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November 20, 2002

Docket No. 50-364

NEL-02-0230

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Joseph M. Farley Nuclear Plant – Unit 2
Post Unit 2 Inspection Response for NRC Bulletin 2002-02
Reactor Pressure Vessel Head Degradation and
Vessel Head Penetration Nozzle Inspection Programs

Ladies and Gentlemen:

In response to the requirements of Nuclear Regulatory Commission (NRC) Bulletin 2002-02, "Reactor Pressure Vessel Head Degradation and Vessel Head Penetration Nozzle Inspection Programs," dated August 9, 2002, and in accordance with 10 CFR 50.54(f), Southern Nuclear Operating Company (SNC) hereby submits the attached information regarding the reactor vessel head and penetration nozzle inspections performed at Farley Nuclear Plant (FNP) Unit 2 during the recently completed fall 2002 refueling outage. This letter also fulfills the post-inspection reporting requirements of Bulletins 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity" and 2001-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles," dated March 18, 2002 and August 3, 2001, respectively.

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

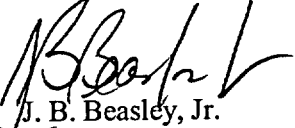
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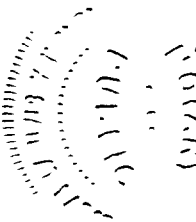
Mr. J. B. Beasley, Jr., states he is a Vice President of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



J. B. Beasley, Jr.



Sworn to and subscribed before me this 20th day of November, 2002.

Gloria H. Bue
Notary Public

My commission expires: 06/07/05

JBB/DWD/sdl: Bulletin 2002-02 U2 Post-Inspection Response.doc

Attachment

cc: Southern Nuclear Operating Company
Mr. D. E. Grissette, Nuclear Plant General Manager - Farley

U. S. Nuclear Regulatory Commission, Washington, D. C.
Mr. F. Rinaldi, NRR Project Manager - Farley

U. S. Nuclear Regulatory Commission, Region II
Mr. L. A. Reyes, Regional Administrator
Mr. T. P. Johnson, Senior Resident Inspector - Farley

ATTACHMENT

**Joseph M. Farley Nuclear Plant – Unit 2
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FNP Unit 2 Fall 2002 Inspection Results

Results from the inspections of the reactor pressure vessel (RPV) head and vessel head penetration (VHP) nozzles performed at FNP Unit 2 during the fall 2002 refueling outage are reported below, in accordance with the pertinent provisions of NRC Bulletin 2002-02 (reproduced in bold text).

- (2) **Within 30 days after plant restart following the next inspection of the RPV head and VHP nozzles to identify the presence of any degradation, all PWR addressees are requested to provide:**
- A. the inspection scope and results, including the location, size, extent, and nature of any degradation (e.g., cracking, leakage, and wastage) that was detected; details of the NDE used (i.e., method, number, type, and frequency of transducers or transducer packages, essential variables, equipment, procedure and personnel qualification requirements, including personnel pass/fail criteria); and criteria used to determine whether an indication, “shadow,” or “backwall anomaly” is acceptable or rejectable.**
 - B. the corrective actions taken and the root cause determinations for any degradation found.**

SNC Response to NRC Item (2) A.:

Scope and Results

The inspection scope included all 69 of the control rod drive mechanism (CRDM) nozzles plus the head vent nozzle, for a total of 70 VHP nozzles. No cracking, leakage, wastage or other degradation was found.

A bare metal visual (BMV) examination was performed on top of the RPV head by an SNC Level III examiner. This examination used a remotely operated video probe and crawler-mounted cameras supplied by vendors Westinghouse / Brooks and achieved 360 degree inspection coverage around all 70 VHP nozzles.

An ultrasonic testing (UT) examination was performed from beneath the RPV head on all 70 VHP nozzles by inspection services vendor Framatome ANP, and was witnessed, reviewed and accepted by SNC Level III examiners. This volumetric examination used UT probes mounted on a remotely operated manipulator and achieved 360 degree inspection coverage around all 70 VHP nozzles throughout the required scan range, which encompassed the heat affected zone of the J-groove nozzle attachment weld and a distance above it sufficient for leak path detection. Inspection coverage requirements for the vent line extended from as far as possible below the weld to 1 inch above it. For the 69 CRDM nozzles the examined volume included the zone from approximately 1.5 inches to 11 inches above the bottom of the nozzle, with complete 360 degree UT data acquisition required to 2 inches above the top of the weld for leak path detection. UT examination was performed beyond the required leak path detection scan range to the upper limit of probe travel, but full 360 degree coverage of this additional examination volume was not achieved at all nozzles due to probe access limitations or contact loss. The particular geometry of each nozzle with respect to the RPV head caused the upper edge of the examined volume to range from approximately 0 to 5 inches below the highest level of the upper head surface.

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NDE Details

Details of the UT equipment, essential variables, acceptance criteria and personnel qualification requirements are described in Framatome ANP training records and procedures 54-ISI-137-00, "Remote Ultrasonic Examination of Reactor Vessel Head Vent Line Penetrations" and 54-ISI-100-09, "Remote Ultrasonic Examination of Reactor Head Penetrations." The information requested includes material considered proprietary by Framatome ANP. Accordingly, this information has been submitted along with a proprietary affidavit directly to NRC by Framatome ANP in a letter dated November 11, 2002.

SNC Response to Item (2) B:

No degradation was found, therefore, no corrective actions or root cause determinations were necessary.