

November 5, 2003

Mr. Dale E. Young, Vice President
Crystal River Nuclear Plant (NA1B)
ATTN: Supervisor, Licensing and Regulatory Programs
15760 W. Power Line Street
Crystal River, FL 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 - REQUEST FOR ADDITIONAL INFORMATION
RELATED TO CRYSTAL RIVER UNIT 3 - REVISED APPENDIX R EXEMPTION
REQUEST - FIRE AREA CC-164-121 SUBMITTAL (TAC NO. MB7987)

Dear Mr. Young:

By letter dated February 4, 2003, Florida Power Corporation (FPC or the licensee) submitted a request for a revision to an Appendix R Exemption to allow removal of the automatic actuation feature for the Control Room Emergency Ventilation System (CREVS) charcoal filter fire protection deluge system for Crystal River Nuclear Plant, Unit 3 (CR-3). FPC proposed to revise its original exemption by demonstrating that the removal of the automatic actuation feature does not substantively alter the basis for the NRC's approval of the original exemption (ADAMS Legacy Library Accession Numbers 8508010796, 8508010808 and 8508010812, dated July 18, 1985).

For the NRC staff to complete its review on schedule, your response to the enclosed request for additional information is needed no later than November 30, 2003. This date was mutually agreed upon in a telephone conversation with Sid Powell on October 23, 2003. If you need to revise the target date, please call me at the earliest opportunity at 301-415-2020.

Sincerely,

/RA/

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

Docket No. 50-302

Enclosure: As stated

cc w/encl: See next page

Request for Additional Information for the Review of
Crystal River 3 Revised Appendix R Exemption Request
Regarding Fire Area CC-164-121

1. In your exemption request, you stated that the charcoal filter banks, which are the major combustible in the area of concern, will be protected by manually actuated fixed water spray systems with spray heads mounted inside the steel filter housings. You also state that a manually actuated water spray system for the CREVS charcoal filters is consistent with current industry practice and the guidance provided in ASME N509-1989 and Regulatory Guide (RG) 1.52. The NRC staff's position on this issue, as outlined in the relevant parts of RG 1.52 is that when a water-based fire suppression or prevention system is installed in the engineered safety feature atmosphere cleanup system housing, the fire system should be manually actuated unless there is a reasonable probability that the iodine desorption and adsorbent auto-ignition could occur in the housing, in which case the fire system should have both automatic and manual actuation.

Therefore, because you state that the charcoal is "the major combustible in the area," we request that you demonstrate that there is not a reasonable probability that the iodine desorption and adsorbent auto-ignition could occur in the housing. One example of an acceptable way of demonstrating this is to provide the results of your calculations that demonstrate that the highest possible temperature that could occur in the vicinity of the charcoal (including the temperature rise associated with radioactivity-induced heat in the charcoal), as a result of a design-basis accident, is lower than the iodine desorption and adsorbent auto-ignition temperature of the adsorbent.

2. The local manual actuation is in the fire area containing the filter housings (Justification 2 of 10). Provide an analysis that fire conditions would be contained within the filter housing (i.e., capability to withstand a 1.7-hour ASTM E-119 fire). Describe where within the area the local manual actuation stations are located. State whether the fire brigade has been trained in the operation of these systems in the event that the fire area is filled with smoke.
3. The charcoal filters are normally isolated by ventilation dampers. State whether these dampers are fire rated. Describe the expected travel path of the smoke and hot gasses in case these ventilation dampers fail during a filter fire. State whether the smoke and hot gasses would interfere with control room ventilation, setting up the Appendix R chilled water system (ARCWS), or the actuation of the manual suppression system.
4. Appendix R Chilled Water System
 - a. The revised exemption states in Justification 10, Page 3 of 6, that the time to place the ARCWS in service is less than 90 minutes. Provide the technical basis for the acceptability of 90 minutes without cooling. Describe the temperatures expected in areas containing hot shutdown equipment and whether the hot shutdown equipment in these areas has been analyzed for these temperatures.

ENCLOSURE

- b. Indicate whether the ARCWS has the capability of removing the heat from the affected areas due to the increased heat load from the loss of cooling for 90 minutes. Consider capability while assuming maximum expected ambient temperature conditions.
 - c. Describe the actions required to get the ARCWS in service. Also, describe the configuration of the ARCWS. For example, list the chillers, fans, ducting, and whether any tools are required. State whether the minimum operations staff is trained on setting up the ARCWS. Confirm that the minimum shift staff has the capability of setting up the ARCWS simultaneously with fire brigade operations and plant shutdown.
 - d. During 90 minutes while setting up the ARCWS, establish whether fans and elephant trunk can be used to keep the affected areas at ambient temperature. If so, provide assurance that there are adequate fans to support ventilation of the main control room, cable spreading room, essential switchgear rooms, battery rooms, inverter rooms, and the emergency feedwater initiation and control system rooms, at the same time that fans are required to ventilate the fire-affected area.
 - e. Describe the elevated temperature in the main control room and establish how long the operators would be required to work in an area with elevated temperature.
 - f. Describe measures in place to protect operators during extended periods in areas of elevated temperatures.
5. The interior wall of rooms 121B and 121C have 'hash marks' indicating some sort of opening. Provide a description of this opening.

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Brenda L. Mozafari, Senior Project Manager, Section 2
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Docket No. 50-302

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Mr. Dale E. Young
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