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BUREAU OF AIR REGULATION



Mr. Michael P. Halpin, P.E.  
Professional Engineer II  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Mail Station #5510  
Tallahassee, Florida 32399-2400

**RE: Stanton Energy Center Combined Cycle Unit A**  
**File No. PSD-FL-313 (PA81-14SA2)**  
**Request for Revision of Condition Number 41**

*045 0137-003-AC*

Dear Mr. Halpin:

During our last meeting in Tallahassee, we discussed the permit-specified span values regarding the new Stanton A Combined Cycle Unit. We indicated that the span values provided in the permit under Condition No. 41 are inconsistent with the requirements under 40 CFR Parts 60 and 75, and may not provide us with the flexibility needed to obtain accurate continuous emissions monitoring system (CEMS) data. The formulas under Part 75 and Part 60 should be used to calculate the appropriate span ranges for the CEMS and therefore the span specifications in our permit are unnecessary.

As is appropriate for units utilizing add-on control technology, our permit requires a dual-range monitoring system. This dual-range approach requires a "high" span value and a "low" span value. We are particularly concerned about the high span values set forth in the permit for the carbon monoxide (CO) and nitrogen oxides (NO<sub>x</sub>) monitors. The span values established in the permit are inconsistent with emission levels experienced during initial startup and load change of the units firing with natural gas, prior to the time that the low NO<sub>x</sub> burners are fully functional.

For instance, the NO<sub>x</sub> value (gas fired) on the attached figure illustrates a NO<sub>x</sub> value as high as approximately 105 ppmvd. This is well above the upper range specified in the permit (30 ppm). According to Part 75, Appendix A 2.1.2.3, "The high span value of the NO<sub>x</sub> value shall be determined by multiplying the MPC [maximum potential concentration] (~105 ppmvd) by a factor of no less than 1.00 and no greater than 1.25." This would result in an upper span value of approximately 140 ppm. When emissions during oil firing are considered, the maximum potential concentration for NO<sub>x</sub> can be 200 ppm. (Note: The utilization of oil would likely present short-term values above the curves provided in the attached figure.)

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In regard to CO, the permit specifies a span value for the lower range of 20 ppm and an upper range of no greater than 100 ppm. As illustrated in the attached figure, CO values can have an instantaneous high of almost 950 ppm. As stated above, when fuel oil is utilized, the maximum value could be higher, with a correspondingly higher span value.

Because the upper span values specified in the permit for both the NO<sub>x</sub> and CO monitors are inconsistent with existing regulatory requirements under Parts 75 and 60, the permit should be revised to delete the specific values. A better approach would be to simply refer to the federal regulations.

The Department has taken this approach in the most recently proposed PSD permits for virtually identical units: "The CO [NO<sub>x</sub>] monitor shall have multi-span capability with appropriate spans established for the methods of operation (simple cycle gas firing, combined cycle gas firing, simple cycle oil firing, combined cycle oil firing, etc.)." (Proposed PSD Permit Nos. PSD-FL-327 and PSD-FL-328, Florida Power & Light Company Martin and Manatee Power Plants, Condition No. 23) Appropriately, no reference is made in these permits as to specific lower or upper span values. This approach is preferred because it avoids the need for a subsequent permit revision in the event requirements in 40 CFR Parts 60 and 75 change in the future and because the maximum potential concentrations can change over time.

We therefore propose the following revisions to the second paragraph of Condition 41, which will ensure the best means of obtaining the most accurate air emissions data:

The NO<sub>x</sub> monitor shall be certified and operated in accordance with the following requirements. The NO<sub>x</sub> monitor shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. For purposes of determining compliance with the emission limits specified within this permit, missing data shall not be substituted. Instead, the block average shall be determined using the remaining hourly data in the 3-hour block. However, in the event that the permittee maintains 95% or greater availability of the continuous emissions monitoring systems used for determining NO<sub>x</sub> emissions compliance for the previous quarter, then compliance with the emission limits for NO<sub>x</sub> shall be based on 3 valid consecutive hours of data for a 3-hour block average. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subparts F and G. The RATA tests required for the NO<sub>x</sub> monitor shall be performed using EPA Method 20 or 7E, of Appendix A of 40 CFR 60. The NO<sub>x</sub> monitor shall be a dual range monitor. ~~The span for the lower range shall not be greater than 10 ppm, and the span for the upper range shall not be greater than 30 ppm, as corrected to 15% O<sub>2</sub>.~~ The CO monitor and CO<sub>2</sub> monitor shall be certified and operated in accordance with the following requirements. The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4. The CO<sub>2</sub> monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 3. 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 semi-annually to the Department's Central District office. The RATA tests required for the CO monitor shall be performed using EPA Method 10, of Appendix A of 40 CFR 60. The Method 10 analysis shall be based on a continuous sampling train, and the ascarite trap may be omitted or the interference trap of section 10.1 may be used in lieu of the silica gel and

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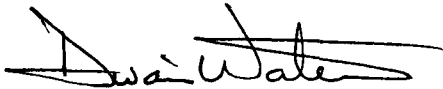
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ascarite traps. The CO monitor shall be a dual range monitor. ~~The span for the lower range shall not be greater than 20 ppm, and the span for the upper range shall not be greater than 100 ppm, as corrected to 15% O<sub>2</sub>.~~ The RATA tests required for the CO<sub>2</sub> monitor shall be performed using EPA Method 3B, of Appendix A of 40 CFR 60.

In conclusion, the span values specified in our permit do not meet the operating envelope of the units at this site. The removal of span values from Condition 41 will help us comply with 40 CFR Parts 75 and 60 and obtain the most accurate data possible.

Thank you for considering our request for permit revision. If you should have any questions regarding this request, please feel free to call me at (850) 444-6527.

Sincerely,



G. Dwain Waters, Q.E.P.  
Air Quality Programs Supervisor

cc: Joseph Kahn, Florida Department of Environmental Protection  
Mike Markey, Gulf Power Company  
Jim Vick, Gulf Power Company  
Ronnie Walston, Southern Company Services  
*Ervin Richard*  
*Alan Johnson, CD*

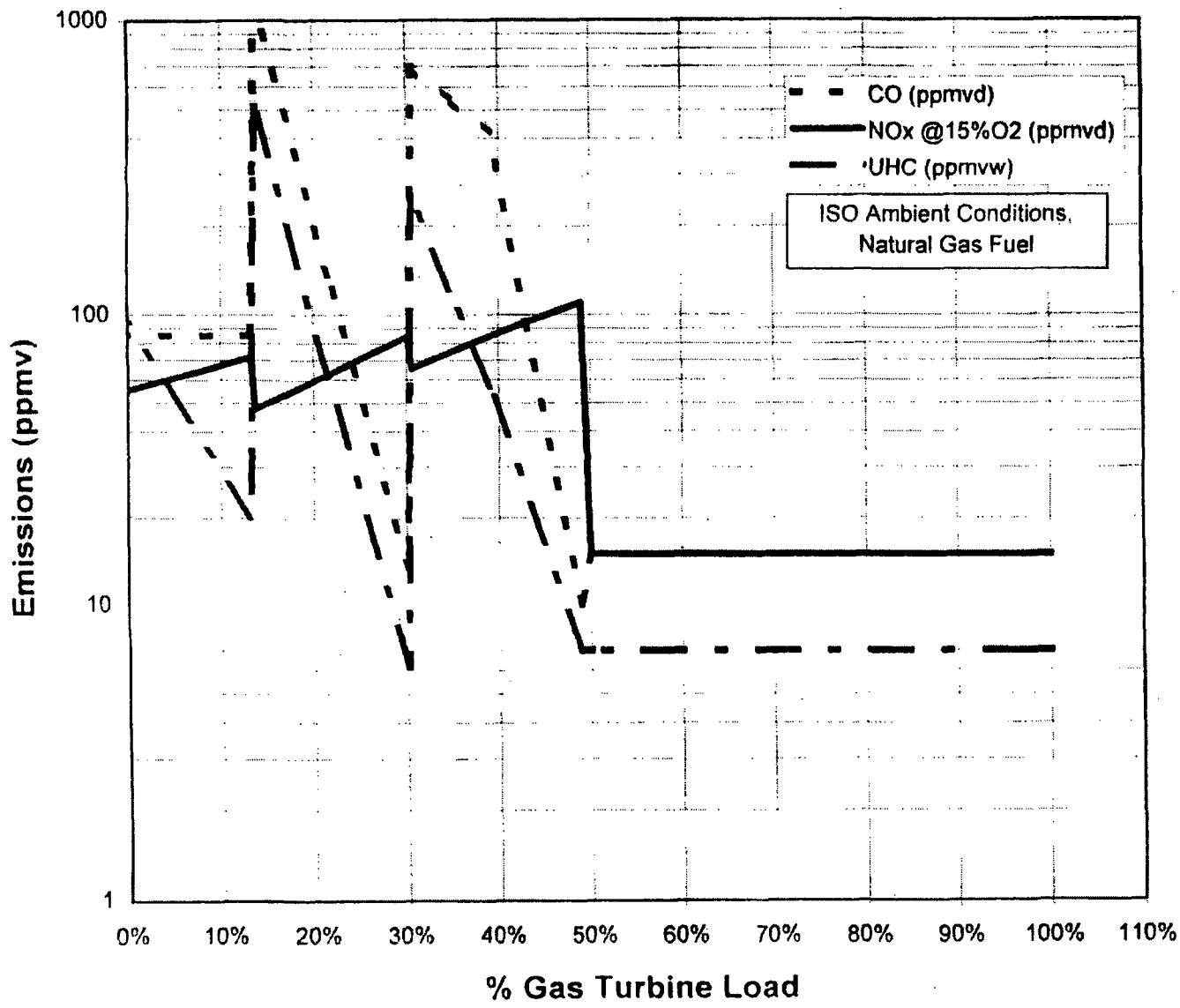
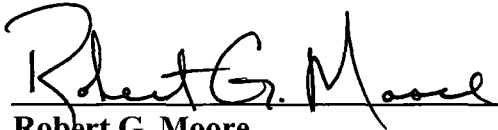


Figure 2 – Emissions Performance Curves for GE DLN-2.6 Combustor Firing Natural Gas in a Dual Fuel GE 7FA Combustion Turbine (Simple Cycle Intermittent Duty – If Tuned to 15 ppmvd NO<sub>x</sub>)

## CERTIFICATION

**"I, the undersigned, am the authorized representative for the PSD permit source for which this request is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this request are true, accurate and complete."**

**Authorized Representative Signature:**

  
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**Robert G. Moore**  
Senior Vice-President of Southern Company Services &  
Senior Production Officer of Southern Power

11/25/02  
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Date: