| 2 | CO | 97.8 | 97.8 | - |
| 2 | NOx | 147 | 147 | - |
| 2 | PM | 9.5 | 9.5 | - |
| 2 | SO2 | 4.4 | 4.4 | - |
| 2 | VOC | 6.2 | 6.2 | - |
| <u>2001:</u> | | | | |
| 1 | CO | 83.7 | 83.8 | 0.1 (neg.) ³ |
| 1 | NOx | 126 | 126 | - |
| 1 | PM | 8.1 | 8.1 | - |

| | | | | |
|---|-----|-------|-------|---|
| 1 | SO2 | 3.7 | 3.7 | - |
| 1 | VOC | 5.2 | 5.2 | - |
| 2 | CO | 84.9 | 84.9 | - |
| 2 | NOx | 127.2 | 127.2 | - |
| 2 | PM | 8.2 | 8.2 | - |
| 2 | SO2 | 3.8 | 3.8 | - |
| 2 | VOC | 5.4 | 5.4 | - |

2002:

| | | | | |
|---|-----|-------|-------|------------|
| 1 | CO | 81.7 | 81.7 | - |
| 1 | NOx | 124.3 | 124.5 | 0.2 (neg.) |
| 1 | PM | 8.0 | 8.0 | - |
| 1 | SO2 | 3.7 | 3.7 | - |
| 1 | VOC | 5.0 | 5.0 | - |
| 2 | CO | 82.1 | 82.1 | - |
| 2 | NOx | 125.2 | 125.1 | 0.1 (neg.) |
| 2 | PM | 8.0 | 8.1 | 0.1 (neg.) |
| 2 | SO2 | 3.7 | 3.7 | - |
| 2 | VOC | 5.0 | 5.0 | - |

¹ FLDEP did not add DB contribution shown on submitted Table for the 1998 report.

² FLDEP did not add DB contribution shown on submitted Table for the 1999 report.

³ (neg.) – negligible difference.

LAKE COGEN, LTD.

NCP LAKE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9th Street • Kansas City, MO 64105
Tel (816) 527-1160 • Fax (816) 527-4160

July 14, 2003

Mr. Jeffery F. Koerner
Florida Department of Environmental Protection
Bureau of Air Quality
New Source Review Section
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

JUL 18 2003

BUREAU OF AIR REGULATION

RE: Pasco Cogeneration L.P. (Pasco Cogen); Project No. 1010071-002-AC
(PSD-FL-177A); SPRINT Upgrade Project

Dear Mr. Koerner:

Thank-you for your letter dated June 20, 2003, in response to our proposed project. We are in the process of developing responses to those questions asked in that letter. As noted, the project has 90 days (until September 18, 2003) to either provide the Department with a response to the requested information, or to request an additional period of time to respond back to the Department, if necessary.

We are planning to have this additional information to you as quickly as possible. If there are any further questions or concerns, please feel free to contact me. My telephone no. is 816 527-1160.

For Pasco Cogen

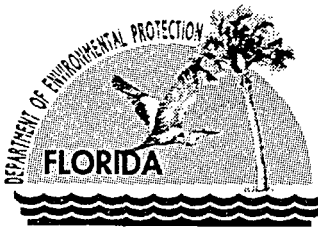
Sincerely,



Thomas A. Grace, CHMM

Director - Environmental, Health and Safety

Cc: R. Christmas
A. Williams
L. Rajter
B. Miles



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

June 20, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Leo Rajter, Vice President
Pasco Cogen, Limited c/o Aquila
20 West 9th Street
Kansas City, MO 64105

Re: **Request for Additional Information**
Project No. 1010071-002-AC (PSD-FL-177A)
SPRINT Upgrade Project

Dear Mr. Rajter:

On June 10, 2003, the Department received your application and sufficient fee for an air construction permit to upgrade the two existing LM6000 gas turbines with the "SPRINT" spray inter-cooling system. The units are installed at the existing plant in Dade City located at 14850 Old State Road 23 in Pasco County, Florida. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Which of the gas turbines will be replaced with an "equivalent reconditioned unit" upgraded with SPRINT technology? Identify the make/model of the replacement unit and provide maximum expected emission rates from the vendor.
2. Please provide vendor performance curves for the modified LM6000 gas turbines comparing the maximum heat input rate (MMBtu/hour) and generating capacity (MW) to the turbine inlet temperature (° F).
3. Please provide a PSD netting analysis similar to the information provided in Attachment PC-B1-AC. Note that the replacement should be treated as the permanent shutdown of the old unit and the addition of a new unit. The shutdown unit will result in permanent emissions decreases and the new unit will result in emissions increases. Based on your initial request to avoid PSD review, the netting analysis must show that net emissions increases do not exceed the PSD significant emission rates. Please note that net emissions increases for the project are the difference between past actual annual emissions before modification and future potential annual emissions after modification. It is not the difference between the potential emissions before and after the project as suggested in Attachment PC-B1-AC.
4. Please describe the general method of calculating the past actual emissions in Attachment PC-B1-AC. Past actual emissions should be based on emission factors that reflect actual emission rates and the average actual production rate for the representative two year period. An emissions summary report from the Department's ARMS database is attached for your review. It is based upon the Annual Operating Reports that Pasco Cogen, Limited filed with the Department as required by permit. The CO and NOx emissions data for 2000 - 2002 are generally the same as reported in Attachment PC-B1-AC. However, the CO and NOx emissions data for 1998 - 1999 in this report are slightly lower than that reported in Attachment PC-B1-AC. Please explain the discrepancies.

"More Protection, Less Process"

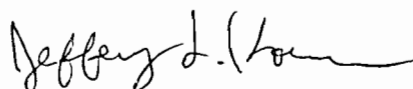
Printed on recycled paper.

5. Based on the estimated past actual emissions, test data, and requested emission caps, the Department will likely require monitoring systems to continuously monitor and record CO and NOx emissions. The data will be used to demonstrate compliance with the permits standards and requested caps. The Department believes that this level of monitoring is necessary to ensure that the project does not trigger PSD review. This equipment is routinely required for new combined cycle gas turbine projects with much lower emission profiles than that of Pasco Cogen, Limited. Previous NOx stack tests indicate that the gas turbines operate near the permit standard, but previous CO stack tests indicate that actual CO emissions may be about half of the permit standard. It may be possible to request a lower CO standard combined with a limitation on hours of operation to avoid the requirement of a CO monitor. However, such a restriction may be not provide the desired level of flexibility for this plant. Please comment.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,



Jeffery F. Koerner
New Source Review Section

cc: Mr. John L. McKelvey, Case Engineering, Inc.
Mr. Tom Grace, Pasco Cogen, Ltd. c/o Aquila
Mr. Richard Christmas, Pasco Cogen, Ltd.
Mr. Gerry Kissel, SWD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

**Annual Emissions for Pasco Cogen, Ltd.
Based on AORs Submitted to DEP**

| AIRS ID | OWNER/COMPANY NAME | ID | EU DESCRIPTION | POLLUTANT | TPY |
|------------------|--|----|---|-----------|----------|
| YEAR 1998 | | | | | |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 107 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 163.7 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 10.536 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 5 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 6.534 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 105.9 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 162.5 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 10.5 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 5.1 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 6.414 |
| YEAR 1999 | | | | | |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 100.0033 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 153.0141 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 9.8021 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 4.508 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 6.1008 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 93.6 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 143.2 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 9.2 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 4.3 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 5.7 |
| YEAR 2000 | | | | | |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 97.1 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 147 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 9.5 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 4.4 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 6 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 97.8026 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 147.011 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 9.50165 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 4.4063 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 6.20065 |
| YEAR 2001 | | | | | |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 83.7 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 126 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 8.1 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 3.7 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 5.2 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 84.9 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 127.2 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 8.2 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 3.8 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 5.4 |
| YEAR 2002 | | | | | |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 81.7 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 124.3 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 8 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 3.7 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 1 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 5 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | CO | 82.1 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | NOX | 125.2 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | PM | 8 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | SO2 | 3.7 |
| 1010071 | PASCO COGEN LIMITED(PARENT CO: AQUILA) | 2 | COMBUSTION TURBINE (CT) WITH HRSG AND DBS | VOC | 5 |

| SENDER: COMPLETE THIS SECTION | COMPLETE THIS SECTION ON DELIVERY | | | | | | | | | | | | | | |
|--|---|--|--|--------------------------|--|---|--|--|--|---|--|---|--|--|--|
| <ul style="list-style-type: none"> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits. | <table style="width: 100%; border: none;"> <tr> <td style="width: 60%; border-bottom: 1px solid black;">A. Received by (Please Print Clearly) <i>Michael Rajter</i></td> <td style="width: 40%; border-bottom: 1px solid black;">B. Date of Delivery <i>6-25-03</i></td> </tr> <tr> <td colspan="2" style="border-bottom: 1px solid black;">C. Signature X</td> </tr> <tr> <td colspan="2" style="border-bottom: 1px solid black;"> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;"></td> <td style="width: 20%; text-align: right;"> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee </td> </tr> </table> </td> </tr> <tr> <td colspan="2" style="border-bottom: 1px solid black;"> D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No </td> </tr> <tr> <td colspan="2" style="border-bottom: 1px solid black;"> 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. </td> </tr> <tr> <td colspan="2" style="border-bottom: 1px solid black;"> 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes </td> </tr> </table> | A. Received by (Please Print Clearly) <i>Michael Rajter</i> | B. Date of Delivery <i>6-25-03</i> | C. Signature X | | <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;"></td> <td style="width: 20%; text-align: right;"> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee </td> </tr> </table> | | | <input type="checkbox"/> Agent <input type="checkbox"/> Addressee | D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No | | 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. | | 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes | |
| A. Received by (Please Print Clearly) <i>Michael Rajter</i> | B. Date of Delivery <i>6-25-03</i> | | | | | | | | | | | | | | |
| C. Signature X | | | | | | | | | | | | | | | |
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| | <input type="checkbox"/> Agent <input type="checkbox"/> Addressee | | | | | | | | | | | | | | |
| D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No | | | | | | | | | | | | | | | |
| 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. | | | | | | | | | | | | | | | |
| 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes | | | | | | | | | | | | | | | |
| 1. Article Addressed to: Mr. Leo Rajter Vice President Pasco Cogen, Limited c/o Aquila 20 West 9th Street Kansas City, MO 64105 | | | | | | | | | | | | | | | |
| 2. 7001 0320 0001 3692 5726 | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between; font-size: 0.8em;"> PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952 </div> | | | | | | | | | | | | | | | |

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

7001 0320 0001 3692 5726

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

| | |
|--------------------------------------|-----------------------|
| Sent To | |
| Leo Rajter | |
| Street, Apt. No., or P.O. Box No. | 9th St. |
| City, State, ZIP+4 | Kansas City, MO 64105 |

Postmark
Here

PS Form 3800, January 2001
See Reverse for Instructions

PASCO COGEN, LTD.

NCP DADE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9th Street • Kansas City, MO 64105
Tel (816) 527-1160 • Fax (816) 527-4160

June 6, 2003

Mr. Jeffery F. Koerner, PE
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road, MS 5505
Tallahassee, FL 32399-2400

(850) 921-9536

RECEIVED

JUN 10 2003

BUREAU OF AIR REGULATION

RE: Pasco Cogeneration LP; Facility ID No. 1010071; Pasco County, Florida;
Air Construction Permit Application to Modify Two GE LM-6000
Combustion Turbine Units

Dear Mr. Koerner:

Attached is a completed permit application in which the Pasco Cogeneration facility requests approval to perform an uprate on its two current GE LM-6000 Combustion Turbine units. GE would perform the proposed uprate that will result in enhanced unit operation. The basic components of the uprate include; replacement of the low pressure turbine with a more efficient design and to modify the CT unit to allow cooling of the combustion process with a water injection process that has been designed by GE.

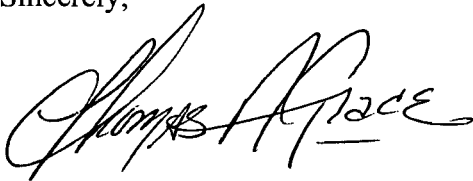
GE has demonstrated this process to be very successful for those facilities it has already modified, including the Tropicana CT facility in Bradenton, FL. We believe that the enhancement will allow the two units at Pasco to perform more efficiently while still virtually achieving the same current emission standards. As you will note, what is being proposed is to maintain the current emission concentrations with a slightly higher heat input rate and a slight increase in pounds per hour of NOx and CO. The project is willing to offset the slight increase in NOx and CO emissions by accepting a lower annual emissions cap. The lowered cap will also ensure NSPS is not triggered.

The project believes that this uprating of the CTs can be performed without the necessity of modifying the emissions monitoring and data recovery programs currently in place at Pasco Cogen. The benefits seen by the uprating include more efficient use of the fuel fired by the facility. In terms of actually performing the modification, Pasco Cogen is proposing to perform the modification on one unit at a time. However, this schedule is still being evaluated.

At the Department's convenience, Pasco Cogen is prepared to meet with you and discuss this proposal further and go over the permit application. We believe that in performing this work we not only enhance the ability of Pasco Cogen to perform better, we will also be able to produce electricity with reduced emissions per MMBtu fired at the facility.

I will look forward to hearing back from you soon. My telephone number is (816) 527-1160 and my e-mail is thomas.grace@aquila.com

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas A. Grace". The signature is fluid and cursive, with the first name "Thomas" and last name "Grace" clearly legible.

Thomas A. Grace, CHMM
Director – Environmental Health and Safety

W/ attachment

Cc: R. Christmas, w/a
L. Rajter, w/o
B. Miles, w/o
R. Murphy @ CASE Engineering, w/a
C. Pittman, SWD
File: 274-2010.3
K. Buel, EPA



Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

| | |
|---|---|
| 1. Facility Owner/Company Name: Pasco Cogeneration Limited | |
| 2. Site Name: Pasco Cogeneration Limited | |
| 3. Facility Identification Number: 1010071 [] Unknown | |
| 4. Facility Location: Street Address or Other Locator: 14850 Old State Rd. 23 City: Dade City County: Pasco Zip Code: 33525 | |
| 5. Relocatable Facility? [] Yes [X] No | 6. Existing Permitted Facility? [X] Yes [] No |

Application Contact

| | |
|--|--|
| 1. Name and Title of Application Contact: Thomas Grace, Director – Environmental, Health & Safety | |
| 2. Application Contact Mailing Address: Organization/Firm: Pasco Cogeneration, Limited, c/o Aquila Street Address: 20 West 9 th Street City: Kansas City State: MO Zip Code: 64105 | |
| 3. Application Contact Telephone Numbers: Telephone: (816) 527 - 1160 Fax: (816) 527 - 4160 | |

Application Processing Information (DEP Use)

| | |
|------------------------------------|----------------|
| 1. Date of Receipt of Application: | 6-10-2003 |
| 2. Permit Number: | 1010071-002-AC |
| 3. PSD Number (if applicable): | |
| 4. Siting Number (if applicable): | |

RECEIVED

JUN 10 2003

BUREAU OF AIR REGULATION

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- ☐ Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- ☐ Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

- ☐ Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

- ☐ Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

- ☐ Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: _____

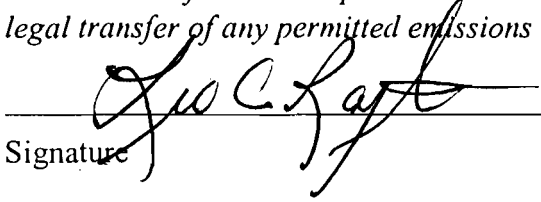
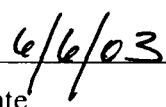
Reason for revision: _____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- ☒ Air construction permit to construct or modify one or more emissions units.
- ☐ Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- ☐ Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

| |
|--|
| 1. Name and Title of Owner/Authorized Representative or Responsible Official: Leo Rajter, Vice President |
| 2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Pasco Cogeneration, Limited, c/o Aquila Street Address: 20 West 9 th Street City: Kansas City State: MO Zip Code: 64105 |
| 3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (816) 701 - 6371 Fax: (816) 502 - 5371 |
| 4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [X], if so) or the responsible official (check here [], if so) of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions unit.</i>  Signature  Date |

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

| |
|--|
| 1. Professional Engineer Name: John L. McKelvey Registration Number: 37319 |
| 2. Professional Engineer Mailing Address: 5925 Imperial Pkwy, Suite 226 Mulberry, FL 33860 Organization/Firm: Case Engineering, Inc. Street Address: 5925 Imperial Pkwy, Suite 226 City: Mulberry State: Florida Zip Code: 33860 |
| 3. Professional Engineer Telephone Numbers: Telephone: (863) 701 - 2822 Fax: (863) 701 - 7671 |

4. 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.

If the purpose of this application is to obtain a Title V source 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 schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit 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.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision 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

* Attach any exception to certification statement.

Scope of Application

| Emissions Unit ID | Description of Emissions Unit | Permit Type | Processing Fee |
|--------------------------|--|--------------------|-----------------------|
| 1R | (2) Combustion Turbines (CTs) each with HRSG and DB modification of both LM-6000 CTs with GE's proposed CT-6000 uprate. The GE LM-6000 uprate will allow for enhanced operating efficiency by utilization of water mist injection. This upgrade will allow each unit to be more efficient during warmer seasonal operations and more effective in conversion of fuel to electric energy. | Construction | N/A |
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Application Processing Fee

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

*** Site currently holds valid Title V permit, processing fee not required at this time.**

Construction/Modification Information**1. Description of Proposed Project or Alterations:**

To upgrade the 2 existing and permitted LM-6000 combustion Turbines using GE's current LM-6000 Unit uprating program.

2. Projected or Actual Date of Commencement of Construction: September, 2003

3. Projected Date of Completion of Construction: May 1, 2004

Application Comment

See Attachment PC-AI-AC for site description and general information.

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 (limit to 500 characters): Pasco Cogeneration consists of two GE LM-6000 combustion turbines, with duct burners (CT/DB), that exhaust through two Heat Recovery Steam (HRSG) stacks. The CTs can be fired on either natural gas or distillate oil. | | | |

Facility Contact

| | | |
|--|--|--|
| 1. Name and Title of Facility Contact: Richard Christmas | | |
| 2. Facility Contact Mailing Address: Organization/Firm: Pasco Cogeneration, Limited Street Address: 14850 Old State Road 23 City: Dade City State: FL Zip Code: 33525 | | |
| 3. Facility Contact Telephone Numbers: Telephone: (352) 523 - 0062 Fax: (352) 523 - 0572 | | |

Facility Regulatory Classifications

Check all that apply:

| | |
|---|----------------------------------|
| 1. <input type="checkbox"/> Small Business Stationary Source? | <input type="checkbox"/> Unknown |
| 2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? | |
| 3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs? | |
| 4. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)? | |
| 5. <input type="checkbox"/> Synthetic Minor Source of HAPs? | |
| 6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS? | |
| 7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP? | |
| 8. <input checked="" type="checkbox"/> Title V Source by EPA Designation? | |
| 9. Facility Regulatory Classifications Comment (limit to 200 characters): CT-NSPS for stationary GTs, (40CFR60 subpart GG). 40 CFR 60 subpart Dc applies to the duct burners 40 CFR 60 subpart Kb applies to the fuel oil storage tank | |

List of Applicable Regulations

| | |
|------------------------|--|
| See Attachment PC-FI-B | |
| | |
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B. FACILITY POLLUTANTS

List of Pollutants Emitted

[illegible]

See Attachment PC-BI-AC

(1) Based on two units operating. (2) Each unit limited to 240 hrs per year operation on fuel oil.

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

| |
|---|
| 1. Area Map Showing Facility Location: [X] Attached, Document ID: <u>PC-FI-E1</u> [] Not Applicable [] Waiver Requested |
| 2. Facility Plot Plan: [X] Attached, Document ID: <u>PC-FI-E2</u> [] Not Applicable [] Waiver Requested |
| 3. Process Flow Diagram(s): [X] Attached, Document ID: <u>PC-FI-E3</u> [] Not Applicable [] Waiver Requested |
| 4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [X] Attached, Document ID: <u>PC-FI-E4</u> [] Not Applicable [] Waiver Requested |
| 5. Fugitive Emissions Identification: [X] Attached, Document ID: <u>PC-FI-E5</u> [] Not Applicable [] Waiver Requested |
| 6. Supplemental Information for Construction Permit Application: [X] Attached, Document ID: <u>PC-FI-E6</u> [] Not Applicable |
| 7. Supplemental Requirements Comment: Attachment PC-FI-E6 → |

Additional Supplemental Requirements for Title V Air Operation Permit Applications

| |
|---|
| 8. List of Proposed Insignificant Activities: [] Attached, Document ID: _____ [X] Not Applicable |
| 9. List of Equipment/Activities Regulated under Title VI: [X] Attached, Document ID: <u>PC-FI-E8</u> [] Equipment/Activities On site but Not Required to be Individually Listed [] Not Applicable |
| 10. Alternative Methods of Operation: [X] Attached, Document ID: <u>PC-FI-E9</u> [] Not Applicable |
| 11. Alternative Modes of Operation (Emissions Trading): [] Attached, Document ID: _____ [X] Not Applicable |
| 12. Identification of Additional Applicable Requirements: [] Attached, Document ID: _____ [X] Not Applicable |
| 13. Risk Management Plan Verification: [] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) [] Plan to be submitted to CEPPO (Date required: _____) [X] Not Applicable |
| 14. Compliance Report and Plan: [X] Attached, Document ID: <u>PC-FI-E14</u> [] Not Applicable |
| 15. Compliance Certification (Hard-copy Required): [X] Attached, Document ID: <u>PC-FI-E15</u> [] Not Applicable |

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

| | | | |
|---|-----------------------------------|---|-----------------------------|
| 1. Type of Emissions Unit Addressed in This Section: (Check one) | | | |
| <input checked="" type="checkbox"/> [X] 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). | | | |
| <input type="checkbox"/> [] 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. | | | |
| <input type="checkbox"/> [] 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. Regulated or Unregulated Emissions Unit? (Check one) | | | |
| <input checked="" type="checkbox"/> [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. | | | |
| <input type="checkbox"/> [] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit. | | | |
| 3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Two (2) Combustion Turbines (CTs), each with HRSG and DBs | | | |
| 4. Emissions Unit Identification Number: | | <input type="checkbox"/> [] No ID <input type="checkbox"/> [] ID Unknown | |
| 5. Emissions Unit Status Code: A | 6. Initial Startup Date: 1 Jul 93 | 7. Emissions Unit Major Group SIC Code: 49 | 8. Acid Rain Unit? [N] |
| 9. Emissions Unit Comment: (Limit to 500 Characters) The exhaust gas from each CT exhausts through an associated Heat Recovery Steam Generator (HRSG). The HRSGs provide steam to a steam generator, rated at 26.5 MW, and also furnishes steam to an orange processing facility (the QF host). The nameplate rating of each LM-6000 combustion turbine following the proposed CT uprate will change from 42 MW at 51° F to 50.2 MW. | | | |

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
Water injection to control NO_x emissions for each CT

2. Control Device or Method Code(s): 28

Emissions Unit Details

| | |
|--|-----------------------|
| 1. Package Unit: | |
| Manufacturer: General Electric | Model Number: LM-6000 |
| 2. Generator Nameplate Rating: increased from 42 MW to 50.2 MW following CT uprate | |
| 3. Incinerator Information: | |
| Dwell Temperature: | °F |
| Dwell Time: | seconds |
| Incinerator Afterburner Temperature: | °F |

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

| | | | |
|---|----------|------------|-----------------|
| 1. Maximum Heat Input Rate: | CT (gas) | 427.2 | MMBtu/hr/CT |
| 2. Maximum Incineration Rate: | | lb/hr | tons/day |
| 3. Maximum Process or Throughput Rate: | | | |
| 4. Maximum Production Rate: | | | |
| 5. Requested Maximum Operating Schedule: | | | |
| | 24 | hours/day | 7 days/week |
| | 52 | weeks/year | 8760 hours/year |
| 6. Operating Capacity/Schedule Comment (limit to 200 characters): Max. heat input is based on natural gas firing as low heating value (LHV) @ 51° F; when firing. Uprate of unit increases from 423 MMBTU/hr. to 427.2 MMBTU/hr. | | | |

C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

List of Applicable Regulations

[illegible]

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

| | | | |
|--|---|---|--|
| 1. Identification of Point on Plot Plan or Flow Diagram? Stacks (EU1) | | 2. Emission Point Type Code: 3 | |
| 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Unit 1 stack; Unit 2 stack | | | |
| 4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A | | | |
| 5. Discharge Type Code: V | 6. Stack Height: 100 feet | 7. Exit Diameter: 11 feet | |
| 8. Exit Temperature: 232 °F | 9. Actual Volumetric Flow Rate: 325,221 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): North (km): | | | |
| 14. Emission Point Comment (limit to 200 characters): Data reflect each CT unit. Emission point calculations are based upon base load conditions at 51° F for natural gas firing. See Attachment PC-EOI-E14 | | | |

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

| | | |
|---|----------------------------------|--|
| 1. Segment Description (Process/Fuel Type) (limit to 500 characters): Internal Combustion Engines, Electric Generation natural gas turbines (2) | | |
| 2. Source Classification Code (SCC): 2-01-002-01 | | 3. SCC Units: Million cubic feet burner |
| 4. Maximum Hourly Rate: 0.427 | 5. Maximum Annual Rate: 3,740 | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: 1,000 |
| 10. Segment Comment (limit to 200 characters): Max. Annual rate: 3,740.5 Max. rate at 51° F with heat content (MMBtu/scc) based on LHV. Max. percent sulfur: 1 grain/100 cf. DB ratios 90 MMBtu/hr. and 525,000 MMBtu/yr., respectively, per unit. | | |

Segment Description and Rate: Segment 2 of 2

| | | |
|---|--------------------------------|--|
| 1. Segment Description (Process/Fuel Type) (limit to 500 characters): Internal combustion engines, distillate oil (diesel) turbine: cogeneration, industrial (2) | | |
| 2. Source Classification Code (SCC): 2-02-001-03 | | 3. SCC Units: Thousand Gallons burned |
| 4. Maximum Hourly Rate: 2.92 | 5. Maximum Annual Rate: 701 | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: ≤ 0.1 | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: 130 |
| 10. Segment Comment (limit to 200 characters): Max. Annual Rate: 701.1 Maximum annual fuel usage based on a permit limitation of 2,921 gal/hr/ct and 701,050 gal/yr respectfully for the combustion turbines | | |

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

| 1. Pollutant Emitted | 2. Primary Control Device Code | 3. Secondary Control Device Code | 4. Pollutant Regulatory Code |
|------------------------|--------------------------------|----------------------------------|------------------------------|
| NO_x | 028 | | EL |
| CO | | | EL |
| PM | | | EL |
| PM₁₀ | | | EL |
| VOC | | | EL |
| SO₂ | | | EL |
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G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|---|---|
| 1. Pollutant Emitted: NOx (CT on fuel oil) | 2. Total Percent Efficiency of Control: 90 |
| 3. Potential Emissions: 148.3 lb/hour 368 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: 42 ppmvd @ 15% O2 Reference: Permit Limit (BACT) | 7. Emissions Method Code: 0 |
| 8. Calculation of Emissions (limit to 600 characters): Potential based on revised calculation to synthetically limit triggering PSD. Total annual NOx emissions is limited to 368 tpy (see below). | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Hourly potential emissions based on CTs at 51° F operating conditions on fuel oil. Annual based upon the current facility limit. AC 51-196460. PSO-FL-177. Annual limit for NOx remains limited based upon a limit of firing ≤ 701,000 gallons of fuel oil per unit per year. | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|---|
| 1. Basis for Allowable Emissions Code: Other and ESCPSD | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 148.3 lb/hr | 4. Equivalent Allowable Emissions: 148.3 lb/hour 368 tons/year |
| 5. Method of Compliance (limit to 60 characters): Annual compliance test, EPA method 20 | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing; the 2 CT units are designed to produce 42 ppmvd@15%O2. Allowable emissions established as BACT in the original project AC permit, Table 1A. This application requests having a synthetic cap for total NOx tonnage which limits annual NOx tonnage to 368 tpy (a 36.7 tpy reduction). | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|--|---|
| 1. Pollutant Emitted: NOx (duct burner gas fired) | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 18 lb/hour 368 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: Reference: | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): Based upon 0.1 lb/mmBtu limit and a firing rate of 90 mmBtu/hr/DB | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Each DB is limited to 525,000 mmBtu per year heat input | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|--|
| 1. Basis for Allowable Emissions Code: Other and ESCPSD | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 18 lb/hr | 4. Equivalent Allowable Emissions: 18 lb/hour 368 tons/year |
| 5. Method of Compliance (limit to 60 characters): None | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Emission limit for 2 duct burners as established by BACT annual emissions for facility. Natural gas only. Basis of limit is 0.1 lb/MMBtu | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | | | |
|---|--|---|--|
| 1. Pollutant Emitted: NOx (CT and DB operated on nat. gas) | | 2. Total Percent Efficiency of Control: | |
| 3. Potential Emissions: 104.0 lb/hour 368 tons/year | | 4. Synthetically Limited? [Y] | |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | | | |
| 6. Emission Factor: Reference: | | 7. Emissions Method Code: | |
| 8. Calculation of Emissions (limit to 600 characters): | | | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | | | |

Allowable Emissions Allowable Emissions _____ of _____

| | | | |
|---|--|---|--|
| 1. Basis for Allowable Emissions Code: Other and ESCPSD | | 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: 104.0 lb/hr | | 4. Equivalent Allowable Emissions: 104.0 lb/hour 368 tons/year | |
| 5. Method of Compliance (limit to 60 characters): Annual compliance test, EPA method 20 | | | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Emission limit for CTs and DBs as established by BACT as 25 ppm. The lb/hr rate is expected to increase slightly from 103.5 to 104 lb/hr. , while natural gas firing. To support acceptance of this application, Pasco Cogen requests having a synthetic cap for total NOx tonnage which limits annual NOx tonnage to 368 tpy (a 36.7 tpy site reduction). | | | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|---|---|
| 1. Pollutant Emitted: NOx (CT and DB operated on nat. gas) | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 104.3 lb/hour 368 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: Reference: | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: Other and ESCPSD | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 104.0 lb/hr | 4. Equivalent Allowable Emissions: 104.0 lb/hour 368 tons/year |
| 5. Method of Compliance (limit to 60 characters): Annual compliance test, EPA method 20 | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Emission limit for CTs and DBs as established by BACT as 25 ppm. The lb/hr rate is expected to increase slightly from 103.5 to 104 lb/hr. , while natural gas firing. To support acceptance of this application, Pasco Cogen requests having a synthetic cap for total NOx tonnage which limits annual NOx tonnage to 368 tpy (a 36.7 tpy site reduction). | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | | | |
|---|--|---|--|
| 1. Pollutant Emitted: CO (nat. gas) | | 2. Total Percent Efficiency of Control: | |
| 3. Potential Emissions: 56.5 lb/hour 337.0 tons/year | | 4. Synthetically Limited? [Y] | |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | | | |
| 6. Emission Factor: 28 ppmvd (BACT) Reference: Permit limit (BACT) | | 7. Emissions Method Code: 0 | |
| 8. Calculation of Emissions (limit to 600 characters): Potential emissions based on revised calculation to synthetically limit triggering PSD. Emissions based upon a 28 ppmvd (BACT) limit and a max. heat input of 427 mmBtu/hr/CT. | | | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Hourly potential emissions based on CTs/DBs at 51° F operating conditions on natural gas; annual is based upon permit limit (337 tpy). | | | |

Allowable Emissions Allowable Emissions _____ of _____

| | | | |
|--|--|--|--|
| 1. Basis for Allowable Emissions Code: Other and ESCPSD | | 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: 56.5 lb/hr | | 4. Equivalent Allowable Emissions: 56.5 lb/hour 337.0 tons/year cap | |
| 5. Method of Compliance (limit to 60 characters): Title V permit renewal compliment test; EPA method 10 | | | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing: CT units 1 and 2; established as BACT in AC 51-196460, Table 1A; Basis of limit is 28 ppmvd. Request a synthetic cap having the annual tonnage limited to 337 tons per year (a 13.3 tpy site reduction). | | | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|---|---|
| 1. Pollutant Emitted: CO (CT on fuel oil) | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 34.5 lb/hour 337 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: Reference: | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): Hourly emissions will be based upon firing fuel oil at 424 mmBtu/hr/CT with an annual limit of 701,000 gallons of fuel oil/CT (a limited operational period of 240 hours per CT is in place for operating on fuel oil). | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|--|
| 1. Basis for Allowable Emissions Code: Other, ESCPSD | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 34.5 lb/hr | 4. Equivalent Allowable Emissions: 34.5 lb/hour 337 tons/year cap |
| 5. Method of Compliance (limit to 60 characters): Title V renewal compliance test; EPA method 10 if firing > 400 hrs | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Oil firing; CTs 1 and 2; established BACT; basis of limit is 18 ppmvd | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|---|---|
| 1. Pollutant Emitted: CO (duct burners) | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 36.0 lb/hour 337 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: Reference: | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): Emissions are based upon duct burner firing only. The annual limit per duct burner is 525,0000 mmBtu/yr and a limit of 0.2 lb/mmBtu heat input. | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|---|--|
| 1. Basis for Allowable Emissions Code: Other and ESCPSD | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 36 lb/hr | 4. Equivalent Allowable Emissions: 36 lb/hour 337 tons/year cap |
| 5. Method of Compliance (limit to 60 characters): None | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing for duct burners in units 1 and 2; established as BACT; basis of limit is 0.2 lb/MMBtu. Each duct burner is limited to firing 525,000 mmBtu/yr. | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | | |
|--|---|---------------------------|
| 1. Pollutant Emitted: CO (CT + DB on nat. gas) | 2. Total Percent Efficiency of Control: | |
| 3. Potential Emissions: 92.5 lb/hour 337 tons/year | 4. Synthetically Limited? [Y] | |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | | |
| 6. Emission Factor: Reference: | | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): | | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|---|--|
| 1. Basis for Allowable Emissions Code: Other and ESCPSD | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 92.5 lb/hr. | 4. Equivalent Allowable Emissions: 92.5 lb/hour 337 tons/year cap |
| 5. Method of Compliance (limit to 60 characters): Title V permit renewal compliance test, EPA method 10 | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing for CTs and DBs; established BACT, 28 ppm for gas firing on CT which reflects 56.5 lb/hr. and 36 lb/hr on DB, and an annual cap of 337 tpy, which represents a 13.3 tpy site reduction from the current permit. | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | | | |
|---|--|---|--|
| 1. Pollutant Emitted: PM/ PM10 (CT on fuel oil) | | 2. Total Percent Efficiency of Control: | |
| 3. Potential Emissions: 20 lb/hour 27 tons/year | | 4. Synthetically Limited? [Y] | |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | | | |
| 6. Emission Factor: 0.026 lb/MMBtu Reference: Permit limit (BACT) | | 7. Emissions Method Code: 0 | |
| 8. Calculation of Emissions (limit to 600 characters): Potential emissions based on permit limit. Emissions based upon 0.026 lb/mmBtu fuel (BACT). Operations are limited to 240 hrs/yr and 701,000 gallons of fuel, per unit. | | | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Hourly potential emissions based on CTs at 51° F operating conditions on fuel oil. Annual Limit is based upon the current permit limit. Fuel oil use is limited to 240 hours /year and 701,000 gallons /year, per unit. | | | |

Allowable Emissions Allowable Emissions _____ of _____

| | | | |
|--|--|--|--|
| 1. Basis for Allowable Emissions Code: Other | | 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: 20 lb/hr | | 4. Equivalent Allowable Emissions: 20 lb/hour 27 tons/year | |
| 5. Method of Compliance (limit to 60 characters): Annual VE test; 10% or less | | | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Fuel oil firing; CTs 1&2, established as BACT in Permit AC; Table 1A; basis of limit 0.026 lb/MMBtu | | | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|---|---|
| 1. Pollutant Emitted: PM/PM10 (CT on nat. gas) | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 5 lb/hour 27 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: Reference: | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): Based upon 0.0065 lb/mmBtu (BACT) and 427 mmBtu/hr /CT | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): The maximum allowable emission rate is 27 tpy | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|--|
| 1. Basis for Allowable Emissions Code: Other | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 5 lb/hr | 4. Equivalent Allowable Emissions: 5 lb/hour 27 tons/year |
| 5. Method of Compliance (limit to 60 characters): Annual VE test; 10% or less; if >400 hrs/yr operation | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): gas firing, based upon 0.0065 lb/mmBtu. | |

Potential/Fugitive Emissions

Allowable Emissions Allowable Emissions _____ of _____

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G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|---|---|
| 1. Pollutant Emitted: PM/PM10 (CT +DB) | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 7.6 lb/hour 27 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: Reference: | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): CT emission rate is based upon 0.0065 lb/ mmBtu and the DB emission rate is based upon 0.006 lb/ mmBtu/ DB. | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|--|
| 1. Basis for Allowable Emissions Code: Other | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 7.6 lb/hr. | 4. Equivalent Allowable Emissions: 7.6 lb/hour 27 tons/year |
| 5. Method of Compliance (limit to 60 characters): Annual VE test; 10% or less | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing for CTs and DBs. Established as BACT | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | | | |
|--|--|---|--|
| 1. Pollutant Emitted: VOC (CT on fuel oil) | | 2. Total Percent Efficiency of Control: | |
| 3. Potential Emissions: 8.7 lb/hour 30.8 tons/year | | 4. Synthetically Limited? [Y] | |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | | | |
| 6. Emission Factor: Reference: Permit limit | | 7. Emissions Method Code: 0 | |
| 8. Calculation of Emissions (limit to 600 characters): Potential emissions based on permit limit | | | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Hourly potential emissions based upon CTs/DBs at 51° F operating on natural gas. Annual Limit is based on current permit limit | | | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|---|--|
| 1. Basis for Allowable Emissions Code: | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 8.7 lb/hr | 4. Equivalent Allowable Emissions: 8.7 lb/hour 30.8 tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|--|---|
| 1. Pollutant Emitted: VOC | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 3.4 lb/hour 30.8 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: Reference: | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|--|
| 1. Basis for Allowable Emissions Code: Other | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 3.4 lbs/hr | 4. Equivalent Allowable Emissions: 3.4 lb/hour 30.8 tons/year |
| 5. Method of Compliance (limit to 60 characters): Compliance with CO limit | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing; CT Unit 1&2; established as permit limit in AC51-196460, Table 1A | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | | | |
|--|--|---|--|
| 1. Pollutant Emitted: | | 2. Total Percent Efficiency of Control: | |
| 3. Potential Emissions: lb/hour tons/year | | 4. Synthetically Limited? [] | |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | | | |
| 6. Emission Factor: Reference: | | 7. Emissions Method Code: | |
| 8. Calculation of Emissions (limit to 600 characters): (This page intentionally left blank) | | | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | | | |

Allowable Emissions Allowable Emissions _____ of _____

| | | | |
|---|--|--|--|
| 1. Basis for Allowable Emissions Code: Other | | 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: lb/hr | | 4. Equivalent Allowable Emissions: lb/hour tons/year | |
| 5. Method of Compliance (limit to 60 characters): Compliance with CO limit | | | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): | | | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|--|---|
| 1. Pollutant Emitted: VOC (DB on nat. gas) | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 5.4 lb/hour 30.8 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: Reference: | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|--|
| 1. Basis for Allowable Emissions Code: Other | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 5.4 lb/hr | 4. Equivalent Allowable Emissions: 5.4 lb/hour 30.8 tons/year |
| 5. Method of Compliance (limit to 60 characters): None | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing for Duct Burners in Units 1 & 2. Duct burners limited to 525,000 mmBtu/yr. | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | | |
|--|---|---------------------------|
| 1. Pollutant Emitted: VOC (CT + DB on nat. gas) | 2. Total Percent Efficiency of Control: | |
| 3. Potential Emissions: 8.8 lb/hour 30.8 tons/year | 4. Synthetically Limited? [] | |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | | |
| 6. Emission Factor: Reference: | | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): | | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|---|--|
| 1. Basis for Allowable Emissions Code: Other | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 8.8 lb/hr | 4. Equivalent Allowable Emissions: 8.8 lb/hour 30.8 tons/year |
| 5. Method of Compliance (limit to 60 characters): Annual Operating Report | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing for CTs and DBs | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|--|---|
| 1. Pollutant Emitted: PM ₁₀ | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 20 lb/hour* 27 tons/year | 4. Synthetically Limited? [N] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: 0.026 lb/MMBtu Reference: Permit Limit (BACT) | 7. Emissions Method Code: 0 |
| 8. Calculation of Emissions (limit to 600 characters): Potential emissions based on permit limit | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Hourly potential emissions based on CTs at 51° F operating conditions on fuel oil. Annual Limit is based on current permit limit | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|--|
| 1. Basis for Allowable Emissions Code: Other | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 5 lb/hr | 4. Equivalent Allowable Emissions: 5 lb/hour 27 tons/year |
| 5. Method of Compliance (limit to 60 characters): Annual VE test; 10% or less | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing; CTs 1 & 2; established as BACT in AC permit; Table 1A; basis of limit 0.0065 lb/MMBtu | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | | |
|--|---|---------------------------|
| 1. Pollutant Emitted: PM10 | 2. Total Percent Efficiency of Control: | |
| 3. Potential Emissions: lb/hour tons/year | 4. Synthetically Limited? [] | |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | | |
| 6. Emission Factor: Reference: | | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): | | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|---|
| 1. Basis for Allowable Emissions Code: Other | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 20 lb/hr | 4. Equivalent Allowable Emissions: 20 lb/hour 27 tons/year |
| 5. Method of Compliance (limit to 60 characters): Annual VE test; 10% or less; if >400 hrs/yr operation on fuel oil | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Oil firing; CTs 1 & 2; established as BACT; basis of limit 0.026 lb/MMBtu | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|--|---|
| 1. Pollutant Emitted: PM10 | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 7.6 lb/hour 27 tons/year | 4. Synthetically Limited? [X] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: Reference: | 7. Emissions Method Code: |
| 8. Calculation of Emissions (limit to 600 characters): | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|--|--|
| 1. Basis for Allowable Emissions Code: Other | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 7.6 lb/hr | 4. Equivalent Allowable Emissions: 7.6 lb/hour 27 tons/year |
| 5. Method of Compliance (limit to 60 characters): Annual VE test; 10% or less | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing for CTs and DBs. Established as BACT | |

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

| | |
|--|---|
| 1. Pollutant Emitted: SO ₂ (CT on fuel oil) | 2. Total Percent Efficiency of Control: |
| 3. Potential Emissions: 87.6 lb/hour 21 tons/year | 4. Synthetically Limited? [Y] |
| 5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year | |
| 6. Emission Factor: 0.1 % Sulfur Reference: Permit Limit | 7. Emissions Method Code: 0 |
| 8. Calculation of Emissions (limit to 600 characters): Potential emissions based on permit limit. Emissions are based on a limit of 0.1% sulfur in fuel oil, and each unit being restricted to a total of 701,000 gallons of fuel oil annually and operations restricted to 240 hours annually. | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Hourly potential emissions based on CTs at 51° F operating on distillate oil. Annual Emissions limit is based on current permit limit. | |

Allowable Emissions Allowable Emissions _____ of _____

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: Other | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 87.6 lb/hr | 4. Equivalent Allowable Emissions: 87.6 lb/hour 21 tons/year |
| 5. Method of Compliance (limit to 60 characters): Fuel analysis – oil firing | |
| 6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Allowable emissions established as limit in AC permit; Table 1A for distillate oil firing. Annual limit established for facility of 701,000 gal/yr/unit. DBs can not fire when CT unit is fired on fuel oil. | |

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

| | |
|---|---|
| 1. Visible Emissions Subtype: VE 10 | 2. Basis for Allowable Opacity: [] Rule [X] Other |
| 3. Requested 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 (limit to 200 characters): VE limit established in Permit AC 51 – 196460, specific condition No. 6 | |

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 2

| | |
|---|--|
| 1. Parameter Code: WTF | 2. Pollutant(s): |
| 3. CMS Requirement: | [X] Rule [] Other |
| 4. Monitor Information: Manufacturer: Chessell Model Number: 4181G Serial Number: 1692600101010901 | |
| 5. Installation Date: 01 July 1993 | 6. Performance Specification Test Date: N/A |
| 7. Continuous Monitor Comment (limit to 200 characters): Parameter Code: Fuel. CMS required by NSPS (40 CFR 60 subpart GG). Systems installed in accordance with original Air Construction permit, specific condition No. 22 | |

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

| | |
|--|---|
| 1. Visible Emissions Subtype: VE99 | 2. Basis for Allowable Opacity: [X] Rule [] Other |
| 3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour | |
| 4. Method of Compliance: Best operating practice | |
| 5. Visible Emissions Comment (limit to 200 characters): Excess VE allowed for startup and shutdown pursuant to FDEP Rule 62-210. 700 (1), 2 hrs/24 hour period | |

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 2 of 2

| | |
|--|--|
| 1. Parameter Code: WTF | 2. Pollutant(s): |
| 3. CMS Requirement: | [X] Rule [] Other |
| 4. Monitor Information: Manufacturer: Chessell Model Number: 4181G Serial Number: 1692600101010901 | |
| 5. Installation Date: 01 Jul 1993 | 6. Performance Specification Test Date: N/A |
| 7. Continuous Monitor Comment (limit to 200 characters): CMS required by NSPS (40 CFR 60 Subpart GG). System installed in accordance with Air Construction Permit, Specific condition No. 22. Pollutant emitted = NOx | |

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

| |
|--|
| 1. Process Flow Diagram [X] Attached, Document ID: <u>PC-E01-L1</u> [] Not Applicable [] Waiver Requested |
| 2. Fuel Analysis or Specification [X] Attached, Document ID: <u>PC-E01-L2</u> [] Not Applicable [] Waiver Requested |
| 3. Detailed Description of Control Equipment [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested |
| 4. Description of Stack Sampling Facilities [X] Attached, Document ID: <u>PC-E01-L4</u> [] Not Applicable [] Waiver Requested |
| 5. Compliance Test Report [] Attached, Document ID: _____ [X] Previously submitted, Date: <u>February 22 and March 22, 1999</u> [] Not Applicable |
| 6. Procedures for Startup and Shutdown [] Attached, Document ID: <u>PC-E01-L6</u> [] Not Applicable [] Waiver Requested |
| 7. Operation and Maintenance Plan [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested |
| 8. Supplemental Information for Construction Permit Application [] Attached, Document ID: _____ [X] Not Applicable |
| 9. Other Information Required by Rule or Statute [] Attached, Document ID: _____ [X] Not Applicable |
| 10. Supplemental Requirements Comment: |

Additional Supplemental Requirements for Title V Air Operation Permit Applications

| |
|---|
| 11. Alternative Methods of Operation [X] Attached, Document ID: <u>PC-E01-L10</u> [] Not Applicable |
| 12. Alternative Modes of Operation (Emissions Trading) [] Attached, Document ID: _____ [X] Not Applicable |
| 13. Identification of Additional Applicable Requirements [] Attached, Document ID: _____ [X] Not Applicable |
| 14. Compliance Assurance Monitoring Plan [X] Attached, Document ID: <u>PC-FI-E14</u> [] Not Applicable |
| 15. Acid Rain Part Application (Hard-copy Required) [] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [X] Not Applicable |

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

| | | | |
|---|-----------------------------------|--|-----------------------------|
| 1. Type of Emissions Unit Addressed in This Section: (Check one) | | | |
| <input type="checkbox"/> 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). | | | |
| <input checked="" type="checkbox"/> 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. | | | |
| <input type="checkbox"/> 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. Regulated or Unregulated Emissions Unit? (Check one) | | | |
| <input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. | | | |
| <input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit. | | | |
| 3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Facility-wide Fugitive and Vent Emissions | | | |
| 4. Emissions Unit Identification Number: | | <input type="checkbox"/> No ID <input checked="" type="checkbox"/> ID Unknown | |
| 5. Emissions Unit Status Code: A | 6. Initial Startup Date: 1 Jul 93 | 7. Emissions Unit Major Group SIC Code: 49 | 8. Acid Rain Unit? [N] |
| 9. Emissions Unit Comment: (Limit to 500 Characters) This emissions unit consists of a fuel oil storage tank, facility-wide fugitive and vent emissions from various locations throughout the facility. These emission points are listed in PC-E02-B6, with the exception of NOx emissions from the 1.275 MW emergency generators, the cumulative emissions from these units are less than the reporting thresholds. List of exemptions: 62-210.300 (3)(a) 5, 7, 9, 10,11,12, 15, 16, 20,21,22,23,24;62-296.310(2) and (3). Trivial sources listed for completeness. | | | |

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

2. Control Device or Method Code(s):

Emissions Unit Details

| | |
|--------------------------------------|---------------|
| 1. Package Unit: | |
| Manufacturer: | Model Number: |
| 2. Generator Nameplate Rating: MW | |
| 3. Incinerator Information: | |
| Dwell Temperature: | °F |
| Dwell Time: | seconds |
| Incinerator Afterburner Temperature: | °F |

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**Emissions Unit Operating Capacity and Schedule**

| | |
|--|-------------------------------------|
| 1. Maximum Heat Input Rate: | MMBtu/hr |
| 2. Maximum Incineration Rate: | lb/hr tons/day |
| 3. Maximum Process or Throughput Rate: | 701,100 gal/yr |
| 4. Maximum Production Rate: | |
| 5. Requested Maximum Operating Schedule: | |
| 24 hours/day | 7 days/week |
| 52 weeks/year | 8760 hours/year |
| 6. Operating Capacity/Schedule Comment (limit to 200 characters): Maximum process rate reflects fuel oil throughout limit for CT oil storage tank | |

List of Applicable Regulations

[illegible]

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)**Emission Point Description and Type**

| | | | |
|---|---|---|--|
| 1. Identification of Point on Plot Plan or Flow Diagram? Facility wide | | 2. Emission Point Type Code: 2 | |
| 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): | | | |
| 4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: | | | |
| 5. Discharge Type Code: F | 6. Stack Height: feet | 7. Exit Diameter: feet | |
| 8. Exit Temperature: x = 77 °F | 9. Actual Volumetric Flow Rate: acfm | 10. Water Vapor: % | |
| 11. Maximum Dry Standard Flow Rate: dscfm | | 12. Nonstack Emission Point Height: 0 feet | |
| 13. Emission Point UTM Coordinates: Zone: East (km): North (km): | | | |
| 14. Emission Point Comment (limit to 200 characters): Emission points are fugitive, and located throughout the facility. See PC-F1-E5 | | | |

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)**Segment Description and Rate:** Segment 1 of 2

| | | | |
|--|--------------------------------|--|--|
| 1. Segment Description (Process/Fuel Type) (limit to 500 characters): Petroleum Liquid Storage; fixed roof – distillate fuel No. 2; working loss | | | |
| 2. Source Classification Code (SCC): 4-03-010-21 | | 3. SCC Units: Thousand gallons used | |
| 6. Maximum Hourly Rate: 6.5 | 7. Maximum Annual Rate: 701 | 6. Estimated Annual Activity Factor: | |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 11.Million Btu per SCC Unit: | |
| 10. Segment Comment (limit to 200 characters): Maximum Annual Rate: 701.1 (rounded to 701). Distillate fuel oil usage limit per combustion turbines | | | |

Segment Description and Rate: Segment 2 of 2

| | | | |
|---|--------------------------------|--|--|
| 1. Segment Description (Process/Fuel Type) (limit to 500 characters): Petroleum Liquid Storage; fixed roof distillate fuel No.2; breathing losses | | | |
| 2. Source Classification Code (SCC): 4-03-010-20 | | 3. SCC Units: Thousand Gallons stored | |
| 6. Maximum Hourly Rate: | 7. Maximum Annual Rate: 170 | 6. Estimated Annual Activity Factor: | |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: | |
| 12.Segment Comment (limit to 200 characters): Maximum annual rate reflects storage capacity | | | |

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

| 1. Pollutant Emitted | 2. Primary Control Device Code | 3. Secondary Control Device Code | 4. Pollutant Regulatory Code |
|-----------------------|-----------------------------------|-------------------------------------|---------------------------------|
| NO_x | | | NS |
| | | | |
| | | | |
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| | | | |

Potential/Fugitive Emissions

Allowable Emissions Allowable Emissions _____ of _____

DEP Form No. 62-210.900(1) - Form
Effective: 2/11/99

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

| |
|--|
| 1. Process Flow Diagram [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested |
| 2. Fuel Analysis or Specification [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested |
| 3. Detailed Description of Control Equipment [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested |
| 4. Description of Stack Sampling Facilities [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested |
| 5. Compliance Test Report [] Attached, Document ID: _____ [] Previously submitted, Date: _____ [X] Not Applicable |
| 6. Procedures for Startup and Shutdown [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested |
| 7. Operation and Maintenance Plan [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested |
| 8. Supplemental Information for Construction Permit Application [] Attached, Document ID: _____ [X] Not Applicable |
| 9. Other Information Required by Rule or Statute [] Attached, Document ID: _____ [X] Not Applicable |
| 10. Supplemental Requirements Comment: |

Additional Supplemental Requirements for Title V Air Operation Permit Applications

| |
|---|
| 11. Alternative Methods of Operation [] Attached, Document ID: _____ [X] Not Applicable |
| 12. Alternative Modes of Operation (Emissions Trading) [] Attached, Document ID: _____ [X] Not Applicable |
| 13. Identification of Additional Applicable Requirements [] Attached, Document ID: _____ [X] Not Applicable |
| 14. Compliance Assurance Monitoring Plan [] Attached, Document ID: _____ [X] Not Applicable |
| 15. Acid Rain Part Application (Hard-copy Required) [] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [X] Not Applicable |

ATTACHMENT PC-AI-AC

ATTACHMENT PC-AI-AC

This application is for Pasco Cogeneration Facility, located in Pasco County, Dade City, Florida.

The application structure is as follows:

Emission Units

General:

2 combustion turbines (CTs)*

2 heat recovery steam generators (HRSGs)

Emissions Points (2): 2 stacks for CT/HRSG Units 1 & 2

Fuel Segments: Natural gas, with 240 hours per year maximum of distillate oil

Pollutants

CT/HRSG

NO_x, CO, PM/PM10, VOC, SO₂

VE Emissions

CT/HRSG

VE limits applicable

CMS

CT/HRSG

NO_x, O₂, fuel consumption

PSD

CT/HRSG

NO_x

*This proposal is to have each LM-6000 unit uprated by GE with their water mist injection technology to enhance performance.

ATTACHMENT PC-BI-AC

Five Year Site Emissions Data and Proposed Emissions Cap

ATTACHMENT PC-B1-AC

FIVE YEAR SITE EMISSIONS DATA AND PROPOSED EMISSIONS CAP

| <u>Pollutant</u> | <u>1998</u> | | | <u>1999</u> | | | <u>2000</u> | | | <u>2001</u> | | | <u>2002</u> | | |
|------------------|--------------------|-----------|--------------|-------------|-----------|--------------|-------------|-----------|--------------|-------------|-----------|--------------|-------------|-----------|--------------|
| | <u>U1</u> | <u>U2</u> | <u>Total</u> | <u>U1</u> | <u>U2</u> | <u>Total</u> | <u>U1</u> | <u>U2</u> | <u>Total</u> | <u>U1</u> | <u>U2</u> | <u>Total</u> | <u>U1</u> | <u>U2</u> | <u>Total</u> |
| <u>NOx</u> | 173.1 ¹ | 173.5 | 346.5 | 160.2 | 159.1 | 310.3 | 147.0 | 147.0 | 294.0 | 126.0 | 127.2 | 253.2 | 124.2 | 125.2 | 249.4 |
| <u>CO</u> | 125.5 | 127.9 | 253.4 | 114.4 | 107.4 | 221.8 | 97.1 | 97.8 | 194.8 | 83.8 | 84.9 | 168.6 | 81.7 | 82.1 | 163.8 |
| <u>PM/PM10</u> | 11.1 | 11.2 | 22.3 | 10.3 | 9.6 | 19.9 | 9.5 | 9.5 | 18.9 | 8.1 | 8.2 | 16.3 | 8.0 | 8.0 | 16.0 |
| <u>SO2</u> | 5.3 | 5.4 | 10.8 | 4.8 | 4.5 | 9.2 | 4.4 | 4.4 | 8.7 | 3.7 | 3.8 | 7.5 | 3.7 | 3.7 | 7.4 |
| <u>VOC</u> | 9.3 | 9.7 | 19.0 | 8.2 | 7.8 | 16.0 | 6.0 | 6.2 | 12.2 | 5.2 | 5.4 | 10.8 | 5.0 | 5.0 | 10.0 |

| <u>Pollutant</u> | <u>Current Permit²</u> | <u>1998/1999 Mean Ave.</u> | <u>PSD Trigger</u> | <u>Proposed Emissions Cap</u> | <u>Current vs. Proposed Cap Difference</u> |
|------------------|-----------------------------------|--------------------------------|--------------------|-----------------------------------|--|
| <u>NOx</u> | 404.7 | 328.4 | 40 | 368.0 | -36.7 |
| <u>CO</u> | 350.3 | 237.6 | 100 | 337.0 | -13.3 |
| <u>PM/PM10</u> | 27.0 | 21.1 | 15 | 27.0 | 0 |
| <u>SO2</u> | 21.0 | 10.0 | 40 | 21.0 | 0 |
| <u>VOC</u> | 30.8 | 17.5 | 40 | 30.8 | 0 |

¹ All calculations are in tons per year (tpy).

² Numbers represent total emissions from both site CTs

ATTACHMENT PC-FI-B
LIST OF APPLICABLE REGULATIONS

ATTACHMENT PC-FI-B
LIST OF APPLICABLE REGULATIONS

| Chapter 4 Permits | |
|--------------------------|---|
| 62-4.030 | General Prohibition. (State only) |
| 62-4.100 (1)(a);(b) | Exemptions Suspensions and Revocation. (State only) |
| 62-4.120 | Transfer of Permits. (State only) |
| 62-4.130 | Plant Operations -- Problems. (State only) |

| Chapter 210 Stationary Sources – General Requirements | |
|--|---|
| 62-210.300 | Permits Required. |
| | (2) Air Operation Permits. |
| | (3)Exemptions; (a) 5,7,9,10,11,12,15,16,20,21,22,23,24. |
| 62-210.350 | Public Notice and Comment. |
| | (1) Public Notice of Proposed Agency Action. |
| | (3) Additional Public Notice Requirements for Facilities Subject to Operation Permits for Title V Sources |
| 62-210.360 | Administrative Permit Corrections. |
| 62-210.370 | Reports. |
| | (3) Annual Operating Report for Air Pollutant Emitting Facility. |
| 62-210.900 | Forms and Instructions; (5) |

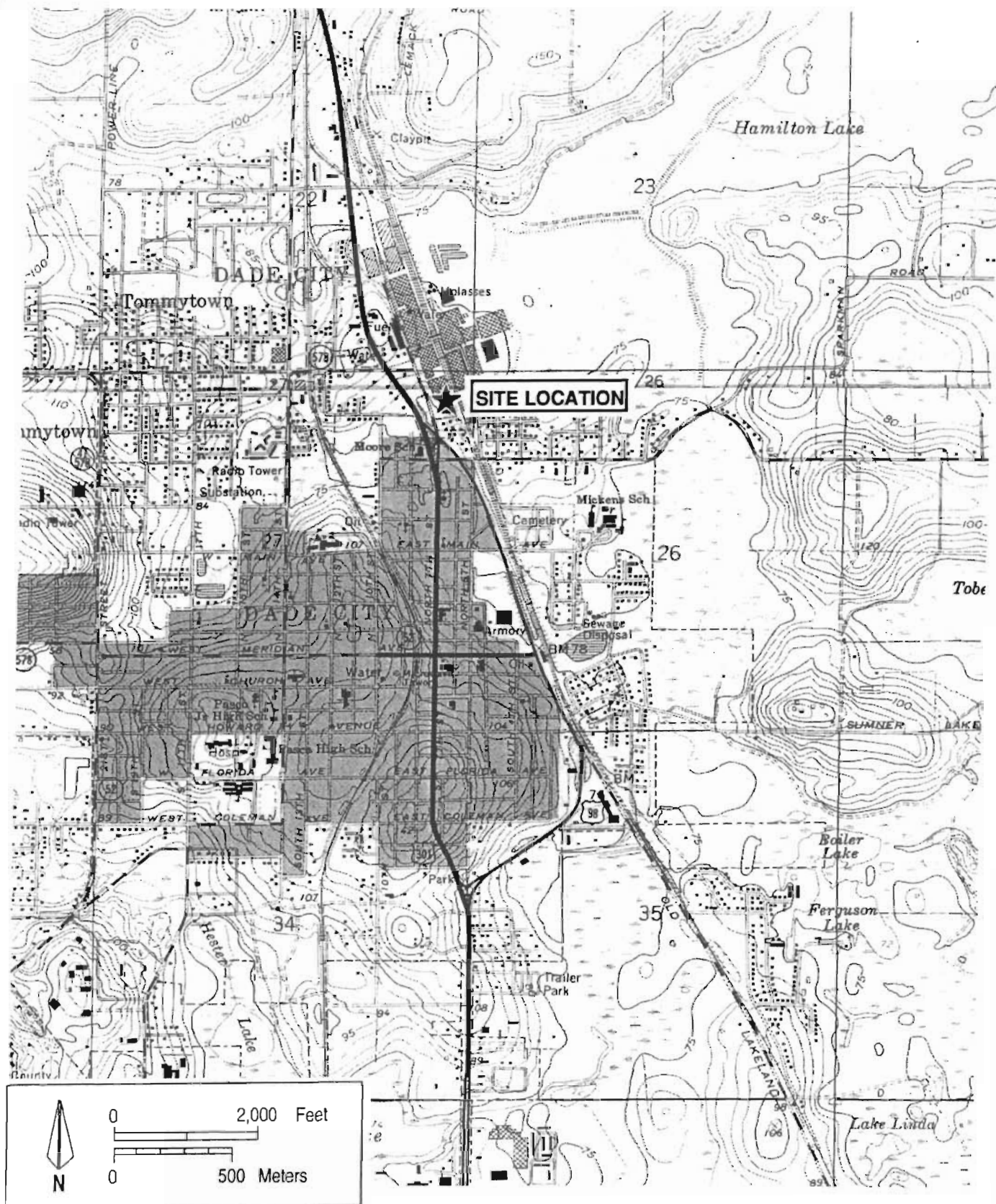
ATTACHMENT PC-FI-B
LIST OF APPLICABLE REGULATIONS

| Chapter 213 Operation Permits for Major Sources of Air Pollution | |
|---|---|
| 62-213.205 | Annual Operation Licensing Fee; (1), (a), (b), (c), (e), (f), (g), (i), (j) |
| 62-213.410 | Changes Without Permit Revision. |
| 62-213.420 | Permit Applications. (1)(b)2. and 3. |
| 62-213.460 | Permit Shield. |
| 62-213.900 | Forms and Instructions; (1) |

| Chapter 296 Stationary Sources – Emission Standards | |
|--|---|
| 62-296.320 | General Pollutant Emission Limiting Standards. |
| | (2) Objectionable Odor Prohibited |
| | (4) General Particulate Emission Limiting Standards |
| | (c) Unconfirmed Emissions of Particulate Matter |

| EPA Part 82 – Protection of Stratospheric Ozone | |
|--|---|
| Subpart F – Recycling and Emissions Reduction | |
| 82.166 | Reporting and record keeping requirements; (k) and (m). |

**ATTACHMENT PC-FI-E1
AREA MAP**



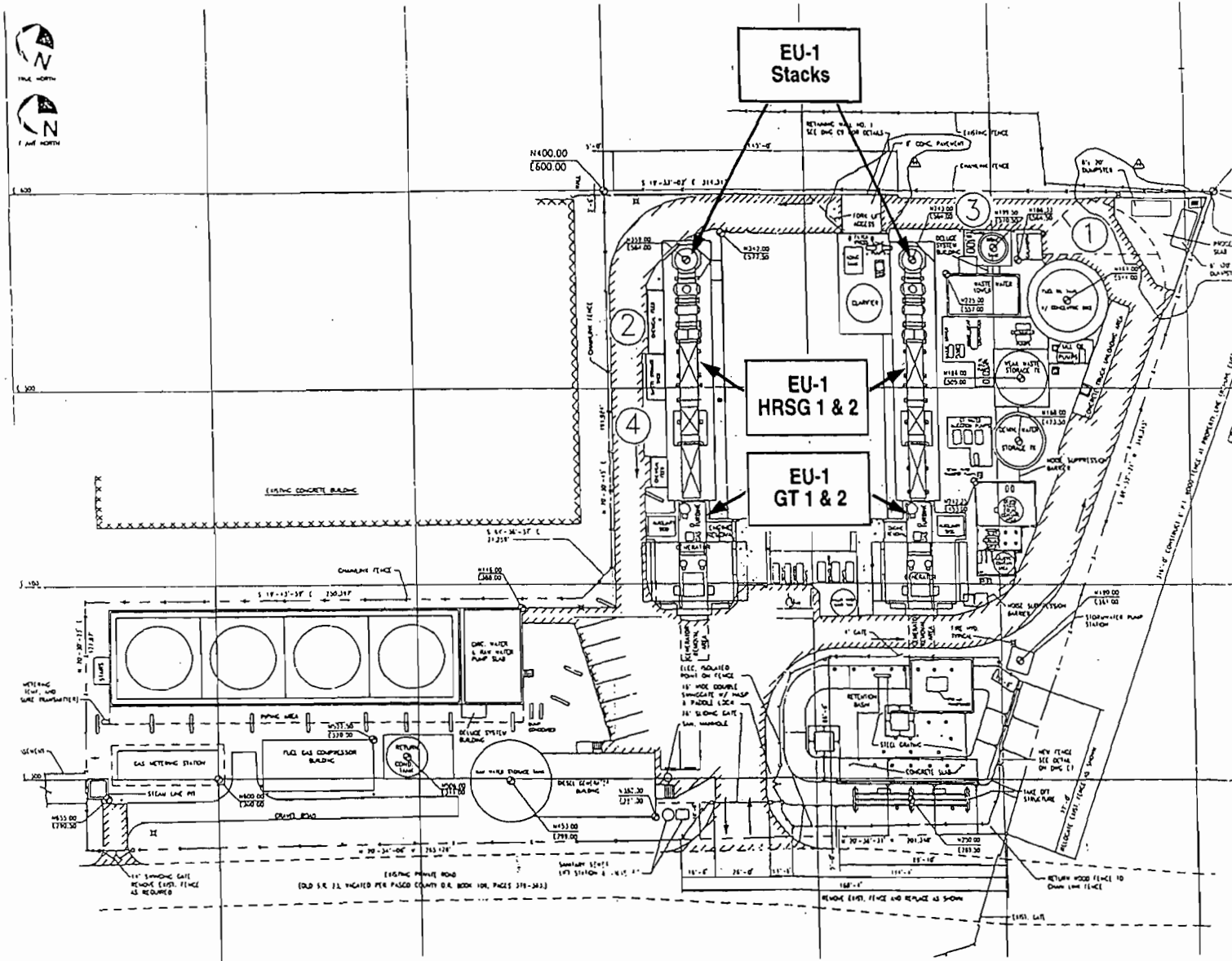
Attachment PC-FI-E1

Location of the Pasco Cogeneration, Limited Facility, Pasco County, Florida

Sources: USGS, 1988; KBN, 1996.

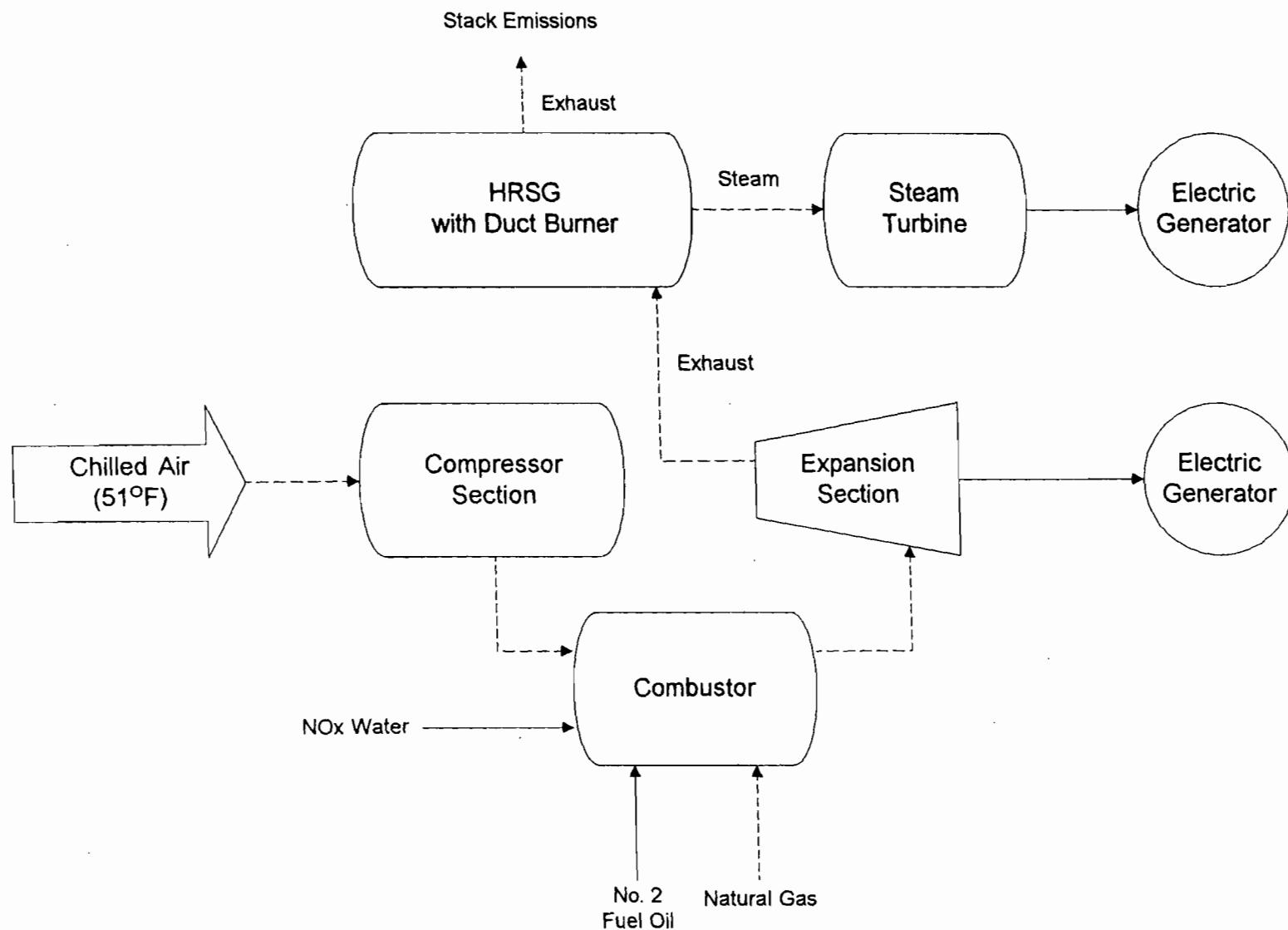


**ATTACHMENT PC-FI-E2
FACILITY PLOT PLAN**

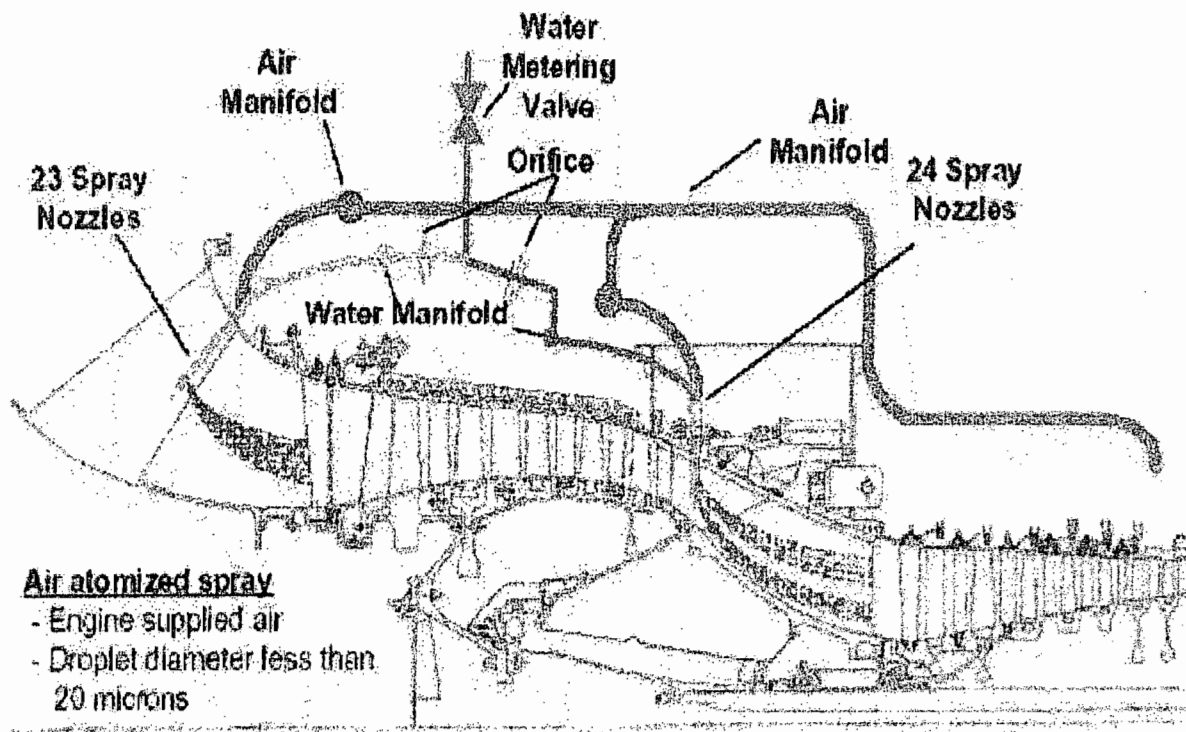


**ATTACHMENT PC-FI-E3
PROCESS FLOW DIAGRAM**

BEST AVAILABLE COPY



BEST AVAILABLE COPY



Schematic diagram of the Sprint system showing water droplets being injected into the LPC and HPC of an LM6000.

ATTACHMENT PC-FI-E4
PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE
MATTER

ATTACHMENT PC-FI-E4

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. Potential examples of particulate matter include:

- Fugitive dust from paved and unpaved roads,
- Fugitive particulates from the use of bagged chemical products, and
- Storage and handling of zero-liquid-discharge (ZLD) salt cake.

Operational measures are undertaken at the facility which also minimize particulate emissions, in accordance with 62-296.310(3), F.A.C.:

- Maintenance of paved areas as needed,
- Regular mowing of grass and care of vegetation,
- Limiting access to plant property by unnecessary vehicles,
- Use of bagged chemical products in enclosed or semi-enclosed areas, and
- Storage of ZLD byproduct in covered enclosed containers.

ATTACHMENT PC-FI-E5
FUGITIVE EMISSIONS IDENTIFICATION

ATTACHMENT PC-FI-E5 FUGITIVE EMISSIONS IDENTIFICATION

It should be noted that many fugitive emissions at the plant site have been classified as "exempt" or "trivial" activities and as such are not addressed here. The discussion below provides information on fugitive emissions that may occur at the facility.

Criteria and Precursor Air Pollutants

Fugitive particulate emissions are addressed in Attachment PC-FI-E4. Pasco Cogeneration, LT. Is not aware of fugitive emission of sulfur dioxide, nitrogen oxides, carbon monoxide, or lead compounds which would exceed the thresholds defined in the permit application instructions.

Volatile Organic Compounds (VOCs)

Fugitive emissions of VOCs include those resulting from the use of cleaners and solvents for maintenance and operation. VOCs are also emitted by the fuel oil storage tanks on the plant property, and by the combined-cycle units. VOC emissions for each of these emission units are covered in the respective Facility Pollutant or Emission Unit sections of this permit application.

Fugitive HAPs Emissions

The following hazardous air pollutants are present on the facility property and are potential sources of fugitive HAPs emissions:

- Chlorine
- Naphthalene
- Methyl ethyl ketone
- Toluene
- Xylene

Chlorine – Present in 150-lb cylinders. Used for water treatment at the facility. Presumptively exempt under category #27 of the FDEP Title V Insignificant Source Summary dated May 20, 1994.

Methyl Ethyl Ketone, Toluene, Xylene – The facility routinely maintains 5 gallons of paint thinner and solvents (which may contain MEK, toluene, or xylene) for use in plant maintenance activities. These containers are kept closed and are stored in weather-tight buildings. These emissions as a whole are addressed in the VOC section (preceding page).

Regulated Toxic or Flammable Substances

The following regulated toxic or flammable substances are present at the Pasco Cogeneration facility:

- Chlorine
- Sulfuric acid
- Acetylene
- Methane (natural gas)
- Cyclohexylamine

Chlorine – considered on the preceding page.

Sulfuric Acid – The facility maintains a 6,000-gallon Sulfuric Acid storage tank for water treatment use.

Acetylene – Present on the facility property in two 125-lb cylinders which are used for plant maintenance (welding and cutting). These operations are identified by EPA as trivial activities, and are exempt by Rule 62-210.3000.

Methane – Is a primary component of natural gas. The facility has a natural gas pipeline which delivers fuel to the generating units. This fuel delivery system is normally airtight, but does have safety valves which occasionally relieve (open) when an overpressure condition develops in the gas line.

Cyclohexylamine – The facility maintains several covered tote bins of a pH-adjustant chemical (Nalco Tri-Act 1820 Inhibitor) with up to 40% by weight of cyclohexylamine.

PC-FI-E6
SUPPLEMENTAL INFORMATION
FOR CP APPLICATION

PC-F1-E6: Supplemental Information For CP Application

Pasco Cogen plans to uprate its 2 GE LM6000 PA series Combustion Turbines (CTs) into more efficient units using GE's current uprate program. Given the nature of the facility's PPA and steam export requirements to Pasco Beverage (steam host facility), the only way to improve plant performance is to decrease fuel consumption while maintaining current power loads and export steam levels. Modification of the current LM-6000 model with the proposed uprate can help Pasco Cogen achieve this goal. Pasco will physically upgrade one unit on site, while replacing the second, with a newly reconditioned and upgraded unit.

The primary advantage of the newer LM6000 uprate technology for Pasco Cogen will be the fact that the modified CTs will experience significantly better fuel economy than the current PA series CTs. The key reason for this improved fuel efficiency is the use of GE's "spray intercooling" or Sprint modification technology. Spray intercooling involves the injection of a fine mist of demineralized water into the inlet of the CT compressor section. The small water droplets (< 20 micron), rapidly evaporate as the compressed air heats up within the compressor unit. The evaporation process extracts heat from the air and lowers the discharge temperature of the compressor. The lower discharge temperature allows the firing temperature of the engine to be increased because the compressor discharge air is used to cool the most critical parts of the hot sections of the engine. By providing this cooling, the modification allows the engine to operate more efficiently. The hotter firing temperature, or increased delta in temperature, produces more power with improved fuel efficiency.

The results seen from this modification are especially noticeable in warm /hot weather. Based upon ASHRAE weather data for the past 50 years in the vicinity of Pasco Cogen, the average ambient temperature observed during on-peak hours of operation is approximately 80°F. At that temperature, the facility can produce 109 MW of power using the PC Sprint engines with no inlet chilling or supplemental firing.

Based upon emission levels seen from similar uprates in other units, the NO_x and CO emissions resulting from the CT uprate modification are expected to remain within compliance of the current permit concentration (ppm) requirements. The total plant emission rates for NO_x and CO are expected to be elevated slightly. NO_x, is anticipated to rise from its current 85.5 lb/hr to 86.0 lb/hr., while CO is expected to increase slightly from 56.0 lb/hr to 56.5 lb/hr, for CO, both while firing on natural gas. Currently, the site's LM6000 PA engines use water injection into the combustion chamber to meet permit limits. The water moderates the flame temperature, which suppresses NO_x formation. It is anticipated that this same technique will continue to be used to maintain control of NO_x emissions at 25 ppmvd and CO emissions at 28 ppmvd with the modified units also. As shown in the synthetic cap table, Pasco is willing to accept less hours of operation or additional hours of lower load operation to meet the lower annual tonnage caps in order to have the ability to have this additional coverage.

ATTACHMENT PC-FI-E8
LIST OF EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE VI

ATTACHMENT PC-FI-E8

LIST OF EQUIPMENT/ACTIVITIES REGULATED – TITLE VI

Pasco Cogeneration, Limited currently has over 9 refrigeration and air-conditioning units on the plant site. Of these, 3 chiller units currently meet the 50-pound threshold established by the Department.

| <u>Model Name, Number</u> | <u>General Area</u> | <u>Amount</u> |
|---|------------------------------|------------------------|
| Trane Centravac Water Chiller Model CVHF1270 | CT/HRSG Chiller (2 units) | 1,250 tons (each unit) |
| Mitsubishi Steam Absorption Chiller Model MDHU | Auxiliary Building | 1,500 tons |

**ATTACHMENT PC-FI-E9
ALTERNATIVE METHODS OF OPERATION**

ATTACHMENT PC-FI-E9

ALTERNATE METHODS OF OPERATION

Alternate methods of operation which could simultaneously affect more than one emissions unit include the following:

1. Use of alternate fuels (e.g. distillate oil) for any unit could simultaneously affect insignificant emissions from the fuel storage tanks based on increased or decreased use of the fuel stored in the tank.

**ATTACHMENT PC-FI-E14
COMPLIANCE REPORT AND PLAN**

ATTACHMENT PC-FI-E14

COMPLIANCE REPORT AND PLAN PASCO COGEN LIMITED COGENERATION FACILITY

In accordance with Chapter 62-213, F.A.C. and based upon FDEP Permit No. AC51-196460, PSD-FL-177, the Cogeneration Facility Units 1 and 2 must comply with the following tests and reports as follows:

Table 1. Compliance Report and Plan, Pasco Cogeneration, Limited, Combined Cycle Units 1 and 2

| Parameter | Value | Compliance Schedule/Method |
|----------------------------|---|--|
| Operating Hours | 8,760 max., limit of 240 annual hours on fuel oil | Annual Operating Report |
| Heat Input Rate | 427.2 MMBtu/hr-natural gas (51° F, LVH)per CT (corresponds to 407 MMBtu/hr ISO) (fuel increase) 424 MMBtu/hr-No. 2 fuel oil (51°F, LHV)per CT (corresponds to 406 MMBtu/hr ISO) 90 MMBtu/hr-natural gas (HHV) per duct burner 525,000 MMBtu/yr-natural gas per duct burner | Annual Operating Report Daily fuel usage records |
| Fuel Usage Rate | 2,921 gal/hr per CT-No2 fuel oil 701,050 gal/yr per CT-No.2 fuel oil | Annual Operating Report Daily fuel usage records |
| Fuel Oil Specifications | 0.1 percent sulfur by weight Monitor nitrogen content and lower and higher heating values of fuel oil | Tested by approved ASTM Methods Records maintained for 3 years |
| Natural Gas Specifications | Sulfur content | Custom fuel monitoring schedule Records maintained for 3 years |
| Nitrogen Oxides | 86.0 lb/hr – CT BG (BACT 25 ppmvd @ 15% O ₂) 148.3 lb/hr – CT DFO (BACT 42 ppmvd @15% O ₂) 18.0 lb/hr – DB NG (BACT 0.1 lb/MMBtu) 104.0 lb/hr – CT&DB NG 368.0 TPY (synthetic cap of NOX) (36.7 TPY reduction) | Annual Stack Test (Gas only) Quarterly Excess Emissions Report Monitoring of water-fuel ration |
| Particulate Matter | 5.0 lb/hr – CT NG (BACT 25 ppmvd @ 15% O ₂) 20.0 lb/hr – CT DFO (BACT 42 ppmvd @15% O ₂) 2.6 lb/hr – DB NG (BACT 0.1 lb/MMBtu) 7.6 lb/hr – CT&DB NG 27.0 TPY (worst case fuel firing-by permit, Table 1a) | Compliance based on meeting VE limit Annual test required if VE exceeds 10% |
| Sulfur Dioxide | 87.6 lb/hr (0.1% sulfur) – CT DFO 21.0 TPY | Fuel Oil Analysis (if >400 hr/yr oil use) Quarterly Excess Emissions Report |
| Carbon Monoxide | 56.5 lb/hr – CT NG (BACT 28 ppmvd) 34.5 lb/hr – CT DFO (BACT 18 ppmvd) 36.0 lb/hr – DB NG (BACT 0.2 lb/MMBtu) 92.5 lb/hr – CT&DB NGa) 337 TPY Synthetic cap for CO) (13.3 TPY reduction) | Stack Test Upon Permit Renewal (Gas only) |
| VOC | 3.4 lb/hr – CT NG 8.7 .b/hr – CT DFO 5.4 lb/hr – DB NG 8.8 lb/hr – CT&DB NG 30.8 TPY (worst case fuel firing-by permit, Table 1a) | Based on demonstration of compliance with CO emission limit |
| Visible Emissions | 10% opacity | Annual Visible Emissions Test |
| Mercury | 0.0003 TPY – CT DFO | Requesting Deletion of Reporting |
| Lead | 0.0008 TPY – CT DFO | Requesting Deletion of Reporting |
| Beryllium | 0.0002 TPY – CT DFO | Requesting Deletion of Reporting |
| Sulfuric Acid Mist | 0.80 TPY – CT DFO | Requesting Deletion of Reporting |

Notes

CT=combustion turbine; DB=duct burner; DFO=distillate fuel oil; NG=natural gas

All stack testing must be conducted separately during operation of the CT only, and combined operation of the CT and HRSG duct burner.

Nitrogen oxide and visible emissions test must be conducted annually prior to September 9 of each year.

A copy of the fuel/water continuous monitoring data must be submitted with each stack test report.

Annual Report


An annual operation report must be submitted on the form supplied by FDEP on or before March 1 of each year

**ATTACHMENT PC-FI-E15
COMPLIANCE STATEMENT**

ATTACHMENT PC-FI-E15

COMPLIANCE STATEMENT

I, the undersigned, am the responsible official as defined in Chapter 62-213, 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.



Signature, Responsible Official



Date

ATTACHMENT PC-E01-D
LIST OF APPLICABLE REGULATIONS

Emission Unit Applicable Requirement List - Pasco Cogeneration - Combustion Turbine

| Chapter 210 Stationary Sources -- General Requirements | |
|---|---------------------------------|
| 62-210.650 | Circumvention. |
| 62-210.700 | Excess Emissions; (1); (4); (6) |

| Chapter 204 Air Pollution Control -- General Provisions (State Only) | |
|---|---|
| 62-204.800 | Standards of Performance for New Stationary Sources (NSPS). |
| | (7) General Provisions Adopted. |
| | (b) The following Standards of Performance for New Stationary Sources contained in 40 CFR 60, revised as of July 1, 1994, or later as specifically indicated. |
| | 4. 40 CFR 60.40c Subpart Dc, Small Industrial - Commercial - Institutional Steam Generating Units. |
| | 37. 40 CFR 60.330 Subpart GG, Stationary Gas Turbines. |
| | (e) Appendices Adopted. The following appendices of 40 CFR Part 60, revised as of July 1, 1994 or later as specifically indicated, are adopted and incorporated by reference. |
| | 1. 40 CFR 60 Appendix A, Test Methods, are adopted by reference. |
| | 2. 40 CFR 60 Appendix B, Performance Specifications. |
| | 5. 40 CFR 60 Appendix F, Quality Assurance Procedures. |

| Chapter 297 Stationary Sources -- Emission Monitoring | |
|--|---|
| 62-297.310 | General Test Requirements. |
| | (1) Required Number of Test Runs. |
| | (2) Operating Rate During Testing (a) Reserved for CTs |
| | (4) Applicable Test Procedures. (a)1.; (b); (c); (d); (e) |
| | (5) Determination of Process Variables. |
| | (6) Required Stack Sampling Facilities (a); (c); (d); (e); (f); (g) |
| | (7) Frequency of Compliance Tests (a)1., 3.; 4.b, 5., 9. |
| | (8) Test Reports. |

| Part 60 - EPA Regulations on Standards of Performance for New Stationary Sources (CT) | |
|--|---|
| Subpart A — General Provisions | |
| 60.7 | Notification and record keeping. (b); (f) |
| 60.8 | Performance tests. (e) |
| 60.11 | Compliance with standards and maintenance requirements. (a), (b), (c), (d), (e) |
| 60.12 | Circumvention. |
| 60.13 | Monitoring requirements. (a), (b), (d) |
| Subpart GG — Standards of Performance for Stationary Gas Turbines | |
| 60.332 | Standard for nitrogen oxides. (a) (1) |
| 60.333 | Standard for sulfur dioxide. |
| 60.334 | Monitoring of operations. |
| 60.335 | Test methods and procedures. |

| Part 60 - EPA Regulations on Standards of Performance for New Stationary Sources (Duct Burner) | |
|--|---|
| Subpart A — General Provisions | |
| 60.7 | Notification and record keeping (b); (f). |
| Subpart Dc — Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units | |
| 60.48c | Reporting and Record keeping; (g). |

ATTACHMENT PC-E01-E14
EMISSION POINT COMMENT

Table PC-E01-E14. Design Information and Stack Parameters for Pasco Cogen Combustion Turbine Units 1 and 2 Simple/Combination

| Data | Gas Turbine (Each Unit) | |
|--|-------------------------|-------------|
| | Combined Fuel Firing | |
| | No. 2 Fuel Oil | Natural Gas |
| General | | |
| Power (MW) | 38.9 | 39.5 |
| Heat Input (MMBtu/hr) | 424 | 423 |
| Estimated Heat Rate (Btu/kwh) | 10,900 | 10,709 |
| Annual Capacity Factor (%) | 100 | 100 |
| Hours of Operation | 240 | 8,520 |
| Volume Flow (acfm) = [(Mass Flow (lb/hr) x 1,545 x (Temp. (°F) + 460°F)] ÷ [Molecular weight x 2116.8] ÷ 60 min/hr | | |
| Mass Flow (lb/hr) | 1,081,322 | 1,079,779 |
| Temperature (°F) | 815 | 806 |
| Molecular Weight | 28.38 | 28.03 |
| Volume Flow (acfm) | 590,949 | 593,257 |
| Volume Flow (dscfm) = [(Mass Flow (lb/hr) x 1,545 x (68°F + 460°F)] ÷ [Molecular weight x 2116.8] ÷ 60 min/hr x [(1 - Moisture(%))/10] | | |
| Mass Flow (lb/hr) | 1,081,322 | 1,079,779 |
| Temperature (°F) | 68 | 68 |
| Molecular Weight | 28.38 | 28.03 |
| Moisture (% Vol.) | 9.30 | 11.00 |
| Volume Flow (dscfm) | 221,963 | 220,208 |
| HRSG Stack Data | | |
| Stack Height (ft) | 100 | 100 |
| Diameter (ft) | 11.0 | 11.0 |
| Volume Flow (acfm) from HRSG = [Volume Flow (acfm) from CT x (HRSG temp.(°F) + 460°F)] ÷ [CT temp.(°F) + 460°F] | | |
| Volume Flow (acfm) from CT | 590,949 | 593,257 |
| CT Temperature (°F) | 815 | 806 |
| HRSG Temperature (°F) | 232 | 232 |
| Volume Flow (acfm) from HRSG | 320,735 | 324,276 |
| Velocity (ft/sec) = Volume flow (acfm) from HRSG ÷ [(diameter)² ÷ 4] x 3.14159 ÷ 60 sc/min | | |
| Volume Flow (acfm) from HRSG | 320,735 | 324,276 |
| Diameter (ft) | 11.0 | 11.0 |
| Velocity (ft/sec) | 56.2 | 56.9 |

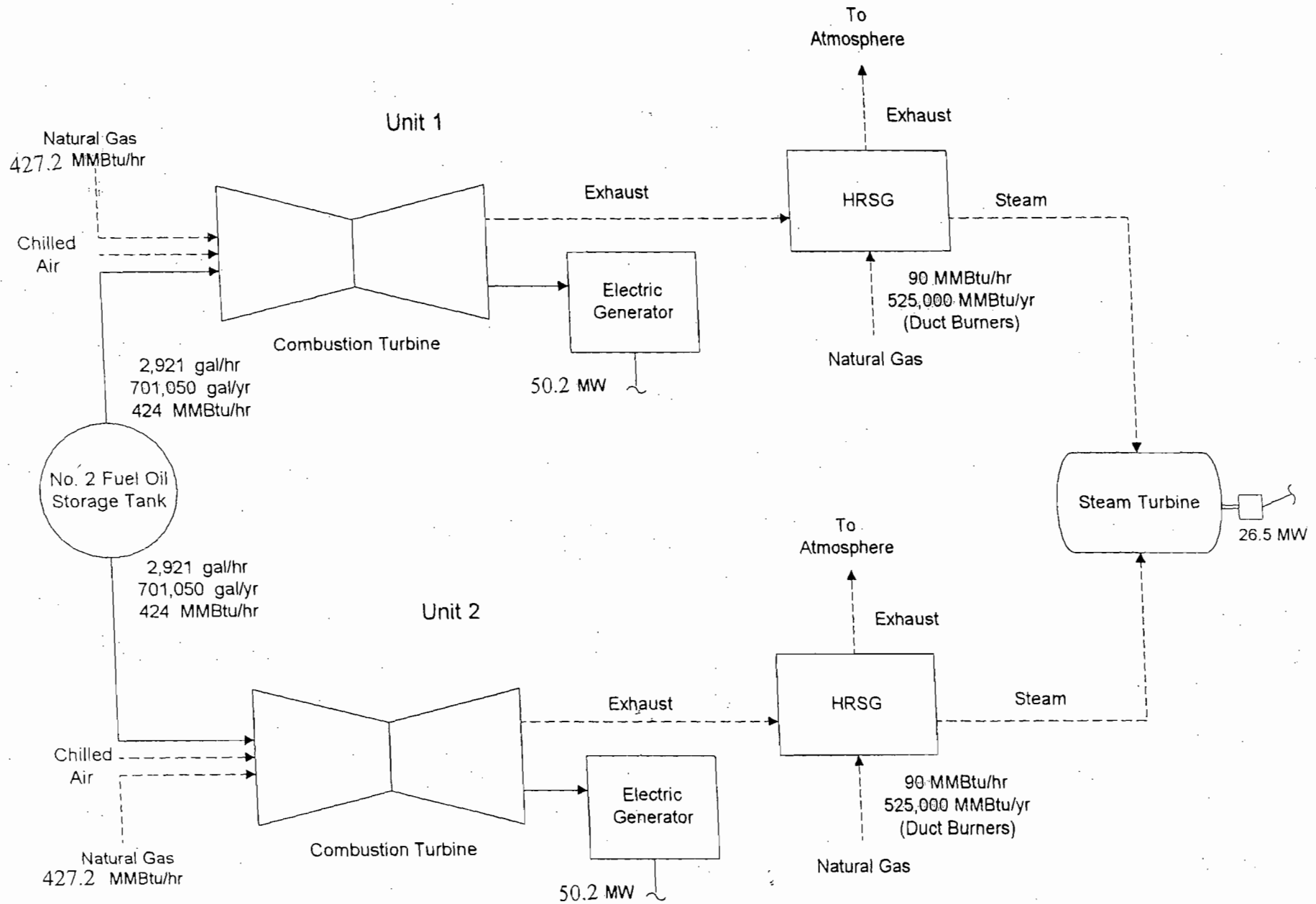
Source: Pasco Cogen, Ltd. Air construction permit application, KBN Engineering, 1991; Air Operating Permit, issued 7/20/94.

Notes:

Universal gas constant = 1,545 ft-lb(force)/°R;

Atmospheric pressure = 2,116.8 lb(force)/ft²

ATTACHMENT PC-E01-L1
PROCESS FLOW DIAGRAM



ATTACHMENT PC-E01-L2
FUEL ANALYSIS OR SPECIFICATION

FGT

Last Updated

4/8/03 9:56

Total Sulfur

Total Sulfur

Previous Day Avg Previous Day Avg

ppm

Grains/hcf

Station Name

04/07/03

04/07/03

Perry 36" Stream #1 (Pasco)

0.195

0.012

Perry 30" Stream #2

0.326

0.020

Perry 24" Stream #3

0.264

0.017

Brooker 24" Stream

5.853

0.366

Florida Gas makes no warranty or representation whatsoever as to the accuracy of the information provided.

This information is provided on a best efforts basis and is an estimate.

The information is not used for billing purposes.

Florida Gas is not responsible for any reliance on this information by any party.

Stream History

Pasco



| Gas Day | Index | Perry 36" Stream #1 15SA36PSUL.A | Perry 36" Stream #1 Avg Grains/hcf | Perry 30" Stream #2 15SA30PSUL.A | Perry 30" Stream #2 Avg Grains/hcf | Perry 24" Stream #3 15SA24PSUL.A | Perry 24" Stream #3 Avg Grains/hc |
|----------|-------|--|--|--|--|--|---|
| 04/06/03 | 33 | 0.195 | 0.012 | 0.326 | 0.020 | 0.264 | 0.017 |
| 04/05/03 | 32 | 0.148 | 0.009 | 0.269 | 0.017 | 0.256 | 0.016 |
| 04/04/03 | 31 | 0.087 | 0.005 | 0.147 | 0.009 | 0.127 | 0.008 |
| 04/03/03 | 30 | 1.263 | 0.079 | 2.329 | 0.146 | 2.295 | 0.143 |
| 04/02/03 | 29 | 4.056 | 0.254 | 6.917 | 0.432 | 6.694 | 0.418 |
| 04/01/03 | 28 | 3.563 | 0.223 | 5.568 | 0.348 | 5.356 | 0.335 |
| 03/31/03 | 27 | 4.035 | 0.252 | 4.458 | 0.279 | 4.323 | 0.270 |
| 03/30/03 | 26 | 3.923 | 0.245 | 4.382 | 0.274 | 4.442 | 0.278 |
| 03/29/03 | 25 | 3.731 | 0.233 | 3.650 | 0.228 | 3.945 | 0.247 |
| 03/28/03 | 24 | 2.781 | 0.174 | 3.083 | 0.193 | 3.213 | 0.201 |
| 03/27/03 | 23 | 2.917 | 0.182 | 3.021 | 0.189 | 2.874 | 0.180 |
| 03/26/03 | 22 | 2.876 | 0.180 | 2.945 | 0.184 | 2.935 | 0.183 |
| 03/25/03 | 21 | 2.624 | 0.164 | 3.412 | 0.213 | 3.413 | 0.213 |
| 03/24/03 | 20 | 2.974 | 0.186 | 3.246 | 0.203 | 3.151 | 0.197 |
| 03/23/03 | 19 | 2.220 | 0.139 | 2.550 | 0.159 | 3.151 | 0.197 |
| 03/22/03 | 18 | 2.520 | 0.157 | 3.066 | 0.192 | 3.151 | 0.197 |
| 03/21/03 | 17 | 1.907 | 0.119 | 2.409 | 0.151 | 3.151 | 0.197 |
| 03/20/03 | 16 | 2.254 | 0.141 | 2.574 | 0.161 | 3.151 | 0.197 |
| 03/19/03 | 15 | 2.233 | 0.140 | 2.592 | 0.162 | 3.151 | 0.197 |
| 03/18/03 | 14 | 2.190 | 0.137 | 2.488 | 0.156 | 3.151 | 0.197 |
| 03/17/03 | 13 | 1.847 | 0.115 | 2.585 | 0.162 | 3.151 | 0.197 |
| 03/16/03 | 12 | 2.257 | 0.141 | 3.196 | 0.200 | 3.151 | 0.197 |
| 03/15/03 | 11 | 2.485 | 0.155 | 3.340 | 0.209 | 3.151 | 0.197 |
| 03/14/03 | 10 | 2.388 | 0.149 | 3.024 | 0.189 | 3.151 | 0.197 |
| 03/13/03 | 9 | 2.601 | 0.163 | 3.490 | 0.218 | 3.151 | 0.197 |
| 03/12/03 | 8 | 3.081 | 0.193 | 3.330 | 0.208 | 3.151 | 0.197 |

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Page 2 of 2

| | | | | | | | |
|----------|---|-------|-------|-------|-------|-------|-------|
| 03/11/03 | 7 | 3.709 | 0.232 | 4.560 | 0.285 | 3.151 | 0.197 |
| 03/10/03 | 6 | 4.285 | 0.268 | 4.992 | 0.312 | 3.151 | 0.197 |
| 03/09/03 | 5 | 4.296 | 0.269 | 4.809 | 0.301 | 3.151 | 0.197 |
| 03/08/03 | 4 | 4.609 | 0.288 | 5.177 | 0.324 | 3.151 | 0.197 |
| 03/07/03 | 3 | 4.648 | 0.290 | 5.262 | 0.329 | 3.151 | 0.197 |
| 03/06/03 | 2 | 4.885 | 0.305 | 5.925 | 0.370 | 3.151 | 0.197 |
| 03/05/03 | 1 | 4.820 | 0.301 | 5.719 | 0.357 | 3.151 | 0.197 |

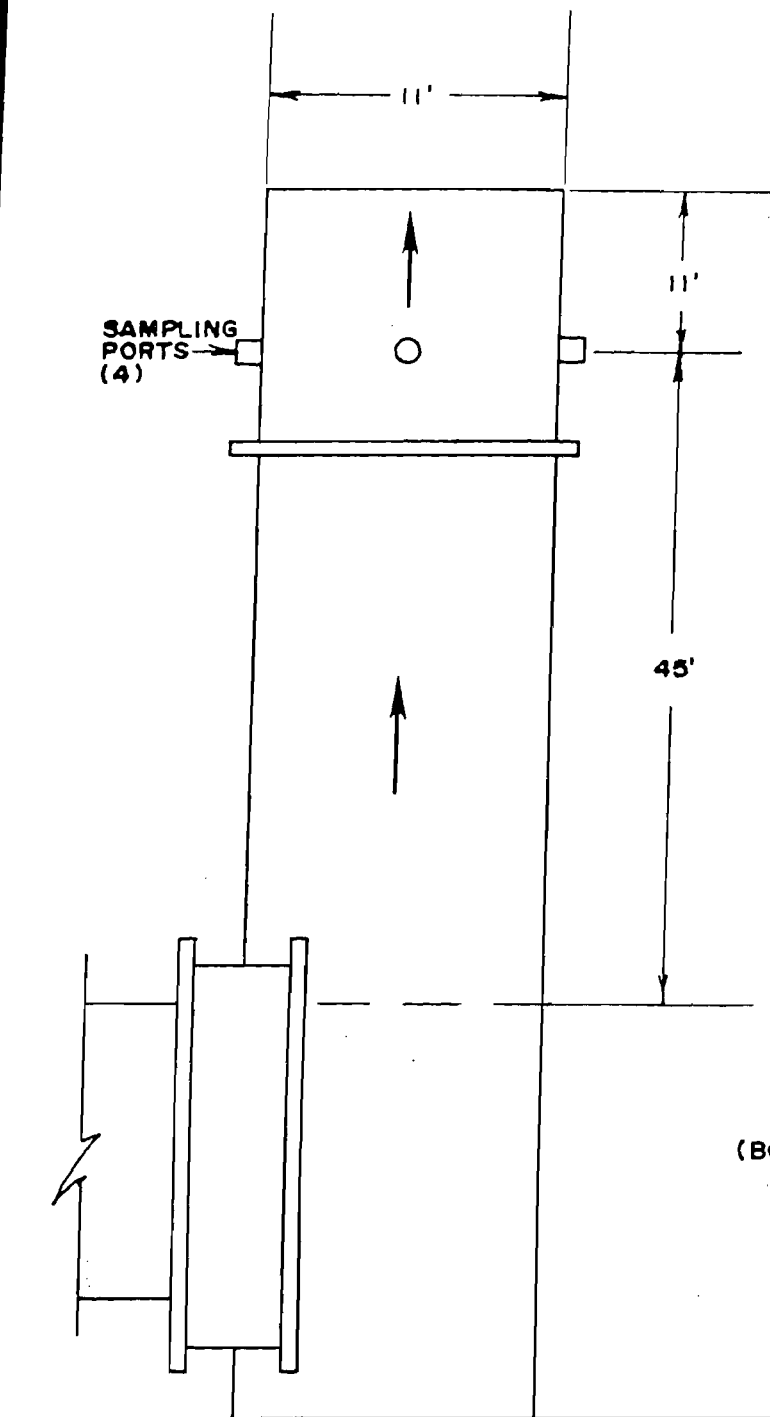
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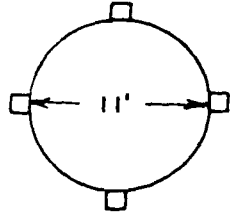
ATTACHMENT PC-E01-L4
DESCRIPTION OF STACK SAMPLING FACILITIES

ATTACHMENT PC-EU1-L4
DESCRIPTION OF STACK SAMPLING FACILITIES

Pasco Cogen is required by Permit AC51-196460 to perform annual stack testing for emissions from the combustion turbine in accordance with standard EPA reference methods. Pursuant to FAC 62-297.310(7), the annual stack test required is performed with the required stack sampling facilities. As specified by rule, the permanent test facilities meet the following:

- The exhaust stack is circular with a diameter of 11 feet.
- The sampling ports have a minimum effective diameter of 3 inches.
- The location of the sampling ports meet FAC 62-297.310(6) requirements (i.e., 2 stack diameters downstream and 0.5 stack diameters upstream of flow disturbances).
- There are four sampling ports, 90 degrees apart have been installed on the circular stack.
- The working platform is at least 24 square feet in area, at least 3 feet wide, extends 180 degrees around the stack, has safety rails, toeboards, and a hinged floor opening attached to it. There are no obstructions 14 inches below the port and 6 inches on either side of the port.
- The platform access ladder is equipped with a safety apparatus.



|  | |
|---|--------------------------|
| TRAVERSE POINT NUMBER | INCHES INSIDE STACK WALL |
| 1 | 2.77 |
| 2 | 8.84 |
| 3 | 15.54 |
| 4 | 23.36 |
| 5 | 33.00 |
| 6 | 46.99 |

(BOTH UNITS ARE IDENTICAL.)

NOTE: NOT TO SCALE

FIGURE 1.
SAMPLING POINT LOCATION
UNITS 1 & 2
 PASCO COGEN LIMITED
 DADE CITY, FLORIDA

AIR CONSULTING
 and
ENGINEERING

ATTACHMENT PC-E01-L6
PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT PC-E01-L6

PROCEDURES FOR STARTUP/SHUTDOWN

Startup for the combustion turbines begins with "lighting off" of the machines on natural gas or distillate oil. A period of from two to several hours is required to allow metal temperatures in the heat recovery steam generator (HRSG) and in the steam turbine to equilibrate without undue metal stress, before putting the unit "on the line" and sending electrical power to the grid.

The combustion turbines (CTs) utilize water injection for NO_x control during startup and shutdown. Emissions are continuously monitored by Continuous Monitor in System (CMS) for water to fuel ratio. If excess emissions are encountered during startup or shutdown, the nature and cause of any malfunction is identified, along with the corrective actions taken or preventative measures adopted. Corrective actions may include switching the unit from automatic (remote) to local control, or changing fuel combination(s). Best Operating Practices are adhered to and all efforts to minimize both the level and duration of excess emissions are undertaken.

Shutdown is performed by reducing the unit load (electrical production) to a minimum level, opening the breaker (which disconnects the unit from the system electrical grid), shutting off the fuel and coasting down to stop. The CT is then put "on turning gear" to prevent possible disfiguration of the turbine components.

ATTACHMENT PC-E01-10
ALTERNATIVE MEDTHODS OF OPERATION

ATTACHMENT PC-E01-L10

**ALTERNATE METHODS OF OPERATION
GAS TURBINE UNITS 1 AND 2**

The combustion turbine units are permitted to burn either natural gas or No. 2 fuel oil with a sulfur content not to exceed 0.1 percent (by weight). The units may operate continuously (i.e., 8,760 hours per year) on natural gas, or utilizing No. 2 fuel oil for no more than 701,050 gal/yr for each unit. The units may operate at various load conditions. Routine maintenance includes injection of a turbine wash chemical to clean the inlet turbine (compressor). These chemicals consist of detergents and surfactants.

ATTACHMENT PC-E01-E14

DESIGN INFORMATION AND STACK PARAMETERS FOR PASCO COGEN
COMBUSTION UNITS 1 AND 2 – REFLECTING DATA SUBMITTED 05/20/96 VS.
DATA CHANGES DUE TO THE INDIVIDUAL LM-6000 UNIT UPRATINGS

Table PC-E01-E14: Design Information and Stack Parameters for Units 1 and 2 (per unit)

| <u>Data</u> | <u>Combined Fuel Firing</u> | | |
|-------------|------------------------------|---------------------------|--|
| | No. 2 Fuel Oil (05/20/96) | Natural Gas (05/20/96) | Natural Gas (04/17/03 uprate request) |

General Information:

| | | | |
|------------------------------|------------|-------------|-------------|
| • Power (MW) | 38.9 | 39.5 | 50.2 |
| • Heat Input (MMBtu/hr.) | 424 | 423 | 427.2 |
| • Annual Capacity Factor (%) | 100 | 100 | 100 |
| • Hours of Operation | 240 (max.) | 8760 (max.) | 8760 (max.) |

$$\text{Volume Flow (acfm)} = [(\text{Mass flow (lb/hr)} \times 1,545 \times (\text{Temp (}^{\circ}\text{F)} + 460^{\circ}\text{F})) / \{\text{Molecular weight} \times 2116.8\} / 60 \text{ min/hr}]$$

| | | | |
|----------------------|-----------|-----------|-----------|
| • Mass Flow (lb/hr) | 1,081,322 | 1,079,779 | 1,083,240 |
| • Temperature (°F) | 815 | 806 | 825 |
| • Molecular Weight | 28.38 | 28.03 | 28.13 |
| • Volume Flow (acfm) | 590,949 | 593,257 | 603,915 |

$$\text{Volume Flow (dscfm)} = [(\text{Mass flow (lb/hr)} \times 1,545 \times (68^{\circ}\text{F} + 460^{\circ}\text{F})) / \{\text{Molecular weight} \times 2116.8\} / 60 \text{ min/hr} \times \{(1 - \text{Moisture (\%)/10})\}]$$

| | | | |
|----------------------|-----------|-----------|-----------|
| • Mass Flow (lb/hr) | 1,081,322 | 1,079,779 | 1,083,240 |
| • Temperature (°F) | 68 | 68 | 68 |
| • Molecular Weight | 28.38 | 28.03 | 28.13 |
| • Moisture (% vol.) | 9.3 | 11.0 | 10.4 |
| • Volume Flow (acfm) | 221,963 | 220,208 | 245,565 |

| <u>Data</u> | No. 2 Fuel Oil (05/20/96) | Natural Gas (05/20/96) | Natural Gas (04/17/03 uprate request) |
|-------------|------------------------------|---------------------------|--|
|-------------|------------------------------|---------------------------|--|

HRSG Stack Data:

| | | | |
|---------------------|------|------|------|
| • Stack Height (ft) | 100 | 100 | 100 |
| • Diameter (ft) | 11.0 | 11.0 | 11.0 |

Volume Flow (acfm) from HRSG = [Vol. Flow (acfm) from CT x (HRSG temp. (°F) + 460°F)] / CT temp (°F) + 460°F]

| | | | |
|------------------------------------|---------|---------|---------|
| • Volume Flow (acfm) from CT | 590,949 | 593,257 | 603,915 |
| • CT Temperature (°F) | 815 | 806 | 825 |
| • HRSG Temperature (°F) | 232 | 232 | 232 |
| • Volume Flow from the HRSG (acfm) | 320,735 | 324,276 | 325,221 |

Velocity (ft/sec) = Volume Flow (acfm) from HRSG / [((diameter of stack)² / 4) x 3.14159] / 60 sec/min

| | | | |
|--------------------------------|---------|---------|---------|
| • Volume Flow (acfm) from HRSG | 320,735 | 324,276 | 325,221 |
| • Stack Diameter (ft) | 11.0 | 11.0 | 11.0 |
| • Velocity (ft/sec) | 56.2 | 56.9 | 57.0 |

ATTACHMENT PC-E02-B6
EMISSIONS UNIT COMMENT

2

TRIVIAL ACTIVITIES

The trivial activities identified in this application are provided for information only and are identified as examples of, but not limited to, the trivial activities identified by the Division of Air Resources Management's (DARM's) guidance. It is understood that such activities do not have to be included in with the Title V Application. The trivial activities identified herein are consistent, in terms of amounts of emissions and types, with those activities listed in DARM's guidance.

NOTIFICATION OF TEMPORARY EXEMPTIONS

Pursuant to Rule 62-210.300(3)(b)1., notice is herein provide that the emissions units listed below are not subject to a permit issued by the Department of Environmental Protection and are exempt from permitting until a final determination is made under the Title V permitting requirements (Rule 62-213 F.A.C.). These units would not have triggered review under Rules 62-212.400 or 62-212.500 or any new source performance standard listed in Rule 62-204.800 F.A.C.

Attachment PC-E02-B6

| Area | Emission Unit Description | Number of Units | Type/ Pollutant | Applicable Regulations |
|---|--|-----------------|--------------------|------------------------|
| CT/ST BUILDING AREA | CT Lube Oil Vents | 2 | Vent/VOC | Trivial |
| | CT Lube Oil Storage Tank | 2 | Vent/VOC | Trivial |
| | ST Lube Oil Tank Vent | 1 | Vent/VOC | Trivial |
| | ST Lube Oil Filter Vent | 1 | Vent/VOC | Trivial |
| | Electric Generator Mineral Oil Vent | 2 | Vent/VOC | Trivial |
| | Turbine Cleaning Operation | 2 | Stack/VOC | Unregulated |
| | Water Wash Tanks | 3 | Fug. | Trivial |
| | Turbine Cooling Air | 2 | Vent | Trivial |
| | Various Pumps | Multiple | Fug. | Trivial |
| | Miscellaneous Drains Tank | 6 | Vent | Trivial |
| | Hydraulic Equipment | 4 | Fug. | Trivial |
| HRSG | Natural Gas Relief Valves | 14 | Vent | Trivial |
| | Various Steam Vents & Pressure Relief Valves | Various | Vents | Trivial |
| HRSG AREA | Nitrogen Lines | 3 | Fug. | Trivial |
| | Blowdown Quench Tank | 3 | Vent | Trivial |
| | Blowdown Flash Tank | 1 | Vent | Trivial |
| | Various Pumps (feedwater, and chemical feed) | Multiple | Fug. | Trivial |
| | CEM Equipment & Calibration Gas Venting | 2 Systems | Fug. | Trivial |
| | Fuel Oil Storage Tank 170,000 gal capacity | 1 | Vent/VOC | Regulated/NSPS Kb |
| WATER TREATMENT (BOILER, WASTEWATER) | Raw Water/Fire Water Storage Tank 376,012 gal capacity | 1 | Fug. | Trivial |
| | Demin-Filter Holding Tank | 1 | Fug. | Unregulated |
| | Chlorine Cylinders 150 lb each | 6 | Valve HAP | Unregulated |
| | Sulfuric Acid (H ₂ SO ₄) Tank 6,016 gal capacity | 1 | Fug. | Unregulated |
| | Boiler Feedwater Chemical Treatment Tanks | Multiple | Fug. | Unregulated |
| | Sodium Hydroxide (NaOH) Tank 6,610 gal capacity | 1 | Fug. | Trivial |
| | Brine Tank 9,306 gal capacity | 1 | Fug. | Trivial |

Attachment PC-E02-B6

| Area | Emission Unit Description | Number of Units | Type/ Pollutant | Applicable Regulations |
|---------------|---|-----------------|--------------------|------------------------|
| COOLING TOWER | Brine Containment Tank 16,545 gal capacity | 1 | Fug. | Unregulated |
| | Chilled Water Storage Tank 25,000 gal capacity | 1 | Fug. | Trivial |
| | RO Surge Tank 10,857 gal capacity | 1 | Fug. | Trivial |
| | Weak Waste Tank 151,222 gal capacity | 1 | Fug. | Trivial |
| | Condensate Return Tank 25,000 gal capacity | 1 | Fug. | Trivial |
| | Demin Water Storage Tank 102,000 gal capacity | 1 | Fug. | Trivial |
| | Decarbonator/Degasifier Removes CO2 from raw water | 1 | Fug. | Trivial |
| | Equalization Tank 22,000 gal capacity | 1 | Fug. | Trivial |
| | Neutralization Basin and Pumps | 1 | Fug. | Trivial |
| | Wastewater Cooling Tower | 1 | Fug. | Trivial |
| | Filter Press | 1 | Fug. | Trivial |
| | Various Pumps | Multiple | Fug. | Trivial |
| | Crystallizer | 1 | Fug. | Trivial |
| | Soda Ash Handling | 1 | Fug/PM | Trivial |
| | Fresh Water Cooling Tower | 1 | Vents | Unregulated |
| CHILLER AREA | Nalco 7342 (NaBr) Tank 492 lb capacity | 1 | Fug. | Trivial |
| | Cooling Water Pumps | Multiple | Fug. | Trivial |
| | Steam Condensing Unit | 1 | Fug. | Trivial |
| | Brine Cooling Tower | 1 | Fug. PM | Unregulated |
| | Refrigeration Chillers | 3 | Fug. | Unregulated |
| GENERAL SITE | Chiller Condensate Tank | 1 | Vent | Trivial |
| | Various pumps | Multiple | Fug. | Trivial |
| | Surface Coating < 6.0 gal/day | NA | Fug. | Exempt by Rule |
| | Sewer Vents | Multiple | Vent/Fug | Trivial |
| | Brazing, Soldering or Welding | NA | Fug. | Trivial/Exempt by Rule |
| | Plant Grounds Maintenance | NA | Fug. | Trivial |

Attachment PC-E02-B6

| Area | Emission Unit Description | Number of Units | Type/Pollutant | Applicable Regulations |
|--------------------------------|---|-----------------|----------------|------------------------|
| OFFICE SHOP AREA | Routine Maintenance | NA | Fug. | Trivial |
| | Non-halogenated Solvent | NA | Fug. | Unregulated |
| | Emergency Generators 1,275 kW Diesel | 2 | Stack | Unregulated |
| | Diesel Fuel Storage Tanks (300-400 gal capacity) | 2 | Vent/VOC | Unregulated |
| | Diesel Fire Pump 216 hp; 1,750 rpm | 1 | Stack | Trivial/Exempt by Rule |
| | Diesel Fire Pump Water Storage Tank | 1 | Vent/VOC | Trivial |
| | Diesel Powered Portable Welder/ Air Compressor | 1 | Vent/VOC | Trivial |
| | Salt Cake Storage | NA | Fug/PM | Trivial |
| | Office Equipment Operation | NA | Fug. | Trivial |
| | Routine Repairs | NA | Fug. | Trivial |
| | Indoor Fugitives (grinder, drill press, etc.) | NA | Fug. | Trivial |
| | Degreaser Non-Halogenated Solvent | 1 | Fug. | Trivial |
| | Laboratory | 1 | Fug. | Trivial/Exempt by Rule |
| | Storage Area | NA | Fug. | Trivial |
| | Propane Forklift | 1 | Vent | Trivial |
| | Air Compressor | 1 | Vent | Trivial |
| | Battery Room | 1 | Fug. | Trivial |
| | CO2 Fire System (Control Room) | 1 System | Fugitive | Trivial/Exempt by Rule |
| SWITCHYARD/ SUBSTATION AREA | Bead Blaster | 1 | Vent | Trivial |
| | Transformers and Associated Equipment | Multiple | Fug./VOC | Trivial |
| | Breakers-SF6 | 2 | Fug. | Trivial |
| PARKING LOT | Vehicles | Multiple | Exhausts | Trivial/Exempt by Rule |

Note: CT = Combustion Turbine; HRSG = Heat Recovery Steam Generator; ST = Steam Turbine
Trivial reflects EPA determination as stated in the White Paper (EPA, 1995).
Exempt by Rule refers to Rule 62-210.300(3)(a)

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Leo Rajter
Vice President
Pasco Cogeneration, Ltd.
20 West 9th Street
Kansas City, MO 64105

COMPLETE THIS SECTION ON DELIVERY
A. Received by (Please Print Clearly)
B. Date of Delivery

12-23-03

C. Signature

X *Michael P. ...*

☐ Agent

☐ Addressee

D. Is delivery address different from item 1?
☐ Yes

If YES, enter delivery address below:

☐ No

3. Service Type
☒ Certified Mail

☐ Express Mail

☐ Registered

☐ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

4. Restricted Delivery? (Extra Fee)
☐ Yes

2. Article Number (Copy from service label)

7000 2870 0000 7028 3642

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

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

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

 Postmark
Here

Sent To

Leo Rajter

Street, Apt. No.; or PO Box No.

20 W. 9th Street

City, State, ZIP+4

Kansas City, MO 64105

PS Form 3800, May 2000

See Reverse for Instructions

RECEIVED

NOV 25 2003

BUREAU OF AIR REGULATION

THE TAMPA TRIBUNE
Published Daily
Tampa, Hillsborough County, Florida

State of Florida }
County of Hillsborough } ss.

Before the undersigned authority personally appeared C. Pugh, who on oath says that she is the Advertising Billing Supervisor of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a

LEGAL NOTICE THE PASCO TRIBUNE

in the matter of **PUBLIC NOTICE OF INTENT**

was published in said newspaper in the issues of
NOVEMBER 21, 2003

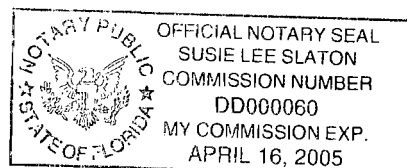
Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, this advertisement for publication in the said newspaper.

C. Pugh

Sworn to and subscribed by me, this 21 day
of NOVEMBER, A.D. 20 03

Personally Known ☒ or Produced Identification _____
Type of Identification Produced _____

Susie Lee Slaton



**PUBLIC NOTICE OF INTENT
TO ISSUE AIR
CONSTRUCTION PERMIT**

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

Draft Air Permit No.
1010071-002-AC

Pasco Cogeneration,
Limited
SPRINT Project

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Pasco Cogeneration, Limited (Applicant) to install "SPRINT" spray inter-cooling technology on the two existing LM-6000 gas turbines (Emissions Units 001 and 002). The new equipment will be installed at the Pasco Cogeneration Plant, which is located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525. The applicant's authorized representative and mailing address is: Mr. Leo Rajter, Vice President, Pasco Cogeneration, Limited, 20 West 9th Street, Kansas City, MO 64105.

The applicant proposes to add SPRINT technology to the two existing gas turbines to enhance performance. "SPRINT" stands for SPRAY INTER-cooling and involves the injection of atomized water into the compressor between the high-pressure and low-pressure

compressors. This results in evaporative cooling of the compressor inlet air and higher mass flow rates. Benefits include increased power output with more efficient fuel usage. The maximum heat input rate when firing natural gas is expected to increase from 423 to 427 MMBtu per hour. The power output is expected to increase from 39.5 to 50.2 MW depending on ambient conditions.

As an electric utility steam generating unit, Pasco Cogeneration Ltd. projects that the addition of SPRINT will have little impact with regard to actual emissions from these units. In other words, future representative actual emissions due to the addition of SPRINT technology would be less than the 2-year average actual annual emissions discounting any emissions due to demand growth that could have been accommodated prior to the change. The draft permit authorizes the SPRINT project and specifies emissions standards for carbon monoxide and nitrogen oxides. Initial and annual testing is required for these pollutants. The permittee is required to submit reports comparing actual emissions after implementing SPRINT to the past actual emissions (2-year average) before the project. If the comparison shows an increase in actual emissions greater than the PSD significant emission rates defined in Table 212.400-2, F.A.C., then Units 1 and 2 shall be subject to PSD pre construction review at that time. The review shall include a determination of the Best Available Control Technology (BACT) for each PSD significant pollutant.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written

comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #335, Tallahassee, Florida 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address

indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the

agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Florida Department of Environmental Protection
Bureau of Air Regulation,
New Source Review
Section
(111 S. Magnolia Drive,
Suite 4)
2600 Blair Stone Road, MS
#5505
Tallahassee, Florida,
32399-2400
Telephone: 850/488-0114

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

The complete project file includes the application, Technical Evaluation and Preliminary Determination, Draft Permit, and the

information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Bureau of Air Regulation's review engineer for this project for additional information at the address and phone number listed above.

3862 11/21/03

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Leo Rajter
Vice President
Pasco Cogeneration, Limited
20 West 9th Street
Kansas City, MO 64105

2. Article Number (Copy from service label)

7000 2870 0000 7028 3345

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly)

B. Date of Delivery

11-10-03

C. Signature

X Michael Palmer

☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes**U.S. Postal Service****CERTIFIED MAIL RECEIPT**

(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage

\$

Certified Fee

Return Receipt Fee
(Endorsement Required)Restricted Delivery Fee
(Endorsement Required)

Total Postage & Fees

\$

Postmark
Here

Sent To

Leo Rajter

Street, Apt. No.; or PO Box No.

20 W. 9th St.

City, State, ZIP+4

Kansas City, MO 64105

PS Form 3800, May 2000

See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Leo Rajter
Vice President
Pasco Cogen, Ltd.
c/o Aquila
20 W. 9th Street
Kansas City, MO 64105

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly)

B. Date of Delivery
10-14-03

C. Signature

X *Michael Palmer*☐ Agent
☐ Addressee

D. Is delivery address different from item 1?

If YES, enter delivery address below: ☐ Yes
☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

2. 7001 0320 0001 3692 6037

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

U.S. Postal Service**CERTIFIED MAIL RECEIPT**

(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage \$

Certified Fee

Return Receipt Fee
(Endorsement Required)Restricted Delivery Fee
(Endorsement Required)

Total Postage & Fees \$

Postmark
Here

Sent To

Leo Rajter

Street, Apt. No.,

or P.O. No. 9th St.

City, State, ZIP+4

Kansas City, MO 64105

PS Form 3800, January 2001

See Reverse for Instructions

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

OFFICIAL USE

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

Postmark
Here

| | |
|--------------------------------------|--|
| Sent To | |
| Leo Rajter | |
| Street, Apt. No., or P.O. Box No. | |
| 20 W. 9th St. | |
| City, State, ZIP+4 | |
| Kansas City, MO 64105 | |

PS Form 3800, January 2001

See Reverse for Instructions

7001 0320 0001 3692 5726



Jeb Bush
Governor

Department of Environmental Protection

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

Colleen M. Castille
Secretary

September 15, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Richard Christmas, Plant Manager
Pasco Cogeneration, Ltd.
14850 Old State Road 23
Dade City, Florida 33525

Re: Air Permit No. 1010071-002-AC
Pasco Cogeneration Plant
SPRINT Project for Combined Cycle Units 1 and 2
Extension of Air Construction Permit Expiration Date

Dear Mr. Christmas:

On August 25, 2006, the Department received your request for an extension of air construction Permit No. 1010071-002-AC for the Pasco Cogeneration Plant located in Pasco County at 14850 Old State Road 23, Dade City, Florida 33525. This permit authorized the installation of spray inter-cooling technology (SPRINT) for the pair of existing LM-6000 gas turbines (Units 1 and 2). In June of 2006, Pasco Cogeneration successfully completed all work related to the SPRINT project for Unit 2, which is now fully operational and satisfactorily performance tested. However, only the initial engineering design and drawings have been completed for Unit 1. Pasco Cogeneration expects to approve expenditures for the Unit 1 SPRINT project by the end of 2006. This work is planned for April/May of 2007, which is the next available major outage scheduled for this unit. Therefore, Pasco Cogeneration, Ltd. requests a 1-year extension of the air permit to allow completion of the SPRINT project for Unit 1 in 2007.

Determination: The SPRINT project will allow an increase in the maximum power production for Units 1 and 2 from approximately 42.5 to 50.2 MW through the use of spray inter-cooling technology (SPRINT). The Department originally concluded that SPRINT would have a minimal impact on emissions. The air construction permit requires the plant to report emissions for 5 years after installing SPRINT to ensure that the project did not result in a PSD significant net emissions increase. This conclusion remains valid for the permit extension and the Department approves the request. The expiration date is hereby extended from December 1, 2006 to December 1, 2007. A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permitting decision is issued pursuant to Chapter 403, Florida Statutes.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making a determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida 32301. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice

"More Protection, Less Process"

Printed on recycled paper.

under Section 120.60(3), F.S., must be filed within fourteen (14) days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

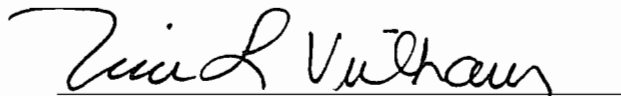
Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests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

Mediation: Mediation is not available in this proceeding.

Effective Date: This permitting decision is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this action will not be effective until further order of the Department.

Appeal: Any party to this permitting decision (order) has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Trina Vielhauer, Chief
Bureau of Air Regulation

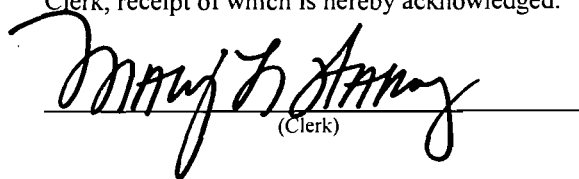
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this order was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 9/15/06 to the persons listed:

Mr. Richard Christmas, Pasco*
Mr. Tom Grace, Pasco c/o Aquila
Ms. Mara Nasca, SWD Office
Mr. Gregg Worley, EPA Region 4 Office

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date,
pursuant to §120.52, Florida Statutes, with the designated Department
Clerk, receipt of which is hereby acknowledged.


(Clerk)

9/15/06
(Date)

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Richard Christmas, Plant Manager
Pasco Cogeneration, Ltd.
14850 Old State Road 23
Dade City, Florida 33525

COMPLETE THIS SECTION ON DELIVERY

A. Signature ☒ Agent
Richard Christmas ☐ Addressee

B. Received by (Printed Name) *Richard Christmas* C. Date of Delivery

D. Is delivery address different from Item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

7000 1670 0013 3110 1236

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

U.S. Postal Service**CERTIFIED MAIL RECEIPT**

(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage \$
Certified Fee
Return Receipt Fee
(Endorsement Required)
Restricted Delivery Fee
(Endorsement Required)

Postmark
Here


Mr. Richard Christmas, Plant Manager
Pasco Cogeneration, Ltd.
14850 Old State Road 23
Dade City, Florida 33525

PS Form 3800, May 2000

See Reverse for Instructions

Florida Department of Environmental Protection

Memorandum

TO: Trina Vielhauer, Bureau of Air Regulation
FROM: Jeff Koerner, Air Permitting North 
DATE: September 8, 2006
SUBJECT: Air Permit No. 1010071-002-AC
Pasco Cogeneration, Limited – LM-6000 SPRINT Project
Second Extension of Air Construction Permit Expiration Date

Attached for your approval and signature is a permit modification to extend the expiration date for the above referenced permit. In October of 2004, the original project to install SPRINT technology on the pair of existing LM6000 gas turbines was extended from December 1, 2004 to December 1, 2006. In June of 2006, Pasco Cogeneration successfully completed all work related to the SPRINT project for Unit 2, which is now fully operational and satisfactorily performance tested. However, only the initial engineering design and drawings have been completed for Unit 1. Pasco Cogeneration expects to approve expenditures for the Unit 1 SPRINT project by the end of 2006. This work is scheduled for April/May of 2007, which is the next available major outage scheduled for this unit. The installation of SPRINT is expected to result in minimal emissions impacts and the change in plans does not affect the Department's original determination. I recommend your approval and signature.

Attachments

PASCO COGEN, LTD.
NCP Dade Power, LLC., General Partner

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

August 23, 2006

Mr. Jeffery F. Koerner, PE
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road, MS 5505
Tallahassee, FL 32399-2400
(850) 921-9536

RECEIVED

AUG 25 2006

BUREAU OF AIR REGULATION

RE: Pasco Cogeneration LP; Facility ID 1010071; Pasco County, Florida;
Request for One Year Extension to Construction Permit 1010071-002-AC

Dear Mr. Koerner:

The purpose of this letter is to follow-up with the conversation we had last Friday, August 18, 2006, concerning the ongoing SPRINT modification project at the Pasco Cogeneration facility and the need to secure an additional extension to the current construction permit.

The Pasco Cogeneration facility, located in Dade City, Pasco County, Florida, has a construction permit to install SPRINT units on its two LM-6000 Combustion Turbine units that is scheduled to expire on December 1, 2006. Progress on having both Combustion Turbines modified with the SPRINT technology is being made, but will not be fully completed by the current December 1, 2006 permit deadline. To successfully complete this effort, Pasco Cogeneration is requesting an additional one year extension to the construction permit. As explained below, progress is being made, but at a pace somewhat slower than originally anticipated by the project.

To date the following work evolutions have occurred or are about to occur with regard to the installation of SPRINT technology in the two Combustion Units at Pasco Cogeneration.

- As of June 6, 2006, all work on the Combustion Turbine Unit 2 SPRINT modification has been completed with the unit having been successfully tested and now fully functional.
- The drawings for the Unit 1 SPRINT modification and initial engineering for design application have been completed.
- Prior to December 1, 2006, Pasco Cogeneration and GE will complete negotiations for the second unit installation and will have secured Partnership Approvals for expenditures.
- To accept beneficial pricing from GE, the PO for purchase of the modification equipment and initial shipment of hardware must be done prior to the end of the first quarter of 2007.

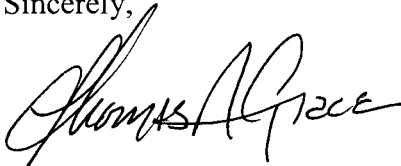
- A major plant outage is scheduled for sometime in either April or May of 2007, at which time the facility will be out of service and available to have the modification components installed and the system testing completed.

Based on the time line provided above, a one year additional extension to the construction permit is anticipated to meet the project needs.

If you have any questions or concerns with regard to this request for an additional time extension to the SPRINT modification construction permit, please feel to call either Richard Christmas, Pasco Cogeneration Plant Manager, at 352-523-0062, or myself, at 775-850-2248. We look forward to hearing back from you at your earliest convenience.

For Pasco Cogeneration

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas A. Grace". The signature is fluid and cursive, with the first name "Thomas" being more prominent.

Thomas A. Grace, CHMM
Manager, Environmental Services

Cc: R. Christmas
J. Delgado
T. DeRocher

Koerner, Jeff

From: Thomas Grace [tgrace@caithnessenergy.com]
Sent: Wednesday, September 06, 2006 4:21 PM
To: Koerner, Jeff
Subject: FW: Scanned from TOSHIBA 09/06/2006 13:01

Attachments: DOC090606.pdf



DOC090606.pdf
(474 KB)

Jeff,

Per our earlier conversation, here are attached the scanned pages from the recent source test. Normally Pasco is not required to do CO testing annually, only every five years prior to Title V permit renewal submittal, but we had it done as a separate test on Unit 2 this time due to the SPRINT addition (see table on last page of scan). The original of this source test was submitted last month to Southwest District.

I hope this addresses your needs for the extension approval for Unit 1. If you need any further info let me know.

Thanks once again for your help.

Tom Grace
775-850-2248

-----Original Message-----

From: Caithness Energy [mailto:gpotts@cenyc.com]
Sent: Wednesday, September 06, 2006 1:01 PM
To: Thomas Grace
Subject: Scanned from TOSHIBA 09/06/2006 13:01

Scanned from TOSHIBA.
Date: 09/06/2006 13:01
Pages:10
Resolution:200x200 DPI

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

BIAS CORRECTION AND EMISSION RESULTS

PASCO COGEN

CT-2 OUTLET

DADE CITY, FLORIDA

JULY 13, 2006

CT BASE LOAD

F-FACTOR

8710

1306-1413

CT ONLY

RUN 1

NOx

Cal Gas

Value

Pre Run

Bias

Zero

Post Run

Bias

Zero

Average

Bias

Zero

Run

Average

Corrected

Value

NOx @ 15%

LB/MMBTU

LB/HR

24.78

24.71

0.07

24.84

0.25

24.77

0.16

26.92

26.95

24.44

0.0900

40.31

CO

27.75

27.72

-0.04

27.84

0.01

27.78

-0.02

27.50

27.47

0.0559

25.00

O2

13.93

13.92

-0.01

13.94

0.01

13.93

0.00

14.39

14.39

GAS FLOW (SCFM)

7237

HEATING VALUE:

1031

BTU/SCF

1435-1535

CT ONLY

RUN 2

NOx

Cal Gas

Value

Pre Run

Bias

Zero

Post Run

Bias

Zero

Average

Bias

Zero

Run

Average

Corrected

Value

NOx @ 15%

LB/MMBTU

LB/HR

24.78

24.84

0.25

24.77

0.26

24.80

0.26

27.20

27.20

24.68

0.0909

40.71

CO

27.75

27.84

0.01

27.82

0.01

27.83

0.01

27.10

27.02

0.0550

24.61

O2

13.93

13.94

0.01

13.90

0.01

13.92

0.01

14.39

14.40

GAS FLOW (SCFM)

7237

HEATING VALUE:

1031

BTU/SCF

1552-1652

CT ONLY

RUN 3

NOx

Cal Gas

Value

Pre Run

Bias

Zero

Post Run

Bias

Zero

Average

Bias

Zero

Run

Average

Corrected

Value

NOx @ 15%

LB/MMBTU

LB/HR

24.78

24.77

0.26

24.47

0.03

24.62

0.15

27.08

27.28

24.80

0.0914

40.9

CO

27.75

27.82

0.01

27.82

-0.03

27.82

-0.01

27.16

27.10

0.0552

24.7

O2

13.93

13.90

0.01

13.90

0.02

13.90

0.02

14.38

14.41

GAS FLOW (SCFM)

7232

HEATING VALUE:

1031

BTU/SCF

**SOURCE TEST REPORT
FOR
COMBINED CYCLE COMBUSTION TURBINES
WITH AUXILIARY DUCT BURNERS**

**INTEGRATED FACILITY UNITS 1 AND 2
COMPLIANCE EVALUATION
FOR
NATURAL GAS FIRING
OXIDES OF NITROGEN,
SULFUR DIOXIDE AND VISIBLE EMISSIONS**

FDEP PERMIT NUMBER 1010071-003-AV

**PASCO COGENERATION LIMITED
DADE CITY, FLORIDA**

JULY 13-14, 2006

PREPARED FOR:

**CAITHNESS ENERGY, L.L.C.
9790 GATEWAY DRIVE, STE. 220
RENO, NEVADA 89521**

PREPARED BY:

**AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67TH PLACE, SUITE 4
GAINESVILLE, FLORIDA 32653
(352) 335-1889**

424-06-04



2106 N.W. 67th Place • Suite 4 • Gainesville, Florida • 32653
(352) 335-1889 FAX (352) 335-1891

REPORT CERTIFICATION

To the best of my knowledge, all applicable field and analytical procedures comply with the Florida Department of Environmental Protection requirements and all test data and plant operating data are true and correct.

Dagmar Fick
Dagmar Fick, Staff Engineer

Date 8/14/2006

EXECUTIVE SUMMARY

The annual compliance test results for the Unit 1 (EU001) and the Unit 2 (EU002) Combustion Turbines meet all mass emission requirements listed in the Florida Department of Environmental Protection (FDEP) Permit Number 1010071-003-AV. All tests were conducted on natural gas firing only. The allowable lower heating value (LHV) heat input to each unit is 424 MMBTUH. Testing was conducted at 395.0 and 405 MMBTUH, respectively, due to restrictions imposed by G.E.

| Pollutant | Source | Actual Emissions | Total Plant Allowable Emissions |
|-----------------|---------|---|---|
| UNIT 1 | | | |
| NO _x | CT | 38.4 lbs/hr, 24 ppm _{v,d} @ 15% O ₂ | 85.5 lbs/hr CT1 & CT2 combined 25ppm _{v,d} @ 15% O ₂ |
| | DB | 0.74 lbs/hr, 0.016 lbs/MMBTU | 18.0 lbs/hr DB1 & DB2 combined 0.1 lbs/MMBTU |
| | CT & DB | 39.1 lbs/hr | 103.5 lbs/hr Total |
| UNIT 2 | | | |
| NO _x | CT | 40.6 lbs/hr, 25 ppm _{v,d} @ 15% O ₂ | 85.5 lbs/hr CT1 & CT2 combined 25ppm _{v,d} @ 15% O ₂ |
| | DB | -2.01 lbs/hr, -0.038 lbs/MMBTU | 18.0 lbs/hr DB1 & DB2 combined 0.1 lbs/MMBTU |
| | CT & DB | 38.6 lbs/hr | 103.5 lbs/hr Total |

Mass emission limitations are total for both units combined.

Emission results at full load are provided in Tables 1 (Unit 1) and 2 (Unit 2), which include demonstration of compliance at ISO ambient corrected NO_x emission concentrations to ensure that CFR 40 Part 60 Subpart GG emission limits are also met. ISO corrected NO_x allowable is approximately 112.5 ppm.

No visible emissions were detected from full gas turbine or full gas turbine plus full duct burner operations from both units.

SO₂ emissions based on fuel analysis were 1.05×10^{-2} for Unit 1 at 42 MW and 1.01×10^{-2} lb/hr for Unit 2 at 47.4 MW.

1.0 INTRODUCTION

On July 13 and 14, 2006 Air Consulting and Engineering, Inc. (ACE) performed annual compliance testing for Oxides of Nitrogen (NO_x) and Opacity on the exhaust stacks of the Combustion Turbines, Units 1 and 2, at Pasco Cogeneration Limited in Dade City, Florida.

The Units were tested at full load to satisfy conditions of the current Florida Department of Environmental Protection (FDEP) Title V Permit 1010071-003-AV (see Appendix A).

United States Environmental Protection Agency (EPA) Method 20 (NO_x and O₂) and Method 9 (VE) were used to determine turbine emissions with and without duct burner operation. Sulfur Dioxide (SO₂) emissions were calculated from the fuel analysis.

Mr. Warren Park of Pasco Cogeneration, Ltd. coordinated testing and provided plant production data. Mr. Tom Grace of Caithness Energy, L.L.C. served as Project Director.

2.0 SUMMARY AND DISCUSSION OF RESULTS

The facility demonstrated compliance with permit conditions. Results of the emission tests are summarized in Tables 1 and 2. The Units were fired on natural gas.

The contribution of NO_x emissions of the gas fired duct burners was determined by performing a test series with and without duct burner firing. The difference in emission rates was attributed to the duct burners.

Duct burner NO_x contributions averaged 0.016 pounds per Million BTUs (lbs/MMBTU) for Unit 1 and -0.038 lbs/MMBTU for Unit 2. The power output of the combustion turbines 1 and 2 was 42 and 47.4 megawatts (MW) with and without duct burners. Unit 2's Inlet Air Temperature and Water Flow Rates were 60.2° F and 38.0 GPM for CT operation only and 58.4° F and 38.1 GPM for CT plus Duct Burner Operations. The NO_x water to fuel ratio averaged 1.39 for both operating conditions (see Appendix F for Plant Data). The apparent negative emission rate was possibly caused by a slight increase in the water injection rate and a slight decrease in CT heat input as well as a higher inlet air temperature during the DB test. DB contribution for NO_x are difficult to accurately demonstrate due to the relative low (10%) DB contribution to the total heat input. Allowable emissions are 0.1 lbs/MMBTU NO_x.

Units 1 and 2 without duct burners averaged 23.9 and 24.6 parts per million (ppm) NO_x at 15% O₂, respectively, which is within the permitted standard of 25 ppm at 15% O₂.

To also demonstrate compliance with Federal New Source Performance Standards (NSPS) by 40CFR 60 Subpart GG, observed NO_x concentrations were first adjusted to 15% O₂ and then finally to ISO standard ambient conditions using the following equation:

$$\text{ISO NO}_x \text{ Emissions} = (\text{NO}_{x\text{obs}} \text{ ppm}) (P_{\text{ref}}/P_{\text{obs}})^{0.5} e^{19(H_{\text{obs}}-0.00633)} (288^\circ\text{K}/T_{\text{amb}})^{1.53}$$

Where:

NO_{xobs} = measured NO_x ppm at 15% O₂

P_{ref} = reference combustor inlet absolute pressure at 101.3 kilopascal ambient pressure (29.92 in. Hg)

P_{obs} = measured combustor inlet absolute pressure at test ambient pressure (actual barometric pressure in in. Hg)

H_{obs} = specific humidity at ambient air at test (g H₂O/g air)

T_{amb} = temperature of ambient air at test

e = 2.718 - transcendental constant

Allowable NO_x emissions for NSPS are approximately 112.5 ppm @ ISO ambient conditions. Both units were in compliance with this standard.

Table 1. Emission Summary
Unit 1 Combustion Turbine - Gas Fired
Pasco Cogeneration, Ltd.
Dade City, Florida
July 14, 2006

| Run Number | Time | Oxygen % | NOx Emissions | | | | | COMBUSTION TURBINE | | | DUCT BURNERS | | CT + DB | NOx Contr. |
|--|-----------|----------|---------------|------------|----------|--------|-----------|--------------------|--------------------------|------------|---------------|-----------------------|-----------------------|------------|
| | | | ppm | ppm 15% O2 | ppm @ISO | lbs/hr | lbs/MMBTU | Gas Flow scfm | CT Heat Input MMBTUH HHV | MMBTUH LHV | Gas Flow scfm | Heat Input MMBTUH HHV | Heat Input MMBTUH HHV | lbs/MMBTU |
| Full Load CT only at 41.9 MW | | | | | | | | | | | | | | |
| 1 | 1113-1222 | 14.28 | 26.79 | 23.87 | 31.60 | 38.45 | 0.0879 | 7076 | 437.3 | 395.5 | NA | NA | NA | NA |
| 2 | 1238-1338 | 14.28 | 26.58 | 23.68 | 30.60 | 38.08 | 0.0872 | 7064 | 436.6 | 394.8 | NA | NA | NA | NA |
| 3 | 1355-1455 | 14.28 | 26.96 | 24.01 | 31.30 | 38.60 | 0.0885 | 7059 | 436.2 | 394.6 | NA | NA | NA | NA |
| Average | — | 14.28 | 26.78 | 23.85 | 31.17 | 38.38 | 0.0879 | 7066 | 438.4 | 395.0 | NA | NA | NA | NA |
| Full Load CT at 42.0 MW with Duct Burner | | | | | | | | | | | | | | |
| 1 | 1513-1613 | 13.40 | 27.74 | 21.82 | NA | 38.75 | 0.0804 | 7060 | 436.3 | 394.6 | 740 | 45.7 | 482.1 | 0.007 |
| 2 | 1632-1732 | 13.41 | 27.99 | 22.05 | NA | 39.30 | 0.0812 | 7081 | 437.6 | 395.8 | 746 | 46.1 | 483.7 | 0.026 |
| 3 | 1746-1847 | 13.38 | 28.28 | 22.19 | NA | 39.30 | 0.0817 | 7037 | 434.9 | 393.4 | 750 | 46.4 | 481.3 | 0.015 |
| Average | — | 13.40 | 28.00 | 22.02 | NA | 39.12 | 0.0811 | 7059 | 436.3 | 394.6 | 745 | 46.1 | 482.3 | 0.016 |

Natural Gas Fd-Factor = 8710 MMBTU/dscf

lbs/hr = ppm(2.595 x 10⁻⁹)MW (20.9/20.9-%O2)(Fd)(Heat Input HHV)

Heat Input HHV = (gas flow)(1030 dry Btu/cf)(60 min/hr)/10E6

MW NOx = 46 lbs/lb-mole

SO2 Emissions (Subpart GG NSPS) = 1.05E-02 lbs/hr 0.299 gr/hcf

Allowable Emissions

NOx =25 ppmvd @ 15%O2

DB NOx = 0.1 lbs/MMBTU

Table 2. Emission Summary
Unit 2 Combustion Turbine - Gas Fired
Pasco Cogeneration, Ltd.
Dade City, Florida
July 13, 2006

| Run Number | Time | Oxygen % | NOx Emissions | | | | | COMBUSTION TURBINE | | | DUCT BURNERS | | CT + DB | NOx |
|--|-----------|----------|---------------|------------|----------|--------|-----------|--------------------|------------------------------|-------|---------------|-----------------------|-----------------------|------------------|
| | | | ppm | ppm 15% O2 | ppm @ISO | lbs/hr | lbs/MMBTU | Gas Flow scfm | CT Heat Input MMBTUH HHV LHV | | Gas Flow scfm | Heat Input MMBTUH HHV | Heat Input MMBTUH HHV | Contr. lbs/MMBTU |
| Full Load CT only at 47.4 MW | | | | | | | | | | | | | | |
| 1 | 1306-1413 | 14.39 | 26.95 | 24.44 | 32.90 | 40.31 | 0.0900 | 7237 | 447.7 | 405.0 | NA | NA | NA | NA |
| 2 | 1435-1535 | 14.40 | 27.20 | 24.68 | 30.30 | 40.71 | 0.0909 | 7237 | 447.7 | 405.0 | NA | NA | NA | NA |
| 3 | 1552-1652 | 14.41 | 27.28 | 24.80 | 30.30 | 40.90 | 0.0914 | 7232 | 447.4 | 404.7 | NA | NA | NA | NA |
| Average | — | 14.40 | 27.14 | 24.64 | 31.17 | 40.64 | 0.0908 | 7235 | 447.6 | 404.9 | NA | NA | NA | NA |
| Full Load CT at 47.4 MW with Duct Burner | | | | | | | | | | | | | | |
| 1 | 1717-1817 | 13.38 | 26.82 | 21.05 | NA | 38.72 | 0.0776 | 7231 | 447.3 | 404.6 | 838 | 51.9 | 499.2 | -0.031 |
| 2 | 1830-1930 | 13.40 | 26.62 | 20.94 | NA | 38.56 | 0.0771 | 7234 | 447.5 | 404.8 | 849 | 52.5 | 500.0 | -0.041 |
| 3 | 1944-2044 | 13.43 | 26.51 | 20.93 | NA | 38.60 | 0.0771 | 7235 | 447.6 | 404.8 | 847 | 52.4 | 499.9 | -0.044 |
| Average | — | 13.40 | 26.65 | 20.97 | NA | 38.63 | 0.0773 | 7233 | 447.5 | 404.8 | 845 | 52.3 | 499.7 | -0.038 |

Natural Gas Fd-Factor = 8710 MMBTU/dscf

MW NOx = 46 lbs/lb-mole

lbs/hr = ppm(2.595 x 10⁻⁹)MW (20.9/20.9-%O2)(Fd)(Heat Input HHV)

Heat Input HHV = (gas flow)(1031 dry Btu/cf)(60 min/hr)/10E6

SO2 Emissions (Subpart GG NSPS) = 1.01E-02 lbs/hr 0.279 gr/hcf

Allowable Emissions

NOx =25 ppmvd @ 15%O2

DB NOx = 0.1 lbs/MMBTU

Actual combined mass emissions for both turbines are 79.0 lbs/hr NO_x at a total heat input of 799.9 MMBTUH (LHV). Combined mass emissions with duct burners are 77.8 lbs/hr NO_x at a total heat input of 799.4 MMBTUH (LHV).

Mass emissions for in pounds per hour were calculated using the actual heat input and the pollutant concentration.

Sulfur Dioxide (SO₂) emissions were determined by fuel analysis performed by the SGS North America, Inc.. SO₂ emissions based on 4.470 ppmv (7/13/06) and 4.788 ppmv (7/14/06) Sulfur content averaged 2.06×10^{-2} lbs/hr for both Units combined (see Appendix F for fuel analysis).

Visible emission tests were conducted on both units during turbine operation only and combined turbine and duct burner operation. Visible emissions on both turbine exhaust stacks at both conditions averaged 0.0 percent opacity for the highest six minute period of each test (see Appendix D for VE data). Permitted emissions are 10 percent opacity.

Gaseous emission data with data logger results and strip chart copies are provided in Appendices B and C, respectively.

3.0 PROCESS DESCRIPTION AND OPERATION

The Pasco Cogeneration Limited facility consists of two GE LM6000 PA combustion gas turbine generating sets with a nominal generating capacity of 42 MW each. Each turbine is exhausted through a Heat Recovery Steam Generator (HRSG) with supplemental duct burner firing. The steam produced by the HRSG is exhausted through a common steam turbine generator originally rated for 26.5 MW. The duct burners are permitted for up to 90 MMBTU heat input each. The gas turbines can be fired on either natural gas or oil. The duct burners are fired only with natural gas. The gas turbines have a chiller system, which maintains inlet combustion air at 51°F to 58°F and 100% relative humidity year round. Water is injected at the turbine combustor ring to reduce NO_x emissions.

Unit 2 is equipped with a "Sprint" system that injects atomized water in the combustor inlet. This increases power and further reduces NO_x.

During the compliance test the Units generated 42 MW (Unit 1) and 47.4 MW (Unit 2) at full load (see Appendix F for plant production data).

ESN 185-103 GAS TURBINE 2

45.00 TO 50.00 3 One Hour runs

DATE: 08/11/06

TAKE READINGS EVERY 15 MINUTES DURING THE TEST

| YOKAGOWA | | | | | | | | | | | | ACE | | | | | | | | | | | |
|--------------|--------------------|-------|----------------------|---------------|------------------|--------------|--------------------|---------------|-----------------------|------------------|--------------|----------------------|-------------------|---------------------------|------------|-------|-------------------------|------------|------------|------------------------|--------------------------|-------------|--|
| PLANT METERS | | | | | | | | | | | | | | | | | | | | | | | |
| TIME | INLET AIR T2 | GTMW | NOX WATER | | TURBINE GAS FLOW | | TURBINE GAS FLOW | | NOX RAMP NETCON | WATER/FUEL | | NOX PPH NETCAL | NOX PPH DCS | CO2 PPM UNCORRECTED | NOX PPM | % O2 | CO2 PPM CORRECTED | NOX PPM | P0 Pres | Plant Barom Pres | Airport Barom Pres | Amb Temp | |
| | | | TOTALIZER GALLONS | FLOW GPM | TOTALIZER SCF | FLOW SCFM | TOTALIZER KSCFH | FLOW KSCFH | | RATIO PLT MTR | RATIO DCS | | | | | | | | | | | | |
| RUN 1 | 13:05 | 60.00 | 47.40 | 21,376,871.00 | 38.10 | 10592.70 | 7249.00 | 85559.00 | 434.40 | 1.000 | | 1.39 | | N/A | 26.84 | 14.39 | 27.60 | 24.31 | 14.42 | 14.79 | 14.79 | 91.80 | |
| | 13:20 | 59.50 | 47.40 | 21,377,412.00 | 38.00 | 11581.10 | 7250.00 | 85634.00 | 434.30 | 1.000 | | 1.39 | | N/A | 26.91 | 14.40 | 27.23 | 24.40 | 14.41 | 14.79 | 14.79 | 92.50 | |
| | 13:36 | 60.20 | 47.40 | 21,377,969.00 | 38.10 | 12634.00 | 7252.00 | 85742.00 | 434.12 | 1.000 | | 1.39 | | N/A | 26.89 | 14.41 | 27.38 | 24.43 | 14.41 | 14.79 | 14.79 | 92.40 | |
| | 13:51 | 60.10 | 47.40 | 21,378,524.00 | 38.10 | 13679.00 | 7252.00 | 85845.00 | 434.00 | 1.000 | | 1.40 | | N/A | 27.02 | 14.40 | 27.54 | 24.51 | 14.41 | 14.79 | 14.79 | 91.80 | |
| | 14:06 | 60.00 | 47.40 | 21,379,132.00 | 38.20 | 14795.00 | 7252.00 | 85970.00 | 434.40 | 1.000 | | 1.40 | | N/A | 27.02 | 14.39 | 27.58 | 24.47 | 14.41 | 14.79 | 14.79 | 92.60 | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| RUN 2 | 14:35 | 61.30 | 47.40 | 21,380,219.00 | 38.00 | 16791.00 | 7260.00 | 86172.00 | 433.90 | 1.000 | | 1.39 | | N/A | 27.16 | 14.37 | 27.56 | 24.52 | 14.41 | 14.79 | 14.79 | 93.80 | |
| | 14:51 | 59.20 | 47.40 | 21,380,793.00 | 37.90 | 17855.00 | 7258.00 | 86291.00 | 434.60 | 1.000 | | 1.39 | | N/A | 27.12 | 14.39 | 27.57 | 24.61 | 14.41 | 14.79 | 14.79 | 93.30 | |
| | 15:06 | 60.80 | 47.40 | 21,381,444.00 | 37.90 | 19089.00 | 7259.00 | 86403.00 | 433.90 | 1.000 | | 1.39 | | N/A | 27.26 | 14.39 | 27.17 | 27.70 | 14.40 | 14.79 | 14.79 | 95.20 | |
| | 15:20 | 60.10 | 47.40 | 21,381,916.00 | 38.10 | 19936.00 | 7260.00 | 86495.00 | 434.20 | 1.010 | | 1.39 | | N/A | 27.12 | 14.39 | 27.02 | 24.56 | 14.40 | 14.79 | 14.79 | 95.20 | |
| | 15:35 | 60.00 | 47.40 | 21,382,503.00 | 38.00 | 21025.00 | 7258.00 | 86606.00 | 434.60 | 1.010 | | 1.39 | | N/A | 27.45 | 14.38 | 26.82 | 24.84 | 14.40 | 14.79 | 14.79 | 93.30 | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| RUN 3 | 15:52 | 59.90 | 47.40 | 21,383,209.00 | 38.00 | 22351.00 | 7259.000 | 86737.00 | 433.80 | 1.010 | | 1.39 | | N/A | 27.16 | 14.37 | 27.18 | 24.55 | 14.40 | 14.77 | 14.77 | 92.40 | |
| | 16:07 | 60.20 | 47.40 | 21,383,755.00 | 38.10 | 23340.00 | 7254.000 | 86847.00 | 433.50 | 1.010 | | 1.39 | | N/A | 27.13 | 14.38 | 27.02 | 24.53 | 14.40 | 14.77 | 14.77 | 94.10 | |
| | 16:22 | 60.20 | 47.40 | 21,384,279.00 | 38.20 | 24327.00 | 7259.000 | 86947.00 | 433.70 | 1.010 | | 1.39 | | N/A | 26.97 | 14.38 | 27.50 | 24.45 | 14.40 | 14.77 | 14.77 | 93.50 | |
| | 16:40 | 60.60 | 47.40 | 21,385,019.00 | 38.10 | 25690.00 | 7263.000 | 87089.00 | 434.50 | 1.010 | | 1.39 | | N/A | 27.21 | 14.36 | 27.25 | 24.56 | 14.40 | 14.76 | 14.76 | 94.10 | |
| | 16:51 | 60.90 | 47.40 | 21,385,387.00 | 38.10 | 26369.00 | 7264.00 | 87147.00 | 434.2 | 1.010 | | 1.39 | | N/A | 27.16 | 14.39 | 27.13 | 24.61 | 14.41 | 14.76 | 14.76 | 81.40 | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
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| | | | | | | | | | | | | | | N/A | | | | | | | | | |
| RUN TOTALS | | 53.12 | 41.82 | 8,516.00 | 33.58 | 16473.81 | | | | | | | | N/A | | | | | | | | | |
| | | | | | | | | | | | | | | N/A | | | | | | | | | |
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