

Mr. John Paul Cowen, Vice President
 Nuclear Operations (NA2
 Florida Power Corporation
 Crystal River Energy Complex
 15760 W. Power Line Street
 Crystal River, Florida 34428-6708

September 16, 1999

SUBJECT: CONFIRMATORY ORDER MODIFYING POST-THREE MILE ISLAND
 REQUIREMENTS PERTAINING TO CONTAINMENT HYDROGEN MONITORS
 FOR CRYSTAL RIVER, UNIT 3 (TAC NO. MA5342)

Dear Mr. Cowen:

The enclosed Order modifies the current requirement pertaining to establishing a continuous indication of hydrogen concentration in containment following severe accidents. By letter dated April 14, 1999, Florida Power Corporation requested relief from the requirement of having indication of hydrogen concentration in containment within 30 minutes of the initiation of safety injection for Crystal River Unit 3. The request was part of an industry initiative undertaken by the Nuclear Energy Institute, and supported by the Commission, to improve the incorporation of risk-informed and performance-based insights into the regulation of nuclear power plants.

The enclosed Order has been forwarded to the Office of the Federal Register for publication.

If you have any questions, please contact me at (301) 415-1495.

Sincerely,

Original signed by:

L. A. Wiens, Senior Project Manager, Section 2
 Project Directorate II
 Division Licensing Project Management
 Office of Nuclear Reactor Regulation

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Docket No. 50-302

Enclosure: Order

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

September 16, 1999

Mr. John Paul Cowen, Vice President
Nuclear Operations (NA2E)
Florida Power Corporation
Crystal River Energy Complex
15760 W. Power Line Street
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Sincerely,

A handwritten signature in black ink, appearing to read "L. A. Wiens".

L. A. Wiens, Senior Project Manager, Section 2
Project Directorate II
Division Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure: Order

cc w/encl: See next page

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of)	
)	
Florida Power Corporation)	Docket No. 50-302
)	
(Crystal River Unit 3))	License No. DPR-72
)	

CONFIRMATORY ORDER MODIFYING POST-THREE MILE ISLAND REQUIREMENTS
PERTAINING TO CONTAINMENT HYDROGEN MONITORS

I.

Florida Power Corporation (the Licensee), is the holder of Facility Operating License No. DPR-72 issued by the Nuclear Regulatory Commission (NRC or Commission) pursuant to 10 CFR Part 50. The license authorizes the operation of Crystal River Unit 3 (CR-3), located in Citrus County, Florida.

II.

As a result of the accident at Three Mile Island, Unit 2 (TMI-2), the NRC issued NUREG-0737, "Clarification of TMI Action Plan Requirements" (November 1980). Generic Letters 82-05 and 82-10, issued on March 17 and May 5, 1982, respectively, requested licensees of operating power reactors to furnish information pertaining to their implementation of specific TMI Action Plan items described in NUREG-0737. Orders were issued to licensees confirming their commitments made in response to the generic letters. The Order to the Licensee issued on March 14, 1983, requires the Licensee to implement and maintain the various TMI Action Plan

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items, including Item II.F.1, Attachment 6, pertaining to monitoring of hydrogen concentration in containment.

Significant improvements have been achieved since the TMI accident in the areas of understanding risks associated with nuclear plant operations and developing better strategies for managing the response to potentially severe accidents at nuclear plants. Recent insights pertaining to plant risks and alternate severe accident assessment tools have led the NRC staff to conclude that some TMI Action Plan items can be revised without reducing, and perhaps enhancing, the ability of licensees to respond to severe accidents. The NRC's efforts to oversee the risks associated with nuclear technology more effectively and to eliminate undue regulatory costs to licensees and the public have prompted the NRC's decision to revise the post-TMI requirement related to establishing indication of hydrogen concentration in containment.

The Confirmatory Order of March 14, 1983 imposed requirements upon the Licensee for having continuous indication of hydrogen concentration in the containment atmosphere provided in the control room, as described by TMI Action Plan Item II.F.1, Attachment 6. Subsequently, by letter dated January 18, 1984, the NRC approved an exception to this requirement which allowed the containment hydrogen monitor system (CHMS) indicator and the CHMS indicator-recorder to be located in the CR-3 emergency feedwater initiation and control room. Information about hydrogen concentration supports the Licensee's assessments of the degree of core damage and whether a threat to the integrity of the containment may be posed by combustion of the hydrogen gas. TMI Action Item II.F.1, Attachment 6 states:

If an indication is not available at all times, continuous indication and recording shall be functioning ~~within 30 minutes~~ of the initiation of safety injection.

This requirement to have indication of the hydrogen concentration in containment within 30 minutes following the start of an accident has defined both design and operating

characteristics for hydrogen monitoring systems at nuclear power plants since the implementation of NUREG-0737. In addition, the technical specifications of most nuclear power plants and NRC regulations at 10 CFR 50.44, "standards for combustible gas control system in light-water-cooled power reactors," require availability of hydrogen monitors.

By letter dated April 14, 1999, Florida Power Corporation requested relief for CR-3 from the requirement to have indication of hydrogen concentration in containment within 30 minutes of the initiation of safety injection. Specifically, the Licensee requested a risk-informed functional requirement for providing indication of hydrogen concentration in containment. The technical basis for this request was that a delay in providing indication of hydrogen concentration in containment would provide more margin for the operators to complete accident assessment and mitigation duties, before redirecting their attention to longer-term recovery actions. The licensee indicated that the delay would have a positive effect on the ability of operators to respond to an event by enabling them to concentrate on important immediate action steps. The licensee further indicated that there would be no negative effect, since the actions for which hydrogen monitoring would be used were not needed for more than 24 hours after an accident, and in addition, other indications would be available to the operators for use in recognizing and classifying emergencies and issuing protective action recommendations to offsite authorities.

On the basis of the NRC staff's review of information provided by the Licensee, consideration of the lessons learned since the TMI-2 accident pertaining to severe accident management and emergency planning, and in order to make NRC licensing and regulatory oversight more efficient, the staff concludes that the Licensee should have the flexibility and assume the responsibility for determining the appropriate time limit for indication of hydrogen concentration in containment, such that control room personnel are not distracted from more important tasks in the early phases of accident mitigation, and decisionmakers, mostly outside

the control room, are able to benefit from having useful information on hydrogen concentration. Because the appropriate balance between control room activities and longer term management of the response to severe accidents can be best determined by the Licensee, the NRC staff has determined that the Licensee may elect to adopt a risk-informed functional requirement in lieu of the current 30-minute time limit for indication of hydrogen concentration as imposed by the Order dated March 14, 1983, and as described by TMI Action Item II.F.1, Attachment 6 in NUREG-0737. Other exceptions to Item II.F.6, recognizing the location of the CHMS indicator and indicator-recorder and phone used to initiate contact with the control room, shall remain part of the CR-3 licensing basis. The applicable functional requirement is as follows:

Procedures have been established for ensuring that indication of hydrogen concentration in the containment atmosphere is available in a sufficiently timely manner to support the role of the information in the Crystal River Unit 3 Emergency Plan (and related procedures) and related activities. Hydrogen monitoring will be initiated based on the appropriate priority for establishing indication of hydrogen concentration within containment in relation to other activities in the control room. Affected licensing basis documents and other related documents will be appropriately revised and/or updated in accordance with applicable NRC regulations.

III.

Accordingly, pursuant to Sections 103, 104b, 161b, 161i, 161o, and 182 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.202 and 10 CFR Part 50, IT IS HERBY ORDERED that:

NRC LICENSE No. DPR-72 is modified as follows:

The Licensee may elect to either maintain the 30-minute time limit for indication of hydrogen in containment, as described by TMI Action Plan Item II.F.1, Attachment 6, in NUREG-0737 and required by the Confirmatory Order of March 14, 1983, or modify the time limit in the manner specified in Section II of this Order.

The Director, Office of Nuclear Reactor Regulation, may, in writing, relax or rescind the above condition upon demonstration by the Licensee of good cause.

IV.

Any person adversely affected by this Confirmatory Order, other than the Licensee, may request a hearing within 20 days of its issuance. Where good cause is shown, consideration will be given to extending the time to request a hearing. A request for extension of time must be made in writing to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and include a statement of good cause for the extension. Any request for a hearing shall be submitted to the Secretary, U.S. Nuclear Regulatory Commission, ATTN: Chief, Rulemakings and Adjudications Staff, Washington, DC 20555-0001. Copies of the hearing request shall also be sent to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; to the Deputy Assistant General Counsel for Hearings and Enforcement at the same address; to the Regional Administrator, NRC Region II, 61 Forsyth Street, SW., Suite 23T85, Atlanta, Georgia 30303; and to R. Alexander Glenn, General Counsel, Florida Power Corporation, MAC - A5A, P.O. Box 14042, St. Petersburg, Florida 33733-4042, attorney for the Licensee. If such a person requests a hearing, that person will set forth with particularity the manner in which his interest is adversely affected by this Order and will address the criteria set forth in 10 CFR 2.714(d).

If the hearing is requested by a person whose interest is adversely affected, the Commission will issue an Order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing will be whether this Confirmatory Order should be sustained.

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section III above will be final 20 days from the date of this Order without further order or proceedings. If an extension of time for

requesting a hearing has been approved, the provisions specified in Section III will be final when the extension expires if a hearing request has not been received.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script that reads "Roy P. Zimmerman".

Roy P. Zimmerman, Acting Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland
this **16th** Day of **September** 1999.

Mr. John Paul Cowan
Florida Power Corporation

CRYSTAL RIVER UNIT NO. 3

cc:

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