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February 26, 2014

Docket Nos.: 50-321  
50-366

NL-14-0180

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

Edwin I. Hatch Nuclear Plant – Units 1 and 2  
Second Six-Month Status Report of the Implementation of the  
Requirements of the Commission Order with Regard to  
Mitigation Strategies for Beyond-Design-Basis External Events (EA-12-049)

References:

1. NRC Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012.
2. NRC Interim Staff Guidance JLD-ISG-2012-01, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, Revision 0, dated August 29, 2012.
3. NEI 12-06, Diverse and Flexible Coping Strategies (FLEX) Implementation Guide, Revision 0, dated August 2012.
4. Edwin I. Hatch Nuclear Plant - Units 1 and 2 Initial Status Report in Response to Commission Order with Regard to Mitigation Strategies for Beyond-Design-Basis External Events (EA-12-049), dated October 23, 2012.
5. Edwin I. Hatch Nuclear Plant - Units 1 and 2 Overall Integrated Plan in Response to Commission Order with Regard to Mitigation Strategies for Beyond-Design-Basis External Events (EA-12-049), dated February 27, 2013.

Ladies and Gentlemen:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued an order (Reference 1) to Southern Nuclear Operating Company. Reference 1 was immediately effective and directs the Edwin I. Hatch Nuclear Plant - Units 1 and 2 (HNP) to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities in the event of a beyond-design-basis external event. Specific requirements are outlined in Attachment 2 of Reference 1.

Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance (Reference 2) and an overall integrated plan pursuant to Section IV, Condition C.1.a of Reference 1. Reference 2 endorses industry guidance document NEI 12-06, Revision 0 (Reference 3) with clarifications and exceptions identified in Reference 2.

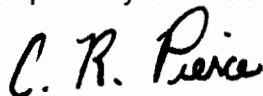
Reference 4 provided the HNP initial status report regarding mitigation strategies. Reference 5 provided the HNP overall integrated plan.

Reference 1 requires submission of a status report at six-month intervals following submittal of the overall integrated plan. Reference 3 provides direction regarding the content of the status reports. The purpose of this letter is to provide the second six-month status report pursuant to Section IV, Condition C.2, of Reference 1, that delineates progress made in implementing the requirements of Reference 1. The enclosed report provides an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief and the basis, if any.

This letter contains no new NRC commitments. If you have any questions, please contact John Giddens at 205.992.7924.

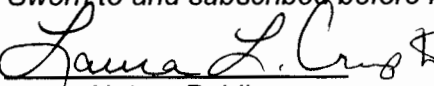
Mr. C. R. Pierce states he is the Regulatory Affairs Director for Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and, to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,



C. R. Pierce  
Regulatory Affairs Director

CRP/JMG/RCW

Sworn to and subscribed before me this 26 day of February, 2014.  
  
Notary Public

My commission expires: 10/8/2017

Enclosure: Edwin I. Hatch Nuclear Plant - Units 1 and 2  
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cc: Southern Nuclear Operating Company  
Mr. S. E. Kuczynski, Chairman, President & CEO  
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer  
Mr. D. R. Vineyard, Vice President – Hatch  
Mr. B. L. Ivey, Vice President – Regulatory Affairs  
Mr. D. R. Madison, Vice President – Fleet Operations  
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Mr. E. Leeds, Director of the Office of Nuclear Reactor Regulations

Mr. V. M. McCree, Regional Administrator

Mr. R. E. Martin, NRR Senior Project Manager – Hatch

Mr. E. D. Morris, Senior Resident Inspector – Hatch

Ms. J. A. Kratchman, NRR/JLD/PMB

Mr. E. E. Bowman, NRR/DPR/PGCB

State of Georgia

Mr. J. H. Turner, Environmental Director Protection Division

**Edwin I. Hatch Nuclear Plant – Units 1 and 2  
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**Enclosure**

**Edwin I. Hatch Nuclear Plant – Units 1 and 2  
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 Second Six-Month Status Report of the Implementation of the  
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**1 Introduction**

Edwin I. Hatch Nuclear Plant - Units 1 and 2 developed an Overall Integrated Plan (Reference 1 of this enclosure), documenting the diverse and flexible strategies (FLEX), in response to Reference 2. This attachment provides an update of milestone accomplishments since submittal of the last status report, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

**2 Milestone Accomplishments**

In addition to the submittal of status reports, the following milestone(s) directly related to FLEX implementation have been completed since the development of the Overall Integrated Plan (Reference 1), and are current as of December 31, 2013:

- None

**3 Milestone Schedule Status**

The following provides an update to Attachment 2 of the Overall Integrated Plan. It provides the activity status of each item, and whether the expected completion date has changed. The dates are planning dates subject to change as design and implementation details are developed. The revised milestone target completion date does not impact the Order implementation date.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Submit 60 Day Status Report	Oct 2012	Complete	N/A
Submit Overall Integrated Plan	Feb 2013	Complete	N/A
Submit 6 Month Status Report	Aug 2013	Complete	N/A
Submit 6 Month Status Report	Feb 2014	Complete	N/A
Develop Modifications – Unit 2	Apr 2014	Started	
Initiate Phase 2 Equipment Procurement	Jun 2014	Started	
Develop Strategies (Playbook) with RRC	Jun 2015	Started	
Submit 6 Month Status Report	Aug 2014	Not Started	
Perform Staffing Analysis (Phase 2)	Aug 2014	Not Started	
Develop Operational Procedure Changes	Sep 2014	Started	
Create Maintenance Procedures	Nov 2014	Not Started	
Develop Training Material	Nov 2014	Not Started	
Submit 6 Month Status Report	Feb 2015	Not Started	
Issue FSGs	Mar 2015	Started	
Unit 2 Implementation Outage **	Mar 2015	Not Started	
Implement Training	Mar 2015	Started	
Develop Modifications – Unit 1	Apr 2015	Not Started	
Submit 6 Month Status Report	Aug 2015	Not Started	
Submit 6 Month Status Report	Feb 2016	Not Started	
Unit 1 Walk-throughs or Demonstrations	Apr 2016	Not Started	
Unit 1 Implementation Outage *	Apr 2016	Not Started	Mar 2016
Submit 6 Month Status Report	Aug 2016	Not Started	

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Unit 2 Walk-throughs or Demonstrations	Dec 2016	Not Started	
Unit 2 Implement Non-Outage Mods **	Dec 2016	Not Started	
Submit Completion Report	Dec 2016	Not Started	

\*Full compliance after second listed refueling outage

\*\* Full compliance by 12/31/2016 since second refueling outage is after 12/31/2016

**4 Changes to Compliance Method**

There are no changes to the compliance method as documented in the Overall Integrated Plan (Reference 1 of this enclosure).

**5 Need for Relief/Relaxation and Basis for the Relief/Relaxation**

Edwin I. Hatch Nuclear Plant - Units 1 and 2 expects to comply with the order implementation date and no relief/relaxation is required at this time.

**6 Open Items from Overall Integrated Plan and Interim Staff Evaluation**

The following tables provide a summary and status of any open items documented in the Overall Integrated Plan. The Interim Staff Evaluation (ISE) has not yet been issued.

Overall Integrated Plan Open Item	Status
1. Structure, content and details of the Regional Response Center playbook will be determined.	SAFER Team developing Pilot Playbook

Interim Staff Evaluation Open Items	Status
Not yet issued.	N/A

**7 Potential Draft Staff Evaluation Impacts**

The NRC has not issued an Interim Staff Evaluation (ISE) for HNP, therefore, there are no potential impacts to the ISE identified at this time.

**8 References**

The following references support the updates to the Overall Integrated Plan described in this enclosure.

1. Edwin I. Hatch Nuclear Plant - Units 1 and 2 Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049),” dated February 27, 2013.

2. NRC Order Number EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012.

## 9 Other Additional Information

The following information provides clarity or corrections to the Overall Integrated Plan but does not constitute a change in strategy:

1. A structure to provide protection of the FLEX equipment will be constructed to meet the requirements identified in NEI 12-06 Section 11. Construction of the FLEX Storage Facility will be completed for 2 sets of FLEX equipment by the date the first unit will reach the Order EA-12-049 implementation completion due date.
2. For the method of SFP makeup referenced on page 35 of Reference 1, (and updated in Reference 3), operators would require opening 7 manual valves per unit (1P41-F1383, 1P41-F070A, 1P41-F103, 1G41-F217, and new RHRSW-RBSW manual valves 1E11-F904A, 1E11-F906A and 1E11-F907A for Unit 1; 2P41-F1386, 2P41-F070B, 2P41-073, 2G41-F040 and new RHRSW-RBSW manual valves 2E11-F904B, 2E11-F906B and 2E11-F907B for Unit 2) versus the 2 valves stated in the OIP.
3. The revised calculation values for the MCR heat-up to greater than 110°F is 3.5 hours versus the assumed value of 9 hours in Reference 1. The mitigation strategy has changed from opening doors based on an assessment of outside temperature, to blocking open the entrance at the stairwell to the MCR and the lower stairwell doors coupled with the opening of the outside freight elevator doors and doors from MCR to the turbine building at or before 3.0 hours following the BDBEE initiation. Preliminary assessment indicates that by employing this strategy and modifying MCR lighting with LED bulbs, the MCR temperature will not exceed 110°F at approximately the 10 hour point by which time Phase 2 actions can be implemented.
4. The most recent calculation performed for the RCIC room heat-up over an extended period of operation concludes that the room remains below 148°F for the duration of 72 hours, with no operator required actions, after which RCIC is not assumed to be required.
5. To maintain the Main Control Room (MCR) temperature below 110°F during Phase 2, two 42,000 scfm fans will be directed at the stairwell door at the 130' elevation stairs to the control room. This will establish a flow from the lower control building (and outside) to the control room at the 164' elevation and provide for forced air to be delivered to the MCR.
6. For the timing of RCIC suction swap from CST back to Torus due to CST depletion, a correction in the timing from 6.5 – 7.5 hours to 6.05 - 7.3 hours was made to accurately reflect calculation results.
7. To enable faster response time and ease the process of deployment, a single large, diesel driven, trailer mounted pump capable of supplying cooling water for both Unit 1 and Unit 2 at twice the amount required has been chosen vs. the two or more pumps referred to in Reference 1.
8. The method for extracting fuel oil for powering Phase 2 and 3 equipment has changed from using manual or battery operated pumps to repowering the existing Diesel Fuel Oil Storage

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Tanks (DFOST) transfer pumps and transferring fuel to a portable tank/trailer. The DFOST transfer pumps will be repowered from the FLEX Phase 2 600V Diesel Generator through installed in-plant breaker alignments.

9. For the Spent Fuel Pool area, the description of the pneumatic seals that need to be provided with backup air supply has been corrected. The discussion in Reference 1 on "Spent Fuel Pool Gate Seals" was corrected to refer to the "Transfer Canal Seismic Gap Seals". The transition piece which connects the transfer canal between Unit 1 and Unit 2 is provided with pneumatic seals to prevent leakage of water from the transfer canal. The seals are supplied by the service air system with a backup supply from an accumulator that provides sufficient air to keep the seismic gap seals pressurized for 24 hours. During Phase 2, the transition assembly seals are pressurized as necessary by valving in backup air from the FLEX air compressor located on the east side of the RB. The air compressor will be connected at the reactor building penetration and supplies the transition assembly seals via hose run from the 130' elevation to the refueling floor and to the service air system that supplies the seals. In addition, the seals can be pressurized using backup nitrogen bottles in accordance with procedure 34SO-P51-002, Instrument and Service Air System.
10. SNC is in the process of evaluating Phase 3 strategies and timing; any changes in Phase 3 strategies will be reflected in a future six month status report.