



**Progress Energy**

**Robert J. Duncan, II**  
Vice President  
Harris Nuclear Plant  
Progress Energy Carolinas, Inc.

**APR 30 2007**

**Serial: HNP-07-040**  
**10 CFR 50.90**

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

Shearon Harris Nuclear Power Plant, Unit No. 1  
Docket No. 50-400/License No. NPF-63  
Request For License Amendment  
To Use Other Containment Sump Water Level Instruments

Ladies and Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.90, Carolina Power and Light Company (CP&L) doing business as Progress Energy Carolinas, Inc., requests a license amendment for the Harris Nuclear Plant (HNP) Technical Specifications (TS). The proposed amendment will revise the TS to use other narrow range containment sump water level instruments rather than the existing narrow range containment recirculation sump water level instruments, which are located inside the emergency core cooling system (ECCS) recirculation sumps. This amendment supports the installation of new strainers in the ECCS recirculation sumps during refueling outage 14 (RFO-14) in the fall 2007 as committed to in the HNP response (HNP-05-101 dated September 1, 2005) to Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors."

Attachment 1 provides the description, background, and technical analysis for the proposed change.

Attachment 2 details, in accordance with 10 CFR 50.91(a), the basis for HNP's determination that the proposed change does not involve a significant hazards consideration.

Attachment 3 provides the proposed TS changes.

Attachment 4 provides the revised TS changes.

The TS Bases are not affected by the proposed amendment.

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With respect to this proposed amendment, there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite and there is no significant increase in individual or cumulative occupational radiation exposure. The proposed change to the Technical Specifications meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental assessment or environmental impact statement is required for approval of this application.

In accordance with 10 CFR 50.91(b), HNP is providing the State of North Carolina with a copy of the proposed license amendment.

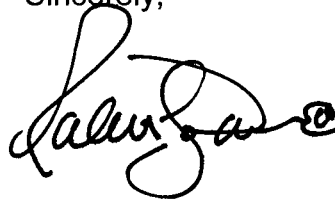
HNP requests approval of the proposed amendment by September 29, 2007 to support the modifications that will be completed in refueling outage 14 (RFO-14).

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 **APR 30 2007** ).

Sincerely,



R. J. Duncan II  
Vice President  
Harris Nuclear Plant

RJD/jpy

Attachments:

1. Description, Background, and Technical Analysis
2. 10 CFR 50.92 No Significant Hazards Evaluation
3. Proposed Technical Specifications (TS) Changes
4. Revised Technical Specifications (TS) Pages

c:

Mr. P. B. O'Bryan, NRC Senior Resident Inspector  
Ms. B. O. Hall, N.C. DENR Section Chief  
Ms. L. M. Regner, NRC Project Manager  
Dr. W. D. Travers, NRC Regional Administrator

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
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DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

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

In accordance with the Code of Federal Regulations, Title 10, Part 50.90, "Application for amendment of license or construction permit," Carolina Power and Light Company (CP&L) doing business as Progress Energy Carolinas, Inc., requests a license amendment for the Harris Nuclear Plant (HNP) Technical Specifications (TS). The proposed amendment will revise the TS to use other narrow range containment sump water level instruments rather than the existing narrow range containment recirculation sump water level instruments, which are located inside the emergency core cooling system (ECCS) recirculation sumps. This amendment supports the installation of new strainers in the ECCS recirculation sumps during refueling outage 14 (RFO-14) in the fall 2007 as committed to in the HNP response (HNP-05-101 dated September 1, 2005) to Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors."

Specifically, HNP proposes to remove the word "(ECCS Sump)" from two tables associated with TS 3.3.3.6, "Accident Monitoring Instrumentation." Item 15 of Table 3.3-10, "Accident Monitoring Instrumentation," and Item 15 of Table 4.3-7, "Accident Monitoring Instrumentation Surveillance Requirements," will be changed from, "Containment Water Level (ECCS Sump) - - Narrow Range," to read, "Containment Water Level - - Narrow Range."

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

**Background**

The following regulatory bases and guidance and industry guidance are applicable to the systems discussed in the proposed amendment:

General Design Criterion (GDC) 13, *Instrumentation and Control*, of Appendix A, *General Design Criteria For Nuclear Power Plants*, to Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR), requires that instrumentation shall be provided to monitor variables and systems over their anticipated ranges for normal operation, for anticipated operational occurrences, and for accident conditions as appropriate to assure adequate safety, including those variables and systems that can affect the fission process, the integrity of the reactor core, the reactor coolant pressure boundary, and the containment and its associated systems.

Regulatory Guide (RG) 1.97, *Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident*, Revision 3, dated May 1983, describes a method acceptable to the NRC staff for complying with the Commission's regulations to provide instrumentation to monitor plant variables and systems during and following an accident in a light-water-cooled nuclear power plant. HNP complies with the guidance of this RG as described in HNP FSAR Section 1.8.

NUREG 0737, *Clarification of TMI Action Plan Requirements*, Section II.F.1, Attachment 5, *Containment Water Level Monitor*, requires that a continuous indication of containment water level shall be provided in the control room for all plants. A narrow range instrument shall be provided for pressurized-water reactors (PWRs) and cover the range from the bottom to the top of the containment sump. A wide range instrument shall also be provided for PWRs and shall cover the range from the bottom of the containment to the elevation equivalent to a 600,000 gallon capacity.

Generic Letter (GL) 2004-02, *Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors*, dated September 13, 2004, requests that holders of domestic operating licenses for PWRs perform an evaluation of the ECCS and containment spray system (CSS) recirculation functions in light of the information provided in the GL and take additional actions to ensure system function. This evaluation was requested based on the identified potential susceptibility of PWR sump screens to debris blockage during design basis accidents requiring recirculation operation of ECCS or CSS and on the potential for additional adverse effects due to debris blockage of flowpaths necessary for ECCS and CSS recirculation and containment drainage.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

**Background (continued)**

In the response to GL 2004-02, HNP committed to complete the corrective actions to resolve GL 2004-02 by December 31, 2007. HNP has two independent sumps, each with a screen area of approximately 398 square feet per sump; which is robust compared to others in the industry. The design of the sumps is not highly susceptible to clogging. However, to resolve NRC Generic Safety Issue (GSI) 191 and GL 2004-02, HNP determined that a larger recirculation sump strainer area was needed and developed an engineering change to replace the existing screens with significantly larger strainers (approximately 3,000 square feet per sump). This modification is planned to be implemented in refueling outage 14 (RFO-14), which is scheduled to begin in September 2007.

At HNP, two independent containment recirculation sumps provide suction to the residual heat removal (RHR) and CSS pumps during their recirculation modes of operation. Each containment recirculation sump includes a screen to filter the water entering the containment recirculation sump. The required function of the containment recirculation sump and screen is to recirculate core cooling water, while limiting the debris that can pass through the screen and enter the RHR and CSS pump suctions during the unlikely event of a loss-of-coolant accident (LOCA).

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

**Technical Analysis**

Because of physical interferences with the new sump strainers, the existing narrow range containment recirculation sump water level elements will be removed from inside the containment recirculation sumps. The required function of the containment recirculation sump and screen is not affected by the removal of these water level elements, which is to recirculate core cooling water, while limiting the debris that can pass through the screen and enter the RHR and CSS pump suctions during the unlikely event of a loss-of-coolant accident (LOCA).

The containment recirculation sumps (1A and 1B) are provided with one narrow range water level element each, LE-01CT-7160ASA and LE-01CT-7160BSB, respectively. These narrow range water level elements are physically located inside the containment recirculation sumps. The associated water level indicators, LI-01CT-7160ASA and LI-01CT-7160BSB, are located on the main control board in the control room. The 0% and 100% indicated level on the water level indicators corresponds with elevations of approximately 219.33 feet and 224.33 feet, respectively. If a containment recirculation sump isolation valve is open, then a low water level alarm occurs at 43% of indicated level in the containment recirculation sump, which is approximately 221.5 feet. The bottom of each of the containment recirculation sumps is at an elevation of approximately 216.38 feet. Because the water level elements have a lower range that equates to an elevation of approximately 219.33 feet and the bottom of each of the containment recirculation sumps is at an elevation of approximately 216.38 feet, then these elements do not read the bottom three feet (approximately) of the containment recirculation sumps. For reference, the bottom of the new containment recirculation sump strainers that will be installed is at an elevation of approximately 217.8 feet, which is approximately 16 inches off the bottom of the containment recirculation sumps.

The existing narrow range containment recirculation sump water level instruments are used in the unlikely event of a loss of coolant accident (LOCA) to detect a beyond design basis event. As described in the HNP FSAR, Section 6.3.2.8, the existing design and licensing basis for the containment recirculation sump screens is to assume that they may become blocked up to 50% of their surface area. If the screens become blocked in excess of 50%, then this condition would be a beyond design basis event. However, assuming this beyond design basis event that the screens become blocked in excess of 50%, then a potential exists for the flow of water through the screens to become less than the rate of suction from the containment recirculation sump pits. This difference in flow would result in drawdown and could result in vortexing or air ingestion in the pumps. To aid the operators in identifying this beyond design basis phenomenon, the existing containment recirculation sump water level instruments were installed to determine

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

**Technical Analysis (continued)**

the water level on the pump suction side of the screens. The containment recirculation sumps are designed to be submerged after a LOCA and completion of the safety injection. The maximum water level following a LOCA is expected to be at elevation 228.6 feet, which is greater than 100% of the narrow range containment recirculation sump water level instruments at approximately 224.33 feet. However, as discussed above, if this water level decreases to 43% (approximately 221.5 feet) with the containment recirculation valves open, then an alarm in the control room is generated, which alerts the operators to reduce or stop flow in the affected containment recirculation sump.

The existing containment recirculation sump water level instruments are used to detect a beyond design basis condition by monitoring for potential drawdown of water inside of the existing sump screens, which would indicate potential unacceptable head loss across the screens. Because the new strainer design has been evaluated utilizing a worst-case scenario regarding debris generation and transport to the containment recirculation sump strainers, the previous beyond design basis condition of excessive clogging of the screens resulting in potential drawdown is no longer credible. Therefore, removal of these water level elements from the containment recirculation sumps is acceptable to support the installation of the significantly larger new sump strainers.

**Regulatory Guide 1.97**

RG 1.97, *Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident*, Revision 3, dated May 1983, describes a method acceptable to the NRC staff for complying with the Commission's regulations to provide instrumentation to monitor plant variables and systems during and following an accident in a light-water-cooled nuclear power plant. HNP complies with the guidance of this RG as described in HNP FSAR Section 1.8.

This RG provides a graded approach to instrumentation requirements depending on the importance to safety of the measurement of a specific variable. Category 1 provides the most stringent requirements and is intended for key variables. Category 2 provides less stringent requirements and generally applies to instrumentation designated for indicating system operating status. Category 3 is intended to provide requirements that will ensure that high-quality off-the-shelf instrumentation is obtained and applies to backup and diagnostic instrumentation.



SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

**Technical Analysis (continued)**

RG 1.97 designates narrow range containment sump water level instruments as Category 2 instruments, and wide range containment sump water level instruments as Category 1 instruments. The purpose of these instruments is to detect a breach, accomplish accident mitigation, verify accident mitigation, and perform long-term surveillances.

The existing narrow range containment recirculation sump water level elements, LE-01CT-7160ASA and LE-01CT-7160BSB, are conservatively classified as RG-1.97, Category 1 instruments, although the RG only requires narrow range containment sump water level instruments to be classified as Category 2 instruments. These narrow range instruments were conservatively classified as Category 1 instruments because they were designed to be used in an active function to aid in mitigating a beyond design basis event. The new containment recirculation sump strainers eliminate this function. The other narrow range containment sump water level instruments, LE-01CT-7161ASA and LE-01CT-7161BSB, provide narrow range containment sump water level indication, and are properly classified in the HNP FSAR, Section 7.5.1-1, as RG 1.97, Category 2 instruments.

A limitation of the existing narrow range containment recirculation sump water level instruments is that they do not meet the intent of RG 1.97 to provide early detection capability in the unlikely event of a breach inside containment. Outside each of the containment recirculation sumps is an 18-inch tall curb that surrounds the containment recirculation sump pits. At HNP, the containment recirculation sumps are dry during normal operation, so water would have to fill the entire lower elevations of the containment building with a minimum of 18 inches of water prior to water entering the containment recirculation sump pits. However, unlike the existing narrow range containment recirculation sump water level instruments, the other narrow range containment sump water level instruments, which are located in the containment reactor keyway sump, are not surrounded by an 18-inch tall curb and would provide early detection of a breach as required by RG 1.97.

The proposed change has no effect on the wide range containment sump water level instruments, LI-01CT-7162A1SA, LI-01CT-7162A2SA, LI-01CT-7162A3SA, LI-01CT-7162B1SB, LI-01CT-7162B2SB, and LI-01CT-7162B3SB. These wide range instruments are Category 1 as required by RG 1.97.

After the removal of the 7160 (narrow range) series instrumentation, operators will still follow applicable procedures for the remaining 7161 (narrow range) and 7162 (wide range) series instrumentation upon indication of a containment water level increase.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

**Technical Analysis (continued)**

Therefore, removal of the narrow range containment recirculation water level elements is considered acceptable, and HNP will continue to comply with the requirements of RG 1.97 for narrow range and wide range containment water level instrumentation.

**NUREG 0737**

NUREG 0737, *Clarification of TMI Action Plan Requirements*, Section II.F.1, Attachment 5, *Containment Water Level Monitor*, requires that a continuous indication of containment water level shall be provided in the control room for all plants. A narrow range instrument shall be provided for PWRs and cover the range from the bottom to the top of the containment sump. A wide range instrument shall also be provided for PWRs and shall cover the range from the bottom of the containment to the elevation equivalent to a 600,000 gallon capacity.

The existing narrow range containment recirculation sump water level instruments are not credited with complying with the requirements of NUREG-0737. These existing instruments do not have a range that extends to the bottom of the containment recirculation sump, and they are isolated from monitoring the containment water level until the containment water level fills above the 18-inch tall curb that surrounds the containment recirculation sumps.

However, the other narrow range containment water level instruments, LI-01CT-7161ASA and LI-01CT-7161BSB provide the narrow range containment water level indication required by NUREG-0737, Section II.F.1. In addition, the wide range level instruments, LI-01CT-7162A1SA, LI-01CT-7162A2SA, LI-01CT-7162A3SA, LI-01CT-7162B1SB, LI-01CT-7162B2SB, and LI-01CT-7162B3SB, provide the wide range containment water level indication required by NUREG-0737, Section II.F.1. Therefore, the removal of the containment recirculation sump water level instruments does not affect compliance with NUREG-0737 for containment water level monitoring.

**HNP Technical Specifications**

The words "(ECCS Sump)" are listed in two tables associated with HNP TS 3.3.3.6, "Accident Monitoring Instrumentation." Item 15 of Table 3.3-10, "Accident Monitoring Instrumentation," and Item 15 of Table 4.3-7, "Accident Monitoring Instrumentation Surveillance Requirements," read, "Containment Water Level (ECCS Sump) - - Narrow Range." This amendment request proposes to remove those parenthetical words so that Item 15 in the two tables reads, "Containment Water Level - - Narrow Range."

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

**Technical Analysis (continued)**

HNP Technical Specifications require that narrow range containment sump water level monitoring instruments are installed. In addition, the HNP TS customize this requirement and add parenthetical wording to describe the location of this instrumentation in the ECCS sump. As previously discussed, the existing narrow range containment recirculation sump water level instruments are isolated from monitoring the containment water level until the containment water level fills above the 18-inch tall curb that surrounds the containment recirculation sumps. This limitation does not meet the intent of RG 1.97 to provide early detection capability in the unlikely event of a breach inside containment. In addition, these instruments do not have a range that extends to the bottom of the containment recirculation sump, so they are not credited with complying with the requirements of NUREG-0737. In contrast, the other narrow range containment sump water level instruments provide a range that extends to the bottom of the containment sump, and they can be used to provide early detection capability in the unlikely event of a breach inside containment.

The existing narrow range containment recirculation sump water level instruments, which provide a function of monitoring for beyond design basis post-accident drawdown of the containment recirculation sumps, are not needed for narrow range containment sump water level monitoring in accordance with HNP TS. The other narrow range containment water level monitoring can provide the needed TS compliance. However, to use the other narrow containment water level instruments, a TS amendment is required. This proposed amendment does not change the intent of the HNP TS.

**Generic Letter 2004-02**

GL 2004-02, *Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors*, dated September 13, 2004, requests that holders of domestic operating licenses for PWRs perform an evaluation of the ECCS and CSS recirculation functions in light of the information provided in the GL and take additional actions to ensure system function. This evaluation was requested based on the identified potential susceptibility of PWR sump screens to debris blockage during design basis accidents requiring recirculation operation of ECCS or CSS and on the potential for additional adverse effects due to debris blockage of flowpaths necessary for ECCS and CSS recirculation and containment drainage.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

**Technical Analysis (continued)**

In the response to GL 2004-02, HNP committed to complete the corrective actions to resolve GL 2004.02 by December 31, 2007. The modification to replace the existing screens (approximately 398 square feet per sump) with significantly larger strainers (approximately 3,000 square feet per sump) is planned to be implemented in RFO-14, which is scheduled to begin in September 2007. This proposed TS amendment supports the installation of these new strainers in the ECCS recirculation sumps.

The applicable regulatory guidance referenced by GL 2004-02 is a later revision of RG 1.82. HNP satisfies the intent of RG 1.82, *Sumps for Emergency Core Cooling and Containment Spray Systems*, Revision 0, dated June 1974, as described in HNP FSAR Section 1.8. This revision of the RG describes a method acceptable to the Regulatory staff for implementing these requirements with regard to design, fabrication, and testing of sump or suction inlet conditions for pumps in the emergency core cooling and containment spray systems. The later revision referenced by GL 2004-02 is RG 1.82, *Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident*, Revision 3, dated November 2003, which describes methods acceptable to the NRC staff for implementing these requirements with respect to the sumps and suppression pools performing the functions of water sources for emergency core cooling, containment heat removal, or containment atmosphere clean up. This guide also provides guidelines for evaluating the adequacy of the availability of the sump and suppression pool for long-term recirculation cooling following a loss-of-coolant accident.

For completeness, a review was performed of RG 1.82, Revision 3, to ensure that no additional requirements associated with containment sump water level indication have been included in this later revision of the RG. This later revision was reviewed, and no new instrumentation requirements have been included. Therefore, HNP continues to satisfy the intent of Revision 0 or Revision 3 of RG 1.82 for containment sump water level indication.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
DESCRIPTION, BACKGROUND, AND TECHNICAL ANALYSIS

**Technical Analysis (continued)**

**Summary**

The existing containment recirculation sump water level instruments are used in the unlikely event of a LOCA to detect a beyond design basis condition by monitoring for potential drawdown of water inside of the existing sump screens, which would indicate potential unacceptable head loss across the screens. Because the new strainer design has been evaluated utilizing a worst-case scenario regarding debris generation and transport to the containment recirculation sump strainers, the previous beyond design basis condition is no longer credible. The new containment recirculation sump strainers eliminate this potential drawdown of water inside of the existing sump screens. Therefore, removal of these water level elements from the containment recirculation sumps is acceptable to support the installation of the significantly larger new sump strainers and does not result in an adverse impact on the containment spray or RHR systems, structures, or components.

The existing narrow range containment recirculation sump water level instruments do not meet the intent of RG 1.97 to provide early detection capability in the unlikely event of a breach inside containment because outside of each of the containment recirculation sumps is an 18-inch tall curb that surrounds the containment recirculation sump pits. This curb prevents water from entering the containment recirculation sumps until the entire lower elevations of the containment building are filled with a minimum of 18 inches of water. Therefore, removal of the narrow range containment recirculation water level instruments is considered acceptable because the other narrow range containment sump water level instruments comply with the requirements of RG 1.97 for early detection capability in the unlikely event of a LOCA.

The existing narrow range containment recirculation sump water level instruments are not credited with complying with the requirements of NUREG-0737 because they do not have a range that extends to the bottom of the containment recirculation sump, and they are isolated from monitoring the containment water level until the containment water level fills above the 18-inch tall curb that surrounds the containment recirculation sumps. However, the other narrow range containment water level instruments provide the narrow range containment water level indication required by NUREG-0737, Section II.F.1. Therefore, removal of the containment recirculation sump water level instruments does not affect compliance with NUREG-0737 for containment water level monitoring.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
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**Technical Analysis (continued)**

HNP Technical Specifications require narrow range containment sump water level monitoring. Acceptable narrow range containment sump water level instruments exist elsewhere in containment for monitoring narrow range containment water level during post-accident conditions. The existing narrow range containment recirculation sump water level elements are not redundant with the other narrow range containment sump water level instruments or with the wide range containment sump water level instruments.

Operation of the RHR and containment spray systems is unchanged as a result of the proposed change. The other narrow range containment recirculation sump level instruments provide early detection capability and meet the requirements of RG 1.97, NUREG-0737, and the HNP TS. The existing containment recirculation sump water level instruments have an alarm that occurs at a 43% level (decreasing) if the recirculation valves are open. Because the new containment recirculation sump strainers eliminate the need for this function, this alarm will be eliminated.

**Conclusion**

HNP has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
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SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
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10 CFR 50.92 NO SIGNIFICANT HAZARDS EVALUATION.

A written evaluation of the significant hazards consideration of a proposed license amendment is required by 10 CFR 50.92. Harris Nuclear Plant (HNP) has evaluated the proposed amendment and determined that it involves no significant hazards consideration. According to 10 CFR 50.92, a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or
2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or
3. Involve a significant reduction in a margin of safety

The basis for this determination is presented below.

Proposed Change

In accordance with the Code of Federal Regulations, Title 10, Part 50.90, "Application for amendment of license or construction permit," Carolina Power and Light Company (CP&L) doing business as Progress Energy Carolinas, Inc., requests a license amendment for the Harris Nuclear Plant (HNP) Technical Specifications (TS). The proposed amendment will revise the TS to use other narrow range containment sump water level instruments rather than the existing narrow range containment recirculation sump water level instruments, which are located inside the emergency core cooling system (ECCS) recirculation sumps. This amendment supports the installation of new strainers in the ECCS recirculation sumps during refueling outage 14 (RFO-14) in the fall 2007 as committed to in the HNP response (HNP-05-101 dated September 1, 2005) to Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors."

Specifically, HNP proposes to remove the word "(ECCS Sump)" from two tables associated with TS 3.3.3.6, "Accident Monitoring Instrumentation." Item 15 of Table 3.3-10, "Accident Monitoring Instrumentation," and Item 15 of Table 4.3-7, "Accident Monitoring Instrumentation Surveillance Requirements," will be changed from, "Containment Water Level (ECCS Sump) - - Narrow Range," to read, "Containment Water Level - - Narrow Range."



SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
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10 CFR 50.92 NO SIGNIFICANT HAZARDS EVALUATION.

Basis

This amendment does not involve a significant hazards consideration for the following reasons:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, and it does not change an accident previously evaluated in the Final Safety Analysis Report (FSAR). The use of other narrow range containment sump water level instruments rather than the existing narrow range containment recirculation sump water level instruments, which have level elements located inside the emergency core cooling system (ECCS) recirculation sumps, will continue to ensure that acceptable narrow range containment sump water level monitoring is maintained during post-accident conditions. Operation of the containment spray and residual heat removal systems is unchanged as a result of the proposed amendment. The level elements associated with the existing narrow range containment recirculation sump water level instruments are not accident initiators, and the FSAR does not credit these level elements in the dose analyses for loss-of-coolant accidents. The proposed amendment does not adversely affect the ability of structures, systems, or components (SSCs) to perform their design function. SSCs required for post-accident recirculation remain capable of performing their design functions.

Therefore, this amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
10 CFR 50.92 NO SIGNIFICANT HAZARDS EVALUATION.

Basis (Continued)

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated, and it does not change an accident previously evaluated in the Final Safety Analysis Report (FSAR). The use of other narrow range containment sump water level instruments rather than the existing narrow range containment recirculation sump water level instruments supports the replacement of the existing containment recirculation sump screens with new strainers in accordance with the response to Generic Letter 2004-02, *Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors*. The proposed amendment does not change the design function or the operation of the containment spray and residual heat removal systems associated with the containment recirculation sumps. The proposed amendment does not create new failure mechanisms or malfunctions or accident initiators. The proposed amendment will continue to ensure that acceptable narrow range containment sump water level monitoring is maintained during post-accident conditions, and that SSCs required for post-accident recirculation remain capable of performing their design functions.

Therefore, this amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
10 CFR 50.92 NO SIGNIFICANT HAZARDS EVALUATION.

Basis (Continued)

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed amendment does not involve a significant reduction in a margin of safety. The proposed amendment does not adversely affect a plant safety limit or a limiting safety system setting, and does not alter a design basis limit for a parameter evaluated in the FSAR. The use of other narrow range containment sump water level instruments, which meet the requirements of the FSAR, rather than the existing narrow range containment recirculation sump water level instruments, will continue to ensure that acceptable narrow range containment sump water level monitoring is maintained during post-accident conditions. The proposed amendment does not adversely affect the ability of SSCs to perform their design functions or the reliability of equipment to mitigate accidents evaluated in the FSAR. The proposed amendment will continue to ensure that SSCs required for post-accident recirculation remain capable of performing their design functions.

Therefore, this amendment does not involve a significant reduction in a margin of safety.

Based on the above, HNP concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
PROPOSED TECHNICAL SPECIFICATIONS (TS) CHANGES

PROPOSED TECHNICAL SPECIFICATIONS (TS) CHANGES

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>TOTAL REQUIRED NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Containment Pressure		
a. Narrow Range	2	1
b. Wide Range	2	1
2. Reactor Coolant Hot-Leg Temperature--Wide Range	2	1
3. Reactor Coolant Cold-Leg Temperature--Wide Range	2	1
4. Reactor Coolant Pressure--Wide Range	2	1
5. Pressurizer Water Level	2	1
6. Steam Line Pressure	2/steam generator	1/steam generator
7. Steam Generator Water Level--Narrow Range	N.A.	1/steam generator
8. Steam Generator Water Level--Wide Range	N.A.	1/steam generator
9. Refueling Water Storage Tank Water Level	2	1
10. Auxiliary Feedwater Flow Rate	N.A.	1/steam generator
11. Reactor Coolant System Subcooling Margin Monitor	N.A.	1
12. PORV Position Indicator*	N.A.	1/valve
13. PORV Block Valve Position Indicator**	N.A.	1/valve
14. Pressurizer Safety Valve Position Indicator	N.A.	1/valve
15. Containment Water Level (ECCS Sump)--Narrow Range	2	1
16. Containment Water Level--Wide Range	2	1

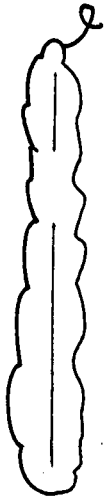


TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Containment Pressure		
a. Narrow Range	M	R
b. Wide Range	M	R
2. Reactor Coolant Hot-Leg Temperature--Wide Range	M	R
3. Reactor Coolant Cold-Leg Temperature--Wide Range	M	R
4. Reactor Coolant Pressure--Wide Range	M	R
5. Pressurizer Water Level	M	R
6. Steam Line Pressure	M	R
7. Steam Generator Water Level--Narrow Range	M	R
8. Steam Generator Water Level--Wide Range	M	R
9. Refueling Water Storage Tank Water Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. PORV Position Indicator	M	R
13. PORV Block Valve Position Indicator	M	R
14. Pressurizer Safety Valve Position Indicator	M	R
15. Containment Water Level (ECCS Sump)--Narrow Range	M	R
16. Containment Water Level--Wide Range	M	R

SHEARON HARRIS - UNIT 1

3/4 3-70

Amendment No. 35



SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
REVISED TECHNICAL SPECIFICATION (TS) PAGES

REVISED TECHNICAL SPECIFICATIONS (TS) PAGES

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>TOTAL REQUIRED NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Containment Pressure		
a. Narrow Range	2	1
b. Wide Range	2	1
2. Reactor Coolant Hot-Leg Temperature--Wide Range	2	1
3. Reactor Coolant Cold-Leg Temperature--Wide Range	2	1
4. Reactor Coolant Pressure--Wide Range	2	1
5. Pressurizer Water Level	2	1
6. Steam Line Pressure	2/steam generator	1/steam generator
7. Steam Generator Water Level--Narrow Range	N.A.	1/steam generator
8. Steam Generator Water Level--Wide Range	N.A.	1/steam generator
9. Refueling Water Storage Tank Water Level	2	1
10. Auxiliary Feedwater Flow Rate	N.A.	1/steam generator
11. Reactor Coolant System Subcooling Margin Monitor	N.A.	1
12. PORV Position Indicator*	N.A.	1/valve
13. PORV Block Valve Position Indicator**	N.A.	1/valve
14. Pressurizer Safety Valve Position Indicator	N.A.	1/valve
15. Containment Water Level--Narrow Range	2	1
16. Containment Water Level--Wide Range	2	1



TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Containment Pressure		
a. Narrow Range	M	R
b. Wide Range	M	R
2. Reactor Coolant Hot-Leg Temperature--Wide Range	M	R
3. Reactor Coolant Cold-Leg Temperature--Wide Range	M	R
4. Reactor Coolant Pressure--Wide Range	M	R
5. Pressurizer Water Level	M	R
6. Steam Line Pressure	M	R
7. Steam Generator Water Level--Narrow Range	M	R
8. Steam Generator Water Level--Wide Range	M	R
9. Refueling Water Storage Tank Water Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. PORV Position Indicator	M	R
13. PORV Block Valve Position Indicator	M	R
14. Pressurizer Safety Valve Position Indicator	M	R
15. Containment Water Level--Narrow Range	M	R
16. Containment Water Level--Wide Range	M	R