Progress Energy

MAY 3 0 2008

SERIAL: HNP-08-055
10 CFR 54

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

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

LICENSE RENEWAL – RESOLUTION OF OPEN ITEM AND LICENSE RENEWAL APPLICATION AMENDMENT 8

References:
1. Letter from Cornelius J. Gannon to the U. S. Nuclear Regulatory Commission (Serial: HNP-06-136), "Application for Renewal of Operating License," dated November 14, 2006
2. Letter from P. T. Kuo (NRC) to Robert J. Duncan II, "Safety Evaluation Report with Open Items Related to the License Renewal of the Shearon Harris Nuclear Power Plant, Unit 1," dated March 18, 2008

Ladies and Gentlemen:

On November 14, 2006, Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., requested the renewal of the operating license for the Shearon Harris Nuclear Power Plant, Unit No. 1, also known as the Harris Nuclear Plant (HNP), to extend the term of its operating license an additional 20 years beyond the current expiration date.

By letter dated March 18, 2008, the Nuclear Regulatory Commission (NRC) issued the Safety Evaluation Report with Open Items Related to the License Renewal of the Shearon Harris Nuclear Power Plant, Unit 1. Section 1.5 of the report identified an Open Item for which resolution had not been achieved at the time the report was issued. This letter submits: (1) information to close the Open Item and (2) changes to the HNP License Renewal Application (LRA) that support closure of the Open Item.

Therefore, this letter contains two enclosures. Enclosure 1 provides the information required to resolve the Open Item. Enclosure 2 is a table that provides the changes to the LRA; the changes constitute LRA Amendment 8. The information provided in this letter does not affect any of the License Renewal Commitments; therefore, any actions identified in this letter should be considered intended or planned actions; they are included for informational purposes but are not considered to be regulatory commitments.

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P. O. Box 165
New Hill, NC 27562

A126
NRR

Please refer any questions regarding this submittal to Mr. Roger Stewart, Supervisor - License Renewal, at (843) 857-5375.

I declare, under penalty of perjury, that the foregoing is true and correct (Executed on MAY 30 2008).

Sincerely,

Christopher L. Burton
Director – Site Operations
Harris Nuclear Plant

CLB/mhf

Enclosures:

1. Resolution of License Renewal Open Item
2. Amendment 8 Changes to the License Renewal Application

cc:

Mr. P. B. O'Bryan (NRC Senior Resident Inspector, HNP)
Ms. B. O. Hall (Section Chief, N.C. DENR)
Mr. M. L. Heath (NRC License Renewal Project Manager, HNP)
Ms. M. G. Vaaler (NRC Project Manager, HNP)
Mr. L. A. Reyes (NRC Regional Administrator, Region II)

Resolution of License Renewal Open Item

Background

On November 14, 2006, Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., submitted a License Renewal Application (LRA) and requested renewal of the operating license for the Shearon Harris Nuclear Power Plant, Unit No. 1, also known as the Harris Nuclear Plant (HNP), to extend the term of its operating license an additional 20 years beyond the current expiration date.

By letter dated March 18, 2008, the Nuclear Regulatory Commission (NRC) issued the Safety Evaluation Report (SER) with Open Items Related to the License Renewal of the Shearon Harris Nuclear Power Plant, Unit 1. Section 1.5 of the report identified an Open Item (OI) for which resolution had not been achieved at the time the SER was issued. A statement of the OI is provided below followed by information required to resolve it.

Open Item 2.2 (Section 2.2 Plant Level Scoping Results)

In LRA Section 2.3.4.6, Feedwater System, the applicant did not identify the feedwater isolation function in scope for license renewal under 10 CFR 54.4 (a)(1). In Section 15.1.5 of the applicants FSAR, it states that the feedwater isolation valves and regulating valves provide a safety-related function, isolation of feedwater in the event of a main steam line break. The staff's position is that the FSAR description of the feedwater isolation and regulating valves meet the criteria defined by 10 CFR 54.4(a)(1). In response to RAI 2.1.1.2-1, the applicant stated that based on their evaluation the feedwater regulating and bypass valves, these valves do not meet the license renewal definition of safety-related as stated in 10 CFR 54.4(a)(1); however, the components are included within the scope of license renewal for 10 CFR 54.4(a)(2). The staff found the applicants answer to RAI response 2.1.1.2-1 inconsistent with 10 CFR 54.4 (a)(1).

In RAI 2.3.4.6-2 the staff asked the applicant to further evaluate the classification of this equipment and justify their position. The applicant's response, dated January 22, 2008, maintains that these valves are important to safety, but are not safety-related; therefore, they only meet the criteria of 10 CFR 54.4(a)(2). The staff's position remains that the main feedwater regulating and bypass valves, by definition, fulfill a safety-related function; therefore, they should be included in scope under 10 CFR 54.4(a)(1). In addition, the function to provide main feedwater isolation should be included in scope under 10 CFR 54.4(a)(1) for Section 2.3.4.6, to include the main feedwater isolation valves and the regulating and bypass valves. This is OI 2.2.

Response to Open Item 2.2

In the previous response to this issue, provided by Progress Energy letter to the NRC (Serial: HNP-08-006), dated January 22, 2008, the function and qualifications of the Feedwater Regulating Valves (FRVs) and FRV Bypass Valves within the HNP Current Licensing Basis (CLB) were recounted. The HNP CLB permits the backup isolation of main feedwater flow to steam generators, under certain assumed conditions following a postulated main steam line

rupture, to be accomplished by non-safety grade components. This aspect of the CLB is based on guidance provided by the HNP Nuclear Steam System Supplier (Westinghouse) and regulatory guidance documented in the Acceptance Criteria of Section 15.1.5 of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants." Application of this guidance to system design is more fully discussed in Issue No. 1 of NUREG-0138, "Staff Discussion of Fifteen Technical Issues Listed in Attachment to November 3, 1976 Memorandum from Director, NRR to NRR Staff." NUREG-0800 was used by the NRC staff in the licensing review of HNP, and Section 10.4.7 of NUREG-1038, "Safety Evaluation Report Related to the Operation of Shearon Harris Nuclear Power Plant Units 1 and 2," November 1983, states that the FRVs are Quality Group D components, i.e., not fully safety grade.

Based on the functions and qualifications of the FRVs and FRV Bypass Valves in the HNP CLB, the License Renewal scoping evaluation for these components concluded that they were properly included in scope under 10 CFR 54.4(a)(2), that is, non-safety related systems, structures, and components (SSCs) whose failure could prevent the satisfactory accomplishment of any safety related functions.

The HNP License Renewal Application states that the License Renewal methodology used at HNP is consistent with the approach recommended in NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule," Revision 6. When applying the guidance for scoping safety related SSCs of NEI 95-10, the HNP scoping methodology focused on: (1) assuring that the definition used during design and operation of HNP to identify safety related SSCs was consistent with the definition provided in 10 CFR Part 54 and (2) identifying cases where SSCs had been classified safety related but did not actually perform a safety related function in accordance with 10 CFR 54.4(a)(1). Guidance for these activities is provided in NEI 95-10; however, guidance is not provided for the situation where a safety related function could be accomplished by non-safety grade components as permitted by the HNP CLB. Therefore, the HNP scoping process relied on the CLB and not on the guidance provided in NEI 95-10 to make a final determination that these SSCs were not safety related under 10 CFR 54.4(a)(1). This is considered to be an exception to the scoping methodology described in Section 3.1.1 of NEI 95-10.

Based on the preceding discussion, the License Renewal conclusion that these non-safety grade components meet the criteria of 10 CFR 54.4(a)(2) is consistent with the HNP CLB.

Based on the above response, a License Renewal Application amendment is required to include the feedwater isolation function in the discussion of the Feedwater System and to note that the scoping methodology for HNP takes an exception to the guidance of NEI 95-10.

Amendment 8 Changes to the License Renewal Application

<table>
<tr><th>Source of Change</th><th>License Renewal Application (LRA) Amendment 8 Changes</th></tr>
<tr><td>Resolution of Open Item-2.2</td><td>
Add the following sentence after the first sentence of paragraph two of LRA Section 2.0:

Exceptions to the scoping guidance of NEI 95-10 has been taken consistent with the HNP Current Licensing Basis.

Revise LRA Subsection 2.3.4.6 on Page 2.3-248 by revising the first full paragraph to read:

The system serves no safety function, with the exceptions of containment isolation integrity and termination of feedwater flow following certain main steam line break accidents; and is therefore generally classified as non-safety related. The portion of the system classified as safety related is the portion from the feedwater header check valves to the Steam Generators.

Also, revise the first row of the table of intended functions in the fourth paragaph to read:

<table>
<tr><td>10 CFR54.4(a)(1) Functions</td><td>• Supports isolation of feedwater flow following certain main steam line breaks,
• Supports the containment isolation function, and
• Supports post-accident monitoring.</td></tr>
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