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**BUREAU OF
AIR REGULATION**

July 8, 2010

Ms. Trina Vielhauer
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
Division of Air Resource Management
111 South Magnolia Drive, Suite 4
Tallahassee, FL 32301

**Re: Orlando Utilities Commission
Curtis H. Stanton Energy Center – Facility ID No. 0950137
Draft Permit No. 0950137-031-AV**

Dear Ms. Vielhauer:

The Department issued a draft/proposed permit package dated May 21, 2010 to revise the Orlando Utilities Commission (OUC) Curtis H. Stanton Energy Center Title V air operation permit. The draft/proposed Title V permit revision incorporates the nominal 300 megawatt dual fuel combined cycle combustion turbine unit (Unit B) that was recently constructed at the Curtis H. Stanton Energy Center. The Public Notice of Intent to Issue Air Permit was published in the Orlando Sentinel newspaper on June 24, 2010.

Following discussions with Department staff, OUC requests the following changes to the draft/proposed Title V permit revision. Requested permit condition deletions are shown in strikethrough font and requested additions shown underlined. The reason for each change is also provided.

1. Emission Unit Description; Page 32 of 66

Unit B consists of: one nominal 150 megawatts (MW) General Electric 7241 FA combustion turbine-electrical generator (CTG); a supplementary fired heat recovery steam generator (HRSG) with natural gas fueled duct burners (DB); and a nominal 150 MW steam turbine generator (STG) for an overall nominal rating of 300 MW. This unit includes highly automated controls, described as the GE Mark VI Gas Turbine Control System to fulfill all of the gas turbine control requirements. The stack height is 205 feet exit, diameter is 20 feet (~~+1 feet~~), stack exit temperature is 262 (gas) and 272 (oil) degrees Fahrenheit (F) and volumetric flow rate is 1,239,934 (gas) and 1,031,061 (oil) actual cubic feet per minute (acfm).

Rationale: Appears to be a typographical error. Exit diameter is 20 feet.

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2. Condition F.5.; DLN Control Technology

F.5. DLN Combustion. The permittee shall operate and maintain the GE DLN 2.6 combustion system (or better) to control NOx emissions from the CTG when firing natural gas. ~~Prior to the initial emissions performance tests required for the gas turbine, the DLN combustors and automated gas turbine control system shall be tuned to achieve the permitted levels for CO and sufficiently low NOx values to meet the NOx limits with the additional SCR control technology described below. Thereafter, the system shall be maintained and tuned in accordance with the manufacturer's recommendations.~~ [Rule 62-212.400(BACT), F.A.C.: and. Permit No. 0950137-020-AC/PSD-FL-373A. Specific Condition A.51

Rationale: Deletion of obsolete permit language.

3. Condition F.6.; Wet Injection Control Technology

F.6. Wet Injection. The permittee shall operate, and maintain a wet injection system (water or steam) to reduce NOx emissions from the CTG when ULSD fuel oil is fired. ~~Prior to the initial emissions performance tests required for the gas turbine, the wet injection system shall be tuned to achieve the permitted levels for CO and sufficiently low NOx values to meet the NOx limits with the additional SCR control technology described below. Thereafter, the system shall be maintained and tuned in accordance with the manufacturer's recommendations.~~ [Rule 62-212.400(BACT), F.A.C.: and. Permit No. 0950 137-020-AC/PSD-FL-3 73A. Specific Condition A.61

Rationale: Deletion of obsolete permit language.

4. Condition F.8.; Capacity

F.8. Capacity — CTG. The nominal heat input rating excluding steam for power augmentation of the CTG is 1,765 MMBtu per hour when firing natural gas and 1,935 MMBtu per hour when firing ULSD fuel oil based on a compressor inlet air temperature of 70 F, the higher heating value (HHV) of each fuel, and 100% load. Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate methods of operation, and evaporative cooling. The permittee shall have provided manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing and shall provide updated curves following any maintenance or tuning sessions that result in a change to the previously submitted curves. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Permit No. 095013 7-020-AC/PSD-FL-373A. , Specific Condition A.81 and Rule 62-213.440(1), F.A.C.]

Rationale: Additional language regarding the resubmission of CTG manufacturer's performance curves if or when they change as suggested by the Department.



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5. Condition F.13.; Emission Standards Footnotes a. and b.

a. Continuous compliance with the 24-hour CO standards shall be demonstrated based on data collected by the required CEMS. The ~~initial and~~ annual EPA Method 10 tests associated with the certification of the ~~GEMS~~ CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and basic duct burner mode. Compliance with the 24-hour CO CEMS standards shall be determined separately for the PA mode and all other modes based on the hours of operation for each mode.

b. Continuous compliance with the 24-hr NO_x standards shall be demonstrated based on data collected by the required CEMS. The ~~initial and~~ annual EPA Method 7E or Method 20 tests associated with demonstration of compliance with 40 CFR 60, Subpart KKKK or certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and basic duct burner mode during the time of those tests. NO_x mass emission rates are defined as oxides of nitrogen expressed as nitrogen dioxide.

Rationale: Deletion of obsolete permit language

6. Condition F.20.; DLN Tuning

F.20. DLN Tuning. CEMS data collected during ~~initial or other~~ major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after ~~completion of initial construction~~, a combustor change-out, a major repair or maintenance to a combustor, or other circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least 14 days that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.

[Rule 62-4.070(3). F.A.C.: and Permit No. 0950 137-020-AC/PSD-FL-373A. Specific Condition A.20]

Rationale: Deletion of obsolete permit language.

7. Condition F.22.; Subsequent Compliance Tests

F.22. Subsequent ~~Initial~~ Compliance Test Determinations After Major Replacement or Major Repair. The Department may, for good reason, require the permittee to conduct additional stack tests after major...

Rationale: Removes language referring to initial compliance tests.



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8. Condition F.26.; CEMS

F.26. CEM Systems. The permittee shall calibrate, maintain, and operate CEMS to measure and record the emissions of CO and NOx from the combined cycle gas turbine in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. ~~Each monitoring system shall be calibrated and properly functioning prior to the initial performance tests.~~ Within one working day of discovering emissions in excess of a CO or NOx standard (and subject to the specified averaging period) the permittee shall notify the Compliance Authority.

a. **CO Monitor.** The CO monitor shall be properly operated and maintained in order to retain the certification ~~certified pursuant to 40 CFR 60. Appendix B, Performance Specification 4 or 4A. within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2) F.A.C., but no later than 180 calendar days after initial startup.~~ Quality assurance procedures shall conform to the requirements of 40 CFR 60. Appendix F. and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.

b. **NOx Monitor** The NOx monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NOx monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60.

c. **Diluent Monitor.** The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where CO and NOx are monitored to correct the measured emissions rates to 15% oxygen. *If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired.* Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

[Permit No. 095013 7-020-AC/PSD-FL-3 73A, Specific Condition A.26+26. and 62-213.440(1), F.A.C.]

Rationale: Deletion of obsolete permit language and additional clarifying language suggested by the Department

Please contact David Báez at (407) 434-3072 if there are any questions regarding our requested changes to draft/proposed Permit No. 0950137-031-AV.

Sincerely,

Denise M. Stalls
Vice President
Human and Environmental Resources

ORLANDO UTILITIES COMMISSION