



Florida Department of Environmental Protection

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Secretary

November 29, 2007

- CERTIFIED MAIL - RETURN RECEIPT REQUESTED -

Mr. Bernie Cumbie, Manager
Crystal River Fossil Plant
15760 West Powerline Street
Crystal River, Florida 34428

RE: Progress Energy Crystal River Plant
Modification to Conditions of Certification
DEP Case Number PA77-09K
OGC Case Number 07-1634

FINAL ORDER MODIFYING CONDITIONS OF CERTIFICATION

Dear Mr. Cumbie:

The Florida Pollution Control Board issued the Site Certification for the Progress Energy Florida's (PEF) Crystal River Units 4 and 5 on November 21, 1978. This certification authorized the construction and operation of two 640 MW coal-fired power plant units (Units 4 and 5) and ancillary facilities. The Florida Department of Environmental Protection (Department) has subsequently modified the Conditions of Certification on ten other occasions by final orders.

The Department issued final Air Construction Permit No. 0170004-014-AC and final Title V Permit No. 0170004-015-AV on December 15, 2006 and February 22, 2007 respectively. Both permits were publicly noticed on November 3, 2006. The Department issued final Air Construction Permit No. 0170004-013-AC on March 2, 2007 which was publicly noticed on February 2, 2007. Air permit PSD-FL-383 was issued by the Department on May 18, 2007 and was publicly noticed on April 11, 2007. Pursuant to Rule 62-17.211(4), Florida Administrative Code (F.A.C.) the Department proposes to modify the Conditions of Certification for this facility to conform them to the Title V Air Operation and Air Construction Permits. Pursuant to 403.516 (1) (b), Florida Statutes ("F.S."), the Department may modify specific Conditions of a site Certification which are inconsistent with the terms of any federally delegated or approved permit. Such modification(s) may be made without further notice if the matter has been previously noticed under the requirements for any federally delegated or approved permit program.

Additionally, the Department has reviewed PEF's December 1, 2006 modification request. On or before October 5, 2007, all parties to the certification proceeding were provided with notice by certified mail of the Department's intent to modify the Conditions of Certification for this facility, along with a copy of the proposed Order Modifying Conditions of Certification.

On October 19, 2007 notice of the Department's intent to modify the Conditions of Certification for this facility was published on the Florida Administrative Weekly (FAW). Pursuant to Section 403.516, Florida Statutes ("F.S."), and Rule 62-17.211, Florida Administrative Code ("F.A.C."), all parties to the

certification proceeding have 45 days from the issuance of notice by mail to such party's last address of record in which to file a written objection to the modification; that any person who is not already a party to the certification proceeding and whose substantial interests will be affected by the requested modification has 30 days from the date of publication of the public notice in the Florida Administrative Weekly to object in writing; that failure to act within the time frame constitutes a waiver of the right to become a party; and that the Department will issue an Order Modifying the Conditions of Certification for this facility if no written objections are received by the Department.

No objections to the modification have been received by the Department. The Conditions of Certification for the Crystal River Units 4 & 5 are hereby modified as follows:

Special

I. Air

The construction and operation of the Units No. 4 and 5 at the Crystal River steam electric plant site shall be in accordance with all applicable provisions of the Chapters 62-210, ~~62-214, 62-256, 62-296 through 62-297, and 62-702, Florida Administrative Code. and relevant portions of Air Operation Permit 0170004-009-AV and any subsequent renewals, modifications or amendments.~~

Title V Air Operation Permit 0170004-015-AV, Air Construction Permits 0170004-013-AC and 0170004-014--AC (including subsequent modifications), and PSD permit PSD-FL-383 (including subsequent modifications) are incorporated by reference herein as part of this Certification and attached as Appendix A through Appendix D.

The provisions of the above shall be conditions of this certification. The licensee shall comply with the substantive provisions and limitations set forth in Title V Air Operation Permit Number 0170004-015-AV, Air Construction Permits 017004-013-AC and 017004-014-AC, and PSD permit PSD-FL-383 as part of these Conditions of Certification, and as those provisions may be modified, amended, or renewed in the future by the Department. Such provisions shall be fully enforceable as conditions of this certification. Any violation of such provisions shall be a violation of these Conditions of Certification.

In addition to the foregoing, the Licensee shall comply with the following specific conditions of certification. Note that Sections B and C below (in italics) will be automatically deleted once a Title V permit is issued signifying the successful start-up and operation of the flue gas desulfurization system:

A. No Change

B. *Coal Characteristics and Contracts*

Before approval can be granted by the Department for use of control devices, characteristics of the coal to be fired must be known. Therefore, before these approvals are granted, the licensee must submit to the Department copies of coal contracts which should include the expected sulfur content, ash content, and heat content of the coal to be fired. These data will be used by the Department in its evaluation of the adequacy of the control devices. Also, the licensee must demonstrate the ability to acquire a low sulfur coal supply of sufficient length to enable the installation of sulfur removal equipment if the supplies of low sulfur coal should not become available or be discontinued. Therefore, the coal contracts must be for a period of at least five (5) years from the date of start-up of the boiler.

C. *Coal Information*

As an alternative to the submittal of contracts for purchase of coal under condition E above, the licensee may submit the following information:

- 1. The name of the coal supplier;*
- 2. The sulfur content, ash content, and heat content of the coal as specified in the purchase contracts;*

3. *The location of the coal deposits covered by the contract (including mine name and seam);*
4. *The date by which the first delivery of coal will be made;*
5. *The duration of the contract; and*
6. *An opinion of counsel for the licensee that the contracts are legally binding.*

D. Natural Gas

Natural Gas may be used as a startup and low-load flame stabilization fuel in Unit 4 and Unit 5.

II. Water Discharges

A. through B. No Change

C. Percolation Pond Monitoring Requirements

1. Upon beginning operation of the coal pile runoff and leachate treatment system, the licensee shall sample and analyze the wastewater in the percolation pond for the following parameters on a quarterly basis: pH, specific conductance, total recoverable arsenic, total recoverable barium, total chlorides, total recoverable iron, total recoverable magnesium, total recoverable sodium, total dissolved solids, total recoverable vanadium, and total recoverable zinc. Results shall be submitted in accordance with Condition II.C.3. below.

2. If the appropriate primary ground water quality criteria specified in Chapter 62-520, Florida Administrative Code (F.A.C.) is not met in the percolation pond for the parameters listed in Condition II.C.1, the Department shall re-evaluate the licensee's current monitoring requirements and may require the licensee to submit a proposed ground water monitoring plan in accordance with Rule 62-522.600, F.A.C., for this percolation pond system.

3. Effluent monitoring test results shall be submitted on Part A of DEP Form 62-620.910(10) (Attachment 3). Results shall be submitted with the DMR for each month listed in the following schedule.

<u>SAMPLE PERIOD</u>	<u>REPORT DUE DATE</u>
<u>January – March</u>	<u>April 28</u>
<u>April – June</u>	<u>July 28</u>
<u>July – September</u>	<u>October 28</u>
<u>October – December</u>	<u>January 28</u>

4. The permittee shall make copies of the attached DMR form(s) and shall submit the original completed DMR form(s) to the Siting Office and a copy to the Department's SWD, Industrial Wastewater Program.

D. FGD Scrubber Blowdown

FGD scrubber blowdown wastewater shall be discharged to treatment systems outside of the Unit 4 & 5 Certified area. Any such receiving treatment system shall be permitted in accordance with all applicable requirements.

III. through IV. No Change.

V. Solid Wastes

A. Solid Wastes resulting from construction or operation shall be disposed of in accordance with the applicable regulations of Chapter ~~17~~62-701, FAC.

B. Open burning in connection with land clearing shall be in accordance with Chapter 17-5, FAC., no additional permits shall be required, but the Division of Forestry shall be notified prior to burning. Open burning shall not occur if the Division of Forestry has issued a ban on burning due to fire hazard conditions.

C. No later than December 31, 2008 or 180 days prior to the initial operation of Unit 4 and 5 FGD scrubbers (whichever occurs first), the licensee shall submit a site-wide Coal Combustion By-Product (CCP)/Solid Waste Materials Management Plan that addresses operations of the fossil generating units to the Department's SWD Office and Siting Office for review and approval. The plan shall, at a minimum, include the following information:

1. descriptions and procedures for all applicable processes for on-site storage practices and management of CCPs, solid wastes and industrial by-products at the site.
2. plans or methods to minimize waste streams, and maximize beneficial use opportunities of CCPs;
3. methods for preventing or minimizing the release of contaminants to the environment, including (as applicable) leachate collection and control methods that meet the requirements of Chapter 62-701, F.A.C.;
4. certification for the above information, as appropriate, by a Professional Engineer registered in the state of Florida.

The Department shall indicate its approval or disapproval of the submitted plans, drawings, maps, analyses and contingency plans within 90 days of the originally submitted information. In the event that the Department requires additional information for the licensee to complete, and the Department to approve the CCP/Solid Waste Materials Management Plan, the Department shall make a written request to the licensee for additional information no later than 30 days after receipt of the originally submitted information.

VI through XI. No Change.

XII. Ash Landfill and Coal Piles

A. Ash Landfill

PEF shall designate a portion of the site as a temporary ash landfill. Associated with the temporary landfill shall be certain sites for the testing and monitoring of leachates and ash pile liners.

Adequate geophysical testing shall be conducted to determine if solution cavities are present under the landfill area. If such cavities are located, such cavities shall be sealed off and stabilized.

The proposed ash landfill area shall be monitored and studied pursuant to a detailed leachate testing and monitoring program to be submitted by PEF to the Department within 30 days of certification for review and approval, rejection, or modification within 60 days thereafter. The detailed leachate testing and monitoring program shall be consistent with the conceptual leachate monitoring program attached and incorporated herein as Attachment 2.

After approval of the program by the Department, PEF shall conduct the approved testing and monitoring program under the supervision of the Department. Results of the program shall be submitted to the Department for its review and consideration on a monthly basis.

The results of the program will be used by the Department in determining whether PEF has affirmatively demonstrated that Florida Water Quality Standards (~~17-362-520~~ and 62-550, F.A.C.) will not be violated in determining the zone of discharge and in determining the need for a liner.

If the Department determines that PEF has failed to affirmatively demonstrate that Florida Water Quality Standards (~~17-362-520~~ and 62-550, F.A.C.) will not be violated, PEF shall present to the

Department, within 90 days of such determination, a plan of correction (which may include, if appropriate, a semi-permeable liner) for review and approval by the Department and for timely implementation by PEF, or PEF shall place an impermeable liner under the final ash landfill site and shall remove all ash from the temporary landfill site and place it on the lined landfill location.

The final cover shall be in compliance with Chapter 17-762-701, F.A.C., and at least 12" of clay or sufficient suitable liner material shall be placed on the top and exposed sides of each finished landfill cell. Sufficient topsoil to support vegetation shall be placed over the top and side clay liner. The top and exposed sides of the ash landfill shall be vegetated to control erosion.

Ash Relocation Due to Installation of New Access Road to Support the Units 4 & 5 Clean Air Project

Prior to commencement of modifications/additions to the existing access road located along the south and west perimeters of the ash storage area the Licensee shall submit the following items to the DEP SWD Office and Siting Office :

1. a figure, aerial photograph or plan sheet identifying the area where the ash to be removed will be re-located;
2. plan sheets of existing (pre-construction) conditions and final contours of the ash landfill affected by the access road installation; and
3. a figure, aerial photograph or plan sheet showing the location and details of any collapsed surface cavities/sinkholes found on the site relative to the ash landfill and proposed access road project.

The working face slopes of the relocated ash shall be no steeper than 4H:1V, unless prior approval from the Department's SWD Solid Waste Section and the Siting Office for an alternative slope is obtained.

The filtered stormwater drainage downslope of the working face shall not discharge outside the contact stormwater or Industrial Wastewater system.

Within 90 days following completion of the access road and restoration of the final cover on the ash landfill in the affected portions, the Licensee shall submit to the Department's SWD Office and Siting Office the following information:

1. a final survey of the affected portions of the closed ash landfill that demonstrates that the slopes are no steeper than 4H:1V;
2. documentation that the clay cover, if used, is no less than 12 inches thick;
3. hydraulic conductivity testing results on the constructed clay layer, if used, (5 tests for the first acre, then 1 test/acre/lift for every other acre). Testing should be carried out in accordance with ASTM Method D5084 or equivalent; and
4. certification for the above information by a Professional Engineer registered in the state of Florida.
5. A geosynthetic clay liner (GCL) or other alternative liner system may be used; however, prior to the installation of any alternative liner system, the Licensee shall submit a complete proposed plan to the Department's SWD Solid Waste Section and Siting Office for review and approval.

The plan shall, at a minimum, include specifications for the Construction Quality Assurance Plan and drawings showing the location of the liner cover, soil cover for the liner, and any other relevant information that may be applicable for the type of alternative liner system being proposed.

The Department shall indicate its approval or disapproval of the submitted plan within 90 days of the originally submitted information. In the event that the Department requires additional information for the licensee to complete, and the Department to approve the GCL or alternative liner system, the Department shall make a written request to the licensee for additional information no later than 30 days after receipt of the originally submitted information.

B. Coal Pile

~~At least two feet of compacted clay, with characteristics similar to montmorillonite, shall be placed underneath any coal pile containing more than 0.2% pyritic sulfur.~~

Prior to initial operation of the Unit 4 and 5 FGD scrubber systems, the licensee shall install an impervious liner system beneath the Unit 4 and 5 coal pile storage area and associated stormwater runoff/leachate collection, storage, and treatment ponds.

The liner system shall be designed and of sufficient impervious material to provide for a hydraulic conductivity equal to, or less than 10⁻⁷ cm/sec.

Prior to initial construction of each liner installation, the licensee shall submit a complete proposed plan of the liner system to the Department's SWD Solid Waste Section and the Siting Office for review and approval. Each liner installation plan shall, at a minimum, include the following information:

1. design drawings, calculations, and specifications of the proposed liner system;
2. the Construction Quality Assurance Plan (CQA);
3. slope stability calculations that demonstrate that the proposed slope will be stable with a 1.5 factor of safety;
4. anchoring details for the liner systems;
5. permeability (hydraulic conductivity) and specifications for the "crusher run" material (or for alternate material if used);
6. procedures for ensuring that the clay liners will not be damaged from future coal removal operations;
7. the thickness (and unit weight) of material that will be placed above the GCL on the slopes and specification of the slope of the GCL sub-grade;
8. piping details that show how the coal pile runoff water will be discharged from the coal pile runoff ponds to the coal pile runoff settling ponds;
9. and any other relevant information that may be applicable for the type of alternative liner system being proposed; and
10. certification for the above information by a Professional Engineer registered in the state of Florida.

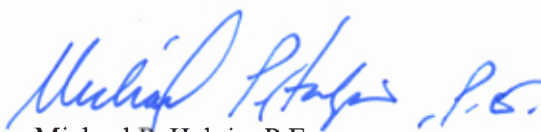
The Department shall indicate its approval or disapproval of a submitted liner system plan within 90 days of the originally submitted information. In the event that the Department requires additional information for the licensee to complete, and the Department to approve the liner system, the Department shall make a written request to the licensee for additional information no later than 30 days after receipt of the originally submitted information.

Handling and monitoring of the coal pile and associated wastes shall be in accordance with the site-wide Coal Combustion By-Product (CCP)/Solid Waste Materials Management Plan for the fossil units required by Special Condition V. Solid Wastes.

A complete set of the Conditions of Certification can be viewed and downloaded from the following website: <http://www.dep.state.fl.us/siting/Highlights/conditions.htm>. A copy of the Conditions of Certification may also be obtained by contacting Michael P. Halpin, P.E., Administrator, Siting Coordination Office, Department of Environmental Protection, 2600 Blair Stone Road, M.S. 48, Tallahassee, Florida 32399-2400, (850) 245-8002.

Any party to the this Order has a right to seek judicial review of it pursuant to Section 120.68, Florida Statutes by filing a Notice of Appeal, pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection in the 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 thirty days from the date this Order is filed with the Clerk of the Department of Environmental Protection.

Executed in Tallahassee, Florida.



Michael P. Halpin, P.E.
Administrator,
Siting Coordination Office

FILING AND ACKNOWLEDGMENT

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



Clerk



Date

CC by certified mail or email (return receipt requested):

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