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Dept. of Environmental Protection Division of Air Resources Mgt. Bureau of Air Regulation, NSR 2600 Blair Stone Rd., MS 5505 Tallahassee, FL 32399-2400 MOTTALE SAN TO LAST OF SOLUTION WILL



Department of Environmental Protection

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

David B. Struhs
Secretary

May 31, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Keith Hulbert General Manager Lakeland Electric 501 East Lemon Street Lakeland, Fl 33801-5079

Re: DEP File No. PSD-FL-245 (PA 74-06)

Lakeland McIntosh Unit No. 5

Dear Mr. Hulbert:

Enclosed is one copy of the Draft PSD Permit Modification relative to the start-up emissions on McIntosh Unit 5 Combined Cycle Unit. The facility is located at 3030 East Lake Parker Drive, Lakeland, Polk County.

The <u>Public Notice of Intent to Issue PSD Permit Modification</u> must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please contact Michael P. Halpin at 850/921-9519.

Sincerely,

C. H. Fancy, P.E., Chief, Bureau of Air Regulation

CHF/mph

Enclosures

In the Matter of an Application for Permit by:

Keith Hulbert, General Manager Lakeland Electric 501 East Lemon Street Lakeland, Florida 33801-5079 DEP File No. PSD-FL-245 (PA 74-06)

INTENT TO ISSUE PSD PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue a PSD Permit Modification (copy of Draft permit attached) for the proposed project, detailed in the application specified above and for the reasons stated below.

The applicant, Keith Hulbert, General Manager, Lakeland Utilities, applied on April 11, 2002, to the Department for a PSD Permit Modification for its McIntosh Combined Cycle Electric Generating Unit No. 5, located at 3030 East Lake Parker Drive, Lakeland, Polk County. The request is to revise the permit to accommodate increased emissions, which have been determined during actual start-up conditions.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a PSD Permit Modification is required to revise the permit with respect to start-up emissions.

The Department intends to issue this PSD Permit Modification based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue PSD Permit Modification. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of <u>Public Notice of Intent to Issue PSD Permit Modification</u>. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

DEP File No. PSD-FL-245 (PA 74-06) Lakeland McIntosh Unit No. 5 Page 2 of 3

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition

DEP File No. PSD-FL-245 (PA 74-06) Lakeland McIntosh Unit No. 5 Page 3 of 3

must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue PSD Permit Modification (including the Public Notice of Intent to Issue PSD Permit Modification and the Draft permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 5/31/02 to the person(s) listed:

Mr. Keith Hulbert, Lakeland Utilities *

Ms. Farzie Shelton, Lakeland Utilities

Mr. Gregg Worley, EPA

Mr. John Bunyak, NPS

Mr. Bill Thomas, SWD

Mr. Buck Oven, DEP

Mr. Joe King, Polk County

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) Substant May 31, 2002

PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. PSD-FL-245 (PA 74-06)

Lakeland Utilities
C.D. McIntosh, Jr. Power Plant - Unit No. 5
Polk County

The Department of Environmental Protection (Department) gives notice of its intent to issue a PSD Permit Modification to Lakeland Utilities, for the McIntosh Unit 5 Combined Cycle Unit located at 3030 East Lake Parker Drive, Lakeland, Polk County. The permit is to revise the conditions relative to start-up emissions. This is a new generating unit, which has commenced initial operation. The applicant's mailing address is: Lakeland Utilities, 501 East Lemon Street, Lakeland FL 33801.

This modification will revise the permit to require the use of a Selective Catalytic Reduction system for the control of NO_X emissions, as well as an oxidation catalyst for the control of CO emissions. Alternate permit limits have been established for CO and VOC emissions, based upon a minimum 90% CO reduction efficiency of the oxidation catalyst. Lastly, alternative limits were established for NO_X emissions during any calendar day in which a start-up, shutdown or fuel change occurs. Permit modifications and a variety of operating scenarios were envisioned by the original BACT analysis, as this combustion turbine represents a prototype installation. There are no other changes to the authorized emissions as a result of this modification.

An air quality impact analysis was not conducted. The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of this Public Notice of Intent to Issue PSD Permit Modification. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Florida Department of Environmental Protection Bureau of Air Regulation 111 S. Magnolia Drive, Suite 4 Tallahassee, Florida, 32301 Telephone: (850) 488-1344

Telephone: (850) 488-1344

Fax: (850) 922-6979

Florida Department of Environmental Protection Southwest District Office 3804 Coconut Drive Tampa, Florida 33619-8218

Telephone: (813) 744-6100 Fax: (813) 744-6084 Lakeland Utilities

Attention: Ms. Farzie Shelton 501 East Lemon Street

Lakeland, Florida 33801-5079 Telephone: (941) 499-6603

Fax: (941) 603-6335

The complete project file includes the application, Draft permit, and the information submitted by the Responsible Official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Source Review Section, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

DRAFT

June XX, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Keith Hulbert General Manager Lakeland Utilities 501 East Lemon Street Lakeland, Fl 33801-5079

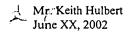
Re: DEP File No. PSD-FL-245, PA 74-06 Lakeland McIntosh Unit No. 5

Dear Mr. Hulbert:

The Department reviewed your request to modify the PSD Permit relative to start-up emissions. The Department has additionally reviewed the May 24, 2002 summary provided by Ms. Farzie Shelton and Mr. Timothy Bachand concerning actual emissions data during Unit 5 start-up periods. As a result of this review, the Department has concluded that a permit modification may be granted. Accordingly, this request is acceptable as indicated herein.

Permit PSD-FL-245 is hereby modified as follows:

- 16. The permittee shall <u>install</u> <u>design the stationary gas turbine</u>, <u>ducting</u>, <u>possible future heat recovery steam generator</u>, <u>and stack(s)</u> to accommodate installation of SCR equipment and/or <u>install an</u> oxidation catalyst. <u>The oxidation catalyst shall be designed for a minimum 90% destruction efficiency at base load in the event that the ULN technology fails to achieve the NOX limits given in Specific Condition No. 20 and 21 or the carbon monoxide (CO) limits given in Specific Condition 22 are not met. [Rule 62-4.070, F.A.C.]</u>
- 21. Carbon Monoxide (CO) emissions: Prior to May-1, 2002, the concentration of CO (@15% O2 in the exhaust gas when firing natural gas shall not exceed 25 ppmvd when firing natural gas and 90 ppmvd when firing fuel oil as measured by EPA Method 10. CO emissions (at ISO conditions) shall not exceed 145 lb/hr (gas) and 539 lb/hr (oil). [Rule 62-212.400, F.A.C.]
 - Prior to April 1, 2003 CO emissions shall be minimized through the use of best operating practices and properly tuned combustors.
 - After March 31, 2003 May 1, 2002, 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. when firing natural gas shall not exceed 25 ppmvd when firing natural gas and 90 ppmvd when firing fuel oil as measured by EPA Method 10. CO emissions (at ISO conditions) shall not exceed 106 lb/hr (gas) and 386 lb/hr (oil). [Rule 62-212.400, F.A.C.]
- 25. Volatile Organic Compounds (VOC) Emissions: The concentration of VOC in the exhaust gas when firing natural gas shall not exceed 4 ppmvd when firing natural gas and 10 ppmvd when firing fuel oil as assured by EPA Methods 18, and/or 25 A. VOC emissions (at ISO conditions) shall not exceed 10 lb/hr (gas) and 25 lb/hr (oil). [Rule 62-212.400, F.A.C.]
 - 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.

26. 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 NO_x 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 shut-down within the 24-hour period

No other changes to the permit are authorized by this action.

A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permit modification is issued pursuant to Chapter 403, Florida Statutes. Any party to this order (permit modification) has the right to seek judicial review of it under Section 120.68, F.S., by the filing of a Notice of Appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the Clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within (thirty) days after this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

Sincerely,

Howard L. Rhodes, Director Division of Air Resources Management

HLR/mph

Memorandum

Florida Department of Environmental Protection

TO:

C.H. Fancy

THRU:

Al Linero

FROM:

M. P. Halpin

DATE:

May 31, 2002

SUBJECT:

Lakeland Electric McIntosh Unit 5

Attached for approval and signature is a PSD Permit Modification for the newly installed combined cycle unit at the McIntosh Plant in Lakeland. This combustion turbine is a prototype Westinghouse Unit and has been besieged by numerous failures and setbacks. Based upon initial testing, Lakeland has found that the emissions of CO and VOC are above the permit allowances, and that NO_x emissions are excessive during start-up. As a result of these findings, Lakeland has requested relief.

The original permit required the unit to provide physical space for the installation of an oxidation catalyst, in the event that the CO emission limits could not be achieved. Accordingly, the attached modification requires its installation, which also represents BACT for VOC emissions. The permit limit for CO is commensurately revised and based upon the oxidation catalyst removal efficiency, which we've specified at a minimum of 90%. Lastly, concerning the NO_x emissions during startup, Lakeland requested start-up times of up to 16 hours, which is well beyond the window, which we've established for combined cycle units (typically 4 hours or less). Instead of accommodating this request directly, we've provided for alternative emission rates during any day in which a startup, shutdown or fuel change occurs. These have been established at 100 lb/hour unless fuel oil is fired, whereby it is established at 200 lb/hr. These limits are based upon 24-hour averages and appear achievable based upon submitted data. For reference, the (equivalent) normal NO_x permit limits are 71.1 and 148 lb/hr for gas and oil respectively.

I recommend your approval and signature.