

**STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**NOTICE OF FINAL PERMIT**

*In the Matter of an  
Application for Permit by:*

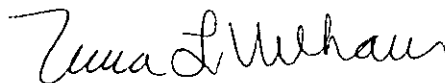
Progress Energy Florida, Inc.  
299 First Avenue North, CN-77  
St. Petersburg, FL, 33701  
Authorized Representative:  
Bernie Cumbie, Plant Manager

Air Permit No. PSD-FL-392  
Project No. 0170004-018-AC  
Crystal River Power Plant  
South Cooling Towers Project  
Citrus County

Enclosed is the final air construction permit, which authorizes Progress Energy to construct additional mechanical draft cooling towers, referred to as south cooling towers (SCT). The proposed work will be conducted at the Crystal River Power Plant, which is located in Citrus County north of Crystal River, west of U.S. 19 in Crystal River, Florida. As noted in the attached Final Determination, only minor changes and clarifications were made to the permit as drafted. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Trina Vielhauer, Chief  
Bureau of Air Regulation

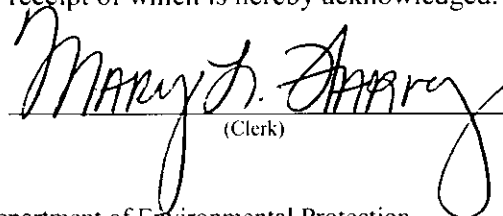
**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit and Final Determination) was sent by electronic mail with received receipt requested before the close of business on 10/12/07 to the persons listed below.

Mr. Bernie Cumbie, Progress Energy Florida, Inc. ([bernie.cumbie@pgnmail.com](mailto:bernie.cumbie@pgnmail.com))  
Mr. Dave Meyer, Progress Energy Florida, Inc. ([dave.meyer@pgnmail.com](mailto:dave.meyer@pgnmail.com))  
Mr. Scott Osbourn, Golder Associates, Inc. ([sosbourn@golder.com](mailto:sosbourn@golder.com))  
Ms. Kathleen Forney, EPA Region 4 ([Forney.Kathleen@epa.gov](mailto:Forney.Kathleen@epa.gov))  
Ms. Mara Nasca, SWD Office ([Mara.Nasca@dep.state.fl.us](mailto:Mara.Nasca@dep.state.fl.us))

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

  
(Clerk)

10/12/07  
(Date)



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

## PERMITTEE

Progress Energy Florida, Inc.  
299 First Avenue North, CN-77  
St. Petersburg, FL 33701

Authorized Representative:  
Bernie Cumbie, Plant Manager

Permit No. PSD-FL-392  
Project No. 0170004-018-AC  
Permit Expires: January 1, 2013  
Crystal River Power Plant  
ARMS ID No. 0170004  
South Cooling Towers Project

## PROJECT AND LOCATION

This permit authorizes Progress Energy to construct additional mechanical draft cooling towers, referred to as south cooling towers (SCT) at the Crystal River Power Plant. The proposed work will be conducted at the Crystal River Power Plant, which is an existing electrical generating power plant (SIC No. 4911). The facility is located in Citrus County north of Crystal River, west of U.S. 19 in Crystal River, Florida. The UTM coordinates are Zone 17, 334.2 km east and 3204.5 km north.

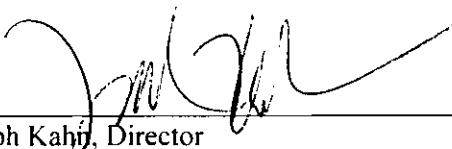
## STATEMENT OF BASIS

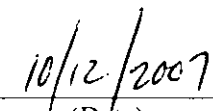
This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The project is subject to preconstruction review in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

## CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Unit Specific Conditions
- Section 4. Appendices

Executed in Tallahassee, Florida

  
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Joseph Kahn, Director  
Division of Air Resource Management

  
10/12/2007  
(Date)

## SECTION 1. GENERAL INFORMATION

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### FACILITY AND PROJECT DESCRIPTION

This project authorizes Progress Energy Florida, Inc. to construct additional mechanical draft cooling towers referred to as south cooling towers (SCT) for the Crystal River Power Plant. Additional cooling capacity is needed to support the project to uprate the capacity of existing nuclear Unit 3. An uprate of 40 MW will be added during the 2009 refueling outage from equipment modifications and an additional 140 MW will be added during the 2011 refueling outage from upgrades to the reactor. Progress Energy plans to install the SCT to help remove the incremental heat generated by the uprate. In addition, the project may replace the existing modular cooling towers (EU-020). The project authorizes up to 18 cells arranged in a preliminary nine by two configuration that would operate continuously. The cooling flow rate for all eighteen cells is estimated at 342,306 gallons per minute and the design air flow rate per cell is estimated at 1,500,000 acfm. If the existing modular cooling towers (EU-020) are not replaced, fewer cells may be installed.

The cooling towers provide direct contact between the cooling water and air passing through the tower. Drift is created when small amounts of cooling water become entrained in the air stream and are carried out of the tower. Particulate matter (PM) is emitted as salt and solids in the water droplets that escape as drift from the tower. Drift eliminators is the control technology used to control PM emissions caused by the cooling tower drift.

### REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400 (PSD), F.A.C.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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1. Permitting Authority: The permitting authority for this project is the Bureau of Air Regulation, Division of Air Resource Management, Florida Department of Environmental Protection (DEP). The Bureau of Air Regulation's mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office. The mailing address and phone number of the Southwest District Office is: 13051 N. Telecom Parkway, Temple Terrace, Florida 33637-0926 and Phone number (813) 632-7600.
3. Appendices: The following Appendices are attached as part of this permit: Appendix A (Citation Format); Appendix B (General Conditions); and Appendix C (Standard Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application and current Title V air operation permit. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: 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.]
6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

This section of the permit addresses the following emissions unit.

| ID  | Emission Unit Description                                                                                        |
|-----|------------------------------------------------------------------------------------------------------------------|
| 027 | South Cooling Towers: mechanical draft helper cooling towers with maximum water circulation rate of 342,306 gpm. |

1. Cooling Towers: The permittee is authorized to construct and operate new mechanical draft cooling towers with up to 18 cells and the following nominal design characteristics: a circulating flow rate of 342,306 gallons per minute (19,017 gpm per cell); a design air flow of 1,500,000 acfm per cell; and drift eliminators designed for a drift rate of no more than 0.0005% of the circulating water flow for each tower. [Application No. 0170004-018-AC and Design]
2. Hours of Operation: The new cooling towers may operate continuously (8760 hours per calendar year). [Application No. 0170004-018-AC]
3. Cooling Tower Design: The cooling towers shall be designed and maintained to achieve a drift rate of no more than 0.0005% of the circulating water flow. [Application No. 0170004-018-AC and Design]
4. Drift Rate: Within 60 days of commencing operation, the permittee shall notify the compliance authority that the cooling towers were constructed and installed to achieve the specific drift rate of no more than 0.0005% of the circulating flow rate and of the final configuration. In addition, the permittee shall indicate the final configuration as installed and whether the existing modular cooling towers (EU-020) were replaced. [Application 0170004-018-AC and Design]
5. Circulating Water Flow Rate: Upon request, the applicant shall provide a means for determining the circulating water flow rate through the new cooling tower. [Rule 62-4.070, F.A.C.]
6. Emissions Report: PM and PM<sub>10</sub> emissions shall be reported as part of the annual operating report. [Rule 62-210.370(3), F.A.C.]

## SECTION 4. APPENDICES

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Appendix A. Citation Formats

Appendix B. General Conditions

Appendix C. Common Conditions

## CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

### Old Permit Numbers

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: "AC" identifies the permit as an Air Construction Permit  
"AO" identifies the permit as an Air Operation Permit  
"123456" identifies the specific permit project number

### New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: "099" represents the specific county ID number in which the project is located  
"2222" represents the specific facility ID number for that county  
"001" identifies the specific permit project number  
"AC" identifies the permit as an air construction permit  
"AF" identifies the permit as a minor source federally enforceable state operation permit  
"AO" identifies the permit as a minor source air operation permit  
"AV" identifies the permit as a major Title V air operation permit

### PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: "PSD" means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality  
"FL" means that the permit was issued by the State of Florida  
"317" identifies the specific permit project number

### Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

### Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

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## SECTION 4. APPENDIX B

### GENERAL CONDITIONS

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The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
  - a. Have access to and copy and records that must be kept under the conditions of the permit;
  - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
  - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
  - a. A description of and cause of non-compliance; and
  - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S.. Such evidence

**SECTION 4. APPENDIX B**  
**GENERAL CONDITIONS**

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shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.
11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
  - a. Determination of Best Available Control Technology (applicable);
  - b. Determination of Prevention of Significant Deterioration (applicable); and
  - c. Compliance with New Source Performance Standards (not applicable).
14. The permittee shall comply with the following:
  - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - c. Records of monitoring information shall include:
    - 1) The date, exact place, and time of sampling or measurements;
    - 2) The person responsible for performing the sampling or measurements;
    - 3) The dates analyses were performed;
    - 4) The person responsible for performing the analyses;
    - 5) The analytical techniques or methods used; and
    - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

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**SECTION 4. APPENDIX C**  
**COMMON CONDITIONS**

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Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

**EMISSIONS AND CONTROLS**

1. 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 permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; 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 or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused 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. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

*{Permitting Note: Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any NSPS or NESHAP provision.}*

**RECORDS AND REPORTS**

10. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(3), F.A.C.]