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

Edwin I. Hatch Nuclear Plant – Units 1 and 2
Request For Additional Information Regarding
SNC License Amendment Request for TSTF-523, Revision 2

References:

1. SNC Letter NL-14-1349, *Edwin I. Hatch Nuclear Plant – Units 1 and 2 License Amendment Request to Revise Technical Specifications Regarding Generic Letter 2008-01, Managing Gas Accumulation in accordance with TSTF-523, Revision 2, Using the Consolidated Line Item Improvement Process (CLIIP)*, dated January 13, 2015, ML15014A411.
2. NRC Letter, *Edwin I. Hatch Nuclear Plant, Units 1 and 2 – Request for Additional Information (TAC NOS. MF5579 AND MF5580)*, dated May 18, 2015.

Ladies and Gentlemen:

On January 13, 2015, in accordance with the provisions of 10 CFR 50.90 Southern Nuclear Operating Company (SNC) submitted a request for an amendment to the technical specifications (TS) for Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2 (Reference 1).

The proposed amendment would modify TS requirements related to Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray systems," as described in TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation."

Following the submittal of the HNP License Amendment Request, SNC received a request for additional information by the NRC on May 18, 2015 (Reference 2). The enclosure provides the requested information.

This letter contains no new NRC commitments. If you have any questions, please contact Ken McElroy at (205) 992-7369.

Mr. C. R. Pierce states he is Regulatory Affairs 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.

Respectfully submitted,

C. R. Pierce

C. R. Pierce
Regulatory Affairs Director

CRP/GLS/lac

Sworn to and subscribed before me this 16 day of June, 2015.

Laura L. Crumpton

Notary Public

My commission expires: 10/8/2017

Enclosure: Response to Request for Additional Information – TSTF-523

cc: Southern Nuclear Operating Company
Mr. S. E. Kuczynski, Chairman, President & CEO
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
Mr. M. D. Meier, Vice President – Regulatory Affairs
Mr. D. R. Vineyard, Vice President – Hatch
Mr. D. R. Madison, Vice President – Fleet Operations
Mr. B. J. Adams, Vice President – Engineering
Mr. G. L. Johnson, Regulatory Affairs Manager – Hatch
RType: CHA02.004

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

State of Georgia
Mr. J. H. Turner, Director – Environmental Protection Division



**Edwin I. Hatch Nuclear Plant – Units 1 and 2
Request For Additional Information Regarding
SNC License Amendment Request for TSTF-523, Revision 2**

Enclosure

Response to Request for Additional Information – TSTF-523

The NRC staff has reviewed the Edwin I. Hatch, Units 1 and 2 license amendment request and determined that additional information is necessary as noted below.

RAI 1:

An acceptable surveillance must include allowance for gas accumulation until the next surveillance is scheduled. How is this requirement satisfied by the following:

- a. Satisfactorily operating a system or subsystem such as a residual heat removal shutdown cooling subsystem?
- b. Monitoring Reactor Core Isolation Cooling pump suction pressure?
- c. Use of a procedure designed to initially ensure that piping is adequately filled and vented?

SNC Response to RA1:

- a. The current systems under GL 2008-01 have been reviewed and the operating procedures for these systems ensure that the system is properly filled and vented after any maintenance activity that could induce gas voids in the system and before being placed in standby or in service to reduce voids upon system operation initiation. Once the system is placed in service, operating parameters are monitored to ensure the capability of the running system is meeting its system requirements and the presence of gas voids is not detected during running. Erratic pump operation, including suction pressure, discharge pressure, and flow oscillations, as well as unusual vibration levels, can be indicative of air or gas accumulation in the system piping. Actions will be taken to document, via Condition Report (CR), and investigate the potential gas intrusion as needed.

If a system is currently running and the 31 day frequency should occur, monitoring the system running parameters, as discussed above, ensures that the system is meeting its system requirements for the required surveillance. If the system is in standby, then the conventional gas accumulation monitoring process will be performed per the required surveillance frequency control program.

- b. As stated above, erratic pump operation, including suction pressure, discharge pressure, and flow oscillations, as well as unusual vibration levels, can be indicative of air or gas accumulation in the system piping. During the Reactor Core Isolation Cooling (RCIC) pump operability tests, RCIC pump suction pressure is monitored and recorded. Depending on the reason for the RCIC pump operation, a 0.5% accuracy calibrated Test Pressure Gauge (30" Hg vacuum to 100 psig range) is installed for the test to ensure accuracy. The value is compared to an acceptance range and if outside the acceptance range a CR would be written and the abnormal indication would be investigated. Possible reasons investigated would include the possibility of voids in the RCIC system. Also, per the RCIC system operating procedure, outlet pressure of the RCIC Pump is similarly

recorded and the RCIC pump differential pressure is calculated with an acceptance range verified.

The RCIC gas accumulation program also ensures proper filling and venting and ultrasonic testing of the system suction piping when the RCIC system is placed in standby readiness. Empirical data suggests that the 31 day frequency for monitoring gas voids in the suction piping is adequate, as no voids have been discovered that exceed the allowable value.

- c. As the systems are placed in standby readiness, the operating procedures either include steps to perform actions (e.g. fill and vent) to ensure voids found in the system are removed or provide references to procedures to perform ultrasonic testing to ensure void size is below analyzed limits to ensure the capability of the system is assured. As the systems are manually initiated, vulnerable system piping locations, such as changing suction alignment, may require special actions to ensure the piping is properly filled as part of the operating procedure. If any voids are left in the system, they will be analyzed and verified to be acceptable to ensure they are not degrading the capability of the system.

RAI 2:

Please describe the monitoring of other system parameters that could identify a change that could introduce gas into piping between surveillance intervals.

SNC Response to RA2:

Residual Heat Removal (RHR) and Core Spray (CS) systems currently have keep fill systems that have annunciator alarms installed which provide operator information that the respective system water level is low. If this alarm is not clear it may indicate that voids are present and the respective piping system may need to be filled and vented to ensure the system is cleared of gas accumulation. When these Emergency Core Cooling Systems (ECCS) are placed in standby operation readiness, it is verified by steps in the operating procedures that the annunciator alarm is clear.

Also, the operating procedures that perform system valve operability and could potentially induce voids during valve cycling, require the appropriate portion of the system piping affected to be filled and vented when that system's valve cycling is complete.

RAI 3:

What are representative surveillance frequencies that exist under the Surveillance Frequency Control Program that differ from the TSTF-523 example of 31 days and what is the basis for those changes?

SNC Response to RA3:

When this TSTF-523 Technical Specification change is issued all values for the gas accumulation surveillance requirements (SRs) will be 31 days as per the recommendation in the implementation guidance of this license amendment change. These surveillance frequencies will then be controlled by the Surveillance Frequency Control Program change process going forward.