



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 4, 2019

Ms. Cheryl A. Gayheart
Regulatory Affairs Director
Southern Nuclear Operating Co., Inc.
3535 Colonnade Parkway
Birmingham, AL 35243

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2, ISSUANCE OF AMENDMENT NOS. 298 AND 243, REGARDING REVISION TO TECHNICAL SPECIFICATION 3.6.4.1 – SECONDARY CONTAINMENT (EPID L-2018-LLA-0288)

Dear Ms. Gayheart:

The Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 298 to Renewed Facility Operating License No. DPR-57 and Amendment No. 243 to Renewed Facility Operating License No. NPF-5 for the Edwin I. Hatch Nuclear Plant (Hatch), Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated October 17, 2018.

The amendments revise Hatch TS Actions associated with the secondary containment. Specifically, when one or more combinations of required standby gas treatment (SGT) subsystems cannot maintain adequate vacuum in the secondary containment, Southern Nuclear Operating Company requests 7 days to determine and correct the cause of the secondary containment degradation provided at least one combination of operable SGT subsystems can establish and maintain adequate secondary containment vacuum.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, appearing to read "John G. Lamb".

John G. Lamb, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

Enclosures:

1. Amendment No. 298 to DPR-57
2. Amendment No. 243 to NPF-5
3. Safety Evaluation

cc: Listserv



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-321

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 298
Renewed License No. DPR-57

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit No. 1 (the facility) Renewed Facility Operating License No. DPR-57 filed by Southern Nuclear Operating Company, Inc. (the licensee), acting for itself, Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the owners), dated October 17, 2018, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

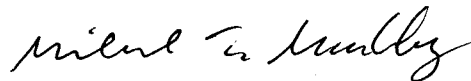
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-57 is hereby amended to read as follows:

- (2) Technical Specifications

The Technical Specifications (Appendix A) and the Environmental Protection Plan (Appendix B), as revised through Amendment No. 298, are hereby incorporated in the renewed license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License No. DPR-57
and Technical Specifications

Date of Issuance: September 4, 2019

ATTACHMENT TO LICENSE AMENDMENT NO. 298

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 1

RENEWED FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

Replace the following pages of the License and the Appendix A Technical Specifications (TSs) with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

Insert Pages

License

License

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TSs

TSs

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for sample analysis or instrumentation calibration, or associated with radioactive apparatus or components

- (6) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- (C) This renewed license shall be deemed to contain, and is subject to, the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 of Part 50, and Section 70.32 of Part 70; all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and the additional conditions² specified or incorporated below:

(1) Maximum Power Level

Southern Nuclear is authorized to operate the facility at steady state reactor core power levels not in excess of 2804 megawatts thermal.

(2) Technical Specifications

The Technical Specifications (Appendix A) and the Environmental Protection Plan (Appendix B); as revised through Amendment No. 298 are hereby incorporated in the renewed license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

The Surveillance Requirement (SR) contained in the Technical Specifications and listed below, is not required to be performed immediately upon implementation of Amendment No. 195. The SR listed below shall be successfully demonstrated before the time and condition specified:

SR 3.8.1.18 shall be successfully demonstrated at its next regularly scheduled performance.

(3) Fire Protection

Southern Nuclear shall implement and maintain in effect all provisions of the fire protection program, which is referenced in the Updated Final Safety Analysis Report for the facility, as contained in the updated Fire Hazards Analysis and Fire Protection Program for the Edwin I. Hatch Nuclear Plant, Units 1 and 2, which was originally submitted by letter dated July 22, 1986. Southern Nuclear may make changes to the fire protection program without prior Commission approval only if the changes

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary containment,
During CORE ALTERATIONS.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. Secondary containment inoperable in MODE 1, 2, or 3 due to SR 3.6.4.1.3 not met.</p>	<p>A.1 Verify secondary containment vacuum of ≥ 0.20 inch water gauge can be established in ≤ 10 minutes using one or more OPERABLE standby gas treatment (SGT) subsystem(s).</p> <p><u>AND</u></p> <p>A.2 Restore secondary containment to OPERABLE status.</p>	<p>4 hours</p> <p>7 days</p>
<p>B. Secondary containment inoperable in MODE 1, 2, or 3 due to SR 3.6.4.1.4 not met.</p>	<p>B.1 Verify secondary containment vacuum of ≥ 0.20 inch water gauge can be maintained for 1 hour using one or more OPERABLE SGT subsystem(s) at a flow rate ≤ 4000 cfm per subsystem.</p> <p><u>AND</u></p>	<p>8 hours</p> <p>(continued)</p>

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.2 Restore secondary containment to OPERABLE status.	7 days
C. Secondary containment inoperable in MODE 1, 2, or 3 for reasons other than Condition A or B.	C.1 Restore secondary containment to OPERABLE status.	4 hours
D. Required Action and associated Completion Time of Condition A, B, or C not met.	D.1 -----NOTE----- LCO 3.0.4.a is not applicable when entering MODE 3. ----- Be in MODE 3.	12 hours
E. Secondary containment inoperable during movement of irradiated fuel assemblies in the secondary containment or during CORE ALTERATIONS.	E.1 -----NOTE----- LCO 3.0.3 is not applicable. ----- Suspend movement of irradiated fuel assemblies in the secondary containment. <u>AND</u> E.2 Suspend CORE ALTERATIONS.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	<p>-----NOTE-----</p> <p>The number of standby gas treatment (SGT) subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.</p> <p>-----</p> <p>Verify secondary containment can be drawn down to ≥ 0.20 inch of vacuum water gauge in ≤ 10 minutes using required standby gas treatment (SGT) subsystem(s).</p>	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.4	<p>-----NOTE-----</p> <p>The number of SGT subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.</p> <p>-----</p> <p>Verify the secondary containment can be maintained ≥ 0.20 inch of vacuum water gauge for 1 hour using required SGT subsystem(s) at a flow rate ≤ 4000 cfm per subsystem.</p>	In accordance with the Surveillance Frequency Control Program



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MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-366

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 243
Renewed License No. NPF-5

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit No. 2 (the facility) Renewed Facility Operating License No. NPF-5 filed by Southern Nuclear Operating Company, Inc. (the licensee), acting for itself, Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the owners), dated October 17, 2018, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-5 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications (Appendix A) and the Environmental Protection Plan (Appendix B), as revised through Amendment No. 243 are hereby incorporated in the renewed license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License No. NPF-5
and Technical Specifications

Date of Issuance: September 4, 2019

ATTACHMENT TO LICENSE AMENDMENT NO. 243

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2

RENEWED FACILITY OPERATING LICENSE NO. NPF-5

DOCKET NO. 50-366

Replace the following pages of the License and the Appendix A Technical Specifications (TSs) with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

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- (6) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- (C) This renewed license shall be deemed to contain, and is subject to, the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 of Part 50, and Section 70.32 of Part 70; all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and the additional conditions² specified or incorporated below:
- (1) Maximum Power Level
- Southern Nuclear is authorized to operate the facility at steady state reactor core power levels not in excess of 2,804 megawatts thermal, in accordance with the conditions specified herein.
- (2) Technical Specifications
- The Technical Specifications (Appendix A) and the Environmental Protection Plan (Appendix B); as revised through Amendment No. 243 are hereby incorporated in the renewed license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
- (3) Additional Conditions
- The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following the issuance of the renewed license or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the license supported by a favorable evaluation by the Commission.
- (a) Fire Protection
- Southern Nuclear shall implement and maintain in effect all provisions of the fire protection program, which is referenced in the Updated Final Safety Analysis Report for the facility, as contained

² The original licensee authorized to possess, use, and operate the facility with Georgia Power Company (GPC). Consequently, certain historical references to GPC remain in certain license conditions.

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary
containment,
During CORE ALTERATIONS.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. Secondary containment inoperable in MODE 1, 2, or 3 due to SR 3.6.4.1.3 not met.</p>	<p>A.1 Verify secondary containment vacuum of ≥ 0.20 inch water gauge can be established in ≤ 10 minutes using one or more OPERABLE standby gas treatment (SGT) subsystem(s).</p> <p><u>AND</u></p> <p>A.2 Restore secondary containment to OPERABLE status.</p>	<p>4 hours</p> <p>7 days</p>
<p>B. Secondary containment inoperable in MODE 1, 2, or 3 due to SR 3.6.4.1.4 not met.</p>	<p>B.1 Verify secondary containment vacuum of ≥ 0.20 inch water gauge can be maintained for 1 hour using one or more OPERABLE SGT subsystem(s) at a flow rate ≤ 4000 cfm per subsystem.</p> <p><u>AND</u></p>	<p>8 hours</p> <p>(continued)</p>

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.2 Restore secondary containment to OPERABLE status.	7 days
C. Secondary containment inoperable in MODE 1, 2, or 3 for reasons other than Condition A or B.	C.1 Restore secondary containment to OPERABLE status.	4 hours
D. Required Action and associated completion Time of Condition A, B, or C not met.	D.1 -----NOTE----- LCO 3.0.4.a is not applicable when entering MODE 3. ----- Be in MODE 3.	12 hours
E. Secondary containment inoperable during movement of irradiated fuel assemblies in the secondary containment or during CORE ALTERATIONS.	E.1 -----NOTE----- LCO 3.0.3 is not applicable. ----- Suspend movement of irradiated fuel assemblies in the secondary containment. <u>AND</u> E.2 Suspend CORE ALTERATIONS.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	<p>-----NOTE-----</p> <p>The number of standby gas treatment (SGT) subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.</p> <p>-----</p> <p>Verify secondary containment can be drawn down to ≥ 0.20 inch of vacuum water gauge in ≤ 10 minutes using required standby gas treatment (SGT) subsystem(s).</p>	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.4	<p>-----NOTE-----</p> <p>The number of SGT subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.</p> <p>-----</p> <p>Verify the secondary containment can be maintained ≥ 0.20 inch of vacuum water gauge for 1 hour using required SGT subsystem(s) at a flow rate ≤ 4000 cfm per subsystem.</p>	In accordance with the Surveillance Frequency Control Program



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

AMENDMENT NO. 298 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-57

AND

AMENDMENT NO. 243 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-5

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

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

DOCKET NOS. 50-321 AND 50-366

1.0 INTRODUCTION

By application dated October 17, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18290A940), Southern Nuclear Operating Company, Inc. (SNC, the licensee), requested changes to the technical specifications (TSs) 3.6.4.1, "Secondary containment," for the Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2.

The proposed changes would modify the HNP TS Actions associated with the secondary containment. Specifically, when one or more combinations of required standby gas treatment (SGT) subsystems cannot maintain adequate vacuum in the secondary containment, SNC requests 7 days to determine and correct the cause of the secondary containment degradation provided at least one combination of Operable SGT subsystems can establish and maintain adequate secondary containment vacuum.

2.0 REGULATORY EVALUATION

The secondary containment satisfies Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 36, "Technical specifications," paragraph (c)(2)(ii), Criterion 3. The leak tightness of the secondary containment ensures that the release of radioactive materials from the primary containment is restricted to those leakage paths and associated leakage rates assumed in the accident analysis and that fission products entrapped within the secondary containment structure will be treated by the SGT systems prior to discharge to the environment. According to the TS bases, the function of the secondary containment is to contain, dilute, and hold up fission products that may leak from primary containment following a Design Basis Accident (DBA).

The proposed change does not delete requirements associated with the secondary containment and Limiting Condition for Operations (LCO) 3.6.4.1 continues to maintain requirements associated with structures, systems, and components that are part of the primary success path and actuate to mitigate the related design basis accidents and transients. In addition, the proposed change does not eliminate remedial actions or shutdown requirements required by 10 CFR 50.36(c)(2)(i); rather, the proposed change provides additional action requirements similar to action requirements currently provided in the SGT system TS for a similar condition. The additional time proposed to restore the secondary containment allows time to determine the cause of the secondary containment integrity degradation; e.g., degraded door seals and dampers or a degraded SGT system. The risk of providing additional time to restore the leak-tightness of the secondary containment to support any combination of SGT subsystems is offset by the proposed requirement to verify that at least one or more operable SGT subsystems can establish and maintain vacuum within the required time periods. Because the secondary containments for both Units 1 and 2 are interconnected during plant operation, the proposed change also reduces the need for a dual unit shutdown and the associated risk during this condition by allowing more time to identify the degraded components and restore the secondary containments to operable status.

The regulation 10 CFR 50.67, "Accident source term," (b)(2) states that the U.S. Nuclear Regulatory Commission (NRC) may issue a license amendment only if the applicant's analysis demonstrates with reasonable assurance that:

- (i) An individual located at any point on the boundary of the exclusion area for any 2-hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 0.25 Sv (25 rem)¹ total effective dose equivalent (TEDE),
- (ii) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage), would not receive a radiation dose in excess of 0.25 Sv (25 rem) total effective dose equivalent (TEDE),
- (iii) Adequate radiation protection is provided to permit access to and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 0.05 Sv (5 rem) total effective dose equivalent (TEDE) for the duration of the accident.

Regulatory Guide (RG) 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors," Revision 0, July 2000 (ADAMS Accession No. ML003716792), provides the methodology for analyzing the radiological consequences of several design basis accidents to show compliance with 10 CFR 50.67. The RG 1.183 provides guidance to licensees on acceptable application of alternate source term (AST) (also known as the accident source term) submittals, including acceptable radiological analysis assumptions for use in conjunction with the accepted AST.

¹ The use of 0.25 Sv (25 rem) TEDE is not intended to imply that this value constitutes an acceptable limit for emergency doses to the public under accident conditions. Rather, this 0.25 Sv (25 rem) TEDE value has been stated in this section as a reference value, which can be used in the evaluation of proposed design basis changes with respect to potential reactor accidents of exceedingly low probability of occurrence and low risk of public exposure to radiation.

NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition," (SRP) Section 15.0.1, "Radiological Consequence Analyses Using Alternative Source Terms," Revision 0, July 2000 (ADAMS Accession No. ML003734190), provides guidance to the NRC staff for the review of alternative source term amendment requests. SRP 15.0.1 states that the NRC reviewer should evaluate the proposed change against the guidance in RG 1.183.

In its letter dated October 17, 2018, the licensee stated that:

HNP, Unit 1 secondary containment system was designed to the following applicable Atomic Energy Commission preliminary general design criteria (GDC) identified in *Federal Register* published on July 11, 1967 (32 FR 10213) (ADAMS Accession No. ML043310029):

1967 GDC 10: The reactor building encompasses the primary containment and, in conjunction with the SGT system and main stack, provides secondary containment when the primary containment is closed and in service, in addition to providing containment when the primary containment is open, e.g., during refueling periods. The proposed amendments do not alter the design of the secondary containment system, SGT system, or main stack. The proposed amendments provide additional action requirements similar to action requirements currently provided in the SGT system TS. The proposed action requirements continue to ensure the release of radioactive materials from the primary containment is restricted to those leakage paths and associated leakage rates assumed in the accident analysis and that fission products entrapped within the secondary containment structure will be treated by the SGT systems prior to discharge to the environment.

1967 GDC 62, 63, 64, and 65: The SGT system is designed to permit periodic testing of the system performance and the system can be physically inspected and its operability demonstrated. The proposed amendments do not alter the design of the secondary containment system or the SGT system. Provisions to facilitate periodic inspections of active components and other important equipment of the secondary containment system, including the SGT system, isolation dampers, penetrations and door seals, is not altered by the proposed change and the secondary containment continues to provide sufficient test connections and isolation valves to permit periodic vacuum testing.

The HNP, Unit 2 secondary containment system was designed to the following 10 CFR Part 50, Appendix A GDC for Nuclear Power Plants:

10 CFR 50, Appendix A - Single failure: The proposed change does not alter the design of the secondary containment or the SGT system. Therefore, the SGT system continues to meet the single failure definition as previously approved in the HNP, Unit 2 license. The proposed change provides additional action requirements similar to action requirements currently provided in the SGT system TS for a similar single active failure condition and does not allow continued operation with a potential single failure condition beyond that currently allowed for the SGT system.

GDC 5: Sharing of structures, systems, and components: The proposed change does not alter the design of the secondary containment or SGT system and these shared systems continue to be capable of performing their safety functions, including, in the event of an accident in one unit and an orderly shutdown and cooldown of the remaining unit, as previously licensed and approved by the NRC.

GDC 16: Containment design: Reactor containment and associated systems shall be provided to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment and to assure that the containment design conditions important to safety are not exceeded for as long as postulated accident conditions require.

GDC 19: Control room: A control room shall be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain it in a safe condition under accident conditions, including loss-of-coolant accidents. Adequate radiation protection shall be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident. Equipment at appropriate locations outside the control room shall be provided (1) with a design capability for prompt hot shutdown of the reactor, including necessary instrumentation and controls to maintain the unit in a safe condition during hot shutdown, and (2) with a potential capability for subsequent cold shutdown of the reactor through the use of suitable procedures.

GDC 41, 42, and 43: Containment atmosphere cleanup, inspection, and testing: The proposed change does not alter the design of the secondary containment system or the SGT system. The proposed amendments provide additional action requirements similar to action requirements currently provided in the SGT system TS. The proposed action requirements continue to ensure the release of radioactive materials from the primary containment is restricted to those leakage paths and associated leakage rates assumed in the accident analysis and that fission products entrapped within the secondary containment structure will be treated by the SGT systems prior to discharge to the environment. Provisions to facilitate periodic inspections of active components and other important equipment of the secondary containment system, including the SGT system, isolation dampers, penetrations and door seals, is not altered by the proposed change and the secondary containment continues to provide sufficient test connections and isolation valves to permit periodic vacuum testing.

License Amendment No. 256 for HNP, Unit 1 and License Amendment No. 200 for HNP, Unit 2, dated August 28, 2008 (ADAMS Accession No. ML081770075), "Edwin I. Hatch Nuclear Plant, Unit Nos. 1 and 2, Issuance of Amendments Regarding Alternative Source Term (TAC Nos. MD2934 and MD2935)," used an AST methodology for analyzing the radiological consequences of four design-basis accidents using RG 1.183. The NRC staff also considered relevant

information in Chapter 15 of the HNP Updated Final Safety Analysis Report (UFSAR), which describes the DBA and evaluates their radiological consequences.

The regulatory requirements and guidance on which the NRC staff based its acceptance of this license amendment request are the reference values in 10 CFR 50.67, the accident specific guideline values in Regulatory Position 4.4 of RG 1.183, and Table 1 of SRP Section 15.0.1.

3.0 TECHNICAL EVALUATION

3.1 System Design and Operation

The reactor building is designed as a low-in-leakage, elevated-release, secondary containment system, which houses the primary containment system, refueling facilities, and most of the components of the nuclear steam supply system. The secondary containment system provides secondary containment when the primary containment system is closed and in-service; it also provides primary containment when the primary containment system is open, as in refueling. The secondary containment system consists of the reactor building, SGT system, reactor building isolation control system, and main stack.

In the event of a postulated pipe break inside the drywell or a fuel handling accident, the reactor building is isolated by the reactor building isolation control system to provide a low leakage barrier. The SGT system is initiated by the same conditions that isolate the reactor building. The SGT system exhausts air from the reactor building to maintain a reduced pressure within the reactor building relative to the outside atmosphere. The system also treats air to remove particulates and iodines and releases air through the elevated release point, the main stack. Further details for the system design and operation can be found on pages E-1 through E-4 of the letter dated October 17, 2018.

3.2 Current Technical Specifications Requirements

The letter dated October 17, 2018, stated the following current TSs requirements.

The current TS Limiting Condition for Operation (LCO) 3.6.4.1 requires the secondary containment to be Operable and is applicable in Modes 1, 2 and 3; during movement of irradiated fuel assemblies in the secondary containment; and during Core Alterations.

In the condition when the secondary containment is inoperable in Mode 1, 2, or 3 (Condition A of TS 3.6.4.1), the required action is to restore the secondary containment to Operable status within 4 hours. If the required action and the associated completion time are not met (Condition B of TS 3.6.4.1), the plant must be placed in Mode 3 in 12 hours.

In addition, TS LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," requires the Unit 1 and Unit 2 SGT subsystems required to support LCO 3.6.4.1 to be Operable and is applicable in Modes 1, 2 and 3; during movement of irradiated fuel assemblies in the secondary containment; and during Core Alterations. When secondary containment is aligned in Type A or B2 configuration, two Unit 1 and two Unit 2 SGT subsystems are required to be Operable to meet LCO 3.6.4.3. When the secondary containment is aligned in Type B1 or C configuration, at

least one Unit 1 SGT and two Unit 2 SGT subsystems are required to be Operable to meet LCO 3.6.4.3.

In the condition when one required Unit 1 SGT subsystem is inoperable when four SGT subsystems are required Operable and the Unit 1 reactor building-to-refueling floor plug is not installed (Condition A of TS 3.6.4.3), the required action is to restore the required Unit 1 SGT subsystem to Operable status within 30 days from discovery of failure to meet the LCO. In the condition when one required Unit 2 SGT subsystem is inoperable or one required Unit 1 SGT subsystem is inoperable for reasons other than Condition A (Condition B of TS 3.6.4.3), the required action is to restore the required SGT subsystem to Operable status within 7 days. If the required action and the associated completion time are not met (Condition C of TS 3.6.4.3), the plant must be placed in Mode 3 in 12 hours.

3.3 Reason for the Proposed Change

By letter dated March 21, 2018 (ADAMS Accession No. ML18080A054), SNC submitted Licensee Event Report (LER) 2018-001 regarding a condition prohibited by TSs due to secondary containment inoperability for HNP, Units 1 and 2.

On January 20, 2018, the licensee performed a secondary containment drawdown test, which was completed unsatisfactorily due to not being able to establish greater than or equal to 0.20 inches of vacuum water gauge within 10 minutes in accordance with TS Surveillance Requirement (SR) 3.6.4.1.3. This test was performed by SNC using the 1 A, 1 B, and 2A SGT trains. The licensee operations personnel entered the required action statement for an inoperable secondary containment. A subsequent secondary containment drawdown test was successfully performed by SNC using the 1B, 2A, and 2B SGT trains. The required action statement was therefore exited by the licensee due to meeting the SR.

Subsequent troubleshooting by the licensee revealed degraded secondary containment door seals. The degraded secondary containment doors were repaired by SNC and a satisfactory secondary containment drawdown test using the 1A, 1B, and 2A SGT trains was completed on January 25, 2018. As part of the corrective actions, the secondary containment door preventative maintenance procedure was revised by the licensee with enhanced actions to prevent recurrence of degraded components.

Further details regarding the reason for the proposed change can be found on pages E-5 and E-6 in the letter dated October 17, 2018.

The licensee's letter dated October 17, 2018, states:

...
However, TS 3.6.4.1 Required Action A.1 only allows 4 hours to restore secondary containment to Operable status when the secondary containment is inoperable, including conditions where the leakage results in one or more combinations of SGT subsystems not capable of establishing adequate secondary containment vacuum within the required time. This completion time does not provide adequate time to determine the underlying cause of the inoperability; whether a degraded secondary containment or an inoperable SGT subsystem.
...

The proposed TS change will provide additional time to determine the cause of the degraded secondary containment and restore it to Operable status, provided at least one combination of Operable SGT subsystems can establish and maintain adequate secondary containment vacuum within the required time periods. The proposed change also obviates the need for a dual unit shutdown and the associated risk as a result of this condition when both HNP units are operating.

3.4 Description of the Proposed Change

3.4.1 TS 3.6.4.1, "Secondary Containment," Added Condition A

Proposed TS Condition A, would state:

Secondary containment inoperable in MODE 1, 2, or 3 due to SR 3.6.4.1.3 not met.

Current TS SR 3.6.4.1.3 states:

NOTE: The number of standby gas treatment (SGT) subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.

Verify secondary containment can be drawn down to ≥ 0.20 inch of vacuum water gauge in ≤ 10 minutes using required standby gas treatment (SGT) subsystem(s).

In accordance with the Surveillance Frequency Control Program

Proposed Required Action A.1 would state:

Verify secondary containment vacuum of ≥ 0.20 inch water gauge can be established in ≤ 10 minutes using one or more OPERABLE standby gas treatment (SGT) subsystem(s); with a Completion Time of 4 hours.

AND

Proposed Required Action A.2 would state:

Restore secondary containment to OPERABLE status; with a Completion Time of 7 days.

3.4.2 TS 3.6.4.1, "Secondary Containment," Added Condition B

Proposed TS Condition B, would state:

Secondary containment inoperable in MODE 1, 2, or 3 due to SR 3.6.4.1.4 not met.

Current SR 3.6.4.1.4 states:

NOTE: The number of SGT subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.

Verify the secondary containment can be maintained ≥ 0.20 inch of vacuum water gauge for 1 hour using required SGT subsystem(s) at a flow rate ≤ 4000 cfm per subsystem.

In accordance with the Surveillance Frequency Control Program

AND

Proposed Required Action B.1 would state:

Verify secondary containment vacuum of ≥ 0.20 inch water gauge can be maintained for 1 hour using one or more OPERABLE SGT subsystem(s) at a flow rates ≤ 4000 cfm [cubic feet per minute] per subsystem;" with a Completion Time of 8 hours.

Proposed Required Action B.2 would state:

Restore secondary containment to OPERABLE status;" with a Completion Time of 7 days.

3.4.2 Editorial Changes

Existing Conditions A, B, and C and associated required actions are renumbered. In addition, the following revisions are proposed as a result of the new conditions (added text in *italics*):

Existing Condition A (proposed Condition C) is revised to state:

Secondary containment inoperable in MODE 1, 2, or 3 *for reasons other than Condition A or B.*

Existing Condition B (proposed Condition D) is revised to state:

Required Action and associated Completion Time of Condition A, B, or C not met.

The proposed changes are shown in the marked-up TS pages provided in Attachments 1 and 2 of the letter dated October 17, 2018. The existing conditions A, B, and C and associated required actions are renumbered and additional text provides clarity; therefore, the NRC staff finds these changes to be editorial and are, therefore, acceptable.

3.5 NRC Staff Evaluation

3.5.1 Design-Basis Accidents

The two principal accidents for which credit is taken for secondary containment Operability are a loss-of-coolant accident (LOCA) and a fuel handling accident (FHA) inside secondary containment.

The current licensing basis radiological consequence analysis for the DBA LOCA is presented in UFSAR Section 15.3.3, "Loss-of-Coolant Accident." As indicated in Section 15.3.3 of the HNP, Unit 2 Final Safety Analysis Report (FSAR), which also applies to HNP, Unit 1, as referenced in the HNP, Unit 1 FSAR, the LOCA analysis assumes secondary containment is drawn down to a negative pressure of 0.20 inches water gauge with respect to the atmosphere in 10 minutes. This 10-minute time period is referred to as the secondary containment drawdown period. The primary containment leakage pathway is modeled by the licensee as the leakage from the primary containment prior to the establishment of this sustained negative pressure. The initial onset of fission products released from the fuel rod gap to the reactor coolant system, referred to as the gap release, is not postulated to begin until 2 minutes after the initiation of the accident. Therefore, there is a possibility of fission products being released to the environment during the modeled time period between the two-minute gap release and the 10-minute reactor building drawdown time. In the DBA LOCA analysis, excluding two-percent of the leakage that is released through bypass lines, all primary containment leakage is conservatively diluted in 50-percent of the reactor building volume and released directly to the environment at ground level. After secondary containment is assumed to be completely drawn down to negative pressure at 10 minutes after LOCA initiation, primary containment leakage into the secondary containment will be filtered by the SGT system in the secondary containment. The SGT system filters are credited with a 95-percent removal efficiency for all forms of iodine. Primary containment activity processed by the SGT system is assumed to be released through the main stack at the maximum TS flow rate of 4,000 cubic feet per minute (cfm) per unit. The licensee recognized that it is possible for the SGT system fans of both units to be in operation, taking suction from one unit; therefore, the licensee assumed a maximized combined release rate of 8,000 cfm from one reactor building. The licensee's model of this release path is consistent with RG 1.183. The analysis shows acceptable radiological doses to the occupants of the main control room and the technical support center and to persons located at the exclusion area boundary (EAB) and the low population zone (LPZ).

The HNP licensing basis FHA analysis is presented in UFSAR Section 15.3.5, "Fuel Handling Accident." The purpose of this analysis is to demonstrate that the engineered safety features designed to mitigate the radiological consequences of the FHA at HNP are adequate. The licensee's evaluation of the various conditions that can exist when the drywell head is off reveals that the greatest potential for the release of radioactive material occurs when the reactor pressure vessel head, dryers, and separators are also removed. In this configuration, radioactive material released because of fuel damage is available for transport directly to the refueling floor. As analyzed by the licensee, the postulated FHA involves a drop of a fuel assembly on top of other fuel assemblies in the reactor core during refueling operations. The licensee determined that the drop distance associated with this location bounds the maximum height that is allowed by the HNP refueling equipment configuration and is the limiting case because it results in the maximum release of fission products to the secondary containment. The licensee determined that the damage due to a fuel assembly drop over the core into the reactor vessel bounds that due to a drop in the spent fuel pool. The FHA analysis considers two cases:

- Case 1: A 10-minute drawdown time for the secondary containment. Prior to that time, the licensee assumed that airborne activity is released, unfiltered, and at ground level. After secondary containment drawdown, all of the airborne activity was assumed to be collected by the SGT system and released. The release is elevated and filtered at a 95 percent efficiency for particulates and all forms of iodine.
- Case 2: The licensee took no credit for secondary containment isolation or operation of the SGT system. The airborne activity was assumed to be released, unfiltered, and at ground level for the duration of the accident.

The license amendment requests to modify the HNP TS Actions associated with the secondary containment. Specifically, when one or more combinations of required SGT subsystems cannot maintain adequate vacuum in the secondary containment, SNC requests 7 days to determine and correct the cause of the secondary containment degradation provided at least one combination of Operable SGT subsystems can establish and maintain adequate secondary containment vacuum.

In Section 2.2 of its letter dated October 17, 2018, the licensee states:

The current TS Limiting Condition for Operation (LCO) 3.6.4.1 requires the secondary containment to be Operable and is applicable in Modes 1, 2 and 3; during movement of irradiated fuel assemblies in the secondary containment; and during Core Alterations.

In the condition when the secondary containment is inoperable in: Mode 1, 2, or 3 (Condition A of TS 3.6.4.1), the required action is to restore the secondary containment to Operable status within 4 hours. If the required action and the associated completion time are not met (Condition B of TS 3.6.4.1), the plant must be placed in Mode 3 in 12 hours.

In addition, TS LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," requires the HNP, Unit 1 and HNP, Unit 2 SGT subsystems required to support LCO 3.6.4.1 to be Operable and is applicable in: Modes 1, 2 and 3; during movement of irradiated fuel assemblies in the secondary containment; and during Core Alterations. When secondary containment is aligned in Type A or B2 configuration, two Unit 1 and two Unit 2 SGT subsystems are required to be Operable to meet LCO 3.6.4.3. When the secondary containment is aligned in Type B1 or C configuration, at least one Unit 1 SGT and two Unit 2 SGT subsystems are required to be Operable to meet LCO 3.6.4.3.

In the condition when one required Unit 1 SGT subsystem is inoperable when four SGT subsystems are required Operable and the Unit 1 reactor building-to-refueling floor plug is not installed (Condition A of TS 3.6.4.3), the required action is to restore the required Unit 1 SGT subsystem to Operable status within 30 days from discovery of failure to meet the LCO. In the condition when one required Unit 2 SGT subsystem is inoperable or one required Unit 1 SGT subsystem is inoperable for reasons other than Condition A (Condition B of TS 3.6.4.3) the required action is to restore the required SGT subsystem to Operable status within 7 days. If the required action and the associated completion time

are not met (Condition C of TS 3.6.4.3), the plant must be placed in Mode 3 in 12 hours.

In Section 3.3 of its letter dated October 17, 2018, the licensee states:

Proposed Required Action A.1 ensures one or more Operable SGT subsystems is capable of establishing a vacuum of ≥ 0.20 -inch water gauge in ≤ 10 minutes. The 4-hour completion time is equivalent to the current Required Action A.1 (proposed Required Action C.1) and provides a reasonable time period to lineup and start combinations of Operable SGT subsystems to determine a combination capable of establishing the required vacuum. Proposed Required Action B.1 ensures one or more Operable SGT subsystems is capable of maintaining a vacuum of ≥ 0.20 -inch water gauge for at least 1-hour at a system flow rate ≤ 4000 cfm per subsystem. The 8-hour completion time provides a reasonable time period to lineup, start, and run combinations of Operable SGT subsystems and maintain the required vacuum for at least 1 hour.

The proposed amendments do not alter the design of the secondary containment system or the SGT system and do not allow for continued operation with a potential single failure condition beyond that currently allowed for the SGT system.

The licensee further states in its letter dated October 17, 2018:

The proposed change does not affect any of the controlling values or parameters used to avoid exceeding regulatory or licensing dose limits. The proposed change does not exceed or alter the design basis or safety limits, or any limiting safety system settings. The requirement for the secondary containment to perform its designated safety function is unaffected. The proposed change does not delete requirements associated with the secondary containment and LCO 3.6.4.1 continues to maintain requirements associated with structures, systems, and components that are part of the primary success path and actuate to mitigate the related DBA and transients.

The NRC staff reviewed the assumptions, inputs, and methods used by the licensee to assess the radiological consequences of DBAs. The NRC staff finds that the licensee used analysis methods and assumptions consistent with the regulatory requirements and guidance identified above. The NRC staff compared the doses estimated by the licensee to the applicable criteria identified in 10 CFR 50.67. The NRC staff finds, with reasonable assurance that the licensee's estimates of the EAB, LPZ, and control room doses will comply with these criteria. The NRC staff further finds reasonable assurance that HNP, Units 1 and 2, as modified by this license amendment, will continue to provide sufficient safety margins with adequate defense-in-depth to address unanticipated events and to compensate for uncertainties in accident progression and analysis assumptions and parameters.

Therefore, the proposed license amendment is acceptable with respect to the radiological consequences of DBAs. The NRC staff finds the TS changes acceptable.

3.5.2 Technical Analysis of Proposed TS Changes

The SR 3.6.4.1.3 verifies that the secondary containment can be down to ≥ 0.20 inches of water gauge vacuum in ≤ 10 minutes using required SGT subsystem(s). The SR 3.6.4.1.4 verifies that

the secondary containment can be maintained ≥ 0.20 inches of water gauge vacuum for 1 hour using required SGT subsystem(s) at a flow rate ≤ 4000 cfm per subsystem. To ensure that all fission products released to the secondary containment are treated, SR 3.6.4.1.3 and SR 3.6.4.1.4 verify that a pressure in the secondary containment that is less than the lowest postulated pressure external to the secondary containment boundary can rapidly be established and maintained. The associated note with these SRs states that the number of SGT subsystems required for the surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) system," for the given configuration. The proposed changes would add new Conditions A and B, which state that secondary containment is inoperable in MODES 1, 2, or 3, when SR 3.6.4.1.3 or SR 3.6.4.1.4, respectively, is not met. New Required Actions A.1 and B.1 would verify that the drawdown time and the 1-hour run time are met with completion times of 4-hours and 8-hours, respectively. If the verification is successful, Actions A.2 and B.2 would allow a Completion Time of 7 days to restore secondary containment to operable status.

The licensee provided the following information to provide further clarification regarding how the proposed changes would logically proceed from failure of SRs 3.6.4.3 and 3.6.4.4 to the proposed new Conditions A and B in TS 3.6.4.1.

SRs 3.6.4.1.3 and 3.6.4.1.4 are performed using the same test procedure. The surveillances are performed at the same time. The drawdown test occurs first (SR 3.6.4.1.3), then the duration test (SR 3.6.4.1.4) begins once a vacuum of > 0.20 " WG is reached.

Regardless of the combination of SGT subsystems used to perform SRs 3.6.4.1.3 and 3.6.4.1.4, (e.g. either using two Unit 1 SGT subsystems and one Unit 2 SGT subsystem OR using one Unit 1 SGT subsystem and two Unit 2 SGT subsystems), the secondary containment is immediately declared inoperable after the SR is not met in accordance with SR 3.0.1. The underlying cause for the SR not being met is then determined, so that the appropriate TS Conditions are entered. Reasons for not meeting SRs 3.6.4.1.3 and 3.6.4.1.4 could be that the secondary containment itself is degraded, in which case TS 3.6.4.1 Condition A is entered. However, other reasons for not meeting SR 3.6.4.1.3 or SR 3.6.4.1.4 could be that a SGT subsystem used for the surveillance is inoperable. The test would be run with a different combination of SGT subsystems to determine if the cause of the failure was due to an inoperable SGT subsystem. If the SR passes with a different combination of SGT subsystems, then TS 3.6.4.3 Condition A or B is entered, as appropriate. Per LCO 3.0.6, the Secondary Containment is still inoperable; however, the Conditions and Required Actions associated with the Secondary Containment (TS 3.6.4.1 Condition A) are not required to be entered. Section 2.3 of the LAR provides an example from when SR 3.6.4.1.3 was run in January 2018 and was not met.

Regarding usage of the wording “using one or more OPERABLE standby gas treatment (SGT) subsystems” in the proposed new Conditions A and B in TS 3.6.4.1, the licensee stated the following:

If the secondary containment is slightly degraded, SR 3.6.4.1.3 and/or 3.6.4.1.4 may not be able to be met using a combination of two Unit 1 SGT subsystems and one Unit 2 SGT subsystem, due in large part from the shared ductwork of the two Unit 1 SGT subsystems. However, if the SRs can be met using the SGT systems that are Operable at the time (e.g. using the two Unit 2 SGT subsystems), then the secondary containment is capable of performing its safety function, and the assumptions in the Chapter 15 accident analysis can be met. This change would allow additional time (beyond the 4 hours) for a slightly degraded secondary containment if the safety function can still be performed during the time the secondary containment degraded condition is being restored.

If less than the required number of SGT subsystems are Operable per LCO 3.6.4.3, the associated Conditions and Required Actions of TS 3.6.4.3 are entered. SRs 3.6.4.1.3 and 3.6.4.1.4 are required to be Met using one less than the required number of SGT subsystems required per LCO 3.6.4.3, to ensure SRs 3.6.4.1.3 and 3.6.4.1.4 could still be met if there's a single failure on an Operable SGT subsystem. It could be possible that, with one required SGT subsystem inoperable, a combination of operable/inoperable SGT subsystems could draw and maintain proper vacuum (e.g., all 4 SGT subsystems). SNC believes this would not be acceptable.

The licensee explained the different completion times for the proposed new Conditions A and B in TS 3.6.4.1, as follows:

Additional time is needed to perform Required Action B.1 since the required vacuum must be met for 1-hour and that it is a reasonable time to perform this Required Action (i.e., align and run various combinations of SGT subsystems for at least one hour each until one combination is determined acceptable). The 8-hour CT is consistent with TS 3.6.4.2 Required Action A.1.

The current Condition A stating, “Secondary containment inoperable in MODE 1, 2, or 3” with a Required Action to restore secondary containment to Operable status within 4-hours, will be designated as Condition C stating, “Secondary containment inoperable in Mode 1, 2, or 3 for reasons other than Condition A or B”, with Required Action and Completion time of 4-hours unchanged. The licensee described the following regarding inspections that are performed, in addition to SRs 3.6.4.1.1 and 3.6.4.1.2, to determine Secondary Containment integrity.

The equipment hatch and door seals are periodically inspected and maintained in accordance with the requirements of Sections X and XI of 10 CFR 50, Appendix B as described in the HNP quality assurance program and associated plant procedures. Seal integrity of the equipment hatches is verified in accordance with the requirements of SR 3.6.4.1.1 at a frequency in accordance with the [surveillance frequency control program] SFCP. The current performance frequency for this verification is every 31 days. Door seals are inspected in accordance with the plant preventative maintenance schedule at an interval based on the history of seal degradation. Leak tightness of equipment hatch, and door seals are verified during performance of secondary containment drawdown and duration tests (SRs 3.6.4.1.3 and 3.6.4.1.4).

During the time periods between testing and inspections, operators are alerted to a degradation of secondary containment leak tightness by reactor building-to-outside air differential pressure low and refueling floor-to-outside air differential pressure low annunciation provided in the main control room.

The proposed new Condition D, which is current Condition B stating, "Required Action and associated Completion Time of Condition A or B not met" will be revised to state "Required Action and associated Completion Time of Condition A, B, or C not met", with the Required Action and Completion time unchanged from "be in Mode 3 within 12 hours."

The additional time proposed to restore secondary containment provides additional time to determine the cause of the degradation of the secondary containment, be it from seals, dampers, other components, or an inoperable SGT subsystem. During the additional time, the secondary containment function is not compromised by verifying that one or more SGT subsystems are available to perform the required function, and by assuring that any additional leakage is processed through the SGT subsystems prior to its discharge to the main stack. Therefore, compliance with Section 50.36(3)(2)(ii), Criteria 3 and GDC 16 is maintained.

The proposed change does not eliminate remedial actions or shutdown requirements required by the TSs. The change adds additional action requirements by the new Conditions A and B to verify that secondary containment can be drawn down to the required vacuum and maintained at the required vacuum, failing which Hatch Units 1 and 2 will be required to enter Mode 3. Therefore, compliance with Section 50.36(3)(2)(i) is unaffected. GDC 19 and Plant Design Criteria are satisfied to the extent that the required vacuum in the secondary containment is processed through the SGT filter trains prior to discharge to the main stack.

As described above, the NRC staff reviewed the assumptions, inputs, and methods used by the licensee to assess the radiological consequences of DBAs. The NRC staff finds that the licensee used analysis methods and assumptions consistent with the conservative regulatory requirements and guidance identified in Section 2.0 above. The NRC staff compared the doses estimated by the licensee to the applicable criteria identified in Section 2.0. The NRC staff finds, with reasonable assurance, that the licensee's estimates of the EAB, LPZ, and CR doses will comply with these criteria. The NRC staff further finds reasonable assurance that HNP, as modified by this license amendment, will continue to provide sufficient safety margins with adequate defense-in-depth to address unanticipated events and to compensate for uncertainties in accident progression and analysis assumptions and parameters. Therefore, the proposed license amendments are acceptable with respect to the radiological consequences of DBAs.

There are no changes proposed to the system initiation or operation, therefore, compliance with GDC 5 and the Plant Design Criteria are not impacted.

The proposed new Conditions A and B to TS 3.6.4.1 only apply when secondary containment is determined inoperable because of SGT subsystem surveillance tests in SRs 3.6.4.1.3 and 3.6.4.1.4. For all other causes of secondary containment degraded conditions, the current completion time of 4 hours remains applicable. Based on the above, the NRC staff finds the proposed changes acceptable.

The editorial changes identified above in Section 4.4.2 of this document are acceptable because the existing conditions A, B, and C and associated required actions are renumbered and the additional text provides clarity and does not make any technical changes.

Based on the evaluation above, the NRC staff concludes that the proposed TS changes for HNP, Units 1 and 2 are acceptable.

3.5.3 Technical Evaluation Conclusion

The NRC staff has reasonable assurance that the functional capability of secondary containment will be maintained. Based on the above, the NRC staff concludes that there is reasonable assurance the requirements of 10 CFR 50.36 would continue to be met and the proposed TS changes are acceptable for HNP, Units 1 and 2.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Georgia State official was notified of the proposed issuance of the amendments on July 18, 2019. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (84 FR 11342; March 26, 2019). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission 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) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Elijah Dickson, NRR/DRA/ARCB
Nageswara Karipineni, NRR/DSS/SRXB
John G. Lamb, NRR/DORL/LPBII-1

Date: September 4, 2019

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2, ISSUANCE OF AMENDMENT NOS. 298 AND 243, REGARDING REVISION TO TECHNICAL SPECIFICATION 3.6.4.1 – SECONDARY CONTAINMENT (EPID L-2018-LLA-0288) DATE: SEPTRMBER 4, 2019

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