

January 18, 2006

Mr. L. M. Stinson  
Vice President - Farley Project  
Southern Nuclear Operating  
Company, Inc.  
Post Office Box 1295  
Birmingham, Alabama 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT (FNP), UNIT 2 - 10 CFR PART 50, APPENDIX H, TEST REPORT REQUIREMENTS: REVIEW OF TOPICAL REPORT WCAP-16351-NP, REVISION 0, "ANALYSIS OF CAPSULE Y FROM SOUTHERN NUCLEAR OPERATING COMPANY, JOSEPH M. FARLEY, UNIT 2 REACTOR VESSEL RADIATION SURVEILLANCE PROGRAM" (TAC NO. MC6504)

Dear Mr. Stinson:

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix H, "Reactor Vessel Material Surveillance Program Requirements" (the rule), provides the Nuclear Regulatory Commission (NRC) surveillance and testing requirements for ferritic components in the reactor vessels (RVs) of operating domestic light-water reactors. The rule requires licensed owners of domestic light-water reactor facilities to install a number of surveillance capsules within the cavities of their RVs and to remove capsules and test the capsule materials in accordance with the withdrawal schedule and testing requirements of American Society for Testing and Materials (ASTM) Standard Practice E185-82. Paragraph IV.A. of the rule requires the RV material surveillance capsule test results to be the subject of a summary technical report that is required to be submitted to the NRC within 1 year of the capsule withdrawal date. Paragraph IV.B. of the rule specifies that these topical reports shall include all data required by ASTM Standard Practice E185 and the results of all fracture toughness tests conducted on the RV beltline materials in both the unirradiated and irradiated condition.

By letter dated March 15, 2005, Southern Nuclear Operating Company (SNC, the licensee) submitted report number WCAP-16351-NP, Revision 0, "Analysis of Capsule Y from the Southern Nuclear Operating Company, Joseph M. Farley, Unit 2 Reactor Vessel Radiation Surveillance Program," to comply with the above requirement. The report is applicable to the evaluation of the RV at FNP, Unit 2, and provides the applicable fracture toughness test data for surveillance capsule Y which was removed from FNP, Unit 2, during the Fall 2001 refueling outage. The report also re-analyzes all prior data that were in earlier reports for surveillance capsules U, W, X, and Z.

The surveillance program for the Farley, Unit 2 RV is a plant-specific program that utilizes the plant's own surveillance capsules as the basis for monitoring what the embrittlement trends are for the vessel's beltline materials. The surveillance weld material being irradiated in the Farley, Unit 2 capsules are those that were fabricated from weld wires in heat number BOLA and using

a shielded metal arc welding process. The BOLA surveillance weld is representative of Intermediate Shell Axial Weld No. 19-923B. The surveillance plate material being irradiated in the Farley, Unit 2 capsules is that fabricated from Heat No. C7466-1, which is representative of Intermediate Shell Plate No. B7212-1.

The NRC staff has performed its review of Westinghouse Report WCAP-16351-NP, Revision 0, and has confirmed that the report includes all of the data and test results that are required by Paragraph IV.B of 10 CFR Part 50, Appendix H and by ASTM Standard Practice E185-82. Furthermore, based on this review, the NRC staff has not identified any immediate safety issues associated with the information provided in Report WCAP-16351-NP, Revision 0, as applied to the structural integrity evaluations of the Farley, Unit 2 RV. Therefore, the NRC staff intends to forward this topical report to the Pacific Northwest National Laboratory for the purpose of officially updating the surveillance data into the NRC staff's Reactor Vessel Integrity Database.

SNC submitted an application to amend its operating license to permit relocation of the pressure temperature (P-T) limits for Farley, Unit 2 into a P-T limits report (PTLR). The PTLR application was submitted in conformance with the process and acceptance criteria that are specified in NRC Generic Letter (GL) 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," dated January 31, 1996. The PTLR application was approved in License Amendment 128 on April 9, 1998. The process permits SNC to revise the Farley, Unit 2 P-T limits without prior NRC staff approval. Technical Specification (TS) 5.6.6.c requires SNC to provide the PTLR to the NRC for information in accordance with the following reporting requirement:

The PTLR shall be provided to the NRC upon issuance for each reactor fluence period and for any revision or supplement thereto.

SNC's letter dated March 15, 2005, stated that the surveillance data in WCAP-16351-NP, Revision 0, did not impact the P-T limits curves for Farley, Unit 2, and therefore, the PTLR for Farley, Unit 2 did not need to be updated as a result of the data. However, Criterion 7 of GL 96-03 provides as a condition of acceptance of the PTLR that the scope of PTLRs include supplemental data and calculations of the chemistry factor used in the adjusted reference temperature calculation and also include surveillance data credibility calculations if the surveillance data are used to establish the adjusted reference temperatures used in the P-T limit calculations. The Farley, Unit 2 RV is limited by Intermediate Shell Plate B7212-1 (Heat No. C7466-1), which is represented in the Farley, Unit 2 RV Material Surveillance Program (i.e., 10 CFR Part 50, Appendix H program). Thus, the scope of the Farley, Unit 2 PTLR includes surveillance data tables that were incorporated into the PTLR to conform to Criterion 7 of GL 96-03.

Therefore, contrary to the statement in SNC's letter of March 15, 2005, in order to ensure continued conformance of the Farley, Unit 2 PTLR with Criterion 7 of GL 96-03, SNC is requested to incorporate the updated surveillance data for Farley, Unit 2 Capsules U, W, X, Z, and Y (as specified in Table 5-10 of WCAP-16351-NP, Revision 0) into the next revision of the plant's PTLR and to submit the PTLR to the NRC in compliance with TS 5.6.6.c.

L. Stinson

- 3 -

This completes the NRC staff's activities under TAC No. MC6504. Please contact me at (301) 415-1493, if you have any other questions on these issues.

Sincerely,

*/RA/*

Robert E. Martin, Senior Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-364

cc: See next page

L. Stinson

- 3 -

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Joseph M. Farley Nuclear Plant, Unit 2

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