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Docket Nos.: 50-321  
50-366

NL-11-1812

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555-0001

**Edwin I. Hatch Nuclear Plant**  
**Updated Final Safety Analysis Report, Fire Hazards Analysis Changes,**  
**Technical Specification Bases Changes, Technical Requirements Manual**  
**Changes, 10 CFR 50.59 Report, and Revised NRC Commitments Report**

Ladies and Gentlemen:

In accordance with the provisions of Sections 50.4(b) and 50.71(e) of Title 10 of the *Code of Federal Regulations* (10 CFR), Southern Nuclear Operating Company (SNC) hereby submits Revision 29 to the Edwin I. Hatch Nuclear Plant (HNP) Units 1 and 2 Updated Final Safety Analysis Report (UFSAR), Revision 29 of the HNP Units 1 and 2 Fire Hazards Analysis (FHA), Revision 84 of the HNP Unit 1 Technical Requirements Manual (TRM), and Revision 87 of the HNP Unit 2 TRM. This submittal represents changes made through September 9, 2011.

The HNP Unit 1 and Unit 2 Technical Specifications, section 5.5.11, "Technical Specifications (TS) Bases Control Program," provides for changes to the Bases without prior NRC approval. In addition, TS section 5.5.11 requires that Bases changes made without prior NRC approval be provided to the NRC on a frequency consistent with 10 CFR 50.71(e). Pursuant to TS 5.5.11, SNC hereby submits a complete copy of Revision 67 of the HNP Unit 1 TS Bases and Revision 76 of the HNP Unit 2 TS Bases, on CD-ROM, which reflects all changes to TS Bases for the same time period as Revision 29 of the UFSAR.

Enclosure 1 provides a table of contents with associated file names for the CD-ROM provided as Enclosure 2, which meets the requirements of Regulatory Issue Summary (RIS) 2001-05, "Guidance on Submitting Documents to the NRC by Electronic Information Exchange or on CD-ROM." This CD-ROM contains all the current pages of the HNP UFSAR, the UFSAR revised reference drawings, all the current pages of the HNP FHA, all the current pages of the HNP TS Bases, and all the current pages of the HNP TRM in portable document format (PDF) with non-proprietary browser included.

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Enclosure 3 provides the 10 CFR 50.59 Report in accordance with the requirements of 10 CFR 50.59(d)(2), which contains a brief description of any changes, tests, or experiments, including a summary of the safety evaluation of each. This report is based on the same time period as Revision 29 of the UFSAR.

Enclosure 4 contains the Revised NRC Commitments Report, as required to be submitted in accordance with the NEI 99-04, "Guideline for Managing NRC Commitment Changes," Revision 0. This report is based on the same time period as Revision 29 of the UFSAR.

Mr. M. J. Ajluni states he is the Nuclear Licensing Director of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

This letter contains no NRC commitments. If you have any questions, please contact Jack Stringfellow at (205) 992-7037.

Respectfully submitted,



M. J. Ajluni  
Nuclear Licensing Director

Sworn to and subscribed before me this 20 day of October, 2011.

  
Notary Public

My commission expires: 6/9/12

MJA/EGA/lac

- Enclosures:
1. CD-ROM Table of Contents
  2. CD-ROM NRC Submittal: Contains Files 001-013
  3. 10 CFR 50.59 Report
  4. Revised NRC Commitments Report

cc: Southern Nuclear Operating Company  
Mr. S. E. Kuczynski, Chairman, President & CEO (w/o Enclosures)  
Mr. D. G. Bost, Chief Nuclear Officer (w/o Enclosures)  
Mr. D. R. Madison, Vice President – Hatch (w/o Enclosures)  
Ms. P. M. Marino, Vice President – Engineering (w/o Enclosures)  
RType: CHA02.004

U. S. Nuclear Regulatory Commission  
Mr. V. M. McCree, Regional Administrator  
Mr. D. H. Gleaves, NRR Senior Project Manager – Hatch  
Mr. E. D. Morris, Senior Resident Inspector – Hatch

State of Georgia  
Mr. Allen Barnes, Environmental Director Protection Division

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**Enclosure 1**

**CD-ROM Table of Contents**

# HNP-FSAR REVISION 29

## FILE SPECIFICATIONS

SEQ	CONTENT	FILENAME	EXTENSION
001	HATCH FSAR_U1 UNIT 1 Active Page List Table of Contents Chapters 1 thru 14 Appendices A thru K, Supplement Ka, M, N & R		.pdf
002	HATCH FSAR_U2_APL, TOC, CH1 THRU CH5 UNIT 2 Active Page List Table of Contents Chapters 1 thru 5		.pdf
003	HATCH FSAR_U2_CH6 THRU CH7 UNIT 2 Chapters 6 thru 7		.pdf
004	FSAR_U2_CH8 THRU CH 18, APP A UNIT 2 Chapters 8 thru 18 Appendix A		.pdf
005	HATCH FSAR_REF DWGS PART 1 A21603 – H16174		.pdf
006	HATCH FSAR_REF DWGS PART 2 H16176 – H21114		.pdf
007	HATCH FSAR_REF DWGS PART 3 H22250 – H26036		.pdf
008	HATCH FSAR_REF DWGS PART 4 H26037 – S15290		.pdf
009	HATCH FSAR_REF DWGS PART 5 S15304 – SX28760		.pdf
010	HATCH BASES		.pdf
011	HATCH TRM UNIT 1		.pdf
012	HATCH TRM UNIT 2		.pdf
013	HNP FHA		.pdf

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**Enclosure 2**

**CD-ROM NRC Submittal: Contains Files 001-013**

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**Enclosure 3**

**10 CFR 50.59 Report**



Licensing Document Change Requests  
10 CFR 50.59 REPORT

LDCR	LD Type	5059 Full Eval?	Title
2008041	FS	Yes	DCP to lower the HWC injection level to 10% reactor power and add a trip signal from the Mode Switch
<b>Activity:</b> DCP 2081302101			
<b>Description of Change:</b> The DCP will lower the HWC injection level to 10% reactor power and add a trip signal from the Mode Switch on panel 2H11-P603. The Mode Switch contact will be placed in series with the contact from the HWC Control Room Shutdown Switch on panel 2H11-P650.			
<b>5059 Summary:</b> This DCP will make the following changes to the non-safety related Unit 2 Hydrogen Water Chemistry (HWC) system. 1) HWC will be placed into service at ~ 5% power. Between 5% and 30% power, the hydrogen flow-rate will be a constant value (3 SCFM). 2) The "Low Reactor Power" HWC system trip will be deleted. 3) By utilizing a contact on the Reactor mode switch, HWC will automatically shutdown when the mode switch is taken out of the "RUN" position (following a Reactor scram). Section C (of NMP-AD-010-F01) discusses the justification of removing an automatic trip of the HWC system and replacing it with a manual operator action. The manual action would be either placing the Reactor Mode switch to "SHUTDOWN" or placing the Control Room HWC Remote Shutdown Selector switch (located on Main Control Room Panel 2H11-P650) 2P73S405 to "OFF". The Reactor mode switch would be placed to "SHUTDOWN" as part of the Reactor Scram procedure, so no new manual actions would be added. Placing the HWC Remote Shutdown Selector switch located on the P650 panel in the Control Room to "OFF" would only be required while performing the "In Sequence Control Rod Insertion" Reactor Shutdown. This would not add unduly to the actions required by the operator during a normal reactor shutdown. In addition, Section C (of NMP-AD-010-F01) discussed the possible increase to the frequency of occurrence of an accident previously evaluated in the Update FSAR as a result of initiating hydrogen injection prior to the inerting of the drywell. No increase in the frequency of occurrence of an accident was determined based on the HWC system being procedurally shutdown if the hydrogen concentration IS > 2.5% in the drywell. There were no additional consequences, impacts, or malfunctions created as a result of adding the proposed changes to the HWC system.			





Licensing Document Change Requests  
10 CFR 50.59 REPORT

LDCR	LD Type	5059 Full Eval?	Title
2010008	5059	Yes	10 CFR 50.59 Review of TRACG04P for DIVOM Application

**Activity:** 2011200600

**Description of Change:** Periodically, fuel vendors or other code vendors will make changes to their codes and methods to implement improved features, improved methodologies, or error corrections. According to 10 CFR 50.59, changes to a method of evaluation used in establishing the design bases or in the safety analyses (described in the plant's FSAR) must be evaluated to ensure that no NRC approval is required before application. The TRACG computer code is used to model the thermal-hydraulics of boiling water reactors (BWRs). The current version of TRACG04P has been revised from its initial version 4.2.57.11 to its first error correction, version 4.2.60.3 to correct several identified errors described below.

1. An internal limit of the code causes the simulation to fail if the model contains a large number of components.
2. An operation that should return a pseudo-random number returns a constant number.
3. Perturbations in the solution when restarting from a dump file due to the dump file.
4. Improper initialization of a source term that is used at the junction of 1D and 3D components.
5. The PIRT model may incorrectly assume film dryout in some statistical analyses of events.
6. Inability to process METHOD C input cards that results in a program crash.

**5059 Summary:** The TRACG computer code is used to model the thermal-hydraulics of boiling water reactors (BWRs). The current version of TRACG04P has been revised from its initial version 4.2.57.11 to its first error correction, version 4.2.60.3 to correct several identified errors described in Reference 5.

It is concluded that TRACG04P version 4.2.60.3 is not a departure from a method of evaluation described in the Updated FSAR because the DIVOM results are more conservative or essentially the same as those produced by the previously approved TRACG02A.

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**Enclosure 4**

**Revised NRC Commitments Report**

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Enclosure 4

Revised NRC Commitments Report

**Commitment Number:** SNC27678

**Source Document:** HL-6123, Edwin I. Hatch Nuclear Plant Transmittal of Additional Information for License Renewal Draft Safety Evaluation Report Open Items

**Old Commitment:** "...2) require that inside insulation and jackets added to the program are inspected within 2 refueling cycles of issuance of the new operating license and at least once every 10 years thereafter..."

**New Commitment:** "...2) require that inside insulation and jackets added to the program are inspected prior to the period of extended operation and at least once every 10 years thereafter..."

**Basis for Change:** This commitment comes from the Monitoring and Trending portion of the Revised Appendix B to the license renewal application, Section B.2.4, Page B-70. This revised Appendix B was Enclosure 3 to HL-6123. Earlier in Section B.2.4, is a statement that, "Program enhancements will be implemented by midnight August 6, 2014 for Unit 1, and midnight June 13, 2018 for Unit 2." These two statements appear to be contradictory. The normal practice for implementing program enhancements for license renewal was that they be implemented prior to the period of extended operation. Review of written communication between SNC and the NRC concerning review of the Hatch license renewal application, found no discussion of this commitment to explain why it would be different. The NRC's SER repeated back both statements from HL-6123, that the enhancements to this program would be implemented before the period of extended operation and that inside insulation would be inspected within 2 cycles of issuance of the renewed license. The program description in FSAR Section 18.3.4 includes the statement that enhancements will be implemented prior to the period of extended operation but not the requirement to perform the inspection of inside insulation within 2 cycles of issuance of the renewed license. The wording in Section 18 of the FSAR was submitted to the NRC in Enclosure 4 to HL-6123. Also, in ML070640041, a March 6, 2007 memorandum to file from Tommy Le, the NRC documented the commitment lists for Hatch and the other four plants granted a renewed operating license before the NRC began requiring licensees to docket their future action commitment list for license renewal. Item 4 on the list of Hatch commitments was the only one that addressed the Equipment and Piping Insulation Monitoring Program. While it included a requirement to include in-scope portions of inside equipment and piping insulation in periodic inspections, it stated the implementation schedule was, "Prior to the end of the initial operating license term." Therefore, it is reasonable to assume the NRC did not consider the statement concerning when the inspections of inside insulation

would begin to be a commitment they relied upon, or they would have required revision of the FSAR program description to include that statement and would have included the earlier date in the Tommy Le memorandum of March 6, 2007.