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BUREAU OF
AIR REGULATION

January 11, 2011

Elizabeth Walker
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Mail Station #5505
Tallahassee, FL 32399-2400

Re: Fees

Dear Ms. Walker,

The FPL West County Energy Center (WCEC) Plant recently submitted a request to revise our PSD Permit PSD-FL-354 (0990646-003-AC) for Combined Cycle Units 1 A-C and 2 A-C. As we discussed on the phone, we did not submit the appropriate fee as required.

Enclosed, please find a copy of the original submittal requesting our permit revision, and a check for \$250 representing the fee for the modification to an existing permit.

Thank you for your help and communications concerning this matter. If there are additional concerns or questions, please call.

Sincerely,

A handwritten signature in cursive script that reads "Emmett Callow".

Emmett Callow/FPL

Enclosures:

- Permit Modification Fee/Check
- Copy of Original Request



December 21, 2010

Trina Vielhauer - Chief
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Mail Station #5505
Tallahassee, FL 32399-2400

Re: Request to Revise Air Construction Permit 0990646-003-AC

Dear Mrs. Vielhauer,

The FPL West County Energy Center (WCEC) Plant requests that the PSD Permit PSD-FL-354 (0990646-003-AC) for Combined Cycle Units 1 A-C and 2 A-C be revised to modify the Combined Cycle Units 1 and 2 - Gas Turbines (EUs 001, 002, 003, 004, 005, & 006) Excess Emissions Allowed: Specific Condition A.18.

Operation of the West County Energy Center Units 1 & 2 Gas Turbines allows exceedances of the BACT emission standards during startup and shutdown of the emission units and during periods of documented malfunction. During periods of startup and shutdown, the combustion turbines operate in a fuel rich state to stabilize combustion and avoid unintended unit trips. While the permit does recognize the need for the additional hours of operation to bring the units into an emission limit compliant operating mode during startup and shutdown, it does not include all modes of normal operation for the combustion turbines. Specifically, under Condition 18 the permit needs to include new categories for "Gas Turbine/HRSG System Warm Startup" to include system startup where the high pressure steam drum is above 450 degrees F, "Shutdown Gas Turbine/HRSG System", and "Documented Malfunction". Additionally, the existing permit language does not specify that allowable excess emissions should be excluded from the CEMS determination of excess emissions to be included within the Quarterly Excess Emission report.

FPL proposes to modify the language of Condition 18 as follows to accommodate normal startup, shutdown and documented malfunctions of the combustion turbine/HRSG system and to clarify the emission data which is to be omitted for reporting of excess emissions:

18. Excess Emissions Allowed: As specified in this condition, excess emissions resulting from startup, shutdown, ~~oil to gas~~ fuel switches, and documented malfunctions are allowed provided that operators employ the best operational practices to minimize the amount and duration of

emissions during such incidents. For each gas turbine/HRSG system, excess emissions resulting from startup, shutdown, or documented malfunctions shall not exceed two hours in any 24-hour period except for the specific cases listed below. For the Gas Turbine/HRSG System excess emissions of NOx and CO resulting from startup, shutdown, or malfunction shall be excluded from CEMS data in any 24-hour period ("any 24-hour period" means a calendar day, midnight to midnight) for each gas turbine/HRSG system for the following conditions:

- a. *Steam Turbine/HRSG System Cold Startup:* For cold startup of the steam turbine system, excess excluded emissions from any gas turbine/HRSG system shall not exceed eight hours in any 24-hour period. A cold "startup of the steam turbine system" is defined as startup of the 3-on-1 combined cycle system following a shutdown of the steam turbine lasting at least 48 hours.

{Permitting Note: During a cold startup of the steam turbine system, each gas turbine/HRSG system is sequentially brought on line at low load to gradually increase the temperature of the steam-electrical turbine and prevent thermal metal fatigue. Note that shutdowns and documented malfunctions are separately regulated in accordance with the requirements of this condition.}

- b. *Shutdown Combined Cycle Operation:* For shutdown of the combined cycle operation, excess excluded emissions from any gas turbine/HRSG system shall not exceed three hours in any 24-hour period.
- c. *Gas Turbine/HRSG System Cold Startup:* For cold startup of a gas turbine/HRSG system, excess excluded emissions shall not exceed four hours in any 24-hour period. "Cold startup of a gas turbine/HRSG system" is defined as a startup after the pressure in the high-pressure (HP) steam drum falls below 450 psig for at least a one-hour period.
- d. Gas Turbine/HRSG System Warm Startup: For warm startup of a gas turbine/HRSG system, excluded emissions shall not exceed two hours in any 24-hour period. "Warm startup of a gas turbine/HRSG system" is defined as a startup after the pressure in the high-pressure (HP) steam drum is above 450 psig.
- e. Shutdown Gas Turbine/HRSG System: For shutdown of the gas turbine/HRSG operation, excluded emissions from any gas turbine/HRSG system shall not exceed two hours in any 24-hour period
- f. *Fuel Switching:* For fuel switching, excess excluded emissions shall not exceed 2 hours in any 24-hour period for each fuel switch and no more than four hours in any 24-hour period for any gas turbine/HRSG system.
- g. Documented Malfunction: For the CTG/HRSG system, excess emissions of NOx and CO resulting from documented malfunctions shall not exceed two hours in any 24-hour period. A "documented malfunction" means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail.

To clarify excess emission reports submitted to the compliance authority, FPL proposes to modify Combustion Turbine Condition 32 as follows:

32. Excess Emissions Reporting:

- a. *Malfunction Notification:* If emissions in excess of a standard (subject to the specified averaging period) occur due to malfunction, the permittee shall notify the Compliance

Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

- b. *SIP Quarterly Permit Limits Excess Emissions Report*: Within 30 days following the end of each calendar quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of CO and NO_x emissions in excess of the BACT permit standards, and the amounts of authorized data excluded following the NSPS format in Appendix XSE of this permit 40 CFR 60.7(c), Subpart A. Periods of startup, shutdown, ~~and malfunction, fuel switching, and tuning~~ shall be monitored and recorded at all times ~~and reported as excess emissions when emission levels exceed the standards specified in this permit~~. In addition, the report shall summarize the CEMS systems monitor availability for the previous quarter.
- c. *NSPS Semi-Annual Excess Emissions Reports*: For purposes of reporting emissions in excess of NSPS Subpart KKKK, excess emissions from the gas turbine are defined as: a specified averaging period over which either the NO_x emissions are higher than the applicable emission limit in 60.4320; or the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in 60.4330. Within thirty (30) days following each calendar semi-annual period, the permittee shall submit a report on any periods of excess emissions that occurred during the previous semi-annual period to the Compliance Authority.

FPL proposes to amend the permit to include Appendix XSE for the reporting of excess emissions in place of the format provided under 40 CFR Part 60.7(c) Subpart A. The proposed Excess Emission Monitoring Report (Appendix XSE) is provided as an attachment.

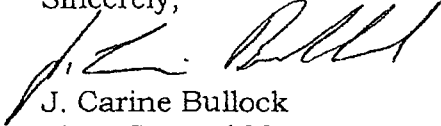
In addition to the changes proposed for the excess emission permit language, FPL proposes a modification to the notification requirements to facilitate DLN tuning. DLN tuning sessions, which are required following major maintenance of the combustion turbine, occur following completion of the maintenance activities and do not involve or require emission testing which would require advanced notice of 14 days. FPL proposes to modify the advance notice requirement under Condition 26 d. as follows:

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 similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least 14 days one day that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.
[Design; Rule 62-4.070(3), F.A.C.]

FPL requests that the Department include the proposed changes within the existing Air Construction permit and in the preparation of the facility's Title V Operating Permit.

Thank you for your assistance in this matter, and, if you should have any questions, please do not hesitate to contact me at (561) 904-4904, or John Hampp at (561) 691-2894.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Carine Bullock". The signature is written in a cursive style with a large initial "J" and "C".

J. Carine Bullock
Plant General Manager
West County Energy Center
Florida Power and Light Company

Cc: Jeff Koerner
Scott Sheplak

Appendix XSE

Quarterly Excess Emissions and Monitoring Report for SIP-Only Standards

Company: _____

Plant Name: _____

Address: _____

Emissions Unit No.: _____

Pollutant (Check One): CO NOx

Emission Limit: _____

Reporting Period:

Q1 (Jan - March),

Q2 (April - June),

Q3 (July - Sept)

Q4 (Oct - Dec)

Monitor Manufacturer: _____

Model No.: _____

Date of Latest CEMS Certification of Audit: _____

Total Emissions Unit Operating Time in Reporting Period (1): _____ hours.

Excluded Emission Data Summary ¹	CEMS Performance Summary ¹
1. Duration of excluded emissions due to: a. ST Cold Startup ² _____ b. GT/HRSG Cold Startup ² _____ c. GT/HRSG Warm Startup ² _____ d. Shutdown _____ e. Documented Malfunction _____ f. Fuel Switching _____ g. Tuning _____ h. Total Authorized Data Excluded _____ 2. <u>Total duration of excluded emissions x</u> (100%) _____ % [Total source operating time] _____ % 3. Number of Compliance Averages > Limit ³	1. CEMS downtime due to: a. Monitor equipment malfunctions _____ b. Non-Monitor equipment malfunctions _____ c. Quality assurance calibration _____ d. Other known causes _____ e. Unknown causes _____ 2. Total CMS Downtime _____ 3. <u>Total CEMS Downtime x (100%)</u> [Total source operating time] _____ % ⁴

¹ For the reporting period, record all times in hours.

² "ST" means steam turbine. "GT/HRSG" means gas turbine/heat recovery steam generator.

³ If an exceedance occurs after excluding data as authorized by permit, the permittee shall also provide the hour-by-hour data for the compliance average and describe the circumstances causing the exceedance and the corrective actions taken.

⁴ If the total CEMS downtime is 5% or greater of the total operating time, the permittee shall also submit a report identifying the problems with maintaining a monitor availability of at least 95% and the corrective actions planned for the next quarter.

Note: On a separate page, describe any changes since the last in CMS, process or controls.

As the Designated Responsible Official of this facility, I certify based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Name: _____

Title: _____

Signature: _____

Date: _____

Appendix XSE

Quarterly Excess Emissions and Monitoring Report for SIP-Only Standards

Company: _____

Plant Name: _____

Address: _____

Emissions Unit No.: _____

Pollutant (Check One): CO NOx

Emission Limit:

Reporting Period:

Q1 (Jan - March),

Q2 (April - June),

Q3 (July - Sept)

Q4 (Oct - Dec)

Monitor Manufacturer: _____

Model No.: _____

Date of Latest CEMS Certification of Audit: _____

Total Emissions Unit Operating Time in Reporting Period (1): _____ hours.

Excluded Emission Data Summary ¹	CEMS Performance Summary ¹
1. Duration of excluded emissions due to: a. ST Cold Startup ² _____ b. GT/HRSG Cold Startup ² _____ c. GT/HRSG Warm Startup ² _____ d. Shutdown _____ e. Documented Malfunction _____ f. Fuel Switching _____ g. Tuning _____ h. Total Authorized Data Excluded _____ 2. <u>Total duration of excluded emissions x (100%)</u> _____ % [Total source operating time] _____ % 3. Number of Compliance Averages > Limit ³	1. CEMS downtime due to: a. Monitor equipment malfunctions _____ b. Non-Monitor equipment malfunctions _____ c. Quality assurance calibration _____ d. Other known causes _____ e. Unknown causes _____ 2. Total CMS Downtime _____ 3. <u>Total CEMS Downtime x (100%)</u> [Total source operating time] _____ % ⁴

¹ For the reporting period, record all times in hours.

² "ST" means steam turbine. "GT/HRSG" means gas turbine/heat recovery steam generator.

³ If an exceedance occurs after excluding data as authorized by permit, the permittee shall also provide the hour-by-hour data for the compliance average and describe the circumstances causing the exceedance and the corrective actions taken.

⁴ If the total CEMS downtime is 5% or greater of the total operating time, the permittee shall also submit a report identifying the problems with maintaining a monitor availability of at least 95% and the corrective actions planned for the next quarter.

Note: On a separate page, describe any changes since the last in CMS, process or controls.

As the Designated Responsible Official of this facility, I certify based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Name: _____

Title: _____

Signature: _____

Date: _____