



James Scarola
Vice President
Harris Nuclear Plant
Progress Energy Carolinas, Inc.

AUG 08 2005

U.S. Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

Serial: HNP-05-092
10 CFR 50.90

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1
DOCKET NO. 50-400/LICENSE NO. NPF-63

RESPONSE TO THE REQUEST FOR ADDITIONAL INFORMATION ON THE
PROPOSED LICENSE AMENDMENT REQUEST TO TECHNICAL SPECIFICATION
(TS) 6.8.4.K AND TS SURVEILLANCE REQUIREMENT (SR) 4.6.1.6.1 (TAC NO.
MC6722)

Ladies and Gentlemen:

On June 17, 2005, based on discussions with the NRC, the NRC requested additional information to facilitate the review of the proposed change to Technical Specification (TS) 6.8.4.K and TS Surveillance Requirement (SR) 4.6.1.6.1 for the Harris Nuclear Plant (HNP).

Attachment 1 provides the requested additional information.

This document contains no new regulatory commitment.

Please refer any question regarding this submittal to Mr. Dave Corlett at (919) 362-3137.

I declare, under penalty of perjury, that the attached information is true and correct
(Executed on AUG 08 2005).

Sincerely,

A handwritten signature in black ink that reads 'James Scarola'.

JS/jpy

P.O. Box 165
New Hill, NC 27562

T > 919.362.2502
F > 919.362.2095

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Attachments:

1. Response to the Request for Additional Information on the Proposed License Amendment Request to Technical Specification (TS) 6.8.4.K and TS Surveillance Requirement (SR) 4.6.1.6.1 (TAC No. MC6722).

C:

Mr. R. A. Musser, NRC Senior Resident Inspector

Ms. B. O. Hall, N.C. DENR Section Chief

Mr. C. P. Patel, NRC Project Manager

Dr. W. D. Travers, NRC Regional Administrator

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6.8.4.K AND TS SURVEILLANCE REQUIREMENT (SR) 4.6.1.6.1 (TAC NO. MC6722)

Request: 1. Liner corrosion has been identified as a prime form of degradation of concrete containment. Please provide a discussion of your experience related to corrosion in the liner and the corrective actions taken to ensure the containment structural and leak-tight integrity will be maintained.

Response:

Section 55a, "Codes and Standards", of Part 50 (§50.55a) of Title 10 of the Code of Federal Regulations requires that each operating license for a boiling or pressurized water-cooled nuclear power facility be subject to the conditions in paragraph (g), Inservice Inspection Requirements. Paragraph (g)(4) of §50.55a requires that pressure retaining components that are classified as Class MC (metal containment or metal liner of concrete containment) meet the requirements set forth in the latest edition and addenda of the ASME Code, Section XI incorporated by reference in paragraph (b)(2).

Accordingly, Progress Energy's Harris Nuclear Plant (HNP) has prepared a Containment Liner Inspection Program to satisfy the applicable rules and requirements outlined in §50.55a and the associated ASME Code, Section XI (1992 Edition with 1992 Addenda).

Subsection IWE of ASME Section XI provides rules and requirements for inservice inspection, repair, and replacement of metal liners in concrete containments. A visual examination is required to be performed on the metal liner once per period. To date, HNP has performed the required visual examination twice, during Refueling Outage 09 (RFO-09) completed in May 2000 and during RFO-12 completed in November 2004. A summary of these results is provided as follows:

RFO-09 Results

1. Small areas of coatings' blisters were observed primarily around air handlers and the "C" safety injection accumulator. Scraping the blisters revealed tightly adhering rust¹ with no pitting, flaking, or metal loss.
2. Mechanical damage to the coatings was observed in four locations with the total surface area less than one square foot (1 ft²). The liner did not exhibit any metal loss in these areas.
3. The coatings around the main steam, feedwater and auxiliary feedwater penetrations were discolored from the heat. The coatings are tightly adhering with no indications of coatings failure.

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Response (continued):

RFO-09 Results (continued)

4. Inside the "A" Containment Spray Valve Chamber, there was rust¹ with pitting in an area approximately 18" x 18" around the drain line connection. The area was ultrasonically examined and found to be acceptable with wall thicknesses above nominal values.

Note 1: All areas with minor rust were cleaned and recoated.

RFO-12 Results

1. No recordable conditions were observed on the containment liner from the moisture barrier to the center of the dome. A number of non-recordable conditions were observed such as scattered mechanical damage, blisters with no resulting material loss, and small areas with flaking coatings.
2. A recordable condition of blistering was observed in the lower regions of each of the valve chambers (Containment Spray and Residual Heat Removal). The coatings were removed from the affected areas and visual and ultrasonic examinations were performed. The results indicated no significant material reduction, and the surfaces were recoated.

In addition to the Containment Liner Inspection Program, HNP has a Coatings Program. The purpose of the Coatings Program is to monitor, control, maintain, and improve the condition of Service Level I protective coatings inside the containment. This will assure that the installed Service Level I protective coatings do not adversely affect the safety-related performance of the emergency core cooling system (ECCS) during the recirculation phase for a loss-of-coolant accident (LOCA). In addition, site protective coatings applied to structures, systems, and components (SSC's) throughout the plant are protected from loss of function due to preventable corrosion failure by maintaining and improving the protective coatings.

In summary, degradation of the containment liner at HNP has not occurred. When light surface corrosion has been identified, it has been inspected and evaluated, and qualified coatings have been restored. HNP has established Containment Liner Inspection and Coatings Programs, which ensure that the integrity of the containment liner is maintained and conditions which could lead to degradation are promptly identified and corrected.