



Lennon

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

June 23, 1998

Mr. Larry J. Adkins
Plant Manager
Orlando CoGen Limited, L.P.
8275 Exchange Drive
Orlando, FL 32809

Re: DRAFT Title V Permit No.: 0950203-001-AV
Orlando CoGen Limited, L.P.

Dear Mr. Adkins:

In response to your May 21 letter providing comments on the subject facility, the Department's response to your comments are enclosed for your review. Also enclosed is a copy of the draft permit reflecting the changes made. At your earliest convenience, please let us know if you agree with the changes so that we may proceed to the PROPOSED stage.

If there are any questions, please contact Lennon Anderson at 850/921-9588.

Sincerely,

Scott M. Sheplak, P.E.
Administrator
Title V Section

SMS/la

Enclosure

cc: Tom Hess, APC

Department's Response to
Orlando CoGen Limited, L.P.
on Draft Title V Permit

The comments will not be restated. Where duplicative comments exists, the original response is referenced.

Comment #1: Page 1

Response: Request is denied; however, the custom fuel monitoring schedule has been incorporated in Specific Condition A.17. as shown below.

A.17. The permittee shall monitor sulfur content and nitrogen content of natural gas fired in the turbine as follows:

Custom Fuel Monitoring Schedule for Natural Gas

1. Monitoring of fuel nitrogen content shall not be required when firing natural gas.
2. Sulfur Monitoring:
 - a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are ASTM D1072-90(94)E-1; ASTM D3031-81(86); ASTM D3246-92; and ASTM D4084-94, or the latest edition of the above ASTM methods as referenced in 40 CFR 60.335(d).
 - b. This custom fuel monitoring schedule became effective on September 17, 1993. Sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.
 - c. If after the monitoring required in item 2.b. above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarter of each calendar year.
 - d. Should any sulfur analysis as required in items 2.b. or 2.c. above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the Department of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be

conducted weekly during the interim period when this custom schedule is being re-examined.

3. If there is a change in fuel supply, the owner or operator must notify the Department of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

4. Records of samples analysis and fuel supply pertinent to this custom schedule shall be retained for a period of five years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.

Comment #2: Page 2

As a result of this comment, Specific Condition A.2. is hereby changed:

From: Turbine Cleaning. The turbine compressors shall be cleaned only with Turbotect 927 while the turbine is operating (i.e., on-line) at a dilution ratio of 9 gallons of cleaner to 35 gallons of demineralized water. Cleaning of the on-line compressors shall be performed every 4 days. The Turbotect 927 usage shall not exceed 821 gallons per 12-month rolling average.

[Proposed by applicant in the initial Title V permit application received June 13, 1996]

To: Turbine Cleaning. The turbine compressors shall be cleaned only with solvent/surfactant based mixtures containing no hazardous air pollutants as defined in Rule 62-210.200, F.A.C., while the turbine is operating (i.e., on-line). Cleaning of the on-line compressors shall be performed on a as needed basis.

[Proposed by applicant in the initial Title V permit application received June 13, 1996]

Comment #3: Page 3

As a result of this comment, Specific Condition A.11. (now Specific Condition A.12.) is hereby changed:

From: Compliance tests shall be conducted on an annual basis on or within 60 days prior to September 8 for **Specific Conditions A.12. through A.14.**

[AC48-206720]

To: Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for **Specific Conditions A.13. and A.14.**

[AC48-206720]

Comment #4: Page 4

Response: Specific Condition A.12. has been deleted.

Comment #5: Page 6

As a result of this comment, Specific Condition A.13. is hereby changed:

From: ..., it may be assumed that stratification does not exist.
[AC48-206720]

To: ..., it may be assumed that stratification does not exist. More than eight points may be used, if desired, providing that the points described above are included.
[AC48-206720]

Comment #6: Page 7

Response: See comment #1 above.

Comment #7: Page 8

As a result of this comment, Specific Condition B.6. is hereby changed:

From: Compliance tests shall be conducted on an annual basis on or within 60 days prior to September 8 for **Specific Condition B.7.**

To: Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for **Specific Condition B.7.**

Comment #8: Page 9

Response: Request to use test results using procedures in Method 19 is denied. However, change of citation to 40 CFR 60.46b(f) is granted.

Comment #9: Page 10

Response: As a result of this comment, Specific Condition C.11. has been deleted and relocated to Subsection B as Specific Condition B.8..

Also, the following specific condition has been inserted into Subsection A:

A.11. Testing of emissions shall be conducted with the source operating at capacity. As defined below. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report. **Capacity** is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test.

Comment #10: Page 11

As a result of this comment, Specific Condition C.17. (now Specific Condition C.16.) is hereby changed:

From: Compliance tests shall be conducted on an annual basis on or within 60 days prior to September 8 for **Specific Conditions C.18.** through **C.21.** Tests shall be conducted for CT only, and CT plus DB.
[AC48-206720]

To: Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for **Specific Conditions C.17.** through **C.20.** Tests shall be conducted for the CT only, and the CT plus the DB.
[AC48-206720]

Comment #11: Page 12

As a result of this comment, Specific Condition C.19. (now Specific Condition C.18) is hereby changed:

From: Particulate Matter. The test method for particulate matter shall be EPA Method 5 or 17. An opacity test for the CT may be substituted for the annual particulate emissions test. If, however, opacity values exceed 10%, then an EPA Method 5 or 17 particulate test must be conducted on the CT to demonstrate compliance with the particulate emissions standard.
[AC 48-206720 and AO48-248669]

To: Particulate Matter. The test method for particulate matter shall be EPA Method 5 or 17. An opacity test at maximum load for the CT may be substituted for the annual particulate matter emissions test. If, however, opacity values exceed 10%, then an EPA Method 5 or 17 particulate matter emissions test must be conducted on the CT at maximum load to demonstrate compliance with the particulate matter emissions standard.
[AC 48-206720 and AO48-248669]

Comment #12: Page 13

As a result of this comment, Specific Conditions C.25. and C.26 (now Specific Conditions C. 24. and C.25.) are hereby changed:

From:

C.25. The owner or operator shall notify the Central District Office of the Department, in writing, at least 15 days prior to the date on which each 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.]

C.26. In case of excess emissions resulting from malfunctions, Orlando CoGen Limited shall notify the Department's Central District Office in accordance with 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.]

To:

C.25. The owner or operator shall notify the Orange County Environmental Protection Department, in writing, at least 15 days prior to the date on which each 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.]

C.26. In case of excess emissions resulting from malfunctions, Orlando CoGen Limited shall notify the Orange County Environmental Protection Department in accordance with 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.]

Comment #13: Page 14

As a result of this comment, Specific Condition C.27.(c) (now Specific Condition 26(c)) is hereby changed:

From: As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information: ...

To: As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information if required by the test method: ...

Comment #14: Page 15

As a result of this comment, Specific Condition C.31. (now Specific Condition C.30.) is hereby changed:

From: The permittee shall maintain records on the amount of Turbotect 927 used to clean the turbine compressors, including the date cleaned and dilution ratio.

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

To: The permittee shall maintain records on the following:

- a. the specific cleaner used to clean the turbine compressors, including the MSDS
- b. dilution ratio
- c. the total quantity of undiluted material consumed during each calendar year

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

Comment #15: Page 16

Response: Specific Condition C.32. has been deleted.

Comments #16, #17, and #18: Pages 17-20

Response: Requests are granted.

Orlando CoGen Limited, L.P.
Facility ID No.: 0950203
Orange County

Initial Title V Air Operation Permit
DRAFT Permit No.: 0950203-001-AV

Permitting Authority:

State of Florida
Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Telephone: 850/488-1344
Fax: 850/922-6979

Compliance Authority:

Orange County Environmental Protection Department
2002 East Michigan Street
Orlando, Florida 32806
Telephone: 407/836-7400
Fax: 407/836-7499

Drafted on June 10, 1998

Initial Title V Air Operation Permit
DRAFT Permit No.: 0950203-001-AV

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Permittee:
Orlando CoGen Limited, L.P.

DRAFT Permit No.: 0950203-001-AV
Facility ID No.: 0950203
SIC Nos.: 49, 4931
Project: Initial Title V Air Operation Permit

This permit is for the operation of the Orlando CoGen Limited, L.P. This facility is located at 8275 Exchange Drive, Orlando, Orange County; UTM Coordinates: Zone 17, 459.5 km East and 3146.1 km North; Latitude: 28° 26' 23" North and Longitude: 81° 24' 28" West.

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

Referenced attachments made a part of this permit:

Appendix I-1, List of Insignificant Emissions Units and/or Activities
APPENDIX TV-1, TITLE V CONDITIONS (version dated 12/02/97)
APPENDIX SS-1, STACK SAMPLING FACILITIES (10/01/96)
TABLE 297.310-1, CALIBRATION SCHEDULE (version dated 10/06/96)
FIGURE 1- SUMMARY REPORT-GASEOUS AND OPACITY EXCESS EMISSION
AND MONITORING SYSTEM PERFORMANCE REPORT (7/96)
Phase II Permit Application received December 4, 1997.

Effective Date: January 1, 1999
Renewal Application Due Date: July 5, 2003
Expiration Date: December 31, 2003

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/sms/la

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of one combustion turbine, one heat recovery steam generator (HRSG) and one duct burner system associated with the HRSG. The facility's nominal output is 128.9 megawatts (MW). This facility utilizes natural gas as its only fuel.

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

Based on the initial Title V permit application received June 13, 1996, this facility is not a major source of hazardous air pollutants (HAPs).

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

E.U.

ID No.

Brief Description

-001 Combustion Turbine (CT)

-002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

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

Subsection C. Relevant Documents.

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

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

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

Table 2-1, Summary of Compliance Requirements

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

Appendix H-1, Permit History/ID Number Changes

These documents are on file with the permitting authority:

Initial Title V Permit Application received June 13, 1996

Additional Information Request dated January 14, 1997

Additional Information Response received April 11, 1997

Waiver of 90 Day time Limit received July 1, 1997

Waiver of 90 Day time Limit received December 31, 1997

Waiver of 90 Day time Limit received January 28, 1998

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-1, TITLE V CONDITIONS, is a part of this permit.
{Permitting note: APPENDIX TV-1, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}
2. **Not federally enforceable.** General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]
3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rule 62-296.320(4)(b)1. & 4, F.A.C.]
4. Prevention of Accidental Releases (Section 112(r) of CAA). If required by 40 CFR 68, the permittee shall submit to the implementing agency:
 - a. a risk management plan (RMP) when, and if, such requirement becomes applicable;
 - b. certification forms and/or RMPs according to the promulgated rule schedule.[40 CFR 68]
5. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.
[Rules 62-213.440(1), 62-213.430(6), and 62-4.040(1)(b), F.A.C.]
6. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1)(a), F.A.C.]

{Permitting note: The Department has not ordered any control devices or systems under Rule 62-296.320(1)(a), F.A.C.}

7. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one. [Rule 62-213.440, F.A.C.]

8. The permittee shall submit all compliance related notifications and reports required of this permit to:

Orange County Environmental Protection Department.
2002 East Michigan Street
Orlando, Florida 32806
Telephone: 407/836-7400
Fax: 407/836-7499

9. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year. {See condition 52., APPENDIX TV-1, TITLE V CONDITIONS}
[Rule 62-214.420(11), F.A.C.]

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

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Operating Permits Section
61 Forsyth Street
Atlanta, Georgia 30303
Telephone: 404/562-9099
Fax: 404/562-9095

Section III. Emissions Units and Conditions.

Subsection A. This section addresses the following emissions unit.

E.U.

<u>ID No.</u>	<u>Brief Description</u>
-001	Combustion Turbine (CT)

The combined cycle combustion turbine (CT) is an Asea Brown Boveri 11N1-EV model with a nameplate rating of 78.9 MW at ISO. The emissions from the CT are controlled by using dry low NOx burner technology. The CT is allowed to burn only natural gas. It began commercial operation on September 25, 1993.

{Permitting notes: The emissions unit is regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 212.400(6), F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated August 17, 1992. For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee. }

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

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The operation rate based on the low heating value (LHV) of the fuel shall not exceed 856.9 MMBtu/hr at ISO conditions.
[Rules 62-4.160(2), F.A.C. and 62-210.200(PTE), F.A.C.]

A.2. Turbine Cleaning. The turbine compressors shall be cleaned only with solvent/surfactant based mixtures containing no hazardous air pollutants as defined in Rule 62-210.200, F.A.C., while the turbine is operating (i.e., on-line). Cleaning of the on-line compressors shall be performed on a as needed basis.
[Proposed by applicant in the initial Title V permit application received June 13, 1996]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit. }

A.3. Nitrogen Oxides. Nitrogen oxides emissions, expressed as NO_x, shall not exceed 15 ppmvd @ 15% O₂ (57.4 lbs/hr; 251.4 TPY, 12-month rolling average).

[AC48-206720 and BACT Determination, dated August 17, 1992]

A.4. Carbon Monoxide. Carbon monoxide emissions, expressed as CO, shall not exceed 10 ppmvd (22.3 lbs/hr; 92.1 TPY, 12-month rolling average)

[AC48-206720 and BACT Determination, dated August 17, 1992]

A.5. Particulate Matter. Particulate matter emissions, expressed as PM/PM₁₀, shall not exceed 0.01 lb/MMBtu (9.0 lbs/hr; 39.4 TPY, 12-month rolling average)

[AC48-206720 and BACT Determination, dated August 17, 1992]

A.6. Volatile Organic Compounds. Volatile organic compound emissions, expressed as VOC, shall not exceed 3.0 lbs/hr; 13.0 TPY, 12-month rolling average.

[AC48-206720]

A.7. Sulfur Dioxide. No fuels shall be burned at this source which contain sulfur in excess of 0.8 percent by weight.

[40 CFR 60.333(b)]

Test Methods and Procedures

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

A.8. Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

[40 CFR 60.8(c)]

A.9. To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.

[40 CFR 60.335(a)]

A.10. In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR 60 or other methods and procedures as specified in this permit, except as provided for in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph 40 CFR 60.335(f).
[40 CFR 60.335(b)]

A.11. Testing of emissions shall be conducted with the source operating at capacity. As defined below. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report. **Capacity** is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test.
[Rule 62-4.070(3), F.A.C. and AO48-248669]

A.12. Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for **Specific Conditions A.13.** and **A.14.**
[AC48-206720]

A.13. Nitrogen Dioxide. The emission test sampling points will be selected in accordance with 6.1.2.4 of Method 20, which states - Select the eight sampling points at which the lowest O₂ concentrations were obtained. If the difference between the highest and the lowest measured oxygen concentrations in the stack is less than 0.4% oxygen by volume, it may be assumed that stratification does not exist. More than eight points may be used, if desired, providing that the points described above are included.
[AC48-206720]

A.14. Sulfur Dioxide. The owner or operator shall determine compliance with the sulfur content standard in 40 CFR 60.333(b) as follows: ASTM D 1072-90(94)E-1, D 3031-81(86), D 4084-94, or D 3246-92, or the latest edition, shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.
[40 CFR 60.335(d)]

A.15. To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in 40 CFR 60.335(a) and 40 CFR 60.335(d) of 40 CFR 60.335 to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or

operator, the fuel vendor, or any other qualified agency.
[40 CFR 60.335(e)]

Monitoring of Operations

A.16. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

- (1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
- (2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b).
[40 CFR 60.334(b)(1) and (2)]

A.17. The permittee shall monitor sulfur content and nitrogen content of natural gas fired in the turbine as follows:

Custom Fuel Monitoring Schedule for Natural Gas

1. Monitoring of fuel nitrogen content shall not be required when firing natural gas.
2. Sulfur Monitoring:
 - a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are ASTM D1072-90(94)E-1; ASTM D3031-81(86); ASTM D3246-92; and ASTM D4084-94, or the latest edition of the above ASTM methods as referenced in 40 CFR 60.335(d).
 - b. This custom fuel monitoring schedule became effective on September 17, 1993. Sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.

- c. If after the monitoring required in item 2.b. above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarter of each calendar year.
 - d. Should any sulfur analysis as required in items 2.b. or 2.c. above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the Department of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
3. If there is a change in fuel supply, the owner or operator must notify the Department of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
4. Records of samples analysis and fuel supply pertinent to this custom schedule shall be retained for a period of five years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.
[Rule 62-4.070(3), F.A.C. and EPA's September 17, 1993 approval letter]

A.18. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be report is as follows:

Sulfur Dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent by weight.
[40 CFR 60.334(c)(2)]

Miscellaneous Condition

A.19. This emissions unit is also subject to conditions contained in **Subsection C. Common Conditions.**

Subsection B. This section addresses the following emissions unit.

E.U.

ID No. Brief Description

-002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

The heat recovery steam generator (HRSG), which accepts exhaust from the CT, is used to drive a 50 MW steam turbine. The transition duct from the CT to the HRSG contains duct burners (DBs), manufactured by COEN Company Incorporated. The DB system is allowed to only burn natural gas. The HRSG-DB System began commercial operation on September 25, 1993.

{Permitting notes: The emissions unit is regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 212.400(6), F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated August 17, 1992. For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee. }

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The operation rate based on the low heating value (LHV) of the fuel shall not exceed 122.0 MMBtu/hr for a maximum heat input of 450,000 MMBtu/yr. [Rules 62-4.160(2), F.A.C. and 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit. }

B.2. Nitrogen Oxides. Nitrogen oxides emissions, expressed as NO_x, shall not exceed 0.1 lb/MMBtu (12.2 lb/hr; 22.5 TPY, 12-month rolling average). [AC48-206720 and BACT Determination, dated August 17, 1992]

B.3. Carbon Monoxide. Carbon monoxide emissions, expressed as CO, shall not exceed 0.1 lb/MMBtu (12.2 lb/hr; 22.5 TPY, 12-month rolling average) [AC48-206720 and BACT Determination, dated August 17, 1992]

B.4. Particulate Matter. Particulate matter emissions, expressed as PM/PM₁₀, shall not exceed 0.01 lb/MMBtu (1.2 lb/hr; 2.2 TPY, 12-month rolling average)
[AC48-206720 and BACT Determination, dated August 17, 1992]

B.5. Volatile Organic Compounds. Volatile organic compound emissions, expressed as VOC, shall not exceed 3.7 lb/hr; 6.8 TPY, 12-month rolling average.
[AC48-206720]

Test Methods and Procedures

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

B.6. Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for **Specific Condition B.7.**

B.7. To determine compliance with the emission limit for nitrogen oxides for duct burners used in combined cycle systems, the owner or operator of an affected facility shall conduct the performance tests required under 40 CFR 60.8 using the nitrogen oxides and oxygen measurement procedures in 40 CFR part 60 appendix A, Method 20. During the performance test, one sampling site shall be located as close as practicable to the exhaust of the turbine, as provided by section 6.1.1 of Method 20. A second sampling site shall be located at the outlet to the steam generating unit. Measurements of nitrogen oxides and oxygen shall be taken at both sampling sites during the performance test. The nitrogen oxides emission rate from the combined cycle system shall be calculated by subtracting the nitrogen oxides emission rate measured at the sampling site at the outlet from the turbine from the nitrogen oxides emission rate measured at the sampling site at the outlet from the steam generating unit.

[AC48-206720 and 40 CFR 60.46b(f)]

B.8. Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity as defined below. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance to regain the authority to operate at the permitted capacity. **Permitted capacity** is defined as 90 to 100 percent of the maximum operation rate allowed by the permit.

[Rule 62-297.310(2), F.A.C.]

Miscellaneous Condition

B.9. This emissions unit is also subject to conditions contained in **Subsection C. Common Conditions.**

Subsection C. Common Conditions.

E.U.

ID No. Brief Description

-001 Combustion Turbine (CT)

-002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

{Permitting Note: For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.}

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

Essential Potential to Emit (PTE) Parameters

C.1. Methods of Operation - Fuels. The only fuel allowed to be burned is natural gas. [Rule 62-213.410, F.A.C.]

C.2. Hours of Operation. These emissions units are allowed to operate continuously, i.e., 8,760 hours/year. The hours of operation for the DB shall not exceed 3688 hours/year at maximum heat input (Note: The DB, however, may operate at lower heat input rates for more hours, up to 8,760, within the annual heat input limit). [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.3. Visible Emissions. Visible emissions from CT only or CT and DB shall not exceed 10% opacity. [AC48-206720]

Excess Emissions

C.4. Excess emissions resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

C.5. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

Test Methods and Procedures

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

C.6. Compliance with standards in 40 CFR 60, other than opacity, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

[40 CFR 60.11(a)]

C.7. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operation and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d)]

C.8. Special provisions set forth under an applicable subpart of 40 CFR 60 shall supersede any conflicting provisions of 40 CFR 60.11.

[40 CFR 60.11(f)]

C.9. Circumvention. No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[40 CFR 60.12]

C.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 the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

C.11. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.

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

C.12. Applicable Test Procedures.

(a) Required Sampling Time.

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

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

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

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

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

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

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

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

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

C.13. 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.]

C.14. The permittee shall comply with the requirements contained in APPENDIX SS-1, Stack Sampling Facilities, attached to this permit.

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

C.15. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the

most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate; or

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

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

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

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

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

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

[Rule 62-297.310(7), F.A.C.; SIP approved]

C.16. Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for **Specific Conditions C.17.** through **C.20.** Tests shall be conducted for the CT only, and the CT plus the DB.

[AC48-206720]

C.17. Carbon Monoxide. The test method for carbon monoxide shall be EPA Method 10. CO shall be tested simultaneously with NO_x, volatile organic compounds (VOC) and VE at maximum load.

[AC48-206720 and AO48-248669]

C.18. Particulate Matter. The test method for particulate matter shall be EPA Method 5 or 17. An opacity test at maximum load for the CT may be substituted for the annual particulate emissions test. If, however, opacity values exceed 10%, then an EPA Method 5 or 17 particulate test must be conducted on the CT at maximum load to demonstrate compliance with the particulate emissions standard.

[AC 48-206720 and AO48-248669]

C.19. Volatile Organic Compounds. The test method for VOC shall be EPA Method 25A. VOC shall be tested simultaneously with NO_x, CO and VE at maximum load. No testing for VOC is required if the CO limit is met.

[AC48-206720]

C.20. Visible Emissions. The test method for visible emissions shall be EPA Method 9. There shall be two one-hour VE tests while firing gas at maximum load, one hour with the DB on and one hour with the DB off. VE readings shall be taken simultaneously with tests for NO_x, CO and VOC.

[AC48-206720 and AO48-248669]

Continuous Monitoring Requirements

C.21. The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any

malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

[40 CFR 60.7(c)(1), (2), (3), and (4)]

C.22. The summary report form shall contain the information and be in the format shown in Figure 1 (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

[40 CFR 60.7(d)(1) and (2)]

C.23. The permittee shall calibrate, maintain and operate a continuous emission monitor (CEM) in the stack to measure and record the nitrogen oxide (NO_x) emissions from this source. The continuous emission monitor must comply with 40 CFR 60, Appendix B, Performance Specification 2. For the purpose of demonstrating ongoing compliance with the applicable NO_x emission limitation in **Specific Conditions A.3. and B.2.** using the stack CEM, compliance is considered to occur when the NO_x emissions are less than or equal to 57.4 lb/hr when only the CT is operating and less than or equal to 69.6 lb/hr when both the CT and DB are operating. The 24-hour rolling average compliance level is calculated based on the proportion of hours in any 24-hour period that the CT only or the CT/DB are operating. Any portion of an hour that the DB operates is recognized as an hour period on the rolling average.

For example, in a given contiguous 24-hour period with 20 hours of CT operation only and 4 hours of CT/DB operation:

Calculated Emission Limitation =

$$[(57.4 \text{ lb/hr} \times 20 \text{ hrs}) + (69.6 \text{ lb/hr} \times 4 \text{ hrs})]/24 \text{ hrs}$$

24 hour rolling average-compliance NO_x level = 59.4 lb/hr

Compliance with the permitted NO_x emission limitation is considered satisfied as long as the NO_x emissions from the stack CEM are less than or equal to the calculated NO_x emissions, averaged over the same 24-hour period.
[AC 48-206720 and AO48-248669]

Recordkeeping and Reporting Requirements

C.24. The owner or operator shall notify the Orange County Environmental Protection Department, in writing, at least 15 days prior to the date on which each 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.]

C.25. In case of excess emissions resulting from malfunctions, Orlando CoGen Limited shall notify the Orange County Environmental Protection Department in accordance with 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.]

C.26. Test Reports.

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

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

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

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.]

C.27. The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 CFR 60.7(b)]

C.28. (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all Recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard;

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required Recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the non-complying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2).

[40 CFR 60.7(e)]

C.29. The permittee shall maintain a file of all measurements, including continuous monitoring systems, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system

or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records.

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

C.30. The permittee shall maintain records on the following:

- a. the specific cleaner used to clean the turbine compressors, including the MSDS
- b. dilution ratio
- c. the total quantity of undiluted material consumed during each calendar year

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

Section IV. This section is the Acid Rain Part.

Operated by: Orlando CoGen Limited, L.P.
ORIS code: 54466

Subsection A. This subsection addresses Acid Rain, Phase II.

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

E.U.

ID No. Brief Description

- 001 Combustion Turbine
- 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

A.1. The Phase II permit application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain unit(s) must comply with the standard requirements and special provisions set forth in the application(s) listed below:

- a. DEP Form No. 62-210.900(1)(a), effective 07/01/95; dated 12/02/97.
[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

A.2. Sulfur dioxide (SO₂) allowance allocations for each Acid Rain unit is as follows:

<u>E.U. ID No.</u>	<u>EPA ID</u>	<u>Year</u>	2000	2001	2002	
-001	1	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> SO₂ ○ ○ </div>
-002	1	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	

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

A.3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

1. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.
2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
3. Allowances shall be accounted for under the Federal Acid Rain Program.

[Rule 62-213.440(1)(c), F.A.C.]

A.4. Fast-Track Revisions of Acid Rain Parts. Those Acid Rain sources making a change described at Rule 62-214.370(4), F.A.C., may request such change as provided in Rule 62-213.413, Fast-Track Revisions of Acid Rain Parts.

[Rule 62-213.413, F.A.C.]

A.5. Comments, notes, and justifications: none

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

Orlando CoGen Limited, L.P.
Orlando CoGen Limited, L.P.

DRAFT Permit No.: 0950203-001-AV
Facility ID No.: 0950203

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62-210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

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

1. Comfort heating < 1 MMBtu/hr
2. Non-industrial vacuum cleaning
3. Refrigeration equipment
4. Vacuum pumps for labs
5. Steam cleaning equipment
6. Sanders < 5 sq. ft.
7. Lab equipment used for chemical or physical analyses
8. Brazing, soldering or welding equipment
9. Emergency generators < 32,000 gal/yr or , 4.4 million standard cubic feet per year
10. General purpose engines < 32,000 gal/yr
11. Fire and safety equipment
12. Surface coating > 5% VOC; 6 gal/day, averaged monthly
13. Surface coating < 5% VOC
14. Freshwater cooling towers. The cooling towers do not use chromium-based treatment chemicals.
15. Turbine cleaning ~~Online~~

Table 2-1, Summary of Compliance Requirements

Orlando CoGen Limited, L.P

DRAFT Permit No.: 0950203-001-AV

Facility ID No.: 0950203

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

E.U. ID No. Brief Description

- 001 Combustion Turbine (CT)
- 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) system

Pollutant Name or parameter	Fuel	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS**	See permit Condition(s)
NOx	natural gas	20	annual	1-Apr	1hr		A.13., B.7.
CO	natural gas	10	annual	1-Apr	1hr		C.17.
PM/PM10	natural gas	5 or 17	annual	1-Apr	1hr		C.18.
Testing required if VE standard for the CT alone, or the CT plus DB is not met.							
VOC	natural gas	25A	annual	1-Apr	1 hr		C.29.
Testing required if CO standard is not met.							
VE	natural gas	9	annual	1-Apr	1hr		C.20.
SO2	natural gas	20	annual	1-Apr	1hr		A.14., 17., 18. 3 6 7

Notes:

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

**CMS [=] continuous monitoring system

[electronic file name: 09502032.xls]

Appendix H-1, Permit History/ID Number Changes

Orlando Cogeneration Limited, L.P.

DRAFT Permit No.: 0950203-001-AV

Facility ID No.: 0950203

Permit History (for tracking purposes):

E.U.

<u>ID No</u>	<u>Description</u>	<u>Permit No.</u>	<u>Issue Date</u>	<u>Expiration Date</u>	<u>Extended Date</u> ^{1,2}	<u>Revised Date(s)</u>
-001	Combustion Turbine	AO48-248669	02/10/95	01/31/2000		5/6/96, 6/10/96 7/19/96, 12/6/96
		AC48-206720/ PSD-FL-184	08/17/92	06/02/95	11/01/96	
-002	HRSG-DB System	AO48-248669	02/10/95	01/31/2000		5/6/96, 6/10/96 7/19/96, 12/6/96
		AC48-206720/ PSD-FL-184	08/17/92	06/02/95	11/01/96	

(if applicable) ID Number Changes (for tracking purposes):

From: Facility ID No.: 30ORG480203

To: Facility ID No.: 0950203

Rec 052698

cc: Lennon
5/26



Orlando CoGen Limited, L.P.
8275 Exchange Drive
Orlando, FL 32809



Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

21 May 1998

Mr. Scott M. Sheplak, P.E.
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Comments, DRAFT Title V Permit No.: 0950203-001-AV
Orlando CoGen Limited, L.P.

Dear Mr. Sheplak:

We appreciate the opportunity to comment on the Department's draft Title V permit for our Orlando cogeneration facility. Many of the comments that follow are administrative in nature and arise out of the fact that several minor modifications were made to the operating permit by the Central District office following the Title V application. Copies of the changes as well as the original operating permit are attached for your reference. Also attached are two other documents bearing on the draft permit: an approved Subpart GG custom fuel monitoring schedule, and DARM guidance relevant to source testing requirements at our plant.

As you review these comments, if there are any questions or a need for additional information, please call me at 407-851-1350 for questions regarding general plant operations, or Tom Hess at 610-481-7620 for questions regarding the enclosed comments. If it would be helpful to meet in person to discuss the draft permit, I would be happy to do so at your convenience.

Very truly yours,

Larry J. Adkins
Plant Manager
Authorized Representative
(Designated Acid Rain Representative)

RECEIVED

MAY 22 1998

BUREAU OF
AIR REGULATION

E.U. ID No. 001 Combustion Turbine (CT)

Page 1, Referenced attachments

Referenced attachments made part of this permit:

Comment

Orlando CoGen has an EPA approved customized fuel monitoring schedule, 40 CFR §60.335(d), which we believe should be included in this list. The approval letter and the schedule are attached as Appendix 1.

sk (Please also refer to later comments regarding condition A.16 on page 9 of the permit.)

E.U. ID No. 001 Combustion Turbine (CT)

Page 6, Condition A.2.

no will restate, deleting reference to Turbotect 927 and dilution ratios, and every 4 day requirement
Turbine Cleaning. The turbine compressors shall be cleaned only with Turbotect 927 while the turbine is operating (i.e., on-line) at a dilution ratio of 9 gallons of cleaner to 35 gallons of demineralized water. Cleaning of the on-line compressors shall be performed every 4 days. The Turbotect 927 usage shall not exceed 821 gallons per 12-month rolling average.

Comment

We request that this newly added condition be deleted. In the Title V application (6/9/96), it was stated that the turbine is periodically injected with a cleaner that consists of detergents and surfactants that clean the inlet compressor sections of the turbine (Part III, page 25 of the application). A subsequent letter from the Department, 1/14/97, requested additional information about the turbine washing process. On or about 4/9/97, Mr. Ken Kosky responded with additional information describing the plant's then current on-line turbine washing process. In his letter, Mr. Kosky explained that the compressor cleaner is completely consumed as a result of combustion in the turbine and that the undiluted material contained no hazardous air pollutants.

not true the MSDS indicates a HAP in the undiluted material.

This draft permit prescribed turbine cleaning condition is not necessary to control air pollution and would add unnecessary administrative burden to the plant as well as the Department. For example, minor changes in labeling such as simply renaming the product or buying the same material from a different vendor would require amending the permit. Indeed this has already happened, the same cleaning material is now distributed by a different company and has been re-labeled CONNTECT 7000. Even minor adjustment of the dilution ratio would trigger the requirement for a permit change.

With regard to the requirement to perform an on-line wash every 4 (operating) days, the turbine manufacturer's recommendations or other circumstance may in the future require changes in the frequency. This in turn would require an administrative change to the permit.

These new restrictions to on-line compressor washing are too inflexible and burdensome and do not contribute to the control of emissions. In addition to no practical benefit, it also does not appear that there is a regulatory basis for this requirement. We therefore ask that the Department remove this condition.

(Please refer also to comments to related condition C.31.)

E.U. ID No. 001 Combustion Turbine (CT)

Page 8, Condition A.11.

OK Compliance tests shall be conducted on an annual basis on or within ⁹⁰~~60~~ days prior to ~~September 8~~ for Specific Conditions A.12. through A.14.

April 1
Comment

The requirement to perform the tests within 60 days prior to September 8 in AO48-248669 was changed by the Department to "...within 60 days prior to April 1". Letter of 6 December 1996 from Mr. L.T. Kozlov, P.E., Program Administrator, Air Resources Management, Department of Environmental Protection, Central District to Mr. John Paul Jones, President Orlando CoGen Limited, L.P. (Appendix 2).

We request that this condition be modified to reflect the new test date.

E.U. ID No. 001 Combustion Turbine (CT)

Page 8, Condition A.12.

Nitrogen Oxides. The owner or operator shall determine compliance with nitrogen oxides as follows:

a. The nitrogen oxides emission rate (NO_x) shall be computed for each run using the following equation:

$$NO_x = (NO_{x0})(Pr/Po)^{0.5} e^{19(Ho-0.00633)} (288^\circ K / Ta)^{1.53} \dots\dots$$

b. EPA Method 20 (40 CFR 60, Appendix A) shall be used to determine the nitrogen oxides, and oxygen concentrations. The span values used shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at 30, 50, 75 and 100 percent of peak load or at four points in the normal operating range of the gas turbine....

Comment 4

Load and ISO Correction

The requirements to adjust measured NO_x concentrations to ISO conditions using the cited equation and to conduct NO_x emission tests at less than maximum load were eliminated in a modification to permit AO48-248669. The current operating permit does not require ISO equation adjustment to measured NO_x and only requires tests to be conducted at "capacity" (letter of 19 July 1996 from Mr. L.T. Kozlov, P.E., Program Administrator, Air Resources Management, Department of Environmental Protection, Central District to Mr. John Paul Jones, President Orlando CoGen Limited, L.P.) (Appendix 3). These changes to the operating permits implemented DARM-EM-05 "Guidance on Rate of Operation During Compliance Testing for Combustion Turbines" (Appendix 4).

We request that these two requirements in the condition be modified to reflect the current requirements in the current operating permit.

Span

The requirement for the reference method analyzer to use a span of 300 ppm is problematic for the Orlando plant. Span is used to determine the allowable ranges for calibration gases required to calibrate the reference method test analyzers, determine method bias, and monitor analyzer drift. In Method 20 both linearity and bias limits are 2% of span. For a 300 ppm span the allowable error in the test method is then 6 ppm. This is 40% of the operating permit emission limit of 15 ppm. Clearly a span of 300 ppm is inappropriate in this case.¹ Further, the EPA has recast most of the reference methods (in draft form),

¹ This span is only appropriate for use with old high NO_x emitting units with actual limits at NSPS levels. For the Orlando combustion turbine with an approximate heat rate of 11.48 kJ/W·hr, the NSPS standard for NO_x becomes $0.0075/100 \cdot 14.4/11.48 \cdot 10^6 = 94$ ppm. At this level a 300 ppm span is usable. However the operating permit limit is 15 ppm. 300 ppm span is not appropriate.

including Method 20 (February 1997), with more appropriate definitions for calibration levels and error tolerances. The draft Method 20 now refers to Method 6C for selection of appropriate calibration gases. EPA defines the high level gas as follows (Method 6C, January 1997):

3.3.1 High-Level Gas. The chosen upper concentration of the gas measurement range such that all sample concentrations are less than the high-level gas concentration and the concentrations of interest are 20-80 percent of the high-level gas value. [The concentration of interest for New Source Performance Standard (NSPS) purposes is the concentration corresponding to the emission standard.]

Thus, for an emission standard of 15 ppm, the high range calibration gas is between 19 and 75 ppm. We request that the span requirement of 300 ppm be eliminated as a permit item. Given that test method details change from time to time, we believe that they are more appropriately addressed in the pre-test plans required before each annual source test and not in the Title V permit.

Alternatively, if the Department determines that numerical calibration levels must be included in the Title V permit, we request that the following definitions (draft 6C § 3.0) be used in lieu of “300 ppm span”.

3.3.1 High-Level Gas. The chosen upper concentration of the gas measurement range such that all sample concentrations are less than the high-level gas concentration and the concentrations of interest are 20-80 percent of the high-level gas value. [The concentration of interest for New Source Performance Standard (NSPS) purposes is the concentration corresponding to the emission standard.]²

3.3.2 Mid-Level Gas. Concentration equivalent to 40 to 60 percent of the high-level gas.

3.3.3 Zero Gas. Concentration of less than 0.25 percent of the high-level gas. Purified ambient air may be used for the zero gas by passing air through a charcoal filter or through one or more impingers containing a solution of 3 percent hydrogen peroxide (H₂O₂)

Using calibration gases more representative of the expected measurement values will result in greater accuracy and is consequently a more stringent requirement than that proposed in the current condition. EPA's *White Paper Number 2*, March 5, 1996, recognizes and encourages the use or “streamling” to resolve conflicting monitoring requirements—in this case inappropriate NSPS span for low NO_x emitters.

² In the case of Orlando CoGen, the applicable emission standard is 15 ppm at 15% O₂.

E.U. ID No. 001 Combustion Turbine (CT)

Page 8, Condition A.13.

Nitrogen Dioxide. The emission test sampling points will be selected in accordance with 6.1.2.4 of Method 20, which states-Select the eight sampling points at which the lowest O₂ concentrations were obtained. If the difference between the highest and lowest measured oxygen concentration in the stack is less than 0.4% oxygen by volume, it may be assumed that stratification does not exist.

Comment 5

§ 6.1.2.4 further states that: "More than eight points may be used, if desired, providing that the points described above are included." As currently written, condition A.13. may be interpreted to restrict sampling to only those 8 points described. We request that this condition be clarified by adding that more than 8 point may be used provided that the 8 specified are included.

E.U. ID No. 001 Combustion Turbine (CT)

Page 9, Condition A.16.

ok. *The owner or operator of any stationary source gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content...*

(2)Owners, or fuel vendors may develop custom schedules for determination of the values...These custom schedules ...must be approved by the Administrator....

Comment 6

EPA in their letter of 17 September 1993 from Mr. J.A. Harper, Chief Air Enforcement Branch to Mr. C.H. Fancy, Air Resources Management Division, Florida DEP approved a customized fuel monitoring schedule for Orlando CoGen. The approval and schedule are attached. Please also refer to comment regarding page 1, "attachments made a part of this permit".

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

Page 11, Condition B.6.

Compliance tests shall be conducted on annual basis on or within ⁸⁰60 days prior to ~~September 8~~ for Specific Condition B.7.

April 1
Comment 7

The requirement to perform the tests within 60 days prior to September 8 in AO48-248669 was changed by the Department to "...within 60 days prior to April 1". Letter of 6 December 1996 from Mr. L.T. Kozlov, P.E., Program Administrator, Air Resources Management, Department of Environmental Protection, Central District to Mr. John Paul Jones, President Orlando CoGen Limited, L.P. (Appendix 2).

We request that this condition be modified to reflect the new test date.

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System


Page 12, Condition B.7.

To determine compliance with the emission limit for nitrogen oxides for duct burners.. The nitrogen oxides emission rate from the combined cycle system shall be calculated by subtracting the nitrogen oxides emission rate measured at the sampling site at the outlet from the turbine from the nitrogen oxides emission rate measured at the sampling site at the outlet from the steam generating unit. [AC48-206720 and 40 CFR 60.45b(f)].

Comment 8

We request that a clarifying statement be added to the effect that the duct burner's NO_x emissions will be calculated from test results using the procedures in Method 19. As an editorial matter, it appears that the citation 40 CFR 60.45b(f) should be instead 40 CFR 60.46b(f).





E.U. ID No. 001 Combustion Turbine (CT)

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

Page 15, Condition C.11.

*Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity as defined below...**Permitted capacity** is defined as 90 to 100 percent of the maximum operation rated allowed by the permit.*

Comment 9

DARM-EM-05 "Guidance on Rate of Operation During Compliance Testing for Combustion Turbines" (Appendix 4) allows, at the request of the permittee, for operation of combustion turbines during compliance testing at 95-100% of the manufacturer's rated heat input achievable for the average ambient air temperature. Orlando CoGen requested the inclusion of this condition in its operating permit. This change was incorporated by letter dated 19 July 1996 from Mr. L.T. Kozlov, P.E., Program Administrator, Air Resources Management, Department of Environmental Protection, Central District to Mr. John Paul Jones, President Orlando CoGen Limited, L.P. (Appendix 3).

With respect to the operation of the duct burners during compliance testing, **permitted capacity** should continue to be defined as in the regulation to be 90 to 100% of the maximum operating rate allowed by the permit.

We therefore request that this condition be modified to reflect the current operating permit requirements for operation of the facility during compliance testing. For the combustion turbine, permitted capacity should be defined as 95 to 100 percent of the maximum heat input allowed and achievable for the ambient air temperature during the test. For the duct burner, permitted capacity should remain as defined between 90 to 100 percent of the operation rate allowed by the permit.

E.U. ID No. 001 Combustion Turbine (CT)

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

sk. Pg. 18, Condition C.17

April *90*
September 8 *90*
only, and CT plus DB.
only, and CT plus DB.

Comment 10

The requirement to perform the tests within 60 days prior to September 8 in AO48-248669 was changed by the Department to "...within 60 days prior to April 1". Letter of 6 December 1996 from Mr. L.T. Kozlov, P.E., Program Administrator, Air Resources Management, Department of Environmental Protection, Central District to Mr. John Paul Jones, President Orlando CoGen Limited, L.P. (Appendix 2).

We request that this condition be modified to reflect the new test date.

E.U. ID No. 001 Combustion Turbine (CT)

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

Pg. 18, Condition C.18, C.19, C.20, C.21



..maximum load...

Comment ||

Conditions C.18, C.20, and C.21 all require testing when required at “maximum load” while C.19 mentions no operating level. For the sake of clarity, we believe that it is appropriate to use the term “maximum load” as given in revised condition C.11 for “maximum load” in conditions C.18, C.19, C.20 and C.21.

E.U. ID No. 001 Combustion Turbine (CT)

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

Page 20, Conditions: C.25, C.26.

C.25. *The owner or operator shall notify the Central District Office of the Department, in writing, at least 15 days prior to the data on which each test....*

C.26. *In case of excess emissions resulting from malfunctions, Orlando CoGen Limited shall notify the Department's Central District Office in accordance...*

Comment 12

Conditions C.25 and C.26. seem to be at odds with C.27. and Section II. Facility-wide Conditions, condition 9 (page 5), which states "*The permittee shall submit all compliance related notifications and reports required of this permit to: Orange County Environmental Protection Department...*" Also in a letter of 6 May 1996 from Mr. L.T. Kozlov, P.E., Program Administrator, Air Management, Dept. of Environmental Protection, Central District to Mr. John Paul Jones, President, Orlando CoGen Limited L.P. the requirement of C.26 was specifically changed to require notification to Orange County in lieu of the Central District. (Appendix 5).

We request that C.25. and C.26. be made consistent with C.27. and Section II. Condition 9 on page 5.

E.U. ID No. 001 Combustion Turbine (CT)

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

Page 20, Conditions: C.27

compliance test report contents

(c)... as a minimum, the test report ...shall provide the following information:

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 sampling time per point.

...

16. Data on the amount pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.

Comment 13

Some of the stated compliance test reporting requirements are not relevant depending on the tests being performed. Take for example c(11). In Method 20, required for the annual NOx compliance test, neither measurement of velocity head nor use of a dry gas meter are involved in the method. Thus there is nothing to report regarding these two items. Further, unless particulate matter is being measured, required only under certain circumstances, there is no probe catch or impinger information to be reported as required in (c(16)).

We request that the last sentence in C.27.(c) be reworded as follows: "As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information if required by the test method:"



E.U. ID No. 001 Combustion Turbine (CT)

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

Page 23, Condition C.31.

The permittee shall maintain records on the amount of Turbotect 927 used to clean the turbine compressors, including date cleaned and dilution ratio. [Rule 62-4.070(3), F.A.C.]

Comment 14

We request that this new condition be removed. As set forth more fully in comments to Condition A.2. (page 6 of the permit), because the amount of compressor cleaner used is not significant and is consumed by combustion in the turbine, it is not reasonable to expect that this on-line compressor washing would lead to a violation of the Department's rules or facility permit limitations. Further, limiting the plant to the use of a specifically labeled material from a specific manufacturer, as this condition does, would add an unnecessary administrative burden to the Department and Orlando CoGen without any benefit. As noted in the comment to condition A.2., the brand of turbine cleaner has already changed from Turbotect 927. It is now CONNTECT 7000.

However, if the Department continues to believe tracking the use of compressor cleaner is necessary, we propose to maintain records of: 1) the specific cleaner used, by retaining the MSDS of the material; and 2) the total quantity of the undiluted material consumed during each calendar year from purchasing records.

will delete reference to brand name.

E.U. ID No. 001 Combustion Turbine (CT)

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

Page 23, Condition C.32.

Any other operating parameters established during compliance testing and/or inspections, that will ensure proper operation of this facility, are considered part of this operating permit. Said operating parameters include, but are not limited to: Fuel flow rate and heat input rate.[Rule 62-4.070(3), F.A.C]

Comment 15

This condition is overly broad and there is not sufficient regulatory basis for its inclusion. The regulation cited states "*The Department may issue any permit with specific conditions necessary to provide reasonable assurance that Department rules can be met*". This rule argues that revisions in operating permit requirements found necessary by the Department must explicitly follow the permit revision process.

We request that this condition be removed or restated.

~~Will be considered~~
~~delete~~ delete.

Appendix U-1, List of Unregulated Emission Units and/or Activities

One or more emergency generators which are not subject to the Acid Rain Program and have total fuel consumption, in the aggregate, 4.4 million cubic feet per year or less of natural gas.

Comment 1b

We believe that the single emergency natural gas-fired generator listed here may more appropriately be listed in Appendix I-1 as an insignificant unit since it falls under the categorical exemption of 210.300(3)(a)(20) and also meets the insignificance definition 62-210.300(3)(a). Also Appendix I-1, item (10), already includes "emergency generators < 32,000 gal/yr". Therefore, we request that this emergency generator be moved from Appendix U-1 to Appendix I-1 as an "emergency generator < 4.4 million standard cubic feet per year".

ok, granted

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

Comments 17.

- ok A) As suggested in the preceding comment regarding Appendix U-1, we believe that the emergency generator is more appropriately listed in this appendix as "emergency generator < 4.4 million standard cubic feet per year".
- ok B) Item 2 on this list ("internal combustion engines-mobile sources") should be removed. Mobile sources, at this plant a registered pickup truck, are not regulated by Title V.
- ok C) Item 13 on this list ("surface coating >5% VOC; 6 gal/month") we believe should instead be "surface coating >5%; 6 gal/day, monthly average" [62-210.300(23)].

(3)

E.U. ID No. 001 Combustion Turbine (CT)

E.U. ID No. 002 Heat Recovery Steam Generator (HRSG) and Duct Burner (DB) System

Table 2-1, Summary of Compliance Requirements

Comment 18

The column "Frequency Base Date" lists 8-Sep for purposes of timing annual compliance tests. As noted in several prior comments, the operating permit was modified by the Department on 6 December 1996 to change the base date to 1 April for annual compliance tests.

"Testing Time Frequency" gives for PM/PM10 and VOC an annual test frequency. For the sake of clarity, it may be helpful to note in the table, as stated in the body of the permit, that annual VOC tests are only required if the individual unit CO emission standard is not met. Similarly, for PM/PM10, annual tests are required only if the VE standard for the CT alone, or the CT plus DB is not met.

1. change dates to April
2. ok

Appendix H-1, Permit History/ID Number Changes

Comment 19

The Department should include in the permit history operating permit modifications as specified in the following documents.

- 5/6/96 Mr. L.T. Kozlov, Central District, reporting agency changed to Orange County (Appendix 5)
- 6/10/96 Mr. L.T. Kozlov, Central District, clarification of excess emission requirements (Appendix 6)
- 7/19/96 Mr. L.T. Kozlov, Central District, change test load requirements, remove ISO adjustment and requirement for low load testing per DARM guidance (Appendix 3)
- 12/6/96 Mr. L.T. Kozlov, Central District, change test base date to 1 April (Appendix 2)

Appendices

1. Customized fuel monitoring schedule
2. Operating permit amendment letter of 12/6/96
3. Operating permit amendment letter of 7/19/96
4. DARM-EM-05 Guidance on Rate of Operation During Compliance Testing for Combustion Turbines
5. Operating permit amendment letter of 5/6/96
6. Operating permit amendment letter of 6/10/96
7. Operating permit of 2/10/95

Orlando CoGen Limited, L.P.
DRAFT Permit No.: 0950203-001-AV
Facility ID No.: 0950203

Appendix 1 – Customized fuel monitoring schedule



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

SEP 17 1993

4APT-AE

Mr. Clair H. Fancy, Chief
Air Resources Management Division
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Fl 32399-2400

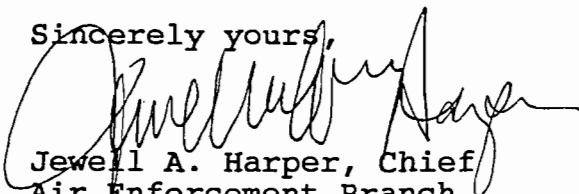
RE: Orlando CoGen Limited, L.P. (OCL)
Stationary Gas Turbines, AC 48-206720, PSD-FL-184
Customized Fuel Monitoring Schedule

Dear Mr. Fancy:

This letter is in response to OCL's July 26, 1993, request for approval of a customized fuel monitoring schedule for the above referenced project. This request was sent to the Environmental Protection Agency (EPA), and a copy was forwarded to you. Since the authority for approving alternatives to the monitoring requirements in § 60.334(b) of 40 CFR Part 60, Subpart GG, was not delegated to the State of Florida, we have reviewed OCL's custom fuel monitoring schedule. Based on our review, we have determined that it is acceptable because it conforms to custom fuel monitoring guidance (a copy of this guidance memo is enclosed) issued by EPA Headquarters in 1987. Therefore, you may modify OCL's permit accordingly. Please note that the approved reference methods are cited in 40 CFR §60.335(d), and not in 40 CFR §60.335(b)(2) as referenced in OCL's July 26, 1993, letter.

If you have any questions regarding the determination provided in this letter, please contact Mr. Mirza P. Baig of my staff at 404/347-5014.

Sincerely yours,



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides, and Toxics
Management Division

Enclosure

cc: Mr. Tom Hess, Orlando CoGen Limited, L.P.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 14 1987

OFFICE OF
AIR AND RADIATION

MEMORANDUM

SUBJECT: Authority for Approval of Custom Fuel Monitoring
Schedules Under NSPS Subpart GG

FROM: John B. Rasnic, Chief *John B Rasnic*
Compliance Monitoring Branch

TO: Air Compliance Branch Chiefs
Regions II, III, IV, V, VI and IX

Air Programs Branch Chiefs
Regions I-X

The NSPS for Stationary Gas Turbines (Subpart GG) at 40 CFR 60.334(b)(2) allows for the development of custom fuel monitoring schedules as an alternative to daily monitoring of the sulfur and nitrogen content of fuel fired in the turbines. Regional Offices have been forwarding custom fuel monitoring schedules to the Stationary Source Compliance Division (SSCD) for consideration since it was understood that authority for approval of these schedules was not delegated to the Regions. However, in consultation with the Emission Standards and Engineering Division, it has been determined that the Regional Offices do have the authority to approve Subpart GG custom fuel monitoring schedules. Therefore it is no longer necessary to forward these requests to Headquarters for approval.

Over the past few years, SSCD has issued over twenty custom schedules for sources using pipeline quality natural gas. In order to maintain national consistency, we recommend that any schedules Regional Offices issue for natural gas be no less stringent than the following: sulfur monitoring should

be bimonthly, followed by quarterly, then semiannual, given at least six months of data demonstrating little variability in sulfur content and compliance with §60.333 at each monitoring frequency; ~~nitrogen monitoring can be waived for pipeline quality natural gas~~, since there is no fuel-bound nitrogen and since the free nitrogen does not contribute appreciably to NO_x emissions. Please see the attached sample custom schedule for details. Given the increasing trend in the use of pipeline quality natural gas, we are investigating the possibility of amending Subpart GG to allow for less frequent sulfur monitoring and a waiver of nitrogen monitoring requirements where natural gas is used.

Where sources using oil request custom fuel monitoring schedules, Regional Offices are encouraged to contact SSCD for consultation on the appropriate fuel monitoring schedule. However, Regions are not required to send the request itself to SSCD for approval.

If you have any questions, please contact Sally M. Farrell at FTS 382-2875.

Attachment

cc: John Crenshaw
George Walsh
Robert Ajax
Earl Salo

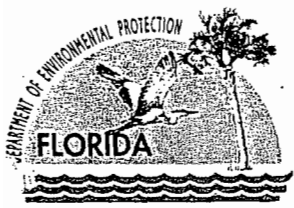
Enclosure

Conditions for Custom Fuel Sampling Schedule for Stationary Gas Turbines

1. Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.
2. Sulfur Monitoring
 - a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(d)(2).
 - b. Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.
 - c. If after the monitoring required in item 2(b) above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.
 - d. Should any sulfur analysis as required in items 2(b) or 2(c) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the State Air Control Board of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
3. If there is a change in fuel supply, the owner or operator must notify the State of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
4. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.

Orlando CoGen Limited, L.P.
DRAFT Permit No.: 0950203-001-AV
Facility ID No.: 0950203

Appendix 2 – Operating permit amendment letter of 12/6/96



Department of Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Orlando Cogen Limited L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Attention: John P. Jones, President

Orange County - AP
Combined Cycle Gas Turbine
Permit No. AO48-248669
Change of Conditions

Dear Mr. Jones:

We are in receipt of a request for a change of the permit conditions. The conditions are changed as follows:

Condition

Specific Condition No. 11

From

... within 60 days prior to September 8 ...

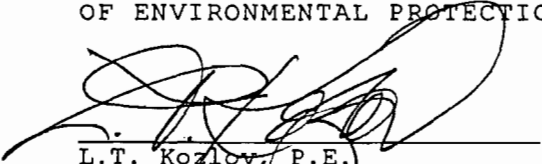
To

... within 60 days prior to April 1 ...

All other conditions remain the same.

This letter must be attached to your permit and becomes a part of that permit.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

Issued: 12-6-96

AZ
LTK/jtt *JJ*

copies furnished to:

Dennis Nester

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

Orlando CoGen Limited, L.P.
DRAFT Permit No.: 0950203-001-AV
Facility ID No.: 0950203

Appendix 3- Operating permit amendment letter of 7/19/96



Department of Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Orlando Cogen Limited L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Attention: John P. Jones, President

Orange County - AP
Combined Cycle Gas Turbine
Permit No. AO48-248669
Change of Conditions

Dear Mr. Jones:

We are in receipt of a request for a change of the permit conditions. The conditions are changed as follows:

Condition

Specific Condition No. 11

From

30, 50, 75 and 100% of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load, as referenced in 40 CFR 60.335 (c)(2), Subpart GG	Peak load based on Btu input will be established and megawatts determined on the day of the test. Multiple load testing for NO _x will be performed in accordance with 40 CFR 60.335 (c)(2).
--	--

To

Subsequent annual compliance tests with No_x limits shall not require an ISO correction or testing at four load points; rather, the testing shall be done at capacity, as defined by specific condition no. 17.

Condition

Specific Condition No. 17

From

17. 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 minimum permitted capacity; in this case, subsequent emissions unit operation is

limited to 110 percent of the test load until a new test is conducted. Once the 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.].

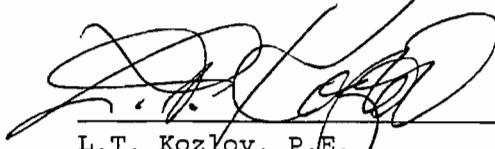
To

17. Testing of emissions shall be conducted with the emissions unit operating at capacity (maximum heat input rate for the inlet air temperature of the combustion turbine during the test). Capacity is defined as 95 - 100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned inlet) air temperature during the test. If it is impractical to test at capacity, then the combustion turbine may be tested at less than capacity. In such case, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report.


All other conditions remain the same.

This letter must be attached to your permit and becomes a part of that permit.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

Issued: 7-19-96

AB
LTK/jtt 

copies furnished to:

Dennis Nester

Orlando CoGen Limited, L.P.
DRAFT Permit No.: 0950203-001-AV
Facility ID No.: 0950203

Appendix 4 – DARM-EM-05

TO: District Air Program Administrators
County Air Program Administrators

FROM: Howard L. Rhodes, Director
Division of Air Resources Management

DATE: November 22, 1995

SUBJECT: Guidance on Rate of Operation During Compliance
Testing for Combustion Turbines

This memo is to provide guidance on determining the rate of operation during compliance testing for combustion turbines (CTs).

The mass throughput rate of combustion turbines is inversely proportional to temperature and humidity measured at the CT inlet as a result of the changing air densities encountered. Inlet air temperature is the predominant factor; therefore, higher temperatures will result in a lower heat input rate (MMBtu/hr) and vice versa. The temperature is referenced to the CT inlet temperature rather than ambient temperature, as some CTs are equipped with inlet air conditioning systems (e.g., chillers or evaporative coolers) to maintain optimum operating temperature. Inlet air temperature and ambient temperature are equivalent in cases where no conditioning systems are used. Variations of heat input (capacity) are to be expected due to the range of ambient temperatures and humidities encountered in Florida. Over the usual operating ranges, the CT operating curve (capacity vs. inlet air temperature) is essentially a straight line. An owner or operator of a CT may use these curves in determining the maximum heat input rate for the unit.

The determination of the rate of CT operation during compliance testing is illustrated in the following example. The heat input limit is often referenced to 59 F, and in this example, corresponds to 750 MMBtu/hr (Point A). On the date that compliance testing is conducted, the average ambient (or conditioned) air temperature during the test period is determined to be 80 F. According to the attached curve, the maximum design heat input rate achievable is 700 MMBtu/hr (Point B). The CT has successfully achieved 90 percent of its maximum permitted capacity for this temperature if it is determined to be operating at 630 MMBtu/hr or more (Point C). In this example, the dashed line represents 90 percent of the maximum heat input value achievable over a range of inlet air temperatures. Heat input may vary depending on CT characteristics; therefore, manufacturer's curves for correction to other temperatures shall be provided to the Department, if a source intends to use the curves for compliance purposes. At the request of a permittee, the following condition shall be incorporated into the construction and corresponding operating permits:

"Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report."

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

HLR/chf/h

Attachment

Orlando CoGen Limited, L.P.
DRAFT Permit No.: 0950203-001-AV
Facility ID No.: 0950203

Appendix 5 – Operating permit amendment letter of 5/6/96



BEST AVAILABLE COPY
Department of
Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Orlando Cogen Limited, L.P.
7201 Hamilton Blvd.
Allentown, PA 18195-1501

Attention: John P. Jones, President

Orange County - AP
Combined Cycle Gas Turbine
Permit No. AO48-248669
Change of Permit Conditions

Dear Mr. Jones:

We are in receipt of a request for a change of the permit conditions. The conditions are changed as follows:

Condition

Specific Condition No. 15

From

..the Central District office of the Department of Environmental Regulation..

To

..the Orange County Environmental Protection Department..

Condition

Specific Condition No. 16

From

..the Department's Central District office..

To

..the Orange County Environmental Protection Department..

Condition

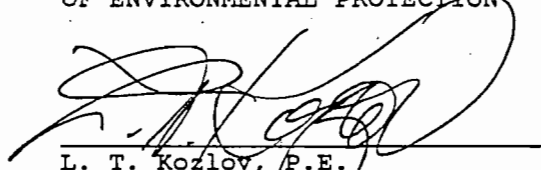
Specific Condition No. 20 - Delete

Orlando Cogen Limited, L.P.
Permit No. AO48-248669
Page Two

All other conditions remain the same.

This letter must be attached to your permit and becomes a part of that permit.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



L. T. Kozlov, P.E.
Acting Program Administrator
Air Resources Management

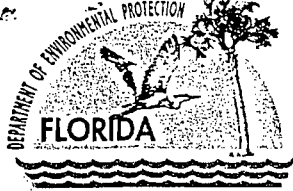
Issued: May 6, 1996

AS
LTK/jt
cc: Dennis Nester
Kennard F. Kosky, P.E.

5/31 - John Turner T/C

Orlando CoGen Limited, L.P.
DRAFT Permit No.: 0950203-001-AV
Facility ID No.: 0950203

Appendix 6 – Operating permit amendment of 6/10/96



LARRY ADKINS

Department of Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Orlando Cogen Limited L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Attention: John P. Jones, President

Orange County - AP
Combined Cycle Gas Turbine
Permit No. AO48-248669
Change of Conditions

Dear Mr. Jones:

We are in receipt of a request for a change of the permit conditions.
The conditions are changed as follows:

Condition

Specific Condition No. 20

Add

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.

Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.

Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.

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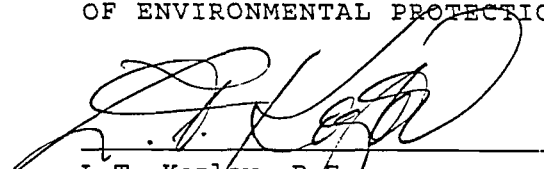
Orlando Cogen Limited L.P.
Permit No. AO48-248669
Change of Conditions
Page Two

In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department [Rule 62-210.700(1), (4), (5) & (6), F.A.C.].

All other conditions remain the same.


This letter must be attached to your permit and becomes a part of that permit.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

Issued: 6-10-96

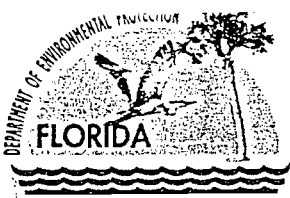

LTK/jtt

copies furnished to:

Dennis Nester
Kennard Kosky, P.E.
Bruce Mitchell

Orlando CoGen Limited, L.P.
DRAFT Permit No.: 0950203-001-AV
Facility ID No.: 0950203

Appendix 7 – Operating permit of 2/10/95



Department of Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Permittee:
Orlando Cogen Limited, L.P.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

Attention: John P. Jones, President

Permit Number: AO48-248669
Date of Issue: 2-10-95
Expiration Date: January 31,
2000
County: Orange
Latitude/Longitude:
28° 26' 23"N / 81° 24' 28"W
UTM: 17-459.5 KmE; 3146.1 KmN
Project: 128.9 MW Combined
Cycle Gas Turbine

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-2. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

The permittee can operate a 128.9 MW combined cycle gas turbine cogeneration facility. The cogeneration facility consists of a combustion turbine (CT) exhausting through a heat recovery steam generator (HRSG). The transition duct from the CT to the HRSG contains duct burners (DBs) with a maximum heat input of 122 MMBtu/hr.

This facility is located in the Orlando Central Park, Orange County, Florida, and will supply steam to the adjacent Air Products and Chemicals plant.

General Conditions are attached to be distributed to the permittee only.

BEST AVAILABLE COPY

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. 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), F.S., the issuance of this permit does not convey any 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 of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement 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.

The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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 reasonable times, access to the premises where the permitted activity is located or conducted to:
 - (a) Have access to and copy any records that must be kept under 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 noncompliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

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.

BEST AVAILABLE COPY

GENERAL CONDITIONS:

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 Section 403.111 and 403.73, F.S. 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 Rule 62-4.120 and 62-30.300, 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:
 - (X) Determination of Best Available Control Technology (BACT)
 - (X) Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)
 - (X) Compliance with New Source Performance Standards
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 for 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;
 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 the 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.

Permittee: Orlando Cogen Limited
L.P.
Attention: John P. Jones,
President

Permit Number: AO48-248669
Date of issue:
Expiration Date: January 31, 2000

ORLANDO COGEN

SPECIFIC CONDITIONS

OPERATING CONDITIONS

1. The CT (combustion turbine) is permitted to operate continuously (8,760 hours per year). [Pursuant to permit application]
2. The HRSG-DB (heat recovery steam generator-duct burner) is permitted to operate for 3688 hours per year at a maximum heat input rate of 122.0 MMBtu/hr for a maximum heat input of 450,000 MMBtu/yr (Note: the unit may operate at lower rates for more hours within the annual heat input limit). [Pursuant to permit application]
3. The CT and HRSG-DB are permitted to fire natural gas only. [Pursuant to permit application]
4. The permitted materials and utilization rates for the combined cycle gas turbine shall not exceed the values as follow:

Maximum heat input to the CT shall not exceed 856.9 MMBtu/hr at ISO conditions.

Maximum heat input to the HRSG-DB shall not exceed 122.0 MMBtu/hr and 450,000 MMBtu/yr.

5. Any change in the method of operation, equipment or operating hours which affects air emissions shall be submitted to the Department's Bureau of Air Regulation and the Central Florida District office for prior approval.
6. Any other operating parameters established during compliance testing and/or inspections, that will ensure the proper operation of this facility, are considered part of this operating permit. Said operating parameters include, but are not limited to: Fuel flow rate and heat input rate.
7. The permittee shall not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. (Rule 62-296.320(2), F.A.C.)
8. This source must be properly operated and maintained [Rule 62-210.300(2), F.A.C.]. No person shall circumvent any pollution control device or allow the emissions of air pollutants without the applicable air pollution control device operating properly [Rule 62-210.650, F.A.C.].

EMISSION LIMITS

9. The maximum allowable emissions from this facility shall not exceed the emission rates listed in Table 1 below

Permittee: Orlando Cogen Limited
L.P.
Attention: John P. Jones,
President

Permit Number: AO48-248669
Date of issue:
Expiration Date: January 31, 2000

Table I

Pollutant	Source	Allowable Emission Standard/Limitation
NO _x	CT	15 ppmvd @ 15% O ₂ (57.4 lb/hr; 251.4 tpy)
	DB	0.1 lb/MMBtu (12.2 lb/hr; 22.5 tpy)
	CT/DB	24-hour rolling average
CO	CT	10 ppmvd; (22.3 lb/hr; 92.1 tpy)
	DB	0.1 lb/MMBtu (12.2 lb/hr; 22.5 tpy)
PM/PM10	CT	0.01 lb/MMBtu (9.0 lb/hr; 39.4 tpy)
	DB	0.01 lb/MMBtu (1.2 lb/hr; 2.2 tpy)
VOC	CT	3.0 lb/hr; 13.0 tpy
	DB	3.7 lb/hr; 6.8 tpy
VE	CT/DB	Less than or equal to 10% opacity

- NOTE: 1. CT - Combustion Turbine
DB - Duct Burner
2. Natural Gas usage only in the CT and DB.
3. Hours of operation:
a. CT - 8760 hrs/yr
b. DB - 3688 hrs/yr (at a maximum heat input of 122.0 MMBtu/hr)
4. Maximum heat input:
a. CT - 856.9 MMBtu/hr
b. DB - 122.0 MMBtu/hr; 450,000 MMBtu/yr
5. DB operation planned when ambient temperature is greater than 59°F.
10. Visible emissions shall never exceed 10 percent opacity. [Pursuant to Construction Permit AC48-206720]

COMPLIANCE DETERMINATION

11. Compliance with the NO_x, CO and visible emission standards shall be determined by the following reference methods as described in 40 CFR 60, Appendix A (July 1, 1990) and adopted by reference in Rule 62-297, F.A.C.
- a. Method 1 - Sample and Velocity Traverses
- b. Method 2 - Volumetric Flow Rate
- c. Method 5 - Determination of Particulate Emissions from
or 17 Stationary Sources
- d. Method 9 - Visual Determination of the Opacity of Emissions
from Stationary Sources
- e. Method 10 - Determination of the Carbon Monoxide emissions
from Stationary Sources
- f. Method 20 - Determination of Nitrogen Oxides, Sulfur Dioxide
and Diluent emissions from Stationary Gas
Turbines

Permittee: Orlando Cogen Limited
 L.P.
 Attention: John P. Jones,
 President

Permit Number: AO48-248669
 Date of issue:
 Expiration Date: January 31, 2000

Note: Other test methods may be used for compliance testing only after prior Department written approval. Compliance with the total volatile organic compound emission limits will be assumed, provided that the CO allowable emission rate is achieved; specific VOC compliance testing is not required. Compliance tests shall be conducted on an annual basis on or within 60 days prior to September 8 for each parameter marked (A) in the following table:

PARAMETER	TEST METHOD
NO _x (A)	Method 20* with F factor for results in pounds per million Btu. Stack concentrations of NO _x will be corrected with the ISO correction equation in Specific Condition 14 of this permit.
VOC (A)	Method 25A. VOC will be tested simultaneously with NO _x , CO and VE at maximum load. Not required if CO limit is met.
CO (A)	Method 10. CO will be tested simultaneously with NO _x , VOC and VE at maximum load. Tests will be conducted for CT only, and CT plus DB. CO test will be three test runs, with each test run to be a minimum of one hour as required by 62-297.310(1) and 62-297.330(1)(a)
VE (A)	Method 9. two one-hour VE tests while firing gas at maximum load. One hour with DB on, one hour with DB off. VE readings will be taken simultaneously with tests for NO _x , CO and VOC.

PARAMETER	METHOD OF DETERMINATION
Fuel Type	Natural Gas.
Btu Per Pound of Fuel (A)	Fuel Analysis both low and high. Btu input for CT calculated using lower heating value. Btu input for DB calculated using higher heating value.
CO ₂ and O ₂ (A)	Method 3A/20 to be used to measure oxygen for all test conditions.

Permittee: Orlando Cogen Limited
 L.P.
 Attention: John P. Jones,
 President

Permit Number: AO48-248669
 Date of issue:
 Expiration Date: January 31, 2000

Ambient temperature, pressure and humidity (A)	Temperature and humidity of the ambient air will be recorded by the stack test team. This is in addition to the data recorded by the computer. Pressure will be measured as ambient pressure.
30, 50, 75 and 100% of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load, as referenced in 40 CFR 60.335 (c) (2), Subpart GG	Peak load based on Btu input will be established and megawatts determined on the day of the test. Multiple load testing for NO _x will be performed in accordance with 40 CFR 60.335 (c) (2).

* The emission test sampling points will be selected in accordance with 6.1.2.4 of Method 20, which states - Select the eight sampling points at which the lowest O₂ concentrations or highest CO₂ concentrations were obtained - . If the difference between the highest and the lowest measured oxygen concentrations in the stack is less than 0.4% oxygen by volume, it may be assumed that stratification does not exist.

A one-hour visible emissions test at peak load is required to show compliance with the 10% opacity limit on the turbine.

12. An opacity test for the combustion turbine may be substituted for the annual particulate emissions test. If however opacity values exceed 10%, then a Method 5 or 17 particulate test must be conducted on the turbine to prove compliance with the particulate emissions standard. [Pursuant to Construction Permit AC48-206720]
13. The permittee shall calibrate, maintain and operate a continuous emission monitor (CEM) in the stack to measure and record the nitrogen oxide (NO_x) emissions from this source. The continuous emission monitor must comply with 40 CFR 60, Appendix B, Performance Specification 2, (July 1, 1991 version). For the purpose of demonstrating ongoing compliance with the applicable NO_x emissions limitation in Table I, using the stack CEM, compliance is considered to occur when the NO_x emissions are less than or equal to 57.4 lb/hr when only the CT is operating and less than or equal to 69.6 lb/hr when both the CT and DB are operating. The 24-hour rolling average compliance level is calculated based on the proportion of hours in any 24-hour period that the CT only or CT/DB are operating. Any portion of an hour that the DB operates is recognized as an hour period on the rolling average.

For example, in a given contiguous 24-hour period with 20 hours of CT operation only and 4 hours of CT/DB operation:

Calculated Emission Limitation =

$$[(57.4 \text{ lb/hr} \times 20 \text{ hrs}) + (69.6 \text{ lb/hr} \times 4 \text{ hrs})] / 24 \text{ hrs} =$$

24 hour rolling average-compliance NO_x level = 59.4 lb/hr

Permittee: Orlando Cogen Limited
L.P.
Attention: John P. Jones,
President

Permit Number: AO48-248669
Date of issue:
Expiration Date: January 31, 2000

Compliance with the permitted NO_x emission limitation is considered satisfied as long as the NO_x emissions from the stack CEM are less than or equal to the calculated NO_x emissions, averaged over the same 24-hour period.

14. During performance tests to determine compliance with the NSPS NO_x standard, the measured NO_x emission at 15% oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor, as found in 40 CFR 60.335(1) NSPS Subpart GG:

$$\text{NO}_x = (\text{NO}_x \text{ obs}) (P_{\text{ref}}/P_{\text{obs}})^{0.5} e^{19(H_{\text{obs}} - 0.00633)} (288^\circ\text{K}/T_{\text{amb}})^{1.53}$$

Where,

NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions

($\text{NO}_x \text{ obs}$) = Measured NO_x emission at 15 percent oxygen, ppmv

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure

P_{obs} = Reference combustor inlet absolute pressure at test ambient pressure

H_{obs} = Specific humidity of ambient air at test

e = Transcendental constant (2.718)

T_{amb} = Temperature of ambient air at test

15. The permittee shall notify the Central District office of the Department of Environmental Protection, in writing, at least 15 days prior to the date on which each formal compliance test is to begin. Said notification shall include the date, time and place of each such test, as well as the name of the contact person who will be responsible for coordinating and having such tests conducted for the owner. The Department may waive the 15 day notice requirement on a case by case basis [Rule 62-297.340(1)(i), F.A.C.]. Further, the permittee shall also at that time, schedule a pre-test meeting with the Central District office to review the compliance test procedures required by this permit and 40 CFR 60, Code of Regulations.
16. A copy of the compliance test results shall be submitted to the Department's Central District office within 45 days after the last test run is complete. The test run should provide the actual heat input rate, and at least all of the information listed in Rule 62-297.570(3), F.A.C. Each test report should include a fuel oil analysis as required in 40 CFR 60.334(b). Failure to submit any of the above information may invalidate a test. [Rule 62-297.570 and 62-4.070(3), F.A.C.]
17. 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

Permittee: Orlando Cogen Limited
L.P.
Attention: John P. Jones,
President

Permit Number: AO48-248669
Date of issue:
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permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the 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.]

18. The stack sampling facility must comply with Rule 62-297.345, F.A.C., regarding minimum requirements that include but are not limited to: location of sampling ports, work platform area hand rails and toe boards, caged ladder, access and electrical power.
19. Combustion control shall be utilized for CO control. The permittee shall design the facility to allow for future installation of an oxidation catalyst. Once performance testing has been completed, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control. [Pursuant to permit application]
20. Excess emissions resulting from startup or shutdown are permitted provided that best operational practices to minimize emissions are adhered to, and the duration of excess emissions is minimized. Excess emissions resulting from malfunction are permitted provided that best operational practices to minimize emissions are adhered to, and the duration of excess emissions is minimized, but in no case exceeds two hours in any 24-hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction, are prohibited. [Rule 62-210.700, F.A.C.]

In the event that the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the Department's Central District Office. Notification shall be conducted in accordance with General Condition (8) of this permit. In case of excess emissions resulting from malfunctions, a full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rules 62-210.700(6) and 62-4.130, F.A.C.]

can't meet permit due to breakdown of equipment

The permittee shall submit, to the Department, a written report of emissions in excess of the emission limiting standard as set forth in Rule ~~62-296.405(1)(a)~~, F.A.C. for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the permittee of the legal liability for violations. All recorded data shall be maintained on file for a period of at least two years. The information supplied in this report consistent with the reporting requirements of 40 CFR 60.7. The report shall be submitted within 30 days following the end of

some fuel steam generator > 750 MMbt. VE < 20%

Permittee: Orlando Cogen Limited
L.P.
Attention: John P. Jones,
President

Permit Number: AO48-248669
Date of issue:
Expiration Date: January 31, 2000

the calendar quarter. [Rules 62-297.500(2) and 62-4.070(3),
F.A.C.]

RULE REQUIREMENTS

21. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes, and Chapter 62-4, Florida Administrative Code.
22. This source shall comply with all requirements of 40 CFR 60, Subparts GG and Db, and Rule 62-296.800(a), F.A.C., Standards of Performance for Stationary Gas Turbines, and Standards of Performance for Industrial, Commercial and Institutional Steam Generating Units.
23. This source shall comply with Rule 62-297, F.A.C., Stationary Point Source Emission Test Procedures.
24. Pursuant to Rule 62-210.300, F.A.C., Air Operating Permits, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to, the following: fuel usage, hours of operation and air emissions. Annual reports shall be sent to the Department's Central District office. Each calendar year, on or before March 1, an Annual Operations Report, DEP Form 62-210.900(5) must be submitted for the preceding calendar year.
25. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapter 62-297 or any other requirements under federal, state or local law. Additional regulations may impact this facility at some future date. The permittee shall comply with any applicable future regulations when they become effective. [Rule 62-210.300, F.A.C.]
25. The application to renew this operating permit shall be submitted to the Central District office of the Department of Environmental Protection at least 60 days prior to the expiration date of this permit. [Rules 62-4.050(2) and 62-4.090(1), F.A.C.]

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Charles M. Cullens
for William M. Bostwick, Jr., P.E.
Acting District Director

ISSUED: 2-10-95



Department of Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Orlando Cogen Limited, L.P.
7201 Hamilton Boulevard
Allenton, PA 18195-1501

OCD-AP-95-44

Attention: John P. Jones, President

Orange County - AP
Permit Number: AO48-248669
128.9 MW Combined Cycle Gas Turbine

RECEIVED
A.P.C.I.

FEB 23 1995

ENVIRONMENTAL/ENERGY
DIVISION

Dear Mr. Jones:

On February 14, 1995 permit number AO48-248669 was mailed to you with incorrect page numbers. Please replace with the attached pages 4 to 9.

We apologize for the inconvenience.

Sincerely,

Charles M. Collins

Charles M. Collins, P.E.
Program Administrator
Air Resources Management

Date: 2-20-95

Attachments
CMC/dj



Orlando CoGen Limited, L.P.
8275 Exchange Drive
Orlando, FL 32809



Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

17 July 1998

Mr. Scott M. Sheplak, P.E.
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

JUL 20 1998

BUREAU OF
AIR REGULATION

Re: DRAFT Title V Permit No.: 0950203-001-AV
Orlando CoGen Limited, L.P.

Dear Mr. Sheplak:

Thank you for your letter of 23 June responding to our comments of 21 May to the draft Title V permit for our Orlando cogeneration plant. The changes contained in the revised draft permit have addressed all of our substantial concerns except one.

We continue to have trouble with condition A.2. Turbine Cleaning. "*The turbine compressors shall be cleaned only with solvent/surfactant based mixtures containing no hazardous air pollutants as defined in Rule 62-210.200, F.A.C., while the turbine is operating (i.e., on-line). Cleaning of the on-line compressors shall be performed on a as needed basis.*"

This condition should be eliminated for the following reasons:

1. This is not only a new condition, but there does not appear to be any regulatory basis for its inclusion in the plant's Title V permit as an applicable requirement.
2. A review of Florida Title V permits for similar facilities did not discover another example of this condition¹.
3. There does not appear to be any justification for the condition based on control of air pollution. The rate of usage of online turbine cleaner is small, at this time averaging on a yearly basis about 1000 gallons of undiluted material. Because the diluted cleaner is injected into the compressor section while the combustion turbine is operating, spent material must pass through the turbine combustor where it is destroyed by combustion at high temperature. For this reason any kind of emissions from online washing are insignificant.

¹ Orlando CoGen is not unique in performing on line compressor washing, we believe that the majority of facilities with modern combustion turbines perform online washing.

4. To comply with this condition would be extraordinarily onerous. A determination would have to be made that every cleaner formulation contained none of the hazardous air pollutants (189 currently) at any level whether added by design or added inadvertently as a trace contaminant during production.
5. Finally, we believe that this is an insignificant activity under Rule 62-213.430(6)(b).

For all of the reasons given above, we request that the Department remove this condition entirely from the Title V permit. However, we do not object to the record keeping requirement for cleaner usage as given in condition C.30.

Two minor editorial comments to the revised draft we believe will add clarity to the conditions.

Page 1
Condition
A.17.2.a. As stated in the condition, the custom fuel monitoring schedule became effective on 9/17/93. Since then the initial phase of frequent fuel sulfur monitoring has been completed. The plant is now in compliance with the requirement to monitor fuel sulfur twice per year. However, A.17.2.a. as written, could be understood to require the facility to repeat the program from the beginning, starting with twice monthly monitoring for six months. We request that a note be added to this condition to the effect that the monitoring in 2.b. need not be repeated unless the Department later determines that the fuel schedule must be modified as specified in A.17.2.d or A.17.3.

Page 3
Condition
A11. The condition as stated paraphrases DARM-EM-05. We request that for the sake of clarity that the entire relevant paragraph as follows be substituted.

"Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report."

As you review these comments, if there are any questions or a need for additional information, please call me at 407-851-1350 for questions regarding general plant operations, or Tom Hess at 610-481-7620 for questions regarding the enclosed comments. If it would be helpful to meet in person to discuss the draft permit, I would be happy to do so at your convenience.

Very truly yours,

A handwritten signature in black ink, appearing to read "L. J. Adkins", with a horizontal line underneath the name.

Larry J. Adkins
Plant Manager
Authorized Representative
(Designated Acid Rain Representative)

Rec 041798
Road 071798

Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501



POWER GENERATION - ENVIRONMENTAL

FACSIMILE NO: (610) 481-2393

PLEASE DELIVER THE FOLLOWING PAGES TO:

Name: Lennon Anderson

Company: Dept. of Environmental Protection

Facsimile No: 850-922-6979

Total Pages: 4 (including cover sheet)

From: Tom Hess (610) 481-7620

Date: 07/17/98

Re: Orlando CoGen Title V Permit

Mr. Anderson:

After our brief telephone conversation earlier this week I revisited the revised draft Title V permit for our Orlando cogeneration plant. I thought it might be useful to fax to you a copy of our response. The original is being sent to Mr. Sheplak via FedEx. Please give me a call if you have any questions or comments.

Regards,

Tom Hess

Tom Hess



Orlando CoGen Limited, L.P.
8275 Exchange Drive
Orlando, FL 32809



Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501

17 July 1998

Mr. Scott M. Sheplak, P.E.
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: DRAFT Title V Permit No.: 0950203-001-AV
Orlando CoGen Limited, L.P.

Dear Mr. Sheplak:

Thank you for your letter of 23 June responding to our comments of 21 May to the draft Title V permit for our Orlando cogeneration plant. The changes contained in the revised draft permit have addressed all of our substantial concerns except one.

We continue to have trouble with condition A.2. Turbine Cleaning. *"The turbine compressors shall be cleaned only with solvent/surfactant based mixtures containing no hazardous air pollutants as defined in Rule 62-210.200, F.A.C., while the turbine is operating (i.e., on-line). Cleaning of the on-line compressors shall be performed on a as needed basis."*

This condition should be eliminated for the following reasons:

1. This is not only a new condition, but there does not appear to be any regulatory basis for its inclusion in the plant's Title V permit as an applicable requirement.
2. A review of Florida Title V permits for similar facilities did not discover another example of this condition¹.
3. There does not appear to be any justification for the condition based on control of air pollution. The rate of usage of online turbine cleaner is small, at this time averaging on a yearly basis about 1000 gallons of undiluted material. Because the diluted cleaner is injected into the compressor section while the combustion turbine is operating, spent material must pass through the turbine combustor where it is destroyed by combustion at high temperature. For this reason any kind of emissions from online washing are insignificant.

¹ Orlando CoGen is not unique in performing on line compressor washing, we believe that the majority of facilities with modern combustion turbines perform online washing.

- 4. To comply with this condition would be extraordinarily onerous. A determination would have to be made that every cleaner formulation contained none of the hazardous air pollutants (189 currently) at any level whether added by design or added inadvertently as a trace contaminant during production. *disagree; look @ the MSDS*
- 5. Finally, we believe that this is an insignificant activity under Rule 62-213.430(6)(b).

For all of the reasons given above, we request that the Department remove this condition entirely from the Title V permit. However, we do not object to the record keeping requirement for cleaner usage as given in condition C.30. *may delete this condition*

Two minor editorial comments to the revised draft we believe will add clarity to the conditions.

Page 1
Condition
A.17.2.a.

As stated in the condition, the custom fuel monitoring schedule became effective on 9/17/93. Since then the initial phase of frequent fuel sulfur monitoring has been completed. The plant is now in compliance with the requirement to monitor fuel sulfur twice per year. However, A.17.2.a. as written, could be understood to require the facility to repeat the program from the beginning, starting with twice monthly monitoring for six months. We request that a note be added to this condition to the effect that the monitoring in 2.b. need not be repeated unless the Department later determines that the fuel schedule must be modified as specified in A.17.2.d or A.17.3. *No*

disregard

Page 3
Condition
A11.

The condition as stated paraphrases DARM-EM-05. We request that for the sake of clarity that the entire relevant paragraph as follows be substituted.

"Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report."

ok

Save in 0823

Orlando CoGen

3

As you review these comments, if there are any questions or a need for additional information, please call me at 407-851-1350 for questions regarding general plant operations, or Tom Hess at 610-481-7620 for questions regarding the enclosed comments. If it would be helpful to meet in person to discuss the draft permit, I would be happy to do so at your convenience.

Very truly yours,



Larry J. Adkins
Plant Manager
Authorized Representative
(Designated Acid Rain Representative)



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

FAX TRANSMITTAL SHEET

TO: Mr. Tom Bless

DATE: 062598

PHONE: 610/481-2393

TOTAL NUMBER OF PAGES, INCLUDING COVER PAGE: 2

FROM: Lennon Anderson 

DIVISION OF AIR RESOURCES MANAGEMENT

COMMENTS: This is to inform you that I will not be
available to discuss the comments until the
week of July 13 or later, at your convenience.
I'll be out of the office from June 26
through July 10.

Thanks!

PHONE: 850/921-9588

FAX NUMBER: ⁸⁵⁰~~904~~/922-6979

If there are any problems with this fax transmittal, please call the above phone number.



Lennon

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

June 23, 1998

Mr. Larry J. Adkins
Plant Manager
Orlando CoGen Limited, L.P.
8275 Exchange Drive
Orlando, FL 32809

Re: DRAFT Title V Permit No.: 0950203-001-AV
Orlando CoGen Limited, L.P.

Dear Mr. Adkins:

In response to your May 21 letter providing comments on the subject facility, the Department's response to your comments are enclosed for your review. Also enclosed is a copy of the draft permit reflecting the changes made. At your earliest convenience, please let us know if you agree with the changes so that we may proceed to the PROPOSED stage.

If there are any questions, please contact Lennon Anderson at 850/921-9588.

Sincerely,

Scott M. Sheplak, P.E.
Administrator
Title V Section

SMS/la

Enclosure

cc: Tom Hess, APC

From: ..., it may be assumed that stratification does not exist.
[AC48-206720]

To: ..., it may be assumed that stratification does not exist. More than eight points may be used, if desired, providing that the points described above are included.
[AC48-206720]

Comment #6: Page 7

Response: See comment #1 above.

Comment #7: Page 8

As a result of this comment, Specific Condition B.6. is hereby changed:

From: Compliance tests shall be conducted on an annual basis on or within 60 days prior to September 8 for **Specific Condition B.7.**

To: Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for **Specific Condition B.7.**

Comment #8: Page 9

Response: Request to use test results using procedures in Method 19 is denied. However, change of citation to 40 CFR 60.46b(f) is granted.

Comment #9: Page 10

Response: As a result of this comment, Specific Condition C.11. has been deleted and relocated to Subsection B as Specific Condition B.8..

Also, the following specific condition has been inserted into Subsection A:

A.12. Testing of emissions shall be conducted with the source operating at capacity. As defined below. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report. **Capacity** is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test.

Comment #10: Page 11

As a result of this comment, Specific Condition C.17. (now Specific Condition C.16.) is hereby changed:

Comments

Golder Associates Inc.

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



April 9, 1997

Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED
APR 11 1997
BUREAU OF
AIR REGULATION

Re: Request for Additional Information Regarding Initial Title V Application
File No. 0950203-001-AV
Orlando CoGen Limited, Orange County

ATTN: Title V Section- Scott M. Sheplak, P.E. Administrator

Dear Mr. Sheplak:

On behalf of Orlando CoGen Limited, L.P., this correspondence and attachments provides the information requested in your January 14, 1997 letter regarding the initial Title V permit application for the above-referenced facility. The information provided below is presented in the same order as requested in your letter.

Facility Information

1. Standard Industrial Classification (SIC) code -- The appropriate four-digit SIC code for the facility is 4931 as listed in the construction permit (AC48-206720). The facility operates as a co-generation plant and provides less than 95 percent of energy output as electricity. This has been confirmed for 1996, where 94.6 percent of the energy output was supplied as electricity. Thus, the appropriate four-digit code is 4931. This correction has been made to the Title V application form and is attached.
2. Synthetic Minor Source of Pollutants Other than HAPs -- The facility that includes the combustion turbine and duct burner system is not synthetically limited in the amount of NO_x or CO emissions that would otherwise classify the facility as a "minor" source. However, the duct burner has a federally enforceable limitation on the total fuel usage (i.e., Specific Condition 3 of the construction permit) that limits the potential to emit for NO_x and CO. The maximum fuel usage of 450,000 million (MM)Btu/year [low heating value (LHV)] represents 3,688.525 hours of operation per year at the maximum heat input of 122 MMBtu/hr; however, the hours per year are not limited. As a result, Field 5 under Facility Regulatory Classification was checked as "No," while Fields 4 under Section H was checked "Yes."

Combustion Turbine (Emission Unit #1)

3. Turbine Wash -- The intake compressor is cleaned while the turbine is operated (i.e., on-line) at a dilution ratio of 9 gallons of cleaner to 35 gallons of demineralized water (i.e., about 20.5 percent cleaner). The cleaner currently used is Turbotech 927, which is a solvent and surfactant based

mixture that contains no hazardous air pollutants as defined in Rule 62-210.200(145)(a), Florida Administrative Code (F.A.C.). An MSDS sheet is attached. The on-line compressor cleaning results in the decomposition of the solvents and surfactants to carbon dioxide and water due to the high temperatures in the combustion zone of the turbine. The on-line compressor cleaning is performed approximately once every 4 days. This frequency results in the use of about 821 gallons of cleaner per year.

4. Segment (Process/Fuel) Information -- The 0.987 MMcf/hr of gas represents the maximum heat input at 20°F inlet turbine temperature. Since a turbine's output is inversely proportional to turbine inlet temperature, the maximum heat input occurs at the lowest temperature. However, ISO conditions (59°F and 60 percent relative humidity) is the common benchmark for turbine performance, the basis of the New Source Performance Standards (NSPS) for Stationary Gas Turbines (40 CFR Part 60, Subpart GG) and the basis of the construction permit limits. A performance summary from 20°F to 102°F was included in the construction permit application. Attachment OR-E01-L12 includes a table from the original application that lists engine performance characteristics including fuel usage (see attached). The maximum heat input of 0.987 MMcf/hr was used to calculate a maximum annual usage at 20°F, a condition unlikely in Florida. The actual permit limit is based on ISO conditions and limits the heat input to 856.9 MMBtu/hr; this is equivalent to 0.9058 MMcf/hr and 7,935 MMcf/year. It should be noted that there is no inherent fuel usage limit for the gas turbine in the construction permit.
5. Million Btu per SCC Unit -- The 946 MMBtu/MMcf (i.e., 946 Btu/cf) represents the lower heating value (LHV) of the natural gas. This heating value was the basis of the construction permit application as listed on Page 5 of 12 of the application form (see attached).
6. Emission Unit Pollutant Detail Information SO₂ -- The 2.82 lb/hr was based on a maximum sulfur content of 1 grain/100 cf of natural gas. This is based on an evaluation of sulfur contents of natural gas received in Florida over the last 6 to 7 years. The calculation was provided in Field 8 of the Title V application (see attached page). The reference to "165" may be an error in the database and the calculation may have been inadvertently changed in the database at some point.
7. Emission Unit Pollutant Detail Information PM -- The calculation presented in Field 8 using the 934 MMBtu/hr was based on the 20°F operating condition. Because 9 lb/hr and 36.4 ton/year is based on a federally enforceable construction limit (Specific Condition 4 of the construction permit) and the "0" was checked in Field 7, the calculation shown was not necessary. Moreover, using the ISO heat input of 856.9 MMBtu/hr produces the same emissions rate when rounded-off. Since there may be confusion, this page was revised to include both calculations (see attached).

See
Cindy

Duct Burner System (Emission Unit #2)

8. Segment (Process/Fuel) Information -- The Maximum Annual Rate listed in Field 5 should be 450,000 as provided for in Specific Condition 3 of the construction permit application. This page of the application form has been corrected and is attached.

Mr. Clair H. Fancy, P.E.
Page 3
April 9, 1997

Miscellaneous

9. Trivial and Unregulated Sources -- The original EPA trivial activities list and the trivial activities list originally developed by the Department included freshwater cooling towers. Since the final EPA trivial list does not include cooling towers, the cooling towers are being requested to be classified as an exempt emission unit by Rule 62-213.430(6) F.A.C. Attachment OR-E03-B6 has been corrected. The maximum potential emission for the cooling towers are 2.741 tons/year of PM/PM10. The calculation is as follows:

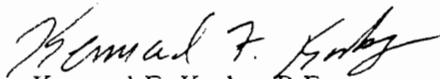
2,500 milligram/liter (mg/L) maximum total dissolved solids
25,000 gallons/minute circulating water rate
0.002% of circulating water rate drift; 0.00002 of circulating water rate

$2,500 \text{ mg/L} \times 3.785 \text{ L/gallon} \times \text{g}/1,000 \text{ mg} \times \text{lb}/453.6 \text{ g} \times 25,000 \text{ gal/min} \times 0.00002 \times 60 \text{ min/hr} = 0.626 \text{ lb/hr or } 2.741 \text{ tons/year}$ *< 5 TAY*

10. Trivial and Unregulated Sources -- The emergency generator is a 150 kW unit fired with natural gas at a rate of 37 cf/min. Currently, the unit is tested quarterly for about 30 minutes and during planned outages for about 1 hour as a full-load test. At other times, the emergency generator is only used when electric power is lost from both the plant and the interconnection with Florida Power Corporation. This unit should be classified as an unregulated unit and would be operated under the general exemption in Rule 62-210.300(3)(a)20. F.A.C. of 4.4 MMcf/year of natural gas.

Also attached is the certification pages for the Responsible Official and Professional Engineer that was requested with this information. Please call if you have any further questions.

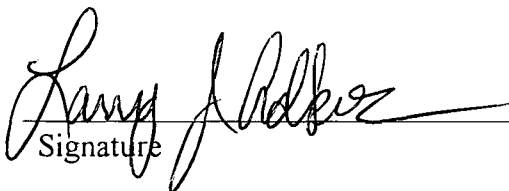
Sincerely,


Kennard F. Kosky, P.E.
Principal

KFK/lcb

cc: Larry Adkins, Orlando CoGen Limited, L.P.
Tom Hess, Orlando CoGen Limited, L.P.
File (2)

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Larry J. Adkins, Plant Mgr, Designated Acid Rain Rep
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Orlando CoGen Limited, L.P. Street Address: 8275 Exchange Drive City: Orlando State: FL Zip Code: 32809
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (407) 851-1350 Fax: (407) 851-1686
4. Owner/Authorized Representative or Responsible Official Statement: <p><i>I, the undersigned, am the owner or authorized representative* of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., 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></p> <p> Signature _____ Date <u>4/10/97</u></p>

* Attach letter of authorization if not currently on file.

RECEIVED

APR 11 1997

**BUREAU OF
AIR REGULATION**

4. Professional Engineer's 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 [] 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.

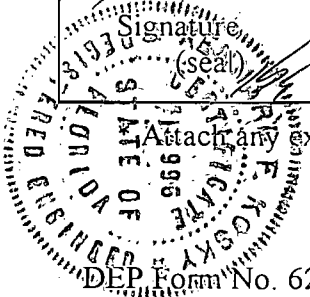
If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions 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.

Kenneth J. Krosby

9 April 1997

Date

Attach any exception to certification statement.



II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 459.5 North (km): 3146.1			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 28 / 26 / 23 Longitude: (DD/MM/SS): 81 / 24 / 28			
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): The Orlando CoGen Limited Facility consists of a single Combustion Turbine (CT) that exhausts through a heat recovery steam generator (HRSG) and a single stack. The CT is natural gas fired. The natural gas fired duct burners (DB) are located inside the HRSG.			

Facility Contact

1. Name and Title of Facility Contact: Tom Hess, Environmental Engineer
2. Facility Contact Mailing Address: Organization/Firm: Orlando CoGen Limited, L.P. Street Address: 7201 Hamilton Blvd. City: Allentown State: PA Zip Code: 18195-1501
3. Facility Contact Telephone Numbers: Telephone: (610) 481-7620 Fax: (610) 481-2393

FROM ORIGINAL PERMIT APPLICATION

D. Control Devices: (See Section V, Item 4) See Section 4.0 in PSD Application

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)

E. Fuels See Table A-1 in PSD Application

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas (CT)	0.906 (59°F)	0.987 (20°F)	933.9 at 20°F
Natural Gas (Duct Burner)	0.106 ^a	0.129	122.0

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, others--lbs/hr.
^aBased on burning only natural gas for 4,500 hours/year @ 100 x 10⁶Btu/hr
 Fuel Analysis:

Percent Sulfur: 1 grain/100 cubic feet (CF) of gas Percent Ash: Negligible
 Density: _____ lbs/gal Typical Percent Nitrogen: Negligible
 Heat Capacity: 946 Btu/CF; 20,877 BTU/lb NA BTU/gal
 Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average Not Applicable Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

All wastewaters generated from the plant will be discharged to the Orange County Wastewater treatment POTW facility at Sandlake Road.

Table A-1. Design Information and Stack Parameters for Orlando CoGen Limited, L.P.
Cogeneration Project

Data	Gas Turbine Natural Gas 20°F - B	Gas Turbine Natural Gas 59°F - C	Gas Turbine Natural Gas 72°F - D	Gas Turbine Natural Gas 102°F - E	Duct Burner Natural Gas - F
General:					
Power (kW)	87,360.0	78,830.0	75,690.0	68,350.0	NA
Heat Rate (Btu/kwh)	10,690.0	10,870.0	10,960.0	11,270.0	NA
Heat Input (mmBtu/hr)	933.9	856.9	829.6	770.3	122.0
Natural Gas (lb/hr)	44,732.4	41,044.3	39,735.7	36,897.3	5,843.8
(cf/hr)	987,186.5	905,795.0	876,915.9	814,275.4	128,964.1
Fuel:					
Heat Content - (LHV)	20,877 Btu/lb	20,877 Btu/lb	20,877 Btu/lb	20,877 Btu/lb	20,877 Btu/lb
Sulfur	1 gr/100cf	1 gr/100cf	1 gr/100cf	1 gr/100cf	1 gr/100cf
CT Exhaust:					
Volume Flow (acfm)	CT Only: 1,601,395	CT Only: 1,529,035	CT Only: 1,500,057	CT Only: 1,429,720	CT & DB Exhaust: 675,048
Volume Flow (scfm)	603,523	569,344	555,810	522,778	524,155
Mass Flow (lb/hr)	2,631,000	2,482,000	2,423,000	2,279,000	2,285,000
Temperature (°F)	941	958	965	984	220
Moisture (% Vol.)	6.10	6.70	7.10	9.30	9.20
Oxygen (% Vol.)	14.40	14.50	14.40	14.20	14.00
Molecular Weight	28.00	28.00	28.00	28.00	28.00
HRSG Stack:					
Volume Flow (acfm)	811,556	754,813	726,343		675,048
Temperature (°F)	250	240	230		220
Diameter (ft)	15.7	15.7	15.7		15.7
Velocity (ft/sec)	69.90	65.01	62.56		58.14

Note: CT and duct burner will fire natural gas only.

Duct burner maximum firing will be 450,000 MM Btu/year; i.e., 4,500 hours at 100 MM Btu/hr.

Duct burner operation is planned when ambient temperature is greater than 59°F.

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: SO2		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	2.82 lb/hour	12.4 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/yr		
6. Emission Factor:		1 grain/100 cf
Reference: Based on Natural Gas		
7. Emissions Method Code: <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5		
8. Calculation of Emissions (limit to 600 characters): <div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block; margin-top: 10px;"> $987,209 \text{ cf/hr} \times 1 \text{ grain S/100 cf} \times 1 \text{ lb/7,000 grains} \times 2 \text{ lb SO}_2/165 = 2.82 \text{ lb/hr}; 2.82 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/2,000 lb} = 12.4 \text{ tons/yr}$ </div> <p style="margin-left: 400px;"><i>per should be Bob McCann</i></p>		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): <p>Potential SO2 emissions are the same as presented in air construction application at 20 °F. SO2 is limited by 40CFR60.333.</p>		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**Pollutant Detail Information:**

1. Pollutant Emitted: PM		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	9 lb/hour	39.4 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions:		
[] 1 [] 2 [] 3 _____ to _____ tons/yr		
6. Emission Factor:		0.01 lb/MMBtu
Reference: AC 48-206720		
7. Emissions Method Code:		
<input checked="" type="checkbox"/> 0 [] 1 [] 2 [] 3 [] 4 [] 5		
8. Calculation of Emissions (limit to 600 characters):		
For 59°F: 857 MMBtu/hr x 0.01 lb/MMBtu = 9 lb/hr; 9 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb. For 20°F: 934 MMBtu/hr x 0.01 lb/MMBtu = 9 lb/hr; 9 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		
Potential hourly emissions based on 20 °F conditions and potential annual emissions based on 59°F conditions.		

FACSIMILE TRANSMISSION



GOLDER ASSOCIATES INC.

6241 N.W. 23rd Street, Suite 500
Gainesville, Florida 32653-1500

(352) 336-5600
(352) 336-6603

Date: 5/8/97

JOB No.:

FAX No.: 904-922-6979

TO: FDEP

ATTN: Lennon Anderson

FR: Ken Kosky

RE: Orlando Cogen

Hard Copy to Follow: Yes No

Total Number of Pages
(including this cover page): 4

MESSAGE:

[Empty lines for message content]

The document(s) with this transmission are only for recipient(s) named above and contain privileged/confidential information. Unauthorized disclosure, dissemination, or copying of this transmission is strictly prohibited. If received in error, please destroy. Questions/problems with transmission: contact the receptionist at (352) 336-5600.

Golder Associates Inc.

6241 NW 23rd Street, Suite 600
Gainesville, FL 32653-1500
Telephone (352) 336-6600
Fax (352) 336-6603



May 8, 1997

Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Request for Additional Information Regarding Initial Title V Application
File No. 0950203-001-AV
Orlando CoGen Limited, Orange County

ATTN: Title V Section- Lennon Anderson

Dear Mr. Anderson:

This correspondence and attachment provides further clarification for my April 9th correspondence.

Combustion Turbine (Emission Unit #1) - Item 6: The "lbs" referenced in the Department's January 14, 1997 letter was apparently a data entry error. The "lbs" should be "lb S." The "S" is for sulfur. A corrected page of the application is attached.

Duct Burner System (Emissions Unit #2) - Item 8: The Maximum Annual Rate in Field 5 should be "475.687" million cubic feet per year. The original application had "475,687" which was a data entry error. The basis for the annual rate is 450,000 MMBtu/hr (LHV). A corrected page of the application is attached.

Please call if you have further questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Kennard F. Kosky", written over a horizontal line.

Kennard F. Kosky, P.E.
Principal

KFK/lcb

cc: Larry Adkins, Orlando CoGen Limited, L.P.
Tom Hess, Orlando CoGen Limited, L.P.
File (2)

14434Y/F1/WP/09

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Natural Gas Firing	
2. Source Classification Code (SCC): 20200203	
3. SCC Units: Million Cubic Feet Burned	
4. Maximum Hourly Rate: 0.129	5. Maximum Annual Rate: 476
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 946	
10. Segment Comment (limit to 200 characters): Max Annual Rate = 475.687. Heat content (million Btu/SCC) based on lower heating value (LHV). Max percent sulfur: 1 grain/100 cf. Max annual rate based on heat input limit of 450,000 MMBtu/yr.	

Emissions Unit Information Section 1 of 3

Comb. Turb.(ABB 11N1-EV)
Sulfur Dioxide

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: SO2	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	2.82 lb/hour 12.4 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive/Other Emissions:	
[<input type="checkbox"/>] 1 [<input type="checkbox"/>] 2 [<input type="checkbox"/>] 3 _____ to _____ tons/yr	
6. Emission Factor: 1 grain/100 cf	
Reference: Based on Natural Gas	
7. Emissions Method Code:	
[<input type="checkbox"/>] 0 [<input type="checkbox"/>] 1 <input checked="" type="checkbox"/> 2 [<input type="checkbox"/>] 3 [<input type="checkbox"/>] 4 [<input type="checkbox"/>] 5	
8. Calculation of Emissions (limit to 600 characters):	
$987,209 \text{ cf/hr} \times 1 \text{ grain S/100 cf} \times 1 \text{ lb/7,000 grains} \times 2 \text{ lb SO}_2/\text{lb S} = 2.82 \text{ lb/hr}$ $2.82 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/2,000 lb} = 12.4 \text{ tons/yr}$	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	
<p>Potential SO2 emissions are the same as presented in air construction application at 20 °F. SO2 is limited by 40CFR60.333.</p>	

**TURBINE INLET COMPRESSOR CLEANER
MSDS SHEET**

Turbo
tect

Turbotect

GAS TURBINE COMPRESSOR CLEANER

ONLINE

927 ✓

Solvent based for ON LINE and OFF LINE use

TURBOTECT 927 is a high quality, solvent based gas turbine compressor cleaner designed for ON LINE and OFF LINE cleaning. It is specifically formulated from organic solvents, surfactants, and emulsifiers designed to remove grease, oil, soot, and other deposits commonly found on gas turbine compressors. The ash free ingredients in TURBOTECT 927 have been carefully selected to insure that no incremental contamination of the hot section of the gas turbine can occur.

FUNCTION

TURBOTECT 927 forms a stable emulsion when mixed with the recommended amount of water (deionized or distilled water is required by most engine manufacturers for ON LINE cleaning) which is usually 1 part TURBOTECT 927 to 4 parts water.

For ON LINE cleaning TURBOTECT 927 is injected into the compressor section of the turbine while it is operating. Average power loss is reduced and periodic OFF LINE cleaning intervals can be extended. For OFF LINE cleaning TURBOTECT 927 is used at the same dilution strength, and following normal rinse and soak procedures the power recovery is normally significant.

TURBOTECT 927 has been treated with special inhibitors to insure compatibility with aluminum alloys, cadmium, magnesium-chrome alloys, nickel, nickel-cadmium, stainless steel, titanium alloys and common coatings.

NOTE: Engine manufacturer should be consulted prior to ON LINE cleaning to determine if cleaning at low ambient temperature is appropriate. Note that the freezing temperature of the cleaning mixture at above recommended dilution ratio (1:4) is -1°C (30°F)

HANDLING AND STORAGE

TURBOTECT 927 should be handled and stored as any hydrocarbon solvent. It should not be used full strength. TURBOTECT 927 is completely consumed during ON LINE use.

6/93

* Contains hydrocarbon solvents

Following an OFF LINE wash, the dirty effluent should be disposed of in compliance with local regulations. We recommend that the oil fraction of the wash water be treated as used oil. It can be separated by breaking the emulsion.

SAFETY PRECAUTIONS

TURBOTECT 927 is an industrial chemical and should be handled with care, using the same precautions as with ordinary petroleum distillates. Do not spill or drain into sewage, streams or other bodies of water. Avoid open flame. Do not take internally and avoid skin and eye contact or prolonged exposure to vapor. For contact with eyes, flush with large amounts of clean water. In case of ingestion, do not induce vomiting and seek medical attention. Do not store near foodstuffs.

AVAILABILITY

TURBOTECT 927 is available in concentrated form in non-returnable steel drums containing approximately 208 liters (55 US Gallons).

TYPICAL SPECIFICATIONS

Appearance	clear, amber liquid
Specific gravity (g/cm ³)	0.96
Density (lb/gal)	8.00
Viscosity (cST @ 25.7° C)	25
Flash Point (Pensky Martens CC)	85° C (185° F)
Pour Point	-1° C (30° F)
Biodegradability of detergents	95%
Ash Content	<0.005%

Spraytec, Inc.

P.O. Box 676, Brookfield, CT. 06804
Tel 203-775-2802 FAX 203-775-9339

Representative:
Corntact Inc. 332 Federal Rd., Brookfield, CT U.S.A.
Telephone 203-775-8445
Telex 543978 CONTEC

MATERIAL SAFETY DATA SHEET

TURBOTECT 927

SPRAYTEC, INC.
P.O. Box 676
Brookfield, CT 06804

Chemtree no.: 800/424-9300
Emergency Phone: 203/775-8445
Date: 7 June 1995

SECTION I- GENERAL INFORMATION	
UN ID NUMBER:	None (Not Restricted by IATA)
NFPA HAZARD RATING:	[Health:1] [Flammability: 2] [Reactivity: 0]
GENERIC DESCRIPTION:	Detergents and surfactants suspended in petroleum distillate water.
SECTION II- HAZARDOUS INGREDIENTS/IDENTITY INFORMATION	
COMPONENT:	CAS NO. TLV-ACGIH:
Dipropylene glycol methyl ether	34590-94-8 100 ppm
Hexylene glycol	107-41-5 25 ppm
THIS PRODUCT DOES NOT CONTAIN CARCINOGENS (NTP, IARC, or OSHA)	
SECTION III- PHYSICAL/CHEMICAL CHARACTERISTICS	
BOILING POINT:	177°C (350°F)
SPECIFIC GRAVITY:	0.96 GM/CM ³ at 25°C (77°F)
VAPOR PRESSURE:	< 1 mm Hg at 25°C (77°F)
VAPOR DENSITY:	> 1 (Air = 1)
SOLUBILITY IN WATER:	Complete
APPEARANCE AND ODOR:	Clear amber liquid; Mild aromatic hydrocarbon odor.
NOTE: The above information is not intended for use in preparing product specifications. Contact Spraytec, Inc. before writing specifications.	
SECTION IV- FIRE AND EXPLOSION HAZARD DATA	
FLASH POINT:	85°C (185°F) (PMCC)
LEL: N/A	UEL: N/A
EXTINGUISHING MEDIA:	Water fog, Dry Chemical, or Carbon dioxide
SPECIAL FIRE FIGHTING PROCEDURES: Self contained breathing apparatus and protective clothing should be used in fighting fires involving chemicals.	
SECTION V- REACTIVITY DATA	
STABILITY:	Stable
HAZARDOUS POLYMERIZATION:	Will not occur
MATERIALS TO AVOID (INCOMPATIBILITY): Strong oxidizing agents such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.	
SECTION VI- HEALTH HAZARD DATA	
EYES:	Can cause temporary irritation, redness, tearing, blurred vision.
SKIN:	Prolonged or repeated contact can cause irritation, drying, or dermatitis.
INHALATION: Can cause nasal and respiratory irritation, dizziness, fatigue, headache, unconsciousness or asphyxiation.	
SWALLOWING: Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Aspiration of material into lungs can cause mild to severe injury or chemical pneumonitis which can be fatal.	

TURBOTECT 927

SECTION VII-EMERGENCY AND FIRST AID PROCEDURES	
EYES:	Flush with large amounts of clean water. Seek medical attention.
SKIN:	Thoroughly wash exposed areas with soap and water.
INHALATION:	If affected, remove from exposure and seek immediate medical attention. If breathing is difficult or has stopped, administer artificial resuscitation and oxygen if available.
INGESTION:	DO NOT Induce vomiting. Seek medical attention.
SECTION VIII- SPILL OR LEAK PROCEDURES	
Shut off and eliminate all ignition sources. Keep people away. Stop spill at source. Dike off area to prevent spreading, and prevent run-off from entering sewers, streams, or other bodies of water. Pump or recover any free product to salvage tanks. Minimize breathing of vapors and ventilate confined spaces. Add sand, earth, or absorbent material to remaining material. Assure conformity with applicable government regulations.	
SECTION IX- WASTE DISPOSAL/EMPTY CONTAINERS	
Empty containers retain hazardous product residue and vapor. Do not pressurize, cut, weld, braze, drill, grind, or expose containers to heat. Do not reuse empty drums or attempt to clean. Empty drums should be drained, properly bunged and returned to a drum reconditioner or disposed of in accordance with governmental regulations.	
SECTION X- PROTECTION AND PRECAUTIONS	
VENTILATION:	Use only with adequate ventilation to prevent exceeding exposure.
RESPIRATION:	Use self-contained approved breathing apparatus in confined or enclosed space.
GLOVES:	Use chemical-resistant gloves to avoid prolonged or repeated skin contact.
EYE PROTECTION:	Use splash goggles or face shield where eye contact may occur. Keep containers closed when not in use. Do not store near head, open flames, or strong oxidants.
OTHER PRECAUTIONS:	Keep containers closed when not in use. Do not store near head, open flames or strong oxidants.
SECTION XI- STATE COMPLIANCE IDENTITY INFORMATION	
COMPONENT:	CAS NO.
Water	7732-18-5
Petroleum Distillate	64742-18-5
Nonylphenoxy poly (ethyleneoxy) ethane	9016-45-9
Triethanolamine	102-71-6
Hexylene glycol	107-41-5
Dipropylene glycol methyl ether	HA 34590-94-8
SECTION XII- ECOLOGICAL INFORMATION	
This product contains a petroleum distillate. Treat effluent as "oily waste," separating the oil phase by processing in an oily water separator or breaking the emulsion. Dispose of oil phase as oily waste in accordance with local regulations. Water phase effluent contains biodegradable detergents and should be disposed of in accordance with local regulations. See also Section IX "Waste Disposal/Empty Containers".	
SARA TITLE III. SECTION 313	
This Spraytec product contains no toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372 in excess of the applicable de minimus concentration.	

The information and recommendations contained herein are, to the best of Spraytec's knowledge and belief, accurate and reliable. Spraytec does not warrant or guarantee their accuracy or reliability, and Spraytec shall not be liable for any loss or damage arising out of the use thereof.

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 2

Duct Burner System Associated with HRSG

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) :	
Natural Gas Firing	
2. Source Classification Code (SCC) : 2-02-002-03 *	
3. SCC Units : Million Cubic Feet Burned	
4. Maximum Hourly Rate : 0.13	5. Maximum Annual Rate :
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : Percent Sulfur Limit : +	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 946	
10. Segment Comment :	
Heat content (million Btu/SCC) based on lower heating value (LHV). Maximum percent sulfur: 1 grain/100 cf. Maximum annual rate based on heat input limit of 450,000 MMBtu/year (LHV).	

III. Part 8 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

conducted weekly during the interim period when this custom schedule is being re-examined.

3. If there is a change in fuel supply, the owner or operator must notify the Department of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

4. Records of samples analysis and fuel supply pertinent to this custom schedule shall be retained for a period of five years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.

Comment #2: Page 2

As a result of this comment, Specific Condition A.2. is hereby changed:

From: Turbine Cleaning. The turbine compressors shall be cleaned only with Turbotect 927 while the turbine is operating (i.e., on-line) at a dilution ratio of 9 gallons of cleaner to 35 gallons of demineralized water. Cleaning of the on-line compressors shall be performed every 4 days. The Turbotect 927 usage shall not exceed 821 gallons per 12-month rolling average.

[Proposed by applicant in the initial Title V permit application received June 13, 1996]

To: Turbine Cleaning. The turbine compressors shall be cleaned only with solvent/surfactant based mixtures containing no hazardous air pollutants as defined in Rule 62-210.200, F.A.C., while the turbine is operating (i.e., on-line). Cleaning of the on-line compressors shall be performed on a as needed basis.

[Proposed by applicant in the initial Title V permit application received June 13, 1996]

Comment #3: Page 3

As a result of this comment, Specific Condition A.11. is hereby changed:

(now specific C. A.12)

From: Compliance tests shall be conducted on an annual basis on or within 60 days prior to September 8 for **Specific Conditions A.12. through A.14.**

[AC48-206720]

To: Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for **Specific Conditions A.12. through A.14.**

[AC48-206720]

Comment #4: Page 4

Response: Specific Condition A.12. has been deleted.

Comment #5: Page 6

As a result of this comment, Specific Condition A.13. is hereby changed:

Additional Information

Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501



POWER GENERATION - ENVIRONMENTAL

FACSIMILE NO: (610) 481-2393

PLEASE DELIVER THE FOLLOWING PAGES TO:

Name: Mr. Lennon Anderson

Company: Department of Environmental Protection

Facsimile No: 850-922-6979

Total Pages: 4 (including cover sheet)

From: Tom Hess (610) 481-7620

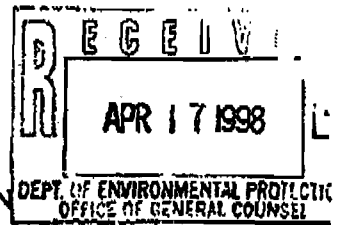
Date: 05/27/98

Mr. Anderson:

Following is copy of the "Request for Extension of Time" re: Orlando CoGen Limited, L.P. Title V permit no. 0950203-001-AV we spoke of yesterday. Please call me if any additional information would be helpful.

Regards

Tom Hess



THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter of an
Application for Permit by:

OGC No. _____

Orlando CoGen Limited, L.P.
8275 Exchange Drive
Orlando, FL 32809

DRAFT Permit No.: 0950203-001-AV
Orlando CoGen Plant
Orange County

REQUEST FOR EXTENSION OF TIME

By and through undersigned counsel, Orlando CoGen Limited, L.P. (Orlando), hereby requests, pursuant to Florida Administrative Code Rules 28-106.111(3) and 62-103.050(1), an extension of time, to and including June 30, 1998, in which to file a Petition for Administrative Proceedings in the above-styled matter. As good cause for granting this request, Orlando states the following:

1. On or about April 3, 1998, the Responsible Official for Orlando received from the Department of Environmental Protection (Department) an "Intent to Issue Title V Air Operation Permit" (Permit No. 0950203-001-AV) for the Orlando CoGen Plant located in Orange County, Florida. Along with the Intent to Issue, Orlando received a draft Title V permit and "Public Notice of Intent to Issue Title V Air Operation Permit."
2. Based on Orlando's review, the draft permit and associated documents contain several provisions that warrant clarification or correction.
3. Representatives of Orlando intend to correspond with staff of the Department's Bureau of Air Regulation in an effort to resolve all issues.

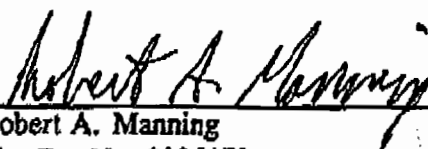
4. This request is filed simply as a protective measure to avoid waiver of Orlando's right to challenge certain conditions contained in the draft Title V permit. Grant of this request will not prejudice either party, but will further their mutual interest and likely avoid the need to file a petition and proceed to a formal administrative hearing.

5. Lennon Anderson with the Bureau of Air Regulation has agreed to an extension until June 30, 1998, on behalf of the Department. Counsel for Orlando has attempted without success to contact Jeffrey Brown with the Department's Office of General Counsel regarding this request.

WHEREFORE, Orlando respectfully requests that the time for filing of a Petition for Administrative Proceedings in regard to the Department's Intent to Issue Title V Air Operation Permit for Permit No. 0950203-001-AV be formally extended to and including June 30, 1998.

Respectfully submitted this 17th day of April, 1998.

HOPPING GREEN SAMS & SMITH, P.A.


Robert A. Manning
Fla. Bar No. 0035173
123 South Calhoun Street
Post Office Box 6526
Tallahassee, FL 32314
(850) 222-7500

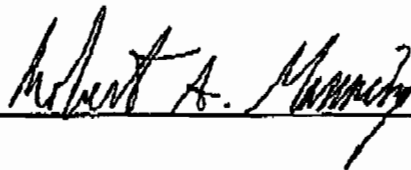
Attorney for ORLANDO COGEN LIMITED, L.P.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing has been furnished to the following
by U.S. Mail on this 17th day of April, 1998:

Clair H. Fancy, P.E.
Chief
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2600

Jeffrey Brown
Office of General Counsel
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2600



108757

Rec 060392
Rec'd 06/03/98

Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501



POWER GENERATION - ENVIRONMENTAL

FACSIMILE NO: (610) 481-2393

PLEASE DELIVER THE FOLLOWING PAGES TO:

Name: Mr. Lennon Anderson

Company: Florida DEP

Facsimile No: 850-922-6979

Total Pages: 6 (including cover sheet)

From: Tom Hess (610) 481-7620

Date: 06/02/98

Comments:

RE: Orlando CoGen Title V Application 0950203-001-AV

For your records is a copy of the "Order Granting Request for Extension of Time to File Petition for Hearing". The extension of time is until June 30, 1998.

Regards

Tom Hess
Tom Hess

RECEIVED

JUN 02 1998

DIVISION OF AIR
RESOURCES MANAGEMENT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

RECEIVED
MAY 28 1998

ORLANDO COGEN LIMITED, L.P.
(ORLANDO COGEN PLANT),

For Your Information
From ROBERT MANNING

Haynes Green, Sams & Smith, P.A.

Petitioner,

vs.

OGC CASE NO. 98-1307

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION,

Respondent.

ORDER GRANTING REQUEST FOR EXTENSION
OF TIME TO FILE PETITION FOR HEARING

This cause has come before the Florida Department of Environmental Protection (Department) on receipt of a request made by Petitioner, Orlando CoGen Limited, L.P., to grant an extension of time to file a petition for an administrative hearing on Application No. 0950203-001-AV. See Exhibit 1.

Respondent, State of Florida Department of Environmental Protection, has no objection to it. Therefore,

IT IS ORDERED:

The request for an extension of time to file a petition for administrative proceeding is granted. Petitioner shall have until June 30, 1998, to file a petition in this matter. Filing shall be complete on receipt by the Office of General Counsel, Mail Station 35, Department of Environmental Protection, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000.

DONE AND ORDERED on this 21st day of May, 1998, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION


F. PERRY ODOM
General Counsel

Douglas Building, MS #35
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000
Telephone: (850) 488-9314

CERTIFICATE OF SERVICE

I CERTIFY that a true copy of the foregoing was mailed to:

Robert A. Manning, Esq.
Post Office Box 6526
Tallahassee, Florida 32314

on this 21st day of May, 1998.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



W. DOUGLAS BEASON
Assistant General Counsel
Florida Bar No. 379239

Mail Station 35
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000
Telephone: (850) 488-9730

THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter of an
Application for Permit by:

OGC No. _____

Orlando CoGen Limited, L.P.
8275 Exchange Drive
Orlando, FL 32809

DRAFT Permit No.: 0950203-001-AV
Orlando CoGen Plant
Orange County

REQUEST FOR EXTENSION OF TIME

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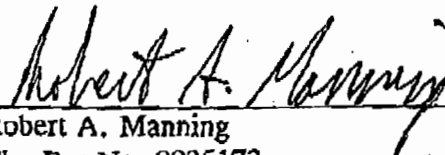
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Respectfully submitted this 17th day of April, 1998.

HOPPING GREEN SAMS & SMITH, P.A.



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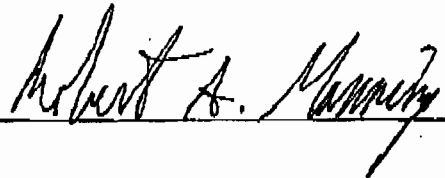
Attorney for ORLANDO COGEN LIMITED, L.P.

CERTIFICATE OF SERVICE

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by U.S. Mail on this 17th day of April, 1998:

Clair H. Fancy, P.E.
Chief
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2600

Jeffrey Brown
Office of General Counsel
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2600



108757

Date: 6/3/98 5:54:41 PM
From: Cindy Phillips TAL
Subject: FWD: Information on Air Web
To: Lennon Anderson TAL
To: Steve Welsh TAL


FYI (I don't remember how to decode her attachment.)

OGC
⚡
Extensions

... ..

Rec 11/29/96
Read 11/29/96
Memorandum

Florida Department of
Environmental Protection

TO: Len Kozlov, Central District
FROM:  Bruce Mitchell
DATE: November 12, 1996
SUBJECT: Completeness Review of an Application Package for a Title V Operation Permit
Orlando Cogen Limited, L.P.: 0950203-001-AV

The Title V operating permit application package for the referenced facility is being processed in Tallahassee. The application was previously forwarded to your office for your files and future reference. Please have someone review the package for completeness and respond in writing by December 6, 1996, if you have any comments. Otherwise, no response is required. If there are any questions, please call the project engineer, Lennon Anderson, at 904/488-1344 or SC:278-1344. It is very important to verify the compliance statement regarding the facility. Since we do not have a readily effective means of determining compliance at the time the application was submitted, please advise if you know of any emissions unit(s) that were not in compliance at that time and provide supporting information. Also, do not write on the documents.

If there are any questions regarding this request, please call me or Scott Sheplak at the above number(s).

RBM/bm

cc: Alan Zahm, CD

A.10. In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR 60 or other methods and procedures as specified in this permit, except as provided for in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph 40 CFR 60.335(f).
[40 CFR 60.335(b)]

A.11. Compliance tests shall be conducted on an annual basis on or within 90 days prior to April 1 for **Specific Conditions A.12. through A.14.**
[AC48-206720]

A.12. Testing of emissions shall be conducted with the source operating at capacity. As defined below. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report. **Capacity** is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test.
[Rule 62-4.070(3), F.A.C. and AO48-248669]

A.13. Nitrogen Dioxide. The emission test sampling points will be selected in accordance with 6.1.2.4 of Method 20, which states - Select the eight sampling points at which the lowest O₂ concentrations were obtained. If the difference between the highest and the lowest measured oxygen concentrations in the stack is less than 0.4% oxygen by volume, it may be assumed that stratification does not exist. More than eight points may be used, if desired, providing that the points described above are included.
[AC48-206720]

A.14. Sulfur Dioxide. The owner or operator shall determine compliance with the sulfur content standard in 40 CFR 60.333(b) as follows: ASTM D 1072-90(94)E-1, D 3031-81(86), D 4084-94, or D 3246-92, or the latest edition, shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.
[40 CFR 60.335(d)]

A.15. To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in 40 CFR 60.335(a) and 40 CFR 60.335(d) of 40 CFR 60.335 to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or

Misc