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#### STATE OF FLORIDA SITING BOARD

JUN 02 2000

BUREAU OF AIR REGULATION

IN RE: CITY OF LAKELAND	)		
C.D. McINTOSH, JR. POWER PLANT	)	OGC CASE NO.	99-0993
UNIT NO. 5	)	DOAH CASE NO.	99-2739EPP
APPLICATION PA74-06SR2	)		
	,		

## FINAL ORDER APPROVING LAND USE AND CERTIFICATION

On March 2, 2000, an Administrative Law Judge with the Division of Administrative Hearings (hereafter "DOAH") submitted his Recommended Order to the Department of Environmental Protection (hereafter "DEP") in this consolidated land use and certification proceeding. The Recommended Order indicates that copies were served upon the attorneys for the East Lake Parker Residents, City of Lakeland, Department of Electric Utilities (hereafter "Lakeland" or "Lakeland Utilities"), and various other governmental entities. On March 8, 2000, DOAH submitted a "corrected copy of page 11" of the Recommended Order rectifying a "scrivener's error" in Finding of Fact No. 25. A copy of the Recommended Order, containing the "corrected" page 11, is attached as Exhibit A. The matter is now before the Governor and Cabinet, sitting as the Siting Board, for final agency action under the Florida Electrical Power Plant Siting Act (hereafter "PPSA") embodied in Sections 403.501-403.518, Florida Statutes.

#### **BACKGROUND**

Lakeland Utilities is a municipal utility supplying electric service to over 100,000 customers in its service area within Polk County. Lakeland Utilities currently operates power plants at two locations in the City of Lakeland. The McIntosh Power Plant site is the larger power plant site and contains six electrical generating units. McIntosh Unit 3 is a 365-megawatt, coal-fired electrical generating unit originally certified under the PPSA in 1978.

In 1998, Lakeland obtained approvals to construct McIntosh Unit 5, a new 250-megawatt, simple-cycle combustion turbine ("CT") at the McIntosh site. These approvals consisted of a modification of the site certification for McIntosh Unit 3 and a separate Prevention of Significant Deterioration Permit, both issued by DEP. The modification of the

The Recommended Order reflects that copies thereof were furnished to counsels for Polk County, Florida Dept. of Transportation, Florida Fish and Wildlife Conservation Commission, Florida Dept. of Community Affairs, Florida Public Service Commission, Southwest Florida Water Management District, Orlando Utilities Commission, and the Central Florida Regional Planning Council.

site certification for McIntosh Unit 5 was required because the new CT was to be located within the site certification for McIntosh Unit 3. Approvals for modification of the site certification for the new McIntosh Unit 5 CT were required under the modification provisions of the PPSA. The McIntosh Unit 5 CT is completing construction and will be placed into service in the near future. The original permits for the new McIntosh Unit 5 CT anticipated that the simple-cycle CT would later be converted to a combined cycle configuration.

Under the proposed McIntosh Unit 5 Steam Cycle Project (the "Project"), the combined cycle configuration involves the construction of a heat recovery steam generator ("HRSG").<sup>2</sup> The HRSG captures the exhaust gas from the CT and produces steam by extracting the heat from the flue gases. In the HRSG, the hot gases are used to convert water into steam in a closed system of piping. The steam is then used to turn a new steam turbine, which provides the power for an electrical generator. The proposed combined cycle Project will be fired primarily with natural gas, with fuel oil as a backup fuel. Natural gas will be supplied by an existing 10-mile long pipeline owned by the City of Lakeland, which connects to the Florida Gas Transmission gas pipeline system. No alterations to those pipelines are required for the project. Fuel oil for the unit will be delivered by truck and stored in an existing on-site fuel storage tank.

The Project site is a three-acre tract of land within the larger 530-acre McIntosh Power Plant site located in the eastern portion of the City of Lakeland, along the northern shore of Lake Parker. The Project site is generally surrounded by undeveloped lands, including reclaimed and vacant phosphate lands. There are no residential or commercial properties adjacent to the Project site, and the nearest residence is over one mile away.

#### DOAH PROCEEDINGS

A DOAH formal hearing was held in this PPSA proceeding before Administrative Law Judge J. Lawrence Johnston (hereafter "ALJ") in Lakeland, Florida, on January 11, 2000. Pursuant to the consent of the parties, this DOAH hearing served as a consolidated land use and certification hearing under § 403.508, Florida Statutes. Evidence was presented at the hearing by Lakeland Utilities and by DEP. The record indicates that no additional

The Project's proposed addition of the new HRSG steam turbine and electrical generator to McIntosh Unit 5 will produce an incremental 100 megawatts of electricity produced through the use of steam. Thus, Lakeland Utilities was required to submit a new PPSA application for site certification of the Project.

governmental agencies or other parties appeared or presented evidence at the DOAH hearing.

At the time set aside for receiving public comment, the Mayor of Lakeland commented in support of the Project, but no other members of the general public appeared.

#### RECOMMENDED ORDER

Included in the Recommended Order are the following findings of fact of the ALJ:

- The Project site contains no significant environmental features, and no archaeological or historical resources were found. No sensitive local, regional federal parks, wilderness areas, forests, or areas of critical concern are located within five miles of the Project site. No threatened, endangered, or protected plant or animal species are known to be present at or near the Project site.
- 2. There is no direct discharge of wastewater from McIntosh Unit 5 to adjacent surface waters, and the Project will not have any effect on area surface waters.
- 3. Air emissions from the Project will not have a significant impact on air quality and will comply with all applicable federal and state air quality standards, including the conditions contained in the PSD Permit for McIntosh Unit 5 and DEP's proposed Conditions of Certification in this PPSA proceeding.

The ALJ concluded in the Recommended Order that, when converted to combined cycle operation, the Project will be consistent and in compliance with the land use plans and zoning ordinances of the City of Lakeland. The ALJ further concluded that Lakeland Utilities has established that the Project will produce minimal adverse affects on human health, the environment, the ecology of the land and its wildlife, and the ecology of state waters and their aquatic life. The ALJ ultimately recommended that a final order be entered by the Siting Board finding that the Project site is consistent with the existing land use plans and zoning ordinances of the City of Lakeland and granting certification of the location and operation of the Project under the PPSA, subject to the Conditions of Certification proposed by DEP.

#### CONCLUSION

Pursuant to subsection 120.57(1)(i), Florida Statutes, the parties to this proceeding were provided fifteen days in which to file Exceptions to the Recommended Order. Nevertheless, no Exceptions to the Recommended Order have been filed by any governmental agencies or private citizens challenging any of the ALJ's factual findings, legal conclusions, or recommendations. The record also reflects that written reports on the Project were prepared by DEP, Dept. of Community Affairs, Southwest Florida Water Management District, Florida Dept. of Transportation, and the Florida Fish and Wildlife Conservation Commission, and that all of these agencies recommended certification of the Project. The record further indicates

that the Central Florida Regional Planning Council entered into a prehearing stipulation submitted to the ALJ asserting that the Project would be consistent with the Council's Strategic Regional Policy Plan. There is no evidence of record in this PPSA proceeding that any state, regional, or local agency has recommended denial of certification of the Project. Based on a review of the record in these consolidated proceedings, the Siting Board concludes that the Project site is consistent and in compliance with the existing land use plans and zoning ordinances of the City of Lakeland, and that certification of the Project under the PPSA serves and protects the broad interests of the public and should be approved.

Having reviewed the Recommended Order and other matters of record and being otherwise duly advised, it is ORDERED that:

- A. The ALJ's Recommended Order, as corrected, is adopted in its entirety and incorporated herein by reference.
- B. Pursuant to § 403.508(2), Florida Statutes, the site of the Project as described in the Site Certification Application and the evidence presented at the DOAH hearing is determined to be consistent and in compliance with applicable existing land use plans and zoning ordinances of the City of Lakeland.
- C. Certification under the PPSA of the location and operation of the Project as proposed in the Site Certification Application and the evidence presented at the DOAH hearing is APPROVED, subject to the Conditions of Certification attached hereto as Exhibit B.
- D. Authority to assure and enforce compliance by the City of Lakeland or Lakeland Utilities and their agents with all of the Conditions of Certification imposed by this Final Order is hereby DELEGATED to DEP, except that any proposed Project modification to burn a fuel other than natural gas or fuel oil shall by reviewed by the Siting Board.

Any party to this certification proceeding has the right to seek judicial review of this Final Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, 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 30 days from the date this Final Order is filed with the Clerk of the Department.

DONE AND ORDERED this day of 2000, in Tallahassee, Florida, pursuant to a vote of the Governor and Cabinet, sitting as the Siting Board, at a duly noticed and constituted Cabinet meeting held on April 25, 2000.

THE GOVERNOR AND CABINET SITTING AS THE SITING BOARD

BY:
THE HONORABLE JEB BUSH

GOVERNOR

KATHERINE HARRIS SECRETARY OF STATE

BOB BUTTERWORTH ATTORNEY GENERAL

ROBERT F. MILLIGAN COMPTROLLER

BILL NELSON TREASURER

BOB CRAWFORD

COMMISSIONER OF AGRICULTURE

TOM GALLACHER

COMMISSIONER OF EDUCATION

FILING AND ACKNOWLEDGMENT: FILED, ON THIS DATE, PURSUANT TO §120.52 FLORIDA STATUTES, WITH THE DESIGNATED DEPARTMENT CLERK, RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED.

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#### **CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a copy of the foregoing Final Order Approving Land Use and Certification has been sent by United States Postal Service to:

Ann Cole, Clerk and
J. Lawrence Johnston, Administrative Law Judge
Division of Administrative Hearings
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, FL 32399-1550

Mark Carpanini, Esquire Office of County Attorney Post Office Box 9005 Bartow, Florida 33831-9005

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James V. Antista, General Counsel Fish and Wildlife Conservation Commission 620 South Meridian Street Tallahassee, Florida 32399-1600

Douglas Roberts, Esquire Angela Morrison, Esquire Hopping Green Sams & Smith Post Office Box 6526 Tallahassee, Florida 32314

and by hand delivery to:

Scott A. Goorland, Esquire Department of Environmental Protection 3900 Commonwealth Blvd., M.S. 35 Tallahassee, FL 32399-3000

this / day of , 2000

Thomas B. Tart, Esquire Orlando Utilities Commission 500 South Orange Street Orlando, Florida 32801

Sheauching Yu, Esquire Assistant General Counsel Department of Transportation Haydon Burns Building 605 Suwannee Street, M.S. 58 Tallahassee, Florida 32399-0450

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> STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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# STATE OF FLORIDA DIVISION OF ADMINISTRATIVE HEARINGS

IN RE: CITY OF LAKELAND

C.D. McINTOSH, JR. POWER PLANT

UNIT NO. 5

APPLICATION PA94-35

DOAH CASE NO. 99-2739EPP

)

# RECOMMENDED ORDER ON LAND USE AND CERTIFICATION HEARING

Pursuant to notice, the Division of Administrative Hearings, by its duly-designated Administrative Law Judge, J. Lawrence Johnston, held a formal hearing in the above-styled case on January 11, 2000, in Lakeland, Florida.

#### **APPEARANCES**

For City of Lakeland Department of Electric Utilities: Douglas S. Roberts, Esquire Angela R. Morrison, Esquire Hopping Green Sams & Smith, P.A. Post Office Box 6526 Tallahassee, Florida 32314

For Florida Department of Environmental Protection:

Scott A. Goorland, Esquire
Department of Environmental
Protection:
Twin Tower Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

#### STATEMENT OF THE ISSUES

The principal issues to be resolved in this proceeding concern whether certification should be issued to the City of Lakeland, Department of Electric Utilities (Lakeland or Lakeland Electric) to construct and operate the steam electric equipment needed to create a nominal 350-megawatt combined-cycle generating unit located at Lakeland's McIntosh Power Plant site in Lakeland, Florida in accordance with the provisions of Section 403.502, et seg., Florida Statutes. The related issues concern whether the

site for the McIntosh Unit 5 Steam Cycle Project is consistent and in compliance with the applicable land use plans and zoning ordinances of the City of Lakeland, pursuant to Section 403.508(2), Florida Statutes.

### PRELIMINARY STATEMENT

This proceeding was conducted pursuant to the Florida Electrical Power Plant Siting Act (PPSA), Chapter 403, Part II, Florida Statutes, and Chapter 62-17, Florida Administrative Code, to consider Lakeland Electric's application for power plant site certification of the McIntosh Unit 5 Steam Cycle Project.

On May 10, 1999, pursuant to Section 403.519, Florida

Statutes, the Florida Public Service Commission (PSC) issued its determination of need for the McIntosh Unit 5 Steam Cycle Project.

On June 14, 1999, Lakeland Electric filed with the Florida

Department of Environmental Protection (FDEP) an application for site certification for the McIntosh Unit 5 Steam Cycle Project.

By consent among the parties, the land use hearing, under Section 403.508(2), Florida Statutes and the certification hearing under Section 403.508(4), Florida Statutes, were consolidated for purposes of this hearing and for entry of recommended and final orders.

On December 22, 1999, FDEP issued its written analysis of the project as required by Section 403.507(4), Florida Statutes. FDEP's written analysis contained reports from other agencies and proposed conditions of certification for the McIntcsh Unit 5 project.

On January 14, 2000, FDEP submitted its revised written analysis to, as Amended FDEP Exhibits, update and correct various matters in the earlier version of its written analysis.

After proper notice by the Applicant and by FDEP, a consolidated land use and certification hearing was held in Lakeland, Florida, on January 11, 2000, as required by the PPSA. The hearing was conducted for the purpose of receiving evidence as to whether the project was in compliance with the criteria for certification set forth in Section 403.502, Florida Statutes. The hearing also served as the land use hearing required by Section 403.508(2), Florida Statutes.

Lakeland Electric presented the testimony of three witnesses and had Lakeland Exhibits numbered 1-23 and 25-28 admitted into evidence. The FDEP presented the testimony of Steven Palmer of the FDEP's Siting Coordination Office and had FDEP Exhibits numbered 1-4 admitted into evidence. No other agency or party appeared at the hearing. The Mayor of Lakeland offered comments in support of the project; no other member of the general public testified at the public hearing.

Prior to the certification hearing, Lakeland Electric and several agencies entered into stipulations that there were no issues of dispute between Lakeland and those agencies concerning the certification of the proposed project. Those agencies were the Department of Community Affairs, the Southwest Florida Water Management District, the Department of Transportation, and the Central Florida Regional Planning Council.

Following the conclusion of the hearing, a Transcript of the hearing was filed. The Joint Proposed Recommended Order of Lakeland and FDEP was timely submitted and has been adopted, with minor modifications, in the rendition of this Recommended Order.

## FINDINGS OF FACT

# Project Operations and Impacts

## Project Overview

- 1. The City of Lakeland, Department of Electric Utilities is a municipal utility that supplies electric service to approximately 106,000 customers, which represents approximately 200,000 residents in its service area within Polk County.

  Lakeland selectric utility commenced operation in 1891, making Lakeland one of only three Florida cities with electricity at that time. Lakeland currently operates power plants at two locations in the City of Lakeland with a combined generating capacity of 785 megawatts (MW). The McIntosh Power Plant site is the larger power plant site and contains six electrical generating units. McIntosh Unit 3 is a 365-megawatt, coal-fired electrical generating unit, which was originally certified under the Florida Electrical Power Plant Siting Act in 1978.
- 2. In 1998, Lakeland obtained approvals to construct a new 250-megawatt, simple-cycle combustion turbine (CT) at the McIntosh site. These approvals consisted of a modification of the site certification for McIntosh Unit 3 and a separate Prevention of Significant Deterioration (PSD) Permit, both issued by FDEP. That modification of the site certification for the new Unit 5 CT was required because the new CT was to be located

within the site certified for McIntosh Unit 3. Pursuant to FDEP rules, the approval for that new unit was required to be obtained under the PPSA's modification rules.

- 3. The new McIntosh Unit 5 CT is completing construction and will be placed into service in the near future. The original permits for the Unit 5 CT anticipated that the CT would later be converted to a combined cycle configuration.
- 4. The City of Lakeland considered a number of generating options before selecting the Unit 5 project to meet the City's required 15 percent reserve margin. Siemens Westinghouse submitted a proposal to the City that Lakeland be the host site for the first 501G simple-cycle combustion turbine. The City concluded that this proposal was the best alternative available to meet the City's needs for additional electricity. The conversion of Unit 5 to combined cycle operation will expand Lakeland's natural gas-fired generating capacity to 76 percent of Lakeland's total electrical generating capacity. No energy conservation measures exist that would affect the need for the plant.
- 5. The 250-megawatt CT in Unit 5 is one of the most efficient generating units currently operating. In the CT, compressed air is introduced into a combustion zone and fuel, typically natural gas, is combusted within the forward portion of the CT. The resulting hot gases expand in the turbine and turn an electrical generator. For Unit 5, this electrical generator produces approximately 250 MW of electricity. The hot exhaust gases then are exhausted out the existing stack.

- 6. Under the proposed Unit 5 Steam Cycle Project, the combined cycle configuration for Unit 5 involves the construction of a heat recovery steam generator (HRSG), which captures the exhaust gas from the CT and produces steam by extracting the heat from the flue gases. In the HRSG, the hot gases are used to convert water into steam in a closed system of piping. The steam is then used to turn a new steam turbine, which then turns an electrical generator. Other equipment required for the steam cycle project includes: a new, taller exhaust stack; a new cooling tower; and other plant equipment.
- 7. The addition of the new HRSG steam turbine and electrical generator to McIntosh Unit 5 will produce an incremental 100 MW of electricity produced through the use of steam. The PPSA requires an increase of steam-generating capacity at the McIntosh site to undergo the full permitting proceedings of the PPSA. Therefore, Lakeland was required to submit its application for site certification to add the steam cycle to Unit 5.
- 8. The McIntosh Unit 5 will be located on a 3-acre tract of land within the larger 530-acre McIntosh Power Plant site. The site is located in the eastern portion of the City of Lakeland, along the northern shore of Lake Parker.
- 9. The McIntosh plant site is generally surrounded by undeveloped lands, including reclaimed and vacant phosphate lands used, in part, as a recreational and fishing area managed by the Florida Fish and Wildlife Conservation Commission (FWCC). There are no residential or commercial properties adjacent to the

project site. The nearest residence to the project site is over one mile away.

- 10. The site for the McIntosh Unit 5 contains no significant environmental features. No wetlands are found within the site. The Unit 5 site is an open field, containing grasses and low-quality, weedy vegetation. Further, no archaeological, or historical resources were found on the site. No sensitive local, regional, state or federal parks, wilderness areas, forests, or areas of critical concern are located within 5 miles of the site. No threatened, endangered, or protected plant or animal species are known to be present at or near the project site.
- 11. The combined cycle unit will be fired primarily with natural gas, with fuel oil as a backup fuel. Natural gas is supplied by a 10-mile long pipeline owned by the City of Lakeland, which connects to the Florida Gas Transmission gas pipeline system. No alterations to those pipelines are required for the project. Fuel oil for the unit will be delivered by truck and stored in an existing on-site fuel storage tank.
- exhaust in the new heat recovery steam generator will significantly increase the efficiency of the electrical generation process for Unit 5. Use of the waste heat will not require any increase in fuel use and will not result in any increase in air emissions from the power plant. When considered on the basis of electrical output, the amount of emissions per megawatt hour of electricity will actually decrease by

approximately 30 percent. All of the air emissions from Unit 5 are associated with the operation of the combustion turbine; and the addition of the heat recovery steam generator does not result in any increase in those emissions.

## Water Use, Wastewaters and Other Impacts

- 13. The addition of the HRSG requires the use of a cooling tower to remove the heat from the circulating steam. Once the steam exits the steam turbine, it passes through a condenser in which the heat from the steam is transferred to circulating cooling water. The steam is condensed back to water and then recycled into the HRSG in a closed loop system. The heated cooling water is then routed to the cooling tower where forced air evaporation removes the heat.
- 14. Periodically, a portion of the cooling water in the cooling tower system is removed to prevent the buildup of solids and other constituents which could impair the performance of the cooling tower. Replacement of this "blowdown water" and of the water lost through evaporation will be achieved through the use of treated domestic waste water (reuse water) supplied from the City of Lakeland's wastewater treatment plants, including a plant adjacent to the McIntosh plant site. The cooling tower will require approximately 3.24 million gallons per day (mgd) to replace water lost in the cooling process.
- 15. FDEP adopted Rule 62-610, Florida Administrative Code, to encourage the beneficial use of reuse water from domestic wastewater systems as a means of water conservation. The rule sets out certain treatment and design criteria that must be met

when reuse water is used, including water used in cooling towers. The Lakeland Unit 5 cooling tower meets these rule requirements because the cooling tower is located more than 300 feet from the nearest property boundary, and the reuse water receives secondary treatment by the City of Lakeland.

- 16. In the event reuse water is not available because of supply or quality problems, groundwater from on-site wells will be used as a backup source of cooling water makeup until reuse water is available again. The needed quantity of groundwater, up to 3.24 mgd, has been approved by the Southwest Florida Water Management District (SWFWMD) under the existing consumptive use permit issued by SWFWMD for the McIntosh plant site. That quantity of water has been shown to not have adverse effects on area users of groundwater.
- 17. In addition to cooling water, the plant requires high quality service water to replace water lost in the operation of the HRSG and for other plant processes, including control of nitrogen oxide (NOx) emissions during oil firing. This water is obtained from groundwater wells and is treated in on-site water treatment facilities. Conversion of Unit 5 to combined cycle operation will reduce the use of groundwater by approximately 250,000 gallons per day during normal operations due to increased recycling of water within the unit.
- 18. Wastewater from the plant is generated from the cooling tower, as a result of the periodic blowdown of the water in the cooling tower. This blowdown water is routed to an on-site collection sump and then routed to the City of Lakeland

wastewater treatment system. Industrial-related wastewaters from plant operations, including wastewaters from plant water treatment, are also collected and routed to the City of Lakeland Wastewater Treatment system. There is no direct discharge of wastewater from McIntosh Unit 5 to adjacent surface waters. The project will not have any effect on area surface waters.

- 19. There will be no increase in the need for potable water or domestic wastewater treatment. The addition of the new HRSG and related equipment for the steam-cycle project will not require an increase in permanent employment at the project site. The on-site stormwater management system is already sized to accommodate the addition of the steam-cycle equipment
- 20. Minor amounts of solid and hazardous wastes will be generated by the project, mainly during construction. Any hazardous wastes will consist mainly of small amounts of spent solvent. Systems are already in place to dispose of these wastes in an approved manner.
- 21. Electricity generated at the site is distributed from an on-site switchyard into the City of Lakeland transmission system. This system is interconnected to other Florida utilities. The addition of the Unit 5 Steam Cycle Project will not require any changes to the existing electrical transmission system.
- 22. The McIntosh Unit 5 will be compatible with the other surrounding land uses in the vicinity of the project site. The project represents a logical expansion of the existing power plant site. It is well buffered from residential land uses.

adversely impact nearby residents. Existing noise levels in the residential areas near the plant are low, even with the existing generating units at the McIntosh site in operation. Noise levels during construction and operation will comply with the applicable local noise ordinance, as well as the existing noise limitations in the McIntosh site certification conditions. Construction will generally occur during daylight hours, and construction equipment has to comply with noise limits set by the manufacturers. Addition of the new HRSG and other equipment will act to buffer noise from the existing CT. Operation of the plant will not be noticeable at the nearest residence, which is almost one mile away.

## <u>Air Quality</u>

## Analyses Required

- 24. Polk County has not been designated by the U.S. Environmental Protection Agency (EPA) or FDEP as a nonattainment area for any federal or Florida ambient air quality standards.
- 25. Federal and state Prevention of Significant
  Deterioration (PSD) program requirements applied to the simple
  cycle portion of McIntosh Unit 5. Because it was a major source
  of air pollution Because there were no significant net emission
  increases of any regulated air pollutants due to the conversion
  of McIntosh Unit 5 to combined-cycle operation, the PSD
  requirements did not apply to the addition of the steam cycle to
  Unit 5.

26. Under the PPSA, air quality impacts associated with the new, taller stack and the new cooling tower associated with the combined cycle operation of Unit 5 were required to be evaluated. However, no changes to the PSD permit itself were necessary to address the addition of the steam cycle to Unit 5, although some updated information reflecting the increased stack height and the addition of the cooling tower was provided to FDEP.

## Emission Impacts

- 27. Under FDEP's rules, air emissions from McIntosh Unit 5 must not cause or contribute to a violation of federal and state ambient air quality standards or PSD increments. Polk County is classified as a Class II area for PSD purposes. The nearest Class I area to the McIntosh Power Plant is the Chassahowitska National Wilderness Area, located approximately 90 kilometers (60 miles) from the Plant.
- McIntosh Unit 5's emissions, including operations in combined-cycle mode with the taller stack and cooling tower, will not have a significant impact on air quality near the McIntosh Plant or in the Chassahowitska Class I area. The maximum predicted impacts from Unit 5 in combined-cycle mode are below the EPA and FDEP significant impact levels. Unit 5's emissions will not cause or contribute to an exceedance of any state or federal ambient air quality standards.
- 29. The 250-foot stack height for McIntosh Unit 5 in combined-cycle mode represents "good engineering practice" (GEP), calculated in accordance with FDEP and EPA rules.

- 30. McIntosh Unit 5's air emissions are not expected to cause any adverse impacts on vegetation, soils, or visibility in the McIntosh Power Plant site vicinity or in the Chassahowitska National Wilderness Area, the nearest PSD Class I area. Air emission impacts of McIntosh Unit 5 on water bodies in the vicinity of the McIntosh Power Plant will be insignificant.
- 31. No adverse air emission impacts are expected to result off-site during the construction of the steam cycle portion of Unit 5, and appropriate control methods will be used to minimize emissions during construction activities.
- 32. The cooling tower plume could cause temporary and localized ground-level fog on occasion. The majority of these relatively rare instances will be of short duration and occur when fog is already naturally occurring.

#### BACT and Emission Rates

- 33. A Best Available Control Technology (BACT) analysis, required under the PSD program, is intended to ensure that the air emissions control systems selected for a new project reflect the latest in control technologies used in a particular industry based on a cost-benefit approach, taking into account technical, economic, energy, and environmental considerations. A BACT determination was made for emissions from Unit 5, including operation of the unit in combined-cycle mode, as part of the PSD permit previously issued for the simple-cycle operation on the Unit 5 CT.
- 34. High efficiency drift eliminators are being installed on the McIntosh Unit 5 cooling tower to minimize particulate

matter emissions from solids contained in the water released from the cooling tower.

35. While the NOx emission limits in the PSD permit will not change due to the addition of the steam cycle portion of Unit 5, the projected emission rate in terms of pound-per-megawatt-hour (lb/mwhr) are actually lower when in combined-cycle mode because of the increase in electricity generated with no additional emissions being created.

### <u>Compliance</u>

36. McIntosh Unit 5 in the combined-cycle mode will comply with all applicable federal and state air quality standards, including the conditions contained in the PSD Permit for Unit 5 and in FDEP is proposed conditions of certification.

# Consistency with Local Land Use Plan and Zoning Ordinances

- 37. The Lakeland McIntosh Unit 5 project site, as well as the entire McIntosh Plant Site, is located in a future land use map designation of "Industrial" on the City of Lakeland's Future Land Use Map. That map is part of the locally-adopted Comprehensive Plan for the City of Lakeland. Electrical power plants are a permitted use in that Industrial land use category. McIntosh Unit 5 meets the locational criteria in the future land use element, in that it is well buffered and served by adequate, available public facilities.
- 38. The McIntosh Unit 5 Steam Cycle project site is zoned I-3, or Heavy Industrial under the City of Lakeland's zoning regulations. That zoning district allows electrical power plants, subject to further review under the City's zoning

- requirements. This additional zoning review consists of a conditional use permit, which is intended to provide an additional layer of review for these types of facilities.
- 39. On September 7, 1999, the City of Lakeland City Council issued a conditional use permit for the entire McIntosh plant site, which includes the site for McIntosh Unit 5.
- 40. McIntosh Unit 5, when converted to combined-cycle operation, will be consistent and in compliance with the City of Lakeland's land use plans and zoning designations for the project. Further, the project will be consistent with the conditional use permit issued for the project site.
- 41. McIntosh Unit 5 will also be consistent with the other provisions of the City of Lakeland Comprehensive Plan. The project meets the local Plan's concurrency requirements, promotes the use of treated wastewater for cooling of power plants, and meets the provisions for protection of local air quality.

## Agency Positions and Stipulations

42. The FDEP, the Florida Department of Community Affairs, the Southwest Florida Water Management District, the Florida Department of Transportation and the Fish and Wildlife Conservation Commission each prepared written reports on the project, and all recommended approval of the City of Lakeland McIntosh Unit 5 Steam Cycle Project. (Amended FDEP Exhibit 3). FDEP has proposed Conditions of Certification for the project, which Lakeland agrees to accept and comply with in plant construction and operation. The Department of Community Affairs determined that the project, if certified, would be consistent

with the State Comprehensive Plan. The Central Florida Regional Planning Council (CFRPC) did not submit a report to FDEP as part of its review of the project. However, CFRPC entered into a prehearing stipulation with the City of Lakeland in which it stated that the project would be consistent with the CFRPC's Strategic Regional Policy Plan. DCA entered a similar stipulation indicating its agreement that the project was consistent with the State Comprehensive Plan. The Department of Transportation entered into a prehearing stipulations indicating it did not object to certification of the project. No state, regional, or local agency has recommended denial of certification of the project.

### CONCLUSIONS OF LAW

- 43. The Division of Administrative Hearings has jurisdiction of the parties to and the subject matter of this proceeding. The proceeding was conducted in accordance with Chapter 403, Part II, Florida Statutes, the Florida Electrical Power Plant Siting Act, and Chapter 62-17, Part I, Florida Administrative Code, addressing power plant siting proceedings.
- 44. In accordance with Chapters 120 and 403, Florida
  Statutes, and Chapter 62-17, Florida Administrative Code, proper
  notice was accorded all persons, entities, and parties entitled
  to such notice, as well as appropriate notice being provided to
  the general public. All necessary and required governmental
  agencies participated, or had the opportunity to participate in
  the certification process. Reports and studies were issued by

FDEP, DCA, SWFWMD, FWCC, and FDOT, in accordance with their various statutory duties.

- 45. The Public Service Commission has determined a need exists for the electrical generating facility, as required by Sections 403.508(3) and 403.519, Florida Statutes.
- 46. Unrebutted evidence at the hearing demonstrate that the site for the McIntosh Unit 5 Steam Cycle Project is consistent and in compliance with the land use plans and zoning ordinances of the City of Lakeland, Florida.
- Competent, substantial evidence produced by Lakeland Electric at the certification hearing demonstrated that Lakeland has met its burden of proof that the McIntosh Unit 5 Steam Cycle Project is entitled to certification under the PPSA. Competent, substantial evidence produced at the hearing demonstrate that the construction and operational safeguards for the McIntosh Unit 5 are technically sufficient for the welfare and protection of the citizens of Florida, and are reasonable and available methods to achieve that protection. The McIntosh Unit 5 will produce minimal adverse affects on human health, the environment, the ecology of the land and its wildlife, and the ecology of state waters and their aquatic life. The proposed project will not conflict with the goals established by the local comprehensive plan of the City of Lakeland. If operated and maintained in accordance with this Recommended Order and the FDEP's recommended Conditions of Certification, McIntosh Unit 5 will comply with the applicable non-procedural requirements of all agencies. Certification of the project will fully balance the demand for

electrical power plant location and operation with the broad interests of the public.

## RECOMMENDATION

Based on the foregoing Findings of Fact and Conclusions of Law, it is

## RECOMMENDED that

- A. The City of Lakeland, Department of Electric Utilities be granted certification, pursuant to Chapter 403, Part II, Florida Statutes, for the location and operation of the McIntosh Unit 5 Steam Cycle Project, representing an expansion of the electrical generating capacity of the existing McIntosh Unit 5, as proposed in the Site Certification Application and the evidence presented at hearing, and subject to the Conditions of Certification contained in Amended FDEP Exhibit 3, and subject to the Conditions of Certifications of Certification attached hereto;
- B. The Siting Board find that the site of the McIntosh Unit 5 Steam Cycle Project, as described in the Site Certification Application and the evidence presented at the hearing, is consistent and in compliance with the existing land use plans and zoning ordinances of the City of Lakeland as they apply to the site, pursuant to Section 403.508(2), Florida Statutes.

DONE and ENTERED this 2nd day of March, 2000, in

Tallahassee, Leon County, Florida.

J. LAWRENCE JOHNSTON
Administrative Law Judge
Division of Administrative Hearings
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-3060
(850) 488-9675 SUNCOM 278-9675
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Filed with the Clerk of the Division of Administrative Hearings this 2000 day of March, 2000.

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# NOTICE OF RIGHT TO SUBMIT EXCEPTIONS

All parties have the right to submit written exceptions within 15 days from the date of this Recommended Order. Any exceptions to this Recommended Order should be filed with the agency that will issue the Final Order in this case.

# State of Florida Division of Administrative Hearings

Sharyn L. Smith Director and Chief Judge Ann Cole Cierk of the Division



The DeSoto Building 1230 Apalachee Parkway Tallahassee, Florida 32399-3060

March 8, 2000

Kathy Carter, Agency Clerk
Office of the General Counsel
Department of Environmental Protection
3900 Commonwealth Boulevard, Mail Station 35
Tallahassee, Florida 32399-3000

Re: In Re: City of Lakeland C.D. McIntosh, Jr. Power Plant Unit No. 5 Application PA94-35, DOAH Case No. 99-2739EPP

Dear Ms. Carter:

Enclosed is a corrected copy of page 11. Number 25 had a scrivener's error that now has been corrected.

Sincerely,

J. LAWRENCE JOHNSTON
Administrative Law Judge

JLJ/js

Enclosure

cc: Mark Carpanini, Esquire
Douglas S. Roberts, Esquire
Scott A. Goorland, Esquire
Sheauching Yu, Esquire
James V. Antista, Esquire
Andrew S. Grayson, Esquire
Robert V. Elias, Esquire
Frank Anderson, Esquire
Thomas B. Tart, Esquire
Andrew R. Reilly, Esquire
Norman White, Esquire
Teri Donaldson, General Counsel

adversely impact nearby residents. Existing noise levels in the residential areas near the plant are low, even with the existing generating units at the McIntosh site in operation. Noise levels during construction and operation will comply with the applicable local noise ordinance, as well as the existing noise limitations in the McIntosh site certification conditions. Construction will generally occur during daylight hours, and construction equipment has to comply with noise limits set by the manufacturers.

Addition of the new HRSG and other equipment will act to buffer noise from the existing CT. Operation of the plant will not be noticeable at the nearest residence, which is almost one mile away.

# Air Quality

## Analyses Required

- 24. Polk County has not been designated by the U.S. Environmental Protection Agency (EPA) or FDEP as a nonattainment area for any federal or Florida ambient air quality standards.
- 25. Federal and state Prevention of Significant
  Deterioration (PSD) program requirements applied to the simple
  cycle portion of McIntosh Unit 5 because it was a major source of
  air pollution. Because there were no significant net emission
  increases of any regulated air pollutants due to the conversion
  of McIntosh Unit 5 to combined-cycle operation, the PSD
  requirements did not apply to the addition of the steam cycle to
  Unit 5.