



Farzie Shelton, chE; REM

Manager of Environmental Affairs

September 3, 2002

Mr. Al Linero, P.E.
Administrator
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road, Mail Station #5505
Tallahassee, Florida 32399-2400

RECEIVED

SEP 05 2002

BUREAU OF AIR REGULATION

Dear Al:

**Re: Draft Air Construction Permit, DEP File No. PSD-FL-245(PA -74-06)
C. D. McIntosh Power Plant -Unit No. 5**

Pursuant to our recent discussions with you and Mr. Mike Halpin, this correspondence revises Lakeland Electric's comments on the draft permit. There are only few minor changes that are being suggested to the proposed draft permit. This suggested change and rationale is presented below.

The following are our comments and requested changes:

1. We have noted a typo error condition number 16 in the draft should be condition number 17 and condition number 21 should be condition number 22 in order to match the PSD permit.

2. **Condition 22**
 - **Replace:** Prior to April 1, 2003 CO emission shall be minimized through the use of best operating practices and properly tuned combustors. After March 31, 2003 the concentration of CO in the exhaust gas shall be additionally controlled by the use of an oxidation catalyst with a minimum of 90% CO removal efficiency, as measured annually by EPA Method 10 at base load.

 - **With:** Prior to August 1, 2003 CO emission shall be minimized through the use of best operating practices and properly tuned combustors. After July 31, 2003, the concentration of CO in the exhaust gas shall be additionally controlled by the use of an oxidation catalyst with a minimum of 90% CO removal efficiency at base load design. The CO emissions shall be tested annually at full load and shall not exceed 2 ppmvd when firing natural gas as measured by EPA Method 10. The oxidation catalyst shall be maintained as recommended by the catalyst manufacturer.

 - **Rationale:** Lakeland is a municipality, therefore, a capital expenditure such as oxidation catalyst will need to be approved by its commissioners and go through extensive vendor/contractor selection process. Hence the requested time will be necessary to accomplish this task. The 2 ppmvd is suggested as the criteria for determining the functional ability of the catalyst and annual CO emission rate only and it is not an emission limit. The maintenance of

September 3, 2002

the oxidation catalyst as recommended by the catalyst manufacturer will ensure the removal efficiency as required by design.

3. Condition 25:

- **Replace:** Prior to April 1, 2003 VOC emissions shall be minimized through the use of best operating practices and properly tuned combustors.

After March 31, 2003 VOC emissions shall be additionally controlled through the use of an oxidation catalyst. CO emissions shall be employed as a surrogate for VOC emissions and no further annual testing will be required.

- **With:** Prior to August 1, 2003 VOC emissions shall be minimized through the use of best operating practices and properly tuned combustors.

After July 31, 2003 VOC emissions shall be additionally controlled through the use of an oxidation catalyst. CO emissions shall be employed as a surrogate for VOC emissions and no further annual testing will be required.

- **Rationale:** Same as condition 22.

4. Condition 26:

- **Replace:** Excess emissions resulting from startup, shutdown, malfunction or fuel switching shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed four hours in any 24-hour period for cold startup or two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration.

During any calendar day in which a start-up, shutdown, or fuel change occurs, the following alternative NOx limit applies:

100 lb/hr on the basis of a 24-hour average
200 lb/hr on the basis of a 24-hour average if fuel oil is fired during a start-up or shutdown within the 24-hour period.

- **With:** Excess emissions resulting from startup, shutdown, malfunction or fuel switching shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed four hours in any 24-hour period for startup and shutdown or two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration.

During any calendar day in which a start-up, shutdown, or fuel change occurs, the following alternative NOx limit applies:

100 lb/hr on the basis of a 24-hour average
200 lb/hr on the basis of a 24-hour average if fuel oil is fired during a start-up or shutdown within the 24-hour period.

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September 3, 2002

- **Rationale:** The phrase "cold startup" has been replaced by "startup" since Unit No. 5 startup includes cold, warm, and hot startup collectively referred to as startup.

- 5. **Replace: Condition 2. of B. Additional Specific conditions (in the Site Certification).**
 - During combined cycle operation, steam injection for power augmentation shall not exceed 3000 hours during any consecutive 12-month period. The permittee shall keep records of operation sufficient to demonstrate compliance with this limit. The permittee shall demonstrate compliance with the CO emissions standard by conducting EPA Method 10 in accordance with the following schedule:
 - a. Within 60 days of implementing power augmentation, the permittee shall conduct an initial CO emissions performance test during the maximum amount of power augmentation to demonstrate compliance with the CO emissions standard.
 - b. Within 45 days after utilizing power augmentation in a federal fiscal year, the permittee shall schedule and conduct a CO emissions performance test during power augmentation.
 - c. Within 45 days after operating 1000 hours with power augmentation in a federal fiscal year, the permittee shall schedule and conduct a second CO emissions performance test during power augmentation.
 - d. Within 45 days after operating 2000 hours with power augmentation in a federal fiscal year, the permittee shall schedule and conduct a third CO emissions performance test during power augmentation.
 - e. The permittee shall comply with all notification, testing, and reporting requirements required by PSD Permit No. PSD-FL-245. NOX data compiled by the continuous monitor during each CO performance test shall be reported and summarized with each CO test report. Steam injection shall be limited to the rate during the most recent emissions performance test that demonstrated compliance with the CO Standard.

 - **With:** During combined cycle operation, steam injection for power augmentation shall not exceed 3000 hours during any consecutive 12-month period. The permittee shall keep records of operation sufficient to demonstrate compliance with this limit.
 - a. Delete
 - b. Delete
 - c. Delete
 - d. Delete
 - e. Delete

 - **Rationale:** The references to CO testing frequencies are no longer necessary with installation of CO oxidation catalyst.

In addition to the proposed changes in the draft permit modification, it is suggested that the table of emission rates for CO and VOC in Condition 20 be modified to reflect the changes proposed by the Department. This would eliminate confusion between the proposed changes for CO and VOC and Condition 20. The recommended changes are presented below.

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September 3, 2002

Replace:

20. The following table is a summary of the BACT determination and is followed by the applicable specific conditions. Values for NOx are corrected to 15% O2. Values for CO are corrected to 15% O2 only until May 1, 2002. [Rule 62-212.410, F.A.C.]

Operational Mode	NO _x (ppm)	CO (ppm)	VOC (ppm)	PM/Visibility (% Opacity)	Technology and Comments
Simple Cycle	25 - NG (basis) 262 lb/hr (24-hr avg) 42 - FO (3-hr avg)	25 - NG or 10 - Ox Cat 90 - FO	4 - NG 10 - FO	10	DLN on gas, WI on oil. Applies until 05/1/2002. Clean fuels, good combustion
Simple Cycle	9 - NG (basis) 85lb/hr (24-hr avg) 42 - FO (3-hr avg)	25 - NG or 10 - Ox Cat 90 - FO	4 - NG 10 - FO	10	ULN on gas, WI on oil. Applies after 05/1/2002. Clean fuels, good combustion
Simple Cycle	9 - NG (3-hr avg) 15 - FO (3-hr avg)	25 - NG or 10 - Ox Cat 90 - FO	4 - NG 10 - FO	10	Hot SCR. Applies no later than 05/1/2002 if 9 ppm NOX not achievable by ULN. Clean fuels, good combustion.
Combined Cycle	7.5 - NG (3-hr avg) 15 - FO (3-hr avg)	25 - NG or 10 - Ox Cat 90 - FO	4 - NG 10 - FO	10	Conventional SCR unless simple cycle limits are achieved on or before 05/01/2002. Clean fuels, good combustion

With:

20. The following table is a summary of the BACT determination and is followed by the applicable specific conditions. Values for NOx are corrected to 15% O2. Values for CO are corrected to 15% O2. [Rule 62-212.410, F.A.C.]

Operational Mode	NO _x (ppm)	CO (ppm)	VOC (ppm)	PM/Visibility (% Opacity)	Technology and Comments
Combined Cycle	7.5 - NG (3-hr avg) 15 - FO (3-hr avg)	Ox Cat (Annual test criteria of 2 ppm with gas firing at full load.)	Ox Cat	10	Conventional SCR. Clean fuels, good combustion.

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5

September 3, 2002

As always, Lakeland appreciates your cooperation in this matter. If you should have a question, please do not hesitate to contact me or our environmental consultant Mr. Kennard Kosky [Phone (352) 336-5600].

Sincerely

A handwritten signature in black ink, appearing to read 'Farzie Shelton', is written over a horizontal line.

Farzie Shelton

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