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Energy to Serve Your WorldSM

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Docket Nos.: 50-424
50-425

NL-08-0143

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

Vogtle Electric Generating Plant
Response to NRC Request for Additional Information Regarding
License Amendment Request to Revise Technical Specifications (TS) 3.3.2,
"ESFAS Instrumentation," and TS 3.5.4, "Refueling Water Storage Tank (RWST)"

Ladies and Gentlemen:

On January 9, 2008, Southern Nuclear Operating Company (SNC) submitted a License Amendment Request to the NRC to revise the Vogtle Electric Generating Plant (VEGP) Technical Specifications (TS) 3.3.2, "ESFAS Instrumentation," and TS 3.5.4, "Refueling Water Storage Tank (RWST)." The proposed TS changes are required to meet commitments related to the resolution of issues identified in NRC Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors," dated September 13, 2004.

On January 28, 2008, SNC received a Request for Additional Information (RAI) from the NRC regarding the January 9, 2008 submittal. The SNC response to the subject RAI is enclosed.

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,

A handwritten signature in black ink, appearing to read "L. M. Stinson".

L. M. Stinson
Vice President Fleet Operations Support

LMS/LPH/daj

Enclosure: Response to NRC Request for Additional Information (RAI)
Regarding License Amendment Request to Revise Technical
Specifications (TS) 3.3.2, "ESFAS Instrumentation," and
TS 3.5.4, "Refueling Water Storage Tank (RWST)"

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. T. E. Tynan, Vice President – Vogtle
Mr. D. H. Jones, Vice President – Engineering
RType: CVC7000

U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Acting Regional Administrator
Mr. S. P. Lingam, NRR Project Manager – Vogtle
Mr. G. J. McCoy, Senior Resident Inspector – Vogtle

Vogtle Electric Generating Plant

Enclosure

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Specifications (TS) 3.3.2, "ESFAS Instrumentation," and
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Enclosure
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1. NRC Question

Demonstrate that there will be adequate net positive suction head (NPSH) available for all ECCS injection pumps operating during a large break LOCA down to the proposed RWST Low Level before switchover to the sump recirculation mode of operation.

SNC Response

The proposed setpoint for the RWST Low-Low level is at 213.5 inches from the bottom of the RWST (an approximate plant elevation of 237.8 feet). This is the point at which the semi-automatic switchover from the RWST to the containment emergency sumps for the suction of the ECCS pumps (centrifugal charging pumps, safety injection pumps and residual heat removal pumps) begins. These pumps may continue to draw from the RWST for some period of time, until the switchover process is complete. Available NPSH for these pumps is conservatively evaluated at a reference plant elevation of 223 feet (approximately 36 inches from the bottom of the RWST), which is well below the elevation at which these pumps would be required to operate from the RWST.

At elevation 223 feet, the Centrifugal Charging Pumps have an available minimum NPSH of greater than 80 feet, versus a required NPSH of approximately 17 feet. Therefore, the NPSH margin is in excess of 60 feet.

At elevation 223 feet, the Safety Injection Pumps have an available minimum NPSH of greater than 60 feet, versus a required NPSH of approximately 15 feet. Therefore, the NPSH margin is in excess of 45 feet.

At elevation 223 feet, the Residual Heat Removal Pumps have an available minimum NPSH of greater than 90 feet, versus a required NPSH of approximately 20 feet. Therefore, the NPSH margin is in excess of 70 feet.

In addition to the above ECCS pumps, the containment spray pumps draw from the RWST until reaching the Empty level setpoint, at which point the switchover process to sump recirculation begins. With the implementation of this proposed amendment, the Empty level alarm will be at an approximate elevation of 227.1 feet (approximately 85 inches from the bottom of the RWST). The lowest level at which the pumps would be required to operate is 221.5 feet (approximately 18 inches from the bottom of the RWST).

At elevation 221.5 feet, the Containment Spray Pumps have an available minimum NPSH of greater than 85 feet, versus a required NPSH of approximately 20 feet. Therefore, the NPSH margin is in excess of 65 feet.