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SOUTHERN COMPANY
Energy to Serve Your World℠

March 10, 2004

NL-04-0385

Docket Nos.: 50-348
50-364

Annette L. Vietti-Cook
Secretary of the Commission
U. S. Nuclear Regulatory Commission
ATTN: Rulemakings and Adjudications Staff
Washington, D. C. 20555-0001

Joseph M. Farley Nuclear Plant
Answer to the First Revised NRC Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors

Dear Ms. Vietti-Cook:

In accordance with the requirements of 10 CFR 2.202(a)(2), Southern Nuclear Operating Company (SNC) provides herein its Answer to the February 20, 2004 Commission First Revised Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors, which will modify the licenses of the Joseph M. Farley Nuclear Plant Units 1 and 2. This Answer constitutes SNC's Response in accordance with Sections IV and V of the Revised Order and is being transmitted to the Secretary of the Commission for filing pursuant to 10 CFR 50.4.

This letter contains no new NRC commitments. If you have any questions, please advise.

Sincerely,

L. M. Stinson

LMS/DWD/sdl

Enclosure: Answer to the First Revised NRC Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors

A101
Rec'd 6/9/04

cc: Southern Nuclear Operating Company
Mr. J. B. Beasley, Jr., Executive Vice President
Mr. D. E. Grissette, General Manager – Plant Farley
RTYPE: CFA04.054; LC# 13979

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator (2 copies)
Mr. S. E. Peters, NRR Project Manager – Farley
Mr. C. A. Patterson, Senior Resident Inspector – Farley
Mr. J. E. Dyer, Director, Office of Nuclear Reactor Regulation
Assistant General Counsel for Materials Litigation and Enforcement
Document Control Desk (3 copies)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)		
	)		
Southern Nuclear Operating Company	)	Docket Nos.	50-348 50-364
	)	License Nos.	NPF-2 NPF-8
Joseph M. Farley Nuclear Plant	)	EA-03-009	
	)		

LICENSEE'S ANSWER TO FEBRUARY 20, 2004 ISSUANCE OF THE FIRST REVISED NRC ORDER (EA-03-009) ESTABLISHING INTERIM INSPECTION REQUIREMENTS FOR REACTOR PRESSURE VESSEL HEADS AT PRESSURIZED WATER REACTORS AT THE JOSEPH M. FARLEY NUCLEAR PLANT

On February 20, 2004, the Nuclear Regulatory Commission ("NRC" or "Commission") issued an order in the captioned matter entitled First Revised Order Modifying Licenses ("Revised Order") to Southern Nuclear Operating Company (SNC), in connection with the Joseph M. Farley Nuclear Plant (FNP). The Revised Order supercedes the original NRC Order Modifying Licenses (Effective Immediately), dated February 11, 2003 ("Original Order"). The Original Order was issued as a result of the discovery of leaks and nozzle cracking at the Davis-Besse Nuclear Power Station and other pressurized water reactor (PWR) plants, after which the Commission determined that the performance of more effective inspections of the reactor pressure vessel (RPV) heads and associated penetrations are necessary. Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) , which is incorporated into NRC regulations by 10 CFR 50.55a, "Codes and Standards," currently specifies that inspections of the RPV head need only include a visual examination of the insulated surface or surrounding area for signs of leakage. Based on recent experience, the Commission determined that such inspections are not sufficient to reliably detect circumferential cracking of RPV head nozzles and corrosion of the RPV head. Circumferential cracking of the RPV head nozzles and corrosion of the RPV head pose a safety concern because of the possibility of a nozzle ejection or loss-of-coolant accident if the conditions are not detected and repaired. Therefore, the NRC Original Order established interim requirements in Section IV to ensure that licensees implement and maintain appropriate measures

to inspect and, as necessary, repair RPV heads and associated penetrations. Since issuance of the Original Order, many requests for relaxation have been reviewed and granted by NRC staff. Several common issues emerged from these requests prompting revision of certain inspection aspects of the Original Order. Consequently, the Revised Order includes revisions to Section IV addressing bare metal visual inspections, penetration nozzle inspection coverage, flexibility in combination of non-destructive examination methods, flaw evaluation, and requirements for plants which have replaced their RPV head.

The requirements of Section IV are to be effective and final 20 days from the date of the Revised Order, absent any request for a hearing or written approval of an extension of time in which to request a hearing. SNC makes no such request and accordingly, pursuant to 10 CFR 2.202(d), SNC consents to the Order.

Section IV.C of the Revised Order in Footnote 2 allows use of a previously accepted inspection plan for the first refueling outage after February 11, 2003. The upcoming spring 2004 refueling outage at FNP Unit 2 will be the first refueling outage for that unit since the cited date and SNC intends to conduct the FNP Unit 2 RPV inspection in accordance with a previously accepted inspection plan. This plan is described in the Safety Evaluation Report (SER) issued by the NRC on April 25, 2003 approving certain relaxations of the Original Order for FNP Units 1 and 2. FNP Unit 1 was inspected in accordance with this SER during spring 2003.

SNC has identified the following discrepancies between the inspection plan approved by the April 25, 2003 SER and the requirements of the Revised Order:

1) The Revised Order requires bare metal visual (BMV) inspection of at least 95% of the RPV head surface for heads with the surface obscured by support structure interferences (but not including associated insulation). The April 25, 2003 SER requires BMV inspection of a greater portion of the head surface (at least 99%) but permits the un-inspected portion to include the area obscured by the reflective metal insulation associated with the FNP shroud support structure.

2) The Revised Order requires the upper boundary of the penetration nozzle non-destructive examination (NDE) inspection zone to lie 2 inches above the highest point of the root of the J-groove

weld (on a horizontal plane perpendicular to the nozzle axis). The April 25, 2003 SER requires this upper NDE boundary to extend 2 inches above the J-groove weld, as per the Original Order. The inspection zone upper boundary required by the SER parallels the weld, following the curvature of the RPV head. The SER-approved inspection zone therefore does not include a wedge-shaped volume of nozzle above the weld that is required by the Revised Order. SNC intends to include this wedge in the zone inspected, but no request for relaxation will be needed for missing NDE data (e.g. due to loss of probe contact) outside the SER-approved inspection zone as would be required per the Revised Order.

3) The Revised Order requires the lower boundary of the penetration nozzle non-destructive examination (NDE) inspection zone to lie 2 inches (or 1 inch, if all nozzle surfaces with operating stresses of 20 ksi or more are included) below the lowest point at the toe of the J-groove weld (on a horizontal plane perpendicular to the nozzle axis) or to the bottom of the nozzle if less than 2 inches. The April 25, 2003 SER requires this lower NDE boundary to extend 1 inch below the bottom of the J-groove weld. The inspection zone lower boundary required by the SER parallels the weld, following the curvature of the RPV head. The SER-approved inspection zone therefore does not include a wedge-shaped volume of nozzle below the weld that is required by the Revised Order. SNC intends to include this wedge in the zone inspected, but no request for relaxation will be needed for missing NDE data (e.g. due to loss of probe contact) outside the SER-approved inspection zone as would be required per the Revised Order.

In accordance with 10 CFR 2.202(a)(2) for an Answer to an Order, the following affirmation is required:

Mr. L. M. Stinson states he is a Vice President of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

Southern Nuclear Operating Company

L. M. Stinson

Sworn to and subscribed before me this 10th *day of* March, *2004.*

Notary Public

My commission expires: 6-7-05