



Jeb Bush  
Governor

# Department of Environmental Protection

Marjory Stoneman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

David B. Struhs  
Secretary

November 30, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Farzie Shelton, Manager  
Environmental Licensing and Planning  
Lakeland Electric and Water Utilities Department  
501 East Lemon Street  
Lakeland, Florida 33801-5079

Re: DEP File No. 1050004-007-AC (PSD-FL-008C)  
C.D McIntosh Jr. Power Plant, Unit 3  
Use of Harvested Biomass as Fuel

Dear Ms. Shelton:

Enclosed is one copy of the Preliminary Draft PSD permit modification, for the referenced project at the C. D. McIntosh, Jr Power Plant located at 3030 East Lake Parker Drive, Lakeland, Polk County. This does not constitute an Intent to Issue PSD Construction Permit. However a draft Intent and a draft Public Notice are also included.

We previously advised that we could not provide an advance copy of the package for your review and comment prior to issuance of a formal Intent. The reason was that the 90-day permitting clock would continue to run during that period and could cause a default. Additionally, we had a temporary computer problem.

The City voluntarily waived the 90-day permitting. This allows us to provide you with the attached draft package that you may review at your convenience while the clock is stopped. As discussed in your letter, the City and the Department will use the time to resolve any outstanding matters. Please advise if and when you wish to have the clock restarted and we will promptly issue a formal Intent.

If you have any questions regarding this matter, please call me at 850/921-9523.

Sincerely,

A. A. Linero, P.E. Administrator  
New Source Review Section

AAL/al

Enclosures

Cc: Ron Tomlin, City of Lakeland  
Buck Oven, DEP PPSO

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**  
 ■ Complete items 1 and/or 2 for additional services.  
 ■ Complete items 3, 4a, and 4b.  
 ■ Print your name and address on the reverse of this form so that we can return this card to you.  
 ■ Attach this form to the front of the mailpiece, or on the back if space does not permit.  
 ■ Write "Return Receipt Requested" on the mailpiece below the article number.  
 ■ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):  
 1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Mrs. Fazzie Shelton  
 Lakeland Electric & Water  
 501 E. Lemon St.  
 Lakeland, FL  
 33801-5079

4a. Article Number  
 Z 031 392 026  
 4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD  
 7. Date of Delivery  
 12-1-99

5. Received By: (Print Name)  
 6. Signature: (Addressee or Agent)  
 X *Bonnie Ben*

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

Z 031 392 026

US Postal Service  
**Receipt for Certified Mail**  
 No Insurance Coverage Provided.  
 Do not use for International Mail (See reverse).

Sent to	Fazzie Shelton
Street & Number	Lakeland Electric
Post Office, State & ZIP Code	CP The Intosh
Postage	Unit \$ 3
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	11-29-99

PS Form 3800 April 1995

050004-007-AC  
 PSD-FI-008(C)

Month xx, year

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Ronald W. Tomlin  
Assistant Managing Director  
Lakeland Electric and Water Utilities Department  
501 East Lemon Street  
Lakeland, Florida 33801-5079

Re: DEP File No. 1050004-007-AC (PSD-FL-008C)  
C.D McIntosh Jr. Power Plant, Unit 3  
Use of Harvested Biomass as Fuel

Dear Mr. Tomlin:

Enclosed is one copy of the Draft PSD permit modification, for the referenced project at the C. D. McIntosh, Jr Power Plant located at 3030 East Lake Parker Drive, Lakeland, Polk County. The Department's Intent to Issue Air Construction Permit and the "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION" are also included.

The "Public Notice of Intent to Issue PSD Permit Modification" must be published one time only as soon as possible in a newspaper of general circulation in the area affected, pursuant to the requirements of Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time 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 call Mr. Linero at 850/921-9523.

Sincerely,

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

CHF/aal

Enclosures

In the Matter of an  
Application for Permit by:

Mr. Ronald W. Tomlin, Assistant Managing Director  
City of Lakeland Electric & Water Utilities  
501 East Lemon Street  
Lakeland, Florida 33801-5079

DEP File No. 1050004-007AC  
DRAFT Permit No.: PSD-FL-008C  
C.D. McIntosh, Jr. Power Plant, Unit No. 3  
Polk County

### 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 Modification attached) for the proposed project, detailed in the application specified above, for the reasons stated below.

The applicant, City of Lakeland Electric & Water Utilities, applied on July 9, 1999 to the Department for a PSD permit modification to allow the use of harvested biomass as fuel in Unit 3 at the C.D. McIntosh, Jr. Power Plant, located at 3030 East Lake Parker Drive, Lakeland, Polk County.

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 under the provisions for the Prevention of Significant Deterioration (PSD) of Air Quality is required for the proposed work.

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 Permit Modification 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 action for a period of 30 (thirty) days from the date of publication of "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION." Any written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 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 Modification and require, if applicable, another Public Notice.

The Department will issue the Permit Modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. 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, 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 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.

C. H. Fancy, P.E., Chief  
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 and the DRAFT Modification Permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on \_\_\_\_\_ to the person(s) listed:

Ronald W. Tomlin, City of Lakeland \*  
Farzie Shelton, City of Lakeland  
Gregg Worley, EPA  
John Bunyak, NPS  
Bill Thomas, SWD  
Buck Oren, DEP  
Iris Hill, Polk County  
Ken Kosky, Golder Associates

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)

\_\_\_\_\_  
(Date)

**PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION**

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 1050004-007AC (PSD-FL-008C)

City of Lakeland Electric and Water Utilities Department  
C.D. McIntosh, Jr. Power Plant - Unit No. 3  
Polk County

The Department of Environmental Protection (Department) gives notice of its intent to issue a Permit Modification to the City of Lakeland Electric & Water Utilities Department. The Modification to the Permit for the Prevention of Significant Deterioration of Air Quality (PSD Permit) will allow certain materials as described below to be co-fired as fuel in McIntosh Unit 3. A determination of Best Available Control Technology (BACT) was not required pursuant to the PSD rules at 40CFR52.21 or 62-212.400, F.A.C. The applicant's name and address are The City of Lakeland Electric and Water Utilities Department, 501 East Lemon Street, Lakeland, Florida 33801-5079.

McIntosh Unit 3 is a coal-fired electrical steam generating unit. The City is already allowed to co-fire up to 10 percent refuse. The City proposes to include biomass within the allotment for the 10 percent refuse. The biomass is proposed to include all forms of vegetative matter including but not limited to wood wastes, agricultural crops or crop waste material and specially planted or harvested energy crops. The City proposes to permit this change as a pollution control project (exempt from the PSD rules) due to expected reductions in sulfur dioxide, particulate matter, and nitrogen oxides and possible increases in carbon monoxide. The Department proposes to allow only certain wood waste and those crops specifically planted and harvested for energy recovery. Agricultural or crop waste material is too broad and not within the scope of the refuse that the City is allowed to burn in accordance with its existing permits and Site Certification.

To avoid triggering PSD, the City must report future actual representative annual emissions of carbon monoxide to the Department and demonstrate that these did not increase significantly due to the project. The Department did not determine that burning of biomass is a pollution control project (PCP) and thus exempt from PSD. The primary reason for burning biomass has not (yet) been shown to be for the purposes of reducing emissions. Furthermore modeling of CO has not (yet) been performed to satisfy the requirements of a PCP. If these demonstrations are made prior to issuance of the final permit, the Department may exempt the project from PSD on that basis.

The Department will issue the Final Permit Modification 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 30 (thirty) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. 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  
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

City of Lakeland Electric  
and Water 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 Draft Permit Modification, 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 Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 904/488-1344, for additional information.



Month, xx 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Ronald W. Tomlin  
Assistant Manager Director  
Lakeland Electric & Water Utilities  
501 East Lemon Street  
Lakeland, Florida 33801-5079

Re: DEP File No. 1050004-007-AC (PSD-FL-008C)  
McIntosh Unit No. 3, Harvested Biomass  
City of Lakeland Department of Electric Utilities (Lakeland)

Dear Mr. Tomlin:

The Department has reviewed Lakeland's July 8, 1999 letter requesting a revision to the PSD permit for McIntosh Unit 3. The request is to clarify that specially planted and harvested energy crops as well as agricultural and wood wastes may be used as a fuel for Unit 3 under its present authorization to burn up to 10 percent refuse.

The Department does not believe that the mentioned materials constitute refuse. However, the Department concludes that by employing good combustion practices, certain materials can be co-fired without triggering PSD Review. Permit PSD-FL-008 is hereby revised as follows:

CONDITION 8

The following fuels may be burned:

- Coal only
- Low sulfur fuel oil only ( $\leq 0.5$  percent by weight)
- Coal and up to 10 percent refuse (based on heat input)
- Low sulfur fuel oil and up to 10 percent (based on heat input) refuse (based on heat input) or wood wastes and specially planted or harvested energy crops.
- Coal and up to 20 percent petroleum coke (based on weight)
- Coal and up to 20 percent petroleum coke (based weight) and up to 10 percent (based on heat input) refuse (based on heat input) or wood wastes and specially planted or harvested energy crops
- High sulfur fuel oil ( $> 0.5$  percent sulfur by weight) consistent with Conditions 2.C. or 2.D.
- Natural gas only, or in combination with any of the other fuels or fuel combinations listed above

CONDITION 9

The City shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit is initially co-fired with petroleum coke, information demonstrating in accordance with 40 CFR 52.21 (b)(33) and 40 CFR 52.21 (b)(21)(v) that the operational changes did not result in emissions increases of carbon monoxide, nitrogen oxides, or sulfuric acid mist.

The City shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit is initially co-fired with wood waste or vegetative crops specifically planted and harvested for energy recovery, information demonstrating in accordance with 40 CFR 52.21 (b)(33) and 40 CFR 52.21 (b)(21)(v) that the operational changes did not result in emissions increases of carbon monoxide.

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 filing 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 must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

\_\_\_\_\_  
Howard L. Rhodes, Director  
Division of Air Resources  
Management

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this permit modification was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on \_\_\_\_\_ to the person(s) listed:

Ronald W. Tomlin \*  
Farzie Shelton \*  
Gregg Worley, EPA  
John Bunyak, NPS  
Bill Thomas, DEP SWD  
Buck Oven, DEP PPSO  
Iris Hill, Polk County  
Ken Kosky, P.E., Golder Associates

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)

\_\_\_\_\_  
(Date)

Preliminary Determination

City of Lakeland  
Department of Water and Electric Utilities  
C. D. McIntosh Power Plant Unit No. 3  
Lakeland, Florida  
Polk County

Electric Utility Steam Generating Unit  
Solid and Liquid Fuel - Fired Boiler  
364 MW

Permit No. PSD-FL-008(C)

Department of Environmental Protection  
Division of Air Resources Management  
Bureau of Air Regulation

Month xx, year

**A. Applicant**

City of Lakeland  
Department of Water and Electric utilities  
501 East Lemon Street  
Lakeland, Florida 33801-5050

**B. Source**

C. D. McIntosh Power Plant  
Unit No. 3 - 364 MW  
Lakeland, Polk County

**C. Request**

On July 9, 1999, the City of Lakeland (City) submitted a request (Attachment 1) for a modification to Permit PSD-FL-008 originally issued by the United States Environmental Protection Agency (EPA) on December 27, 1978 and subsequently revised by the Department on September 5 and December 11, 1995. The permit and request are applicable to the City's C.D. McIntosh Power Plant Unit No. 3 (Unit 3) in Lakeland, Florida.

Initially the City requested that the Department "clarify that vegetative crops specifically planted and harvested for energy recovery can be burned along with other forms of biomass such as agricultural and wood wastes to supplement the refuse/refuse derived fuel already authorized for this unit." The request provided emission factors for burning "biomass" to suggest that emissions of particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), and nitrogen oxides (NO<sub>x</sub>) are likely to decrease under the proposed operation.

On August 5, the Department requested information regarding effects on carbon monoxide (CO) emission factors and specific language for possible incorporation into the permit modification. Additional information was received on August 20. The City specifically proposed that Condition 1.H. of the most recent version of the permit be modified as indicated:

**CONDITION 8**

The following fuels may be burned:

- Coal only
- Low sulfur fuel oil only ( $\leq 0.5$  percent by weight)
- Coal and up to 10 percent refuse (based on heat input)
- Low sulfur fuel oil and up to 10 percent refuse (based on heat input) including biomass; biomass shall include all forms of vegetative matter including but not limited to wood wastes, agricultural crops or crop waste material and specially planted or harvested energy crops. Biomass shall not include any material derived from sewage sludge

- Coal and up to 20 percent petroleum coke (based on weight)
- Coal and up to 20 percent petroleum coke (based weight) and 10 percent refuse (based on heat input)
- High sulfur fuel oil (> 0.5 percent sulfur by weight) consistent with Conditions 2.C. or 2.D.
- Natural gas only, or in combination with any of the other fuels or fuel combinations listed above

#### **D. Justification**

Because CO emissions increase while PM, SO<sub>2</sub>, and NO<sub>x</sub> emissions decrease, the City believes the project can be considered a "Pollution Control Project" as described in Rule 62-212(2)(a)2., F.A.C. In its letter of August 19, the City provides as a further rationale the recent Presidential Executive Order for Developing and Promoting Biobased Products and Bioenergy. According to the Release, "It is the policy of this Administration, therefore, to develop a comprehensive national strategy, including research development, and private sector incentives, to stimulate the creation and early adoption of technologies needed to make biobased products and bioenergy cost-competitive in large national and international markets."

#### **E. Rule Applicability**

The present request is a modification of the existing PSD permit and Site Certification. Here modification means at least a change in the permit, though not necessarily an increase in emissions such that PSD rules are triggered. Matters related to Site Certification will be handled separately after approval of any changes in the PSD permit to insure that conditions remain at least as strict as those given in the PSD permit.

Presuming that the coal yard and the steam units comprise a single facility, an increase in coal yard throughput would result in emissions increases of at least nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and particulate matter (PM/PM<sub>10</sub>). There could also be increases in carbon monoxide (CO) and sulfuric acid mist (SAM).

The change in the coal yard throughput limit is a relaxation of a federally enforceable limitation on the capacity of the facility and is therefore a modification. As such, the PSD requirements in Rule 62-212.400, F.A.C. may apply as described in Rule 62-212.400(2)(g), F.A.C.

Modifications to Major Facilities are those that result in a significant net emissions increase as described in Rule 62-212.400(2)(d)4.a(ii) and 62-212.400(2), F.A.C.

In 1992, EPA amended the PSD rules to account for several court decisions known as the Puerto Rican Cement and WEPCO decisions. Florida adopted these changes within Chapter 62-212, F.A.C. The key provisions applicable to this review relate to a new method for determining if a net emissions increase takes place following a physical or operational change. The PSD rules require a comparison of past actual emissions with future actual emissions rather than with future potential emissions when determining PSD applicability for electric utility units.

The City believes the project is actually exempt from PSD review as a Pollution Control Project. A pollution control project (PCP) is defined at 40CFR52.21(b)(32) as:

*Any activity or project undertaken at an existing electric steam generating unit for purposes of reducing emissions from such unit. Such activities and projects are limited to:*

*(1) The installation of conventional or innovative pollution control technology, including but not limited to advanced flue gas desulfurization, sorbent injection for sulfur dioxide control and nitrogen oxides control and electrostatic precipitators;*

*(2) An activity or project to accommodate switching to a fuel which is less polluting than the fuel in use prior to the activity or project, including, but not limited to natural gas or coal reburning, or the co-firing of natural gas and other fuel for the purpose of controlling emissions;*

*(3) A permanent clean coal technology demonstration project conducted under title II, Section 101(d) of the Further Continuing Appropriations Act of 1985.....; or*

*(4) A permanent clean coal technology demonstration project that constitutes a repowering project.*

The above definition is not specifically listed in the State Rules in Chapter 62, F.A.C. However it is obvious that it is the intent of the State to abide by the Federal definition. Furthermore, McIntosh Unit 3 was certified in accordance with 403.501-519, F.S. EPA Rules are also applicable to certified projects. Per Rule 62-212.400(2)(a)2., F.A.C., Pollution Control Project Exemption:

*A pollution control project that is being added, replaced, or used at an existing electric utility steam generating unit and that meets the requirements of 40CFR52.21(b)(2)(iii)(h) shall not be subject to the preconstruction requirements of this rule.*

According to 40CFR52.21(b)(2)(iii)(h), one of the exemptions from review for PSD is:

*The addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the Administrator determines such addition, replacement, or use renders the unit less environmentally beneficial, or except (1) When the Administrator has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of title I if any, and (2) The Administrator determines the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation.*

A fuel switch is not actually included in the definition of PCP nor is it listed as an activity in support of a PCP. However, it is not excluded. Furthermore, according to the EPA rule analysis at FR Vol. 57, No. 140, Pages 32320-32321:

*"Thus EPA is today adopting revisions to its PSD and nonattainment regulations for the addition, replacement or use at an electric steam generating unit of any system or device whose **primary function is the reduction of pollutants** (including the switching to a less-polluting fuel where the **primary purpose of the switch is the reduction of air pollutants**)."*

The proposed project by the City is not a fuel switch as it is obvious that only small amounts of the proposed fuel will be used. The City does not propose to switch its primary fuel which is coal. The project is more like *the co-firing of natural gas and other fuel for the purpose of controlling emissions*. If it is established that the primary purpose of co-firing biomass is to reduce emissions, then it can be evaluated for qualification as a PCP. Even if there is an increase in a PSD pollutant associated with the project, it is not necessarily precluded from consideration as a PCP. Per the EPA analysis:

*"Several commentors pointed out that a pollution control project that reduces one pollutant should not be allowed to increase emissions of another pollutant if that increase will cause or exacerbate a different pollution problem..... Although a pollution control project could theoretically cause a small collateral increase in some emissions, it will substantially reduce emissions of other pollutants. In recognition of this, the rule provides for a case-by-case assessment of the pollution control project's net emissions and overall impact on the environment."*

Therefore, the criteria which the Department must follow are clear. The collateral increase in any PSD pollutant should be small and the decrease in one or more PSD pollutants should be substantial. The increases in any pollutant should not cause or contribute to violation of an ambient air quality standard or PSD increment.

At this time, the Department does not have sufficient information to conclude that the primary purpose of the co-firing is to reduce emissions, although the concept is promoted by the Department of Energy and other agencies as renewable energy and as a way to reduce greenhouse gas emissions. The Department does not yet have information regarding the impacts of possibly increased CO emissions on ambient air quality.

The Department will use the most recent definitions in this permitting action as well as the reporting requirements as necessary to insure that PSD rules are not triggered by future actual operation of Unit 3. These are:

Actual emissions - (such as "present actuals"). The average rate in tons per year, at which the emissions unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of the normal operation of the emissions unit. The Department may allow the use of a different time period upon a determination that it is more representative of the normal operation of the emissions unit's actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.

Actual emissions - (such as "future actuals"). The representative actual annual emissions of the unit following the change provided the owner or operator maintains and submits to the Department on an annual basis for a period of five years from the date the unit resumes regular operation, information demonstrating that the physical or operational change did not result in an emissions increase, etc.

Representative actual annual emissions - (adopted from 40 CFR 52.21). The average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in method of operation of a unit, considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator (in this case the Department) shall:

(i) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and

(ii) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of utility demand growth for the utility system as a whole.

#### **F. Evaluation of Application**

The Department disagrees that that vegetative crops specifically planted and harvested for energy recovery fit within the definition of refuse/refuse derived fuel. The reasons are obvious. Also biomass is a vague term that can be construed to mean many things including sewage sludge and for which the emissions are not necessarily represented by the emission factors supplied by the City for this project. Similarly, agricultural waste is also too vague. The original refuse that the City intended to burn is better characterized as municipal solid waste rather than the expanded definition that the Department is requested to clarify.

There is sufficient information to conclude that co-firing of the vegetative energy crops and wood waste will reduce sulfur dioxide. Reductions are possible in nitrogen oxides and particulate emissions, although much depends on the combustion practices employed at Unit 3. Emissions of carbon monoxide are more likely to increase, but it is possible that the City can employ combustion practices to control CO.

#### **G. Revised PSD Permit**

Based on the Department's review of the City's application, subsequent clarifications, the applicable rules, and the existing permit conditions, the following changes are proposed in the Unit 3 PSD permit:



## CONDITION 8

The following fuels may be burned:

- Coal only
- Low sulfur fuel oil only ( $\leq 0.5$  percent by weight)
- Coal and up to 10 percent refuse (based on heat input)
- Low sulfur fuel oil and up to 10 percent (based on heat input) refuse (based on heat input) or wood wastes and specially planted or harvested energy crops.
- Coal and up to 20 percent petroleum coke (based on weight)
- Coal and up to 20 percent petroleum coke (based weight) and up to 10 percent (based on heat input) refuse (based on heat input) or wood wastes and specially planted or harvested energy crops.
- High sulfur fuel oil ( $> 0.5$  percent sulfur by weight) consistent with Conditions 2.C. or 2.D.
- Natural gas only, or in combination with any of the other fuels or fuel combinations listed above

## CONDITION 9

The City shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit is initially co-fired with petroleum coke, information demonstrating in accordance with 40 CFR 52.21 (b)(33) and 40 CFR 52.21 (b)(21)(v) that the operational changes did not result in emissions increases of carbon monoxide, nitrogen oxides, or sulfuric acid mist.

The City shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit is initially co-fired with wood waste or vegetative crops specifically planted and harvested for energy recovery, information demonstrating in accordance with 40 CFR 52.21 (b)(33) and 40 CFR 52.21 (b)(21)(v) that the operational changes did not result in emissions increases of carbon monoxide.

## H. Conclusion

The changes in operation allowed by this permit amendment are not expected to cause a significant increase in emissions of air pollutants. The changes will not result in any significant increases in ambient concentrations of any air pollutants or cause or contribute to a violation of any ambient air quality standard or allowable increment.