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February 22, 2013

Docket Nos.: 50-321
50-366

NL-13-0295

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

Edwin I. Hatch Nuclear Plant
Request to Revise the Plant Service Water Pump Well Minimum Water Level
Response to Request for Additional Information
Regarding Pump Minimum Submergence and Technical Specifications

Ladies and Gentlemen:

By letter dated July 5, 2012, Southern Nuclear Operating Company (SNC) requested amendments to the Edwin I. Hatch Nuclear Plant (HNP) Units 1 and 2 Technical Specifications (TS) (TAC NOS ME9004 and ME9005). The proposed amendments would revise the minimum water level referenced in the Units 1 and 2 TS Surveillance Requirement (SR) associated with the Limiting Condition for Operation (LCO) for the plant service water (PSW) system and ultimate heat sink (UHS) (LCO 3.7.2).

By letter dated October 15, 2012, the NRC requested additional information regarding the minimum submergence values for the pumps located in the HNP intake structure and plant service water pump throttling requirements that were formerly in the HNP TS. By letter dated November 13, 2012, SNC provided the response to the information requested.

By letter dated January 28, 2013, the NRC requested additional information regarding operator actions and minimum water levels referenced in applicable drawings. The enclosure provides the response to the NRC request for additional information (RAI).

This letter contains no 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/rmj/lac

Sworn to and subscribed before me this 22nd day of February, 2013.

Laura L. Crumpton
Notary Public

My commission expires: 11-02-2013

Enclosure: 1. Response to Request for Additional Information Regarding
Pump Minimum Submergence and Technical Specifications

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. Madison, Vice President – Hatch
Mr. B. L. Ivey, Vice President – Regulatory Affairs
Mr. B. J. Adams, Vice President – Fleet Operations
RType: CHA02.004

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

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

**Edwin I. Hatch Nuclear Plant
Request to Revise the Plant Service Water Pump Well Minimum Water Level
Response to Request for Additional Information
Regarding Pump Minimum Submergence and Technical Specifications
Level**

Enclosure 1

**Response to Request for Additional Information
Regarding Pump Minimum Submergence and Technical Specifications**

NRC RAI #1

The minimum water level for the Plant Service Water pumps is stated to be 59.1 feet considering a 4500 gallon per minute (gpm) flow rate. SNC procedures call for reducing pump flow to not exceed 7000 gpm when level is less than 61.2 feet. SNC provided no assurance that flow has been reduced to 4500 gpm although it is stated that only 4428 gpm is required for shutdown cooldown. Please clarify.

SNC Response

The 7000 gpm limitation is for normal plant operation when the turbine building component heat exchangers are in service. By design, the turbine building PSW isolation valves receive a close signal for a design basis accident (LOCA and/or LOSP). With the turbine building isolation valves closed, system hydraulics prevent a PSW pump from exceeding 4500 gpm. Therefore, procedural throttling limitations are not required for design basis accidents.

NRC RAI #2

The minimum water level for the residual heat removal service water (RHRSW) pumps is stated to be 59.8 feet, yet drawings S-56317 and S-60315 state the minimum water level is 60.5 feet. Drawing S-56317 lists a minimum submergence of 35 inches for a flow rate of 4000 gpm. Apparently SNC used 35 inches for a flow rate of 4400 gpm? If so, why is 59.8 feet the minimum water level for the RHRSW pumps considering that the drawings indicate 60.5 feet and the actual flow rate is 4400 versus 4000 gpm?

SNC Response

Drawings S-56317 and S-60315 are vendor drawings. The drawings provide a minimum water level of 60.5 feet as well as a maximum high water level of 91.3 feet. These values are not licensing or design bases values. The values were placed on the drawings by the vendor and reflect information that was provided in the original pump specifications to indicate minimum and maximum water levels expected in the pump well. These water levels are not related to pump performance. The minimum submergence of 35 inches for a flow rate of 4000 gpm currently provided on drawing S-56317 represents the minimum submergence for a flow rate of 4000 gpm previously provided by the pump vendor. Due to a requirement to evaluate the pump at a flow rate of 4400 gpm, the vendor was requested to provide the minimum submergence at a flow rate of 4400 gpm. The vendor response stated that a minimum submergence of 34 inches is required at a flow rate of 4400 gpm and a minimum submergence of 31 inches is required at a flow rate of 4000 gpm. Since our previous analysis was based on 35 inches, we continued to use 35 inches for consistency and conservatism. An action item has been generated to revise the information on the drawings.

NRC RAI #3

The minimum stated water level for the standby service water pump is 60.0 feet which considers an 850 gpm flow rate and 1.0 foot minimum submergence. However, drawing SX-24108 lists 1.0 foot as the minimum submergence for a flow rate of 700 gpm. If the standby service water pump is delivering 850 gpm and SNC's calculation used a minimum submergence of 1.0 foot, why is 60.0 feet the minimum water level for the standby service water pumps?

SNC Response

The design flowrate of the Standby Service Water pump is 700 gpm. Due to a requirement to evaluate the pump at a flow rate of 850 gpm, the vendor was requested to provide the minimum submergence at a flow rate of 850 gpm. The vendor response stated that a minimum submergence of 12 inches is required at a flow rate of 700 and 850 gpm. An action item has been generated to clarify the information on the drawing.