January 6, 2006

Mr. H. L. Sumner, Jr.
Vice President - Nuclear
Hatch Project
Southern Nuclear Operating
Company, Inc.
P.O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2, EXEMPTION FROM THE REQUIREMENTS OF 10 CFR 50.55a(b)(2)(ix)(G) (TAC NOS. MC6540 AND MC6541)

Dear Mr. Sumner:

The Commission has approved the enclosed exemption from specific requirements of Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.55a(b)(2)(ix)(G), for the Edwin I. Hatch Nuclear Plant, Unit Nos. 1 and 2. This action is in response to your letter of March 30, 2005, as supplemented by letters dated August 2 and 24, 2005, that requested Southern Nuclear Operating Company, Inc. (SNC), be exempted from the requirements to perform a VT-3 examination of the containment vent system. SNC proposed to continue the practice of performing a general visual examination for the system.

A copy of the exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Christopher Gratton, Sr. Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

Enclosure: Exemption

cc w/encl: See next page

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Edwin I. Hatch Nuclear Plant, Units 1 & 2

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7590-01-P

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-321 AND 50-366

EXEMPTION

1.0 BACKGROUND

The Southern Nuclear Operating Company, Inc. (SNC, or the licensee), is the holder of Facility Operating License Nos. DPR-57 and NPF-5 which authorizes operation of the Edwin I. Hatch Nuclear Plant, Unit Nos. 1 and 2 (Hatch 1 and 2), respectively. The license provides, among other things, that the facility is subject to all rules, regulations, and orders of the Nuclear Regulatory Commission (NRC, Commission) now or hereafter in effect.

The facility consists of two boiling water reactors located in Appling County, Georgia.

2.0 REQUEST/ACTION

Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(b)(2)(ix), states the requirements for the examination of metal containments and liners of concrete containments. In particular, Section 50.55a(b)(2)(ix)(G) requires, in part, that a VT-3 examination method be used to conduct examinations of Item E.20 of Table IWE-2500-1 of Section IX of the American Society of Mechanical Engineers, *Boiler and Pressure Vessel Code* (ASME Code).

By letter dated March 30, 2005, as supplemented by letters dated August 2 and 24, 2005, the licensee submitted a request for an exemption from the requirements of Section 50.55a(b)(2)(ix)(G). The exemption request would allow the licensee to perform an alternative

examination of the accessible surface areas of the containment vessel pressure retaining boundary vent system, in lieu of the VT-3 examination required by the rule. The licensee stated that the alternate examination method is currently in use at Hatch 1 and 2 and has proven to be sufficient to maintain the structural integrity and leak-tightness of the containment surfaces, and, therefore, serves the underlying purpose of the rule.

The licensee is currently in its 3rd 10-year inservice inspection (ISI) interval. The licensee's code of record for the 3rd 10-year ISI interval is the 1992 edition through the 1992 addenda of the ASME Code. The code of record contains the requirement to perform a VT-3 examination of the accessible surface areas of the vent system. In Relief Request RR-MC-9 submitted by letter dated July 19, 2000, the licensee requested relief from the requirement to perform a VT-3 examination on nonsubmerged, accessible pressure boundary surfaces, including the vent system, at the end of the 3rd 10-year ISI interval. The licensee explained that the proposed alternative to perform a general visual examination was sufficient to detect the types of corrosion expected in the components covered by the relief. On October 4, 2000, this request was approved by the NRC staff.

The licensee's 4th 10-year ISI interval is scheduled to begin in 2006. The licensee's code of record for this interval will be the 2001 edition through the 2003 addenda of the ASME Code. Modifications to the ASME Code and 10 CFR 50.55a since the beginning of the 3rd 10-year ISI interval have relocated the requirement to perform the subject VT-3 examination from the ASME Code to 10 CFR 50.55a(b)(2)(ix). As a result, licensees wanting relief from the requirement to perform a VT-3 examination for the subject structures must now request an exemption from the requirements of 10 CFR 50.55a(b)(2)(ix)(G).

The licensee stated in its August 24, 2005, letter that the examination provisions previously authorized through Relief Request RR-MC-9 have proven to be sufficient to maintain

the structural integrity and leak-tightness of the containment surfaces, and, therefore, serve the underlying purpose of the rule. As an alternative to the VT-3 examination, SNC is proposing the examination on all nonsubmerged, accessible pressure boundary surfaces of the vent system. This general visual-type examination will be performed in accordance with the Hatch 1 and 2 Qualified (N) Coatings Program. The licensee indicated that the details of this program were provided in the October 19, 1998, response to NRC Generic Letter 98-04, "Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System after a Loss-of-Coolant Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in Containment." The procedures and personnel qualifications applicable for the coatings program implementation are in compliance with Regulatory Guide 1.54 (1973), and the implementation is based on the following documents: (1) ANSI N 101.2-1972, "Protective Coatings (Plants) for Light Water Nuclear Reactor Containment Facilities;" (2) ANSI N101.4-1972, "Quality Assurance for Protective Coatings Applied to Nuclear Facilities;" and (3) EPRI Report TR-109937, "Guideline on Nuclear Safety-Related Coatings." This program was approved by the NRC staff in a letter dated November 19, 1999.

The licensee further noted that the Qualified (N) Coatings program examination frequency is equivalent to the requirements of Section XI to the ASME Code, and the program requires that when evidence of degradation is detected, a detailed examination and evaluation be performed. The detailed visual examination would be performed in accordance with the provisions of ASME Code, Section XI, paragraph IWE-2310(c). The exterior surfaces of the vent system that connects the drywell to the suppression pool are located in the reactor building. The reactor building environment does not pose adverse conditions that would promote rapid degradation of the outside pressure boundary surfaces of the vent system. The interior surfaces of the vent system that connect the drywell to the suppression pool and the portions of the vent system located inside the suppression pool are maintained in a nitrogen

inerted environment during normal power operation in accordance with technical specification requirements. Operational experience and previous examinations have indicated that this environment does not promote rapid degradation of the surfaces.

The licensee stated that the requirements specified for a VT-3 examination were developed for detecting flaws in metal components and are more stringent than those required for detecting corrosion-related degradation. Since corrosion of base metal is the primary issue of concern for containment pressure boundary surface areas, a general visual-type examination, in accordance with the Hatch 1 and 2 Qualified (N) Coatings Program, is sufficient to inspect the subject surface areas of the containment and will provide an acceptable level of quality and safety.

In summary, the licensee is proposing an exemption from the requirements of Section 50.55a(b)(2)(ix)(G) to use an alternate examination method to examine Item E.20 of Table IWE-2500-1 of ASME Code, Section XI, pursuant to 10 CFR 50.12(a)(1) and 10 CFR 50.12(a)(2)(ii). The licensee stated in its application that compliance with the visual examination requirements of Section 50.55a(b)(2)(ix)(G) is not necessary for accessible surface areas of the containment vessel pressure retaining boundary Vent System to achieve the underlying purpose of the rule.

3.0 DISCUSSION

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 50 when: (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present. Special circumstances are present whenever, in accordance with 10 CFR Part 50.12(a)(2)(ii), “Application of the regulation in the particular circumstances would

not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule..." Therefore, in determining the acceptability of the licensee's exemption request, the NRC staff has performed the following evaluation to satisfy the requirements of 10 CFR 50.12 for granting the exemption.

The underlying purpose of 10 CFR 50.55a(b)(2)(ix)(G), as it applies to Item E1.20 of Table IWE-2500-1, is to ensure that an examination of the metal containment or the metal liner of a concrete containment is performed to identify corrosion or other degradation that could affect the structural or leak-tight integrity of the structure.

The NRC staff examined the licensee's rationale to support the exemption request and concluded that maintaining the integrity of the coating system applied to the Hatch 1 and 2 containment vent system components is a preventive measure that would protect against corrosion of the coated components. As the licensee emphasizes the effectiveness of its coating program, the NRC staff believes that the general visual examination performed as part of maintaining the integrity of the coating system is a proactive action and will ensure the integrity of the coated vent system components. The proposed alternative will provide the quality and safety level similar to the one intended by the use of VT-3 examination of the vent system components, and would meet the underlying purpose of 10 CFR Section 50.55a(b)(2)(ix)(G).

Based on a consideration of proposed alternatives contained in the licensee's letters dated March 20, and August 2 and 24, 2005, the NRC staff concludes that degradation of the containment structure would be detected using the proposed alternative, thus meeting the underlying purpose of the rule. Therefore, the NRC staff concludes that the proposed exemption from 10 CFR Section 50.55a(b)(2)(ix)(G) is acceptable.

4.0 CONCLUSION

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. Also, special circumstances are present. Therefore, the Commission hereby grants SNC an exemption from the requirement of 10 CFR Section 50.55a(b)(2)(ix)(G) to perform a VT-3 examination for Item E1.2 of Table IWE-2500-1, for Hatch 1 and 2, for the 4th 10-year ISI interval.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will not have a significant effect on the quality of the human environment (70 FR 76082).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 6th day of January 2006.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Catherine Haney, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation