

**BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

In Re: City of Lakeland)
C.D. McIntosh Power Plant)
Unit No. 3)
Modification of Conditions)
of Certification)
Polk County, Florida)
_____)

OGC CASE NO. 98-1994
DEP FILE NO. (PA74-06F)

DEPARTMENT OF
ENVIRONMENTAL PROTECTION
JUL 13/1998
SITING COORDINATION

**FINAL ORDER MODIFYING
CONDITIONS OF CERTIFICATION**

On December 7, 1978, the Governor and Cabinet, sitting as the Siting Board, issued a final order approving certification for the Lakeland McIntosh Power Plant Unit Number 3. The site certification order approved the construction and operation of a 334 MW (net) coal fired unit and associated facilities in Polk County, Florida. The certification has been previously modified on October 5, 1980, August 10, 1983, August 15, 1988 and February 13, 1996.

On March 16, 1998, Lakeland filed a request with the Florida Department of Environmental Protection ("Department") to amend the conditions of certification pursuant to Section 403.516(1)(b), Florida Statutes. Lakeland requested that the conditions be modified to allow the construction and operation of Unit 5, a 250 megawatt, natural gas fired combustion turbine on the McIntosh Plant site.

Copies of Lakeland's proposed modifications were made available for public review on April 3, 1998, on which date a Notice of Intent to Issue Proposed Modification of Power Plant Certification was also published in the Florida Administrative Weekly. On March 16, 1998, all parties to the original proceeding were served by mail with copies of the intent to modify and supporting documentation. The notice specified that a hearing would be held if a party to the original certification hearing objected within 45 days from receipt of the proposed modifications or if any other person, whose interests would be substantially affected, objected in writing within 30 days after issuance of the public notice. No written objection to the proposed modifications

has been received by the Department. Accordingly, in the absence of any timely objection,

IT IS ORDERED:

The proposed changes to the Lakeland McIntosh Power Plant Unit Number 3 as described in its March 13, 1998, request for modification are APPROVED. Pursuant to Section 403.516(1)(b), F.S., the conditions of certification for the Lakeland McIntosh Power Plant Unit Number 3 are **MODIFIED** as follows:

I. Air Unit 3 - No change

II. Air Unit No. 5

A. EMISSION UNITS

This permit addresses the following emission units:

<u>ARMS EMISSION UNIT NO.</u>	<u>SYSTEM</u>	<u>EMISSION UNIT DESCRIPTION</u>
<u>028</u>	<u>Power Generation</u>	<u>250 Megawatt Combustion Turbine and</u> <u>Once Through Steam Generator</u>
<u>029</u>	<u>Fuel Storage</u>	<u>1.05 Million Gallon Fuel Oil Storage</u> <u>Tank</u>

B. REGULATORY CLASSIFICATION

The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY). This facility is also subject to the provisions of Title IV, Acid Rain, Clean Air Act as amended in 1990.

C. GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, telephone number (850) 488-1344. All

documents related to reports, tests, and notifications should be submitted to the Department's Southwest District office (DEPSW), 3804 Coconut Palm Drive, Tampa, Florida 33619, telephone number (813) 744-6100.

2. General Conditions: The owner and operator is subject to and shall operate under the General Permit Conditions G.1 through G.15 listed in Appendix GC attached to Permit No. PSD-FL-245. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

4. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. [Rule 62-210.900, F.A.C.]

5. Modifications: The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change. [Chapters 62-210 and 62-212, F.A.C.]

6. Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]

7. BACT Determination: In accordance with 40 CFR 52.21(j)(4), the Best

Available Control Technology (BACT) determination shall be reviewed and modified as appropriate in the event of a conversion to combined cycle operation. This paragraph states: "For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source." [40 CFR 52.21(j)(4)]
This reassessment will be conducted for this project only if the conversion to combined cycle operation is accompanied by any increases in heat input limits, hours of operation, oil firing, low or baseload operation, short-term or annual emission limits, or similar changes. [40 CFR 52.21(j)(4)]

8. Application for Title V Permit: An application for a Title V operating permit, pursuant to Chapter 62-213, F.A.C., must be submitted to the Department's Bureau of Air Regulation, and a copy to the Department's Southwest District office (DEPSW). [Chapter 62-213, F.A.C.]

9. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

10. Annual Reports: Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the Department's Southwest District office by March first of each year.

11. Stack Testing Facilities: Stack sampling facilities shall be installed in

accordance with Rule 62-297.310(6), F.A.C.

12. Permit Extension: The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.090, F.A.C.).

13. Quarterly Reports: Quarterly excess emission reports, in accordance with 40 CFR 60.7(a)(7)(c) (1997 version), shall be submitted to the Department's Southwest District office.

D. APPLICABLE STANDARDS AND REGULATIONS

1. Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-103, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Parts 60, 72, 73, and 75.

2. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]

3. These emission units shall comply with all applicable requirements of 40CFR60, Subpart A, General Provisions including:

- 40CFR60.7, Notification and Record keeping
- 40CFR60.8, Performance Tests
- 40CFR60.11, Compliance with Standards and Maintenance Requirements
- 40CFR60.12, Circumvention

- 40CFR60.13, Monitoring Requirements
- 40CFR60.19, General Notification and Reporting requirements

4. ARMS Emission Unit, Power Generation, consisting of a 250 megawatt combustion turbine with a once-through steam generator shall comply with all applicable provisions of 40 CFR 60, Subpart GG, Standards of performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not used for compliance determinations with the BACT standard(s).

5. ARMS Emission Unit 029, Fuel Storage, consisting of a 1.05 million gallon distillate fuel oil storage tank shall comply with all applicable provisions of 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels, adopted by reference in Rule 62-204.800, F.A.C.

6. All notifications and reports required by the above specific conditions shall be submitted to the Department's Southwest District office.

E. GENERAL OPERATION REQUIREMENTS

1. Fuels: Only pipeline natural gas or maximum 0.05 percent sulfur No. 2 distillate fuel oil shall be fired in this unit. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

2. Capacity: The maximum heat input rates, based on the lower heating value (LHV) of each fuel to Unit 5 at ambient conditions of 59°F temperature, 60% relative humidity, 100% load, and 14.7 psi pressure shall not exceed 2,174 million Btu per hour (MMBTU/hr) when firing natural gas, nor 2,236 MMBTU/hr when firing No. 2 fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site

conditions or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing. [Design, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

3. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering of and/or application of water or chemicals to the affected areas, as necessary.

4. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Department's Southwest District Office as soon as possible, but at least within one (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]

5. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]

6. Circumvention: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.]

7. Maximum allowable hours of operation for the stationary gas turbine and once-through steam generator are 8760. Fuel usage as heat input, while burning natural gas in the stationary gas turbine, shall not exceed 15.639×10^{12} BTU (LHV) per year (rolled monthly) until the unit achieves the NO_x emission limits (other than the initial ones) given in Specific Condition 21. Thereafter, only the hourly heat input limits given in Specific Condition 8 apply. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

8. Fuel usage as heat input while burning fuel oil in the stationary gas turbine shall not exceed 559×10^9 BTU (LHV) per year (rolled monthly). [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

CONTROL TECHNOLOGY

9. Westinghouse Second Generation Advanced Dry Low NO_x (DLN) combustors (or equivalent) shall be installed on the stationary combustion turbine to control nitrogen oxides (NO_x) emissions while firing natural gas. [Design, Rule 62-4.070, F.A.C.]

10. The Dry Low NO_x (DLN) combustors shall be replaced with Westinghouse Ultra Low NO_x (ULN) combustors to accomplish further NO_x control in order to achieve the emission limits specified in Specific Conditions 20 and 21. A high temperature selective catalytic reduction (Hot SCR) system or a low temperature SCR system shall be installed and in operation (together with DLN or ULN combustors) not later than May 1, 2002 if the emission limits specified in Specific Condition Nos. 20 and 21 are not achievable by ULN combustors by this date. [Design, Rules 62-4.070 and 62-212.400, F.A.C.]

11. The permittee shall design the stationary gas turbine, ducting, possible future heat recovery steam generator, and stack(s) to accommodate installation of SCR

equipment and/ or oxidation catalyst in the event that the ULN technology fails to achieve the NO_x limit given in Specific Condition Nos. 20 and 21 or if carbon monoxide (CO) limits given in Specific Condition No. 22 are not met. [Rule 62-4.070, F.A.C.]

12. A water injection system shall be installed for use when firing No. 2 fuel oil or superior grade distillate fuel oil for control of NO_x emissions. [Design, Rules 62-4.070 and 62-212.410, F.A.C.]

13. The permittee shall provide manufacturer's emissions performance versus load diagrams for the DLN and ULN systems prior to their installation. DLN and ULN systems shall each be tuned upon initial operation to optimize emissions reductions and shall be maintained to minimize NO_x emissions and CO emissions. Operation of the DLN or ULN systems in the diffusion firing mode shall be minimized when firing natural gas. [Rule 62-4.070, and 62-210.650 F.A.C.]

F. EMISSION LIMITS AND STANDARDS

1. The following emission limits shall apply upon completion of the initial performance tests: Best Available Control Technology (BACT). Following is a summary of the BACT determination by DEP. Values for NO_x are corrected to 15% O₂. Values for CO are corrected to 15% O₂ only until May 1, 2002. [Rule 62-212.400, F.A.C.]

Operational Mode	NO _x (ppm)	CO (ppm)	VOC (ppm)	PM/Visibility (% Opacity)	Technology and Comments
Simple Cycle	25 - NG (basis) 237 lb/hr (24-hr avg) 42 - FO (3 hr avg)	25 - NG or 10 - Ox Cat 90 - FO	4 - NG 10 - FO	10	DLN on gas, WI on oil. Applies until 05/1/2002. Clean fuels, good combustion.

Simple Cycle	9 - NG (basis) 85 lb/hr (24-hr avg) 42 - FO (3 hr avg)	25 - NG or 10 - Ox Cat 90 - FO	4 - NG 10 - FO	10	ULN on gas, WI on oil. Applies after 05/1/2002 Clean fuels, good combustion.
Simple Cycle	9 - NG (3 hr avg) 15 - FO (3-hr avg)	25 - NG or 10 - Ox Cat 90 - FO	4 - NG 10 - FO	10	Hot SCR. Applies not later than 05/1/2002 if 9 ppm NO _x not achievable by ULN. Clean fuels, good combustion.
Combined Cycle	7.5 - NG (3 hr avg) 15 - FO (3-hr avg)	25 - NG or 10 - Ox Cat 90 - FO	4 - NG 10 - FO	10	Conventional SCR unless simple cycle limits are achieved on or before 05/01/2002. Clean fuels, good combustion.

2. Nitrogen Oxides (NO_x) Emissions:

a. When NO_x monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time.

b. Until May 1, 2002, the concentration of NO_x in the exhaust gas shall not exceed 237 lb/hr (at ISO conditions) on a 24 hr block average (basis 25 ppm @ 15% O₂, full load) when firing natural gas and 42 ppmvd at 15% O₂ when firing fuel oil on the basis of a 3 hr average), as measured by the continuous emission monitoring system (CEMS). In addition, NO_x emissions calculated as NO₂ (at ISO conditions) shall exceed neither 25 ppm @15% O₂ nor 237 lb/hr (when firing natural gas) and shall exceed neither 42 ppm @15% O₂ nor 413 lb/hr (when firing oil) to be demonstrated by stack test. [Rule 62-212.400, F.A.C.]

c. Not later than May 1, 2002, NO_x concentrations in the exhaust gas shall not exceed 85 lb/hr (at ISO conditions) on a 24 hr block average (basis 9 ppm @ 15% O₂) when firing natural gas and 42 ppmvd at 15% O₂ when firing fuel oil on the basis of a 3 hr average as measured by the CEMS. In addition, NO_x emissions calculated as NO₂ (at ISO conditions) shall exceed neither 9 ppm @15% O₂ nor 85 lb/hr (when firing natural gas) and shall exceed neither 42 ppm @15% O₂ nor 413 lb/hr (when

firing oil) to be demonstrated by stack test. [Rule 62-212.400, F.A.C.]

d. If Hot SCR is installed, achievable short-term NO_x concentrations in the exhaust gas shall be demonstrated at baseload during the first compliance test following installation not to exceed 9 ppmvd at 15% O₂ when firing natural gas. NO_x emissions shall not exceed 9 ppmvd at 15% O₂ when firing natural gas and 15 ppmvd at 15% O₂ when firing fuel oil on the basis of a 3-hr average as measured by the CEMS. NO_x emissions calculated as NO₂ (at ISO conditions) shall not exceed 85 lb/hr (when firing gas) and 148 lb/hr (when firing oil) to be demonstrated by stack test. [Rule 62-212.400, F.A.C.]

e. If conventional SCR is installed in conjunction with conversion to combined cycle operation, achievable short-term NO_x concentrations in the exhaust gas shall be demonstrated at baseload during the first compliance test following installation not to exceed 7.5 ppmvd at 15% O₂ when firing natural gas and 15 ppmvd @ 15% O₂ when firing fuel oil on the basis of a 3-hr average as measured by the CEMS. If conventional SCR catalyst is installed, NO_x emissions shall not exceed 7.5 ppmvd at 15% O₂ when firing natural gas and 15 ppmvd at 15% O₂ when firing fuel oil on the basis of a 3-hr average as measured by the CEMS. NO_x emissions calculated as NO₂ (at ISO conditions) shall not exceed 71.1 lb/hr (when firing gas) and 148 lb/hr (when firing oil) to be demonstrated by stack test. [Rule 62-212.400, F.A.C.]

3. Carbon Monoxide (CO) emissions: Prior to May 1, 2002, the concentration of CO at 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 Reference Method 10 test. CO emissions (at ISO conditions) shall not exceed 145 lb/hr (when firing gas) and 539 lb/hr (when firing oil). [Rule 62-212.400, F.A.C.] After May 1, 2002, the concentration of CO 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 106 lb/hr (when

firing gas) and 386 lb/hr (when firing oil). [Rule 62-212.400, F.A.C.]

4. Sulfur Dioxide (SO₂) emissions: SO₂ emissions (at ISO conditions) shall not exceed 7.2 pounds per hour when firing pipeline natural gas and 127 pounds per hour when firing maximum 0.05 percent sulfur No. 2 or superior grade distillate fuel oil as measured by applicable compliance methods described below. Emissions of SO₂ shall not exceed 38.4 tons per year. [Rules 62-4.070 and 62-212.400, F.A.C. to avoid PSD Review]

5. Visible emissions (VE): VE emissions shall not exceed 10 percent opacity when firing natural gas or No. 2 or superior grade of fuel oil.

6. Volatile Organic Compounds (VOCs) 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 measured 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.]

G. EXCESS EMISSIONS

1. 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.

2. Excess emissions entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited pursuant to Rule 62-210.700, F.A.C.

3. Excess Emissions Report: If excess emissions occur due to malfunction, the owner or operator shall notify the Department's Southwest District office within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rules 62-4.130 and 62-210.700(6), F.A.C.]

H. COMPLIANCE DETERMINATION

1. Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate, for each fuel, at which this unit will be operated, but not later than 180 days after initial operation of the unit for that fuel, and annually thereafter as indicated in this permit, by using the following reference methods as described in 40 CFR 60, Appendix A (1997 version), and adopted by reference in Chapter 62-204.800, F.A.C. Emission limits compliance dates shall conform to the timetable specified on Condition No. II.F.1.

2. Initial (I) performance tests shall be performed on Unit 5 while firing natural gas as well as while firing fuel oil. Initial tests shall also be conducted after any modifications (and shake down period not to exceed 100 days after re-starting the CT) of air pollution control equipment, including installation of Ultra Low NOX burners, Hot SCR, or conventional SCR. Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 - September 30), pursuant to Rule 62-297.310(7), F.A.C., on Unit 5 as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing.

- EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from

Stationary Sources" (I, A).

- EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources" (I, A).
- EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Initial test only for compliance with 40 CFR 60 Subpart GG and short-term NO_x BACT limits (I,A) (Method 7E or RATA test data may be used to demonstrate compliance for annual test requirement.)
- EPA Reference Method 18, and/or 25A, "Determination of Volatile Organic Concentrations." Initial test only.

3. Continuous compliance with the NO_x emission limits shall be demonstrated with the CEM system based on the applicable averaging time of 24-hr block average (DLN or ULN technology) or a 3-hr average (if SCR is used). Based on CEMS data, a separate compliance determination is conducted at the end of each operating day (or 3-hr period when applicable) and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day (or 3-hr period when applicable). Valid hourly emission rates shall not include periods of startup (including fuel switching), shutdown, or malfunction as defined in Rule 62-210.200 F.A.C., where emissions exceed the applicable NO_x standard. These excess emissions periods shall be reported as required in Condition 28. A valid hourly emission rate shall be calculated for each hour in which at least two NO_x concentrations are obtained at least 15 minutes apart. [Rule 62-4.070, F.A.C., 40 CFR 75]

4. Compliance with the SO₂ and PM/PM₁₀ emission limits: Notwithstanding the requirements of Rule 62-297.310, F.A.C., the use of pipeline natural gas and the use of no more than 250 hours per year of maximum 0.05 percent sulfur (by weight) No. 2 or superior grade distillate fuel oil, is the method for determining compliance for SO₂

and PM_{10} . For the purposes of demonstrating compliance with the 40 CFR 60.333 SO_2 standard and the 0.05% S limit, fuel oil analysis using ASTM D2880-71 or D4294 (or equivalent) for the sulfur content of liquid fuels and D1072-80, D3031-81, D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule. The applicant is responsible for ensuring that the procedures above are used for determination of fuel sulfur content. Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (1997 version).

5. Compliance with CO emission limit: An initial test for CO, concurrent with the initial NO_x test, is required. The initial NO_x and CO test results shall be the average of three valid one-hour runs. Annual compliance testing may be conducted concurrent with the annual RATA testing required pursuant to 40 CFR 75 (required for gas only).

6. Compliance with the VOC emission limit: An initial test is required to demonstrate compliance with the BACT VOC emission limit. Thereafter, CO emission limit will be employed as surrogate.

7. Testing procedures: Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and 105 percent of the value reached during the test until a new test is conducted. Once the unit is so

limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Test procedures shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapter 62-297 F.A.C.

8. Test Notification: The Department's Southwest District office shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance test(s).

9. Special Compliance Tests: The DEP may request a special compliance test pursuant to Rule 62-297.310, F.A.C., when, after investigation (such as complaints, increased visible emissions, or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated.

10. Test Results: Compliance test results shall be submitted to the DEP's Southwest District office no later than 45 days after completion of the last test run.

I. NOTIFICATION, REPORTING, AND RECORD KEEPING

1. Records: All measurements, records, and other data required to be maintained by the City of Lakeland Department of Electric & Water Utilities shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to Department representatives upon request.

2. Emission Compliance Stack Test Reports: A test report indicating the results of the required compliance tests shall be filed with the Department's Southwest District Office as soon as practical, but no later than 45 days after the last sampling run is completed. [Rule 62-297.310(8), F.A.C.]. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to

determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C.

I. MONITORING REQUIREMENTS

1. Continuous Monitoring System: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from Unit 5. Periods when NO_x emissions (ppmvd @ 15% oxygen) are above the BACT standards listed in Subsection C. Specific Condition C.1. shall be reported to the Department's Southwest District Office pursuant to Rule 62-4.160(8), F.A.C. Periods of startup, shutdown, malfunction, and fuel switching shall be monitored, recorded, and reported as excess emissions when emission levels exceed the BACT standards following the format of 40 CFR 60.7 (1997 version).

2. CEMS in lieu of Water to Fuel Ratio: Subject to EPA approval, the NO_x CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1997 version). Subject to EPA approval, the calibration of the water/fuel monitoring device required in 40 CFR 60.335 (c)(2) (1997 version) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMS. Upon request from the Department, the CEMS emission rates for NO_x on Unit 5 shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.

3. Continuous Monitoring System Reports: The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, and 40 CFR 60.7(a)(5) including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5). Quality assurance procedures must conform to

all applicable sections of 40 CFR 60, Appendix F or 40 CFR75. Data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the Department's Southwest District Office (DEPSW) for review at least 90 days prior to installation.

4. Fuel Oil Monitoring Schedule: The following monitoring schedule for No. 2 fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at the C.D. McIntosh, Jr. Power Plant, an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).

5. Natural Gas Monitoring Schedule: The following custom monitoring schedule for natural gas is approved (pending EPA concurrence) in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2):

- Monitoring of natural gas nitrogen content shall not be required.
- Analysis of the sulfur content of natural gas shall be conducted using one of the EPA-approved ASTM reference methods in Specific Condition No.32 for the measurement of sulfur in gaseous fuels, or an approved alternative method. Once Unit 5 becomes operational, monitoring of the sulfur content of the natural gas shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then fuel sulfur monitoring shall be conducted once per quarter for six quarters and after that, semiannually.
- Should any sulfur analysis indicate noncompliance with 40 CFR 60.333, the City of Lakeland shall notify the Department of such excess emissions and the customized fuel monitoring schedule shall be re-examined. The sulfur content of the natural gas

will be monitored weekly during the interim period while the monitoring schedule is re-examined.

- The City of Lakeland shall notify the Department of any change in natural gas supply for re-examination of this monitoring schedule. A substantial change in natural gas quality (i.e., sulfur content variation of greater than 1 grain per 100 cubic foot of natural gas) shall be considered as a change in the natural gas supply. Sulfur content of the natural gas will be monitored weekly by the natural gas supplier during the interim period when this monitoring schedule is being re-examined.
- Records of sampling analysis and natural gas supply pertinent to this monitoring schedule shall be retained by the City of Lakeland for a period of five years, and shall be made available for inspection by the appropriate regulatory personnel.
- The City of Lakeland may obtain the sulfur content of the natural gas from the fuel supplier (Florida Gas Transmission) provided the test methods listed in Specific Condition E.4 are used.

6. Determination of Process Variables:

a. The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value [Rule 62-297.310(5)].

F.A.C.1.

III. ~~H.~~ WATER DISCHARGES - No change

IV. ~~HH.~~ GROUNDWATER

A. and B. - No change

C. Groundwater Use Limitations

1. and 2. - No Change

3. Well Numbers 5 and 8, as identified in the Southwest Florida Water Management District (SWFWMD) Permit 200047.03 (dated August 27, 1996) may be used for raw makeup water for Unit 5.

4. Groundwater used for Unit 5, in simple cycle operation shall not exceed 500 gpm or a peak usage of 720,000 gallons/day (gpd) and an annual usage of 576,000 gpd, respectively.

V. ~~IV.~~ LEACHATE - No change

VI. ~~V.~~ CONTROL MEASURES DURING CONSTRUCTION - No change

VII. ~~VI.~~ SOLID WASTES - No change

VIII. ~~VII.~~ OPERATION SAFEGUARDS - No change

IX. ~~VIII.~~ SOLID WASTE UTILIZATION SYSTEM - No change

X. ~~IX.~~ SCREENING - No change

XI. ~~X.~~ POTABLE WATER SUPPLY SYSTEM - No change

XII. ~~XI.~~ TRANSFORMER AND ELECTRIC SWITCHING GEAR - No change

XIII. ~~XII.~~ TOXIC, DELETERIOUS OF HAZARDOUS MATERIALS -No change

~~XIV. XII.~~ TRANSMISSION LINE - No change

~~XV. XIV.~~ CONSTRUCTION IN WATERS OF THE STATE - No change

~~XVI. XV.~~ COOLING WATER TREATMENT - No change

~~XVII. XVI.~~ SANITARY WASTE DISPOSAL - No change

XVIII. SURFACE WATER AND STORMWATER MANAGEMENT FACILITIES

The City of Lakeland shall construct all aspects of the surface water management system in accordance with the construction plans received by the Southwest Florida Water Management District (SWFWMD) on June 23, 1998. This certification for the surface water management systems is valid only for the specific processes and operations applied for and indicated in the approved drawing or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or Conditions of Certification may constitute grounds for modification, revocation or enforcement action.

A. General

1. City of Lakeland Confirmation.

The operational phases of the surface water management systems authorized under this certification shall not become effective until the City of Lakeland confirms in writing, upon completion of each phase, that these facilities have been constructed consistent with the conditions of certification. Such confirmation shall include a certification by an engineer (practicing in the State of Florida, having the appropriate experience in surface water management design and construction, and in compliance with Chapter 471, Florida Statutes, unless exempt thereunder), that the facilities have been constructed in accordance with the approved project design. Within 30 days after completion of construction of the surface water management system, the City of Lakeland shall submit the confirmation, including "as-built" construction drawings with the engineer's certification and a description of any deviations; and notify the SWFWMD that the

facilities are ready for inspection for consistency with the conditions of certification and information submitted hereunder.

2. Discharges.

The discharges from the surface water management system shall meet state water quality standards as set forth in Chapter 62-302, F.A.C. for class waters equivalent to the receiving waters.

3. Minimum Standards.

This certification is predicated on the City of Lakeland's submitted information to SWFWMD which reasonably demonstrates that adverse off-site water resource related impacts will not be caused by the authorized activities. The plans, drawings, and design specifications submitted shall be considered minimum standards for compliance.

4. Post-Certification Information Submittal.

Information submitted to the SWFWMD subsequent to certification, in compliance with the conditions of this certification, shall be for the purpose of water management district monitoring and confirming compliance with the conditions of certification and the criteria contained in Rule 40D-4, F.A.C., as applicable, prior to the commencement of the subject construction, operation and/or maintenance activity, covered thereunder.

5. Liability.

Permittee shall hold and save SWFWMD harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, operation, maintenance and/or use of any facility authorized by this certification, to the extent allowed under Florida law.

6. Enforcement.

Authorized representatives of the SWFWMD shall be allowed reasonable escorted

access to the project site to inspect and observe any activities associated with the project construction or the operation and/or maintenance of the surface water management system(s) and stormwater facilities in order to determine compliance with the conditions of this certification.

7. Monitoring.

Post-certification monitoring requirements may be determined and specified as a result of technical review of construction information, where necessary, to demonstrate compliance with water management district regulations. If monitoring data is required by the SWFWMD in conjunction with post-certification review, it shall be submitted to the SWFWMD and to the Florida Department of Environmental Protection. Parameters to be monitored may include those listed in Chapter 62-302, Florida Administrative Code. The City of Lakeland shall, if required, provide data to SWFWMD regarding: Construction, operation, and maintenance of surface water management systems; NGVD levels; volumes and timing of water discharged, including total volume discharge during period of sampling and total and discharges from the property.

B. Construction Conditions

1. This project must be constructed in compliance with and meet all applicable requirements set forth in Chapter 373, Florida Statutes, and Chapter 40D-4, Florida Administrative Code.

2. Any surface water discharged from the site during construction of the project shall meet State water quality standards at the property boundary or point of discharge to wetlands or State waters. If the discharge does not meet these standards, the discharge will be immediately stopped and the SWFWMD shall be notified of corrective action(s) taken to correct the violation(s). Turbidity shall not exceed 29 N.T.U. above background level. Turbidity shall be monitored at least once during discharge, or more often as

determined by the project engineer or SWFWMD if needed, to ensure compliance.

3. Except as authorized by this certification for the surface water management system, any further land development, wetlands disturbance or other construction within the total land area of this site will require additional certifications in accordance with the SWFWMD's rules (Chapter 40D-4, F.A.C.).

4. All rights-of way and easement locations necessary to construct, operate, and maintain all facilities, including uplands conservation/buffer areas and wetlands, which constitute the certified surface water management system, shall be reserved for water management purposes.

5. Construction of the discharge control and water quality treatment facilities which are part of the certified surface water management system shall be completed and operational prior to beneficial occupancy and use of the project development being served.

6. Establishment and survival of littoral areas provided for stormwater quality treatment in wet detention systems shall be assured by proper and continuing maintenance procedures designed to promote viable wetlands plant growth of natural diversity and character. As-built drawings depicting the established wet detention treatment areas shall be submitted to the SWFWMD for inspection and approval upon completion of construction. Following as-built approval, perpetual maintenance shall be provided for the certified system.

7. Any existing wells in the path of construction shall be properly plugged and abandoned by a licensed water well contractor in accordance with Chapter 40D-3, and Rule 62-532.500(4), F.A.C.

8. All retention/detention pond side slopes shall be sodded and staked as necessary to prevent erosion.

9. Any system alteration, including for augmentation into or withdrawal of water from

the certified surface water management system, other than as specifically authorized by this certification, will require additional District certification consideration. The water level of stormwater detention ponds shall not be augmented by pumping or diversion of water into the ponds to artificially control their level above the design normal or beginning storage level.

10. The City of Lakeland shall perform the construction authorized in a manner so as to minimize any adverse impact on the system on fish, wildlife, natural environmental values, and water quality. The City of Lakeland shall institute necessary measures during the construction period, including full compaction of any fill material placed around newly installed structures, to reduce erosion, turbidity, nutrient loading and sedimentation in the receiving waters.

11. Off-site discharges of surface water during construction and development shall be made only through the facilities authorized by this certification.

12. In order to insure that the person who will construct the proposed work is identified as required by 373.413(2)(f), F.S., once the contract is awarded, the name, address, and telephone number of the contractor shall be submitted to the SWFWMD prior to construction.

13. The City of Lakeland shall immediately provide written notification to the SWFWMD upon beginning any construction authorized by this certification.

14. The City of Lakeland shall retain the design engineer, or other Professional Engineer registered in Florida, to conduct on-site observations of construction and assist with the as-built certification requirements of this project. The City of Lakeland shall inform the SWFWMD in writing and prior to beginning construction of the name, address, and telephone number of the Professional Engineer so employed by the City of Lakeland.

15. The operation and maintenance entity shall submit inspection reports for the

surface water management system in the form required by the SWFWMD. For systems utilizing wet detention, the inspections shall be performed two (2) years thereafter.

16. The SWFWMD verified wetland boundaries shall be clearly delineated on the site prior to initial clearing and grading activities. The delineation shall endure throughout the construction period and be readily discernable to construction personnel and SWFWMD staff.

C. Project Information Requirements

1. Subsequent modifications to the drawings and supporting calculation submitted to SWFWMD which may significantly alter the quantity and/or quality of waters discharged off site shall also be submitted to the water management district for a determination that the modifications are in compliance with Chapter 40D-4, Florida Administrative Code, as appropriate, prior to the commencement of construction. However minor deviations from construction plans deemed necessary in the field, including, but not necessarily limited to changes in the number, size, and location of culverts and other structures, shall be allowed.

2. The SWFWMD and the City of Lakeland may mutually agree to vary the information requirements.

Any party to this Notice has the right to seek judicial review of the 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, M.S.35, Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the Notice of Appeal accompanied by the applicable filing fee with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date that this Final Order is filed with the Department of Environmental Protection.

DONE AND ENTERED this 9th day of July, 1998 in Tallahassee,
Florida.

STATE OF FLORIDA, DEPARTMENT
OF ENVIRONMENTAL PROTECTION

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

[Signature] Clerk 7/9/98 Date

[Signature]
VIRGINIA B. WETHERELL
SECRETARY
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000
Telephone: (850) 488-1554

CERTIFICATE OF SERVICE

I HEREBY CERTIFY this 12th day of July, 1998, that a true and correct copy of
the foregoing Final Order Modifying Conditions of Certification has been sent by mail to
the following listed persons:

David S. Des, Esq.
Landers & Parsons
P.O. Box 271
Tallahassee, FL 32302

Richard T. Tschann, Esq.
S.W.F.W.N.D.
2379 Broad Street
Brooksville, FL 34609-6899

Andrew Grayson, Esq.
Department of Community Affairs
2555 Skumard Oak Boulevard
Tallahassee, FL 32399-2100

Pinellas County Building
Traders Council
8000 Wallis
2165 County Club Court North
St. Petersburg, FL 33710

Plumbers and Pipe Fitters Local
No. 111
601 1st Street
4020 80th Avenue North
Pinellas Park, FL 33565

Pinellas County Department of
Environmental Management
111 County Street
Clearwater, FL 34601

* CORRECTED CERTIFICATE OF SERVICE ATTACHED

14-86

CORRECTED CERTIFICATE OF SERVICE

I HEREBY CERTIFY this 10th day of July 1998, that a true and correct copy of the foregoing Final Order Modifying Conditions of Certification has been sent by U.S. mail or interagency mail to the following listed persons:

Gary P. Sams, Esq.
Hopping Green Sams & Smith
P.O. Box 6526
Tallahassee, FL 32314

Norman White, Esq.
Central Florida Regional
Planning Council
555 East Church Street
Bartow, FL 33830

Stephanie G. Kruer, Esq.
General Counsel
Dept. of Community Affairs
2555 Shumard Oak Blvd
Tallahassee, FL 32399-2100

Richard Tschantz, Esq.
Assistant General Counsel
Southwest Florida Water
Management District
2379 Broad Street
Brooksville, FL 34609-6899

Pamela S. Leslie, Esq.
General Counsel
Department of Transportation
Haydon Burns Building
605 Suwannee Street, M.S. 58
Tallahassee, FL 32399-0450

Mark Carpanini, Esq.
Office of County Attorney
Post Office Box 60
Bartow, FL 33830-0060

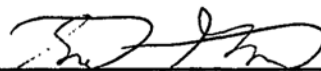
Robert V. Elias, Esq.
Florida Public Service Commission
Gerald Gunter Building
2540 Shumard Oak Blvd
Tallahassee, FL 32399-0850

Andrew R. Reilly, Esq.
East Lake Parker Residents
Post Office box 2039
Lakeland, FL 33845-2039

James V. Antista
General Counsel
Game and Fresh Water Fish Comm.
Bryant Bldg.
620 S. Meridian Street
Tallahassee, FL 32399-1600

Thomas B. Tart, Esq.
Orlando Utilities Commission
500 South Orange Street
Orlando, FL 32801

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



SCOTT GOORLAND
Assistant General Counsel
Florida Bar No. 0066834

3900 Commonwealth Boulevard, MS 35
Tallahassee, Florida 32399-3000