



UNITED STATES
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December 2, 2008

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

SUBJECT: CRYSTAL RIVER NUCLEAR PLANT, UNIT 3 - REQUEST FOR ADDITIONAL INFORMATION, REGARDING RESPONSE TO GENERIC LETTER 2004-02 (TAC NO. MC4678)

By letters dated February 29, 2008 and August 4, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML080640544 and ML082210372), Florida Power Corporation (the licensee), doing business as Progress Energy Florida, Inc., submitted a supplemental response to Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," for Crystal River, Unit 3 (CR3).

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's submittals. The process involved detailed review by a team of approximately 10 subject matter experts, with a focus on the review areas described in the NRC's "Content Guide for Generic Letter 2004-02 Supplemental Responses" (ADAMS Accession No. ML073110389). Based on these reviews, the staff has determined that additional information is needed in order to conclude there is reasonable assurance that GL 2004-02 has been satisfactorily addressed for CR3. The enclosed document describes these requests for additional information (RAIs).

The NRC requests that the licensee respond to these RAIs within 90 days of the date of this letter. However, the NRC would like to receive only one response letter for all RAIs with exceptions stated below. If the licensee concludes that more than 90 days are required to respond to the RAIs, the licensee should request additional time, including a basis for why the extension is needed.

If the licensee concludes, based on its review of the RAIs, that additional corrective actions are needed for GL 2004-02, the licensee should request additional time to complete such corrective actions as needed. Criteria for such extension requests are contained in the NRC policy issue paper, SECY-06-0078, *Status of Resolution of GSI [Generic Safety Issue]-191, "Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance,"* (ADAMS Accession No. ML053620174), and examples of previous requests and approvals can be found on the NRC's sump performance website, located at: <http://www.nrc.gov/reactors/operating/ops-experience/pwr-sump-performance.html>.

Any extension request should also include results of contingency planning that will result in near-term identification and implementation of any and all modifications needed to fully address GL 2004-02. The NRC strongly suggests that the licensee discuss such plans with the staff before formally transmitting an extension request.

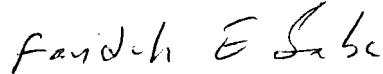
The exception to the above response timeline is RAI 7 in the enclosure. The NRC staff considers in-vessel downstream effects to not be fully addressed at CR3, as well as at other pressurized-water reactors. The licensee's submittal refers to the draft Westinghouse topical report, WCAP-16793-NP, "Evaluation of Long-Term Cooling Considering Particulate, Fibrous, and Chemical Debris in the Recirculating Fluid." At this time, the NRC staff has not issued a final safety evaluation (SE) for WCAP-16793-NP.

The licensee may demonstrate that in-vessel downstream effects issues are resolved for CR3, by showing that the licensee's plant conditions are bounded by the final WCAP-16793-NP and the corresponding final NRC staff SE, and by addressing the conditions and limitations in the final SE. The licensee may also resolve RAI 7 by demonstrating, without reference to WCAP-16793-NP or the NRC staff SE, that in-vessel downstream effects have been addressed at CR3. The specific issues raised in RAI 7 should be addressed regardless of the approach the licensee chooses to take.

The licensee should report how it has addressed the in-vessel downstream effects issue and the associated RAI referenced above within 90 days of issuance of the final NRC staff SE on WCAP-16793-NP. The NRC staff is currently developing a regulatory issue summary to inform licensees of the staff's expectations and plans regarding resolution of this remaining aspect of GSI-191.

If you have any questions regarding this letter, please feel free to contact me at (301) 415-1447.

Sincerely,



Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure: As stated

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REQUEST FOR ADDITIONAL INFORMATION
REGARDING CRYSTAL RIVER UNIT 3
SUPPLEMENTAL RESPONSES TO GENERIC LETTER (GL) 2004-02
DOCKET NO. 50-302, LICENSE NO. DPR-72

1. Because the jacketed mineral wool zone of influence (ZOI) was validly reduced from 17D to 4D (17 times pipe diameter to 4 times pipe diameter), please verify that the pipe breaks were subsequently moved systematically to ensure that the amount of debris created was maximized.
2. Please provide verification that the fibrous size distribution used during testing was prototypical or conservative compared to the size distribution predicted by the transport evaluation.
3. Please provide details of the debris addition procedures used. Please include a description of the fibrous concentration during debris addition and the method of adding fibrous debris to the test tank. Please provide verification that the debris introduction processes did not result in non-prototypical settling or agglomeration of debris.
4. Please verify that the stirring used to prevent debris settlement did not non-prototypically affect bed formation.
5. Given the potential issues with debris preparation and introduction into the test tank, please verify that a debris bed could not form over a majority of the strainer and that adequate open area would remain to prevent significant head losses (e.g., please provide assurance that the head loss tests that were conducted resulted in prototypical or conservative head losses).
6. Please provide the amount (percentage by type) of debris that settled in the agitated areas of the test tank.
7. The NRC staff considers in-vessel downstream effects to not be fully addressed at Crystal River 3 (CR3), as well as at other PWRs. The licensee's submittal refers to the draft Westinghouse topical report, WCAP-16793-NP. The NRC staff has not issued a final safety evaluation (SE) for WCAP-16793-NP. The licensee may demonstrate that in-vessel downstream effects issues are resolved for CR3 by showing that the CR3 plant conditions are bounded by the final WCAP-16793-NP and the corresponding final NRC staff SE, and by addressing the conditions and limitations in the final SE. The licensee may alternatively resolve this item by demonstrating, without reference to WCAP-16793-NP or the staff SE, that in-vessel downstream effects have been addressed at CR3. In any event, the licensee should report how it has addressed the in-vessel downstream effects issue within 90 days of issuance of the final NRC staff SE on WCAP-16793-NP. The NRC staff is developing a regulatory issue summary to inform the industry of the staff's expectations and plans regarding resolution of this remaining aspect of GSI-191.

Enclosure

D. Young

- 2 -

The exception to the above response timeline is RAI 7 in the enclosure. The NRC staff considers in-vessel downstream effects to not be fully addressed at CR3, as well as at other pressurized-water reactors. The licensee's submittal refers to the draft Westinghouse topical report, WCAP-16793-NP, "Evaluation of Long-Term Cooling Considering Particulate, Fibrous, and Chemical Debris in the Recirculating Fluid." At this time, the NRC staff has not issued a final safety evaluation (SE) for WCAP-16793-NP.

The licensee may demonstrate that in-vessel downstream effects issues are resolved for CR3, by showing that the licensee's plant conditions are bounded by the final WCAP-16793-NP and the corresponding final NRC staff SE, and by addressing the conditions and limitations in the final SE. The licensee may also resolve RAI 7 by demonstrating, without reference to WCAP-16793-NP or the NRC staff SE, that in-vessel downstream effects have been addressed at CR3. The specific issues raised in RAI 7 should be addressed regardless of the approach the licensee chooses to take.

The licensee should report how it has addressed the in-vessel downstream effects issue and the associated RAI referenced above within 90 days of issuance of the final NRC staff SE on WCAP-16793-NP. The NRC staff is currently developing a regulatory issue summary to inform licensees of the staff's expectations and plans regarding resolution of this remaining aspect of GSI-191.

If you have any questions regarding this letter, please feel free to contact me at (301) 415-1447.

Sincerely,

/RA/

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
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Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure: As stated

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ADAMS Accession Number: ML083290414

NRR-088

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