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SOUTHERN COMPANY
Energy to Serve Your World℠

June 22, 2006

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50-425

NL-06-1275

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

Vogtle Electric Generating Plant - Units 1 & 2
Request for Extension for Completing Corrective Actions for Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors"

Ladies and Gentlemen:

By letter dated August 31, 2005, Southern Nuclear Operating Company (SNC) submitted a combined SNC response for Joseph M. Farley Nuclear Plant (FNP) and Vogtle Electric Generating Plant (VEGP) as required by NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors." In this letter, SNC committed to the installation of the VEGP Unit 1 and Unit 2 new post-LOCA containment sump recirculation screens, completion of required modifications, and implementation of required procedural changes by December 31, 2007.

SNC is fully committed to resolving GSI-191. Debris generation and transport calculations are complete. Contracts are in place for the design, testing, delivery and installation of the new containment emergency sump screens. However, the VEGP passive screen design still has a number of open industry and plant specific design issues to be resolved. Downstream effects and chemical effects analyses are on-going. Anomalies during screen sector testing have presented challenges that require additional screen design testing. On-going downstream effects evaluations of component operation may require future plant modifications that include some combination of ECCS throttle valve/flow orifice modification. In addition, chemical effects testing by the vendor is being negotiated for completion in the fall of 2006. This chemical effects testing timeframe allows for an assessment of the NRC's Request for Addition Information (RAI) on the chemical effects WCAP-16530-NP, "Evaluation of Post-Accident Chemical Effects in Containment Sump Fluids to Support GSI-191," prior to completion of testing for VEGP. The RAI is expected from the NRC to the PWR Owners Group (PWROG) in July 2006.

Considering the above, a short extension to the completion schedule is respectfully requested to extend the completion of the corrective actions required by Generic

Letter 2004-02 for VEGP Unit 1 from December 31, 2007 to the spring 2008 outage, which is currently scheduled to begin in March 2008. To improve existing margins until all modifications can be implemented, VEGP will install new sump screens that will increase the available screen area by approximately 1400% for the RHR screens and approximately 1075% for the Containment Spray screens, during the Unit 1 fall 2006 refueling outage. Required modifications to Unit 2 are scheduled to be completed during the spring 2007 outage. The Enclosure to this letter provides the basis for SNC's conclusion that it is acceptable to extend the completion of the corrective actions required by Generic Letter 2004-02.

SNC requests approval of the proposed request by July 21, 2006.

Mr. D. E. Grissette states he is a Vice President 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 advise.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

Don E. Grissette

Sworn to and subscribed before me this 22 *day of* June, *2006.*

Notary Public

My commission expires: 4-28-07

VALERIE A. O'BRIEN NOTARY PUBLIC ALABAMA STATE AT LARGE

DEG/DWM/daj

Enclosure: Basis for Request for Extension for Completing Corrective Actions for Generic Letter 2004-02

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. T. E. Tynan, General Manager – Plant Vogtle
RType: CVC7000

U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
Mr. C. Gratton, NRR Project Manager – Vogtle
Mr. G. J. McCoy, Senior Resident Inspector – Vogtle

State of Georgia
Mr. L. C. Barrett, Commissioner – Department of Natural Resources

Enclosure

Vogtle Electric Generating Plant
Basis for Request for Extension for Completing Corrective Actions
for Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency
Recirculation During Design Basis Accidents at Pressurized-Water Reactors"

Enclosure
Vogtle Electric Generating Plant
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By letter dated August 31, 2005, Southern Nuclear Operating Company (SNC) submitted a combined SNC response for Joseph M. Farley Nuclear Plant (FNP) and Vogtle Electric Generating Plant (VEGP) as required by NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors." In this letter, SNC committed to the installation of the VEGP Unit 1 and Unit 2 new post-LOCA containment sump recirculation screens, completion of required modifications, and implementation of required procedural changes by December 31, 2007.

The VEGP passive screen design still has a number of open industry and plant specific design issues to be resolved. Downstream effects and chemical effects analyses are on-going. Anomalies during screen sector testing have presented challenges that require additional screen design testing. On-going downstream effects evaluations of component operation may require additional plant modifications that include some combination of ECCS throttle valve/flow orifice modification. In addition chemical effects testing by the vendor is being negotiated for completion in the fall of 2006. This chemical effects testing timeframe allows for an assessment of the NRC's Request for Addition Information (RAI) on the chemical effects WCAP-16530-NP, "Evaluation of Post-Accident Chemical Effects in Containment Sump Fluids to Support GSI-191," prior to completion of testing for VEGP. The RAI is expected from the NRC to the PWR Owners Group (PWROG) in July 2006.

Considering the above, a short extension to the completion schedule is respectfully requested to extend the completion of the corrective actions required by Generic Letter 2004-02 for VEGP Unit 1 from December 31, 2007 to the spring 2008 outage which is currently scheduled to begin in March 2008.

The following discussions demonstrate that safety at VEGP is maintained until all corrective actions are completed. This discussion supports VEGP's request for an extension of the completion date for the corrective actions from December 31, 2007 to the completion of the Unit 1 spring 2008 refueling outage, currently scheduled to begin in March 2008.

New Screen Installation

VEGP will install new sump screens that will increase the available screen area by approximately 1400% for the RHR screens and approximately 1075% for the Containment Spray screens during the Unit 1 Fall 2006 refueling outage to improve existing margins until the final design can be implemented. The Unit 2 screens (final design) will be installed during the spring 2007 refueling outage.

Debris Generation

VEGP has no calcium-silicate insulation inside of containment and is actively assessing the removal of Min-K insulation, which may have similar effects on head loss as calcium-silicate.

Leak-Before-Break (LBB)

Postulated breaks in the reactor coolant loop (RCL), except for branch line connections, have been eliminated for both Unit 1 and Unit 2 (reference Federal Register, Vol. 50, No. 27, February 8, 1985). Subsequent to the General Design Criterion 4 final rule change (52 FR 41288, October 27, 1987), postulated breaks in the RCL branch lines (pressurizer surge line, accumulator line, and residual heat removal (RHR) line for Unit 2 and the pressurizer surge line for Unit 1) were eliminated by application of leak-before-break technology. Approval of the elimination of breaks in these Unit 2 branch lines is given in the Vogtle Safety Evaluation Report, Supplement 7, dated November 19, 1987. The necessary information supporting the elimination of breaks in the Unit 1 pressurizer surge line was submitted to the NRC via GPC-to-NRC letter transmitting WCAP-12218 Supplement 1 and WCAP-12219 Supplement 1.

While leak-before-break is not being used to establish the design basis debris load on the new sump screens, the use of LBB results in a substantial reduction in the zone of influence, and thus a significant reduction in the postulated debris generation and loading on the sump screens. With the installation of the additional sump screen area, the possibility of screen clogging due to debris is greatly reduced and the operation of Unit 1 until the spring 2008 outage is acceptable.

Containment Floor Configuration

Heavy particles are impeded from reaching the sumps because the surrounding floor slopes away from the sumps. This facilitates settling of debris on the floor prior to reaching the sump area. In addition, the new screens will be mounted approximately six inches above the containment floor. This raised mounting would allow accumulation of debris below screen inlet levels and the possibility of sump screen clogging is reduced.

Zone-Of-Influence Reduction for Qualified Coatings

VEGP is currently assessing the impact of reducing the Zone-Of-Influence for Qualified Coatings that would result in a lower particulate loading on the sump screens, allowing for additional margin.

Emergency Containment Coolers

Safety-related emergency containment coolers can supplement containment heat removal capability if spray flow is degraded.

Procedure Guidance, Training and Actions

By letter dated August 26, 2005, the NRC acknowledged VEGP's response to NRC Bulletin 2003-01, "Potential Impact Of Debris Blockage On Emergency Sump Recirculation At Pressurized Water Reactors" as responsive and meets the intent of the bulletin. SNC's letter stated in the bulletin response of August 7, 2003, that it had implemented the following interim compensatory measures:

(1) training on integrated plant computer indications to ensure adequate ECCS flow through both the injection and recirculation phases; new training materials and simulator scenarios addressing the need for long-term monitoring of the recirculation phase; how to recognize that sump blockage is taking place; and actions to be taken if blockage is encountered.

(2) guidance to reduce depletion of the RWST and initiate makeup to the RWST from normal and alternate sources during efforts to restore normal ECCS flowpaths.

(3) sump screen and rack inspections for cleanliness, damage, corrosion and stability upon containment entry; containment exit inspections with logged material accounting procedures, and comparable controls for emergency entries into containment; and post-outage emergency sump cleanliness and material control procedures to ensure the sumps are free of debris such as trash, rags, tools or protective clothing.

(4) post-refueling and heat-up procedures to inspect that reactor cavity drains are properly restored with their blind flanges removed.

(5) inspections to ensure ECCS subsystem inlets are free of debris and show no evidence of abnormal corrosion or structural distress, and that the sump screens are correctly configured and securely bolted in place.

The above measures will continue in effect until such time that all evaluations and all required plant modifications are complete.

Containment Cleanliness

A containment exit inspection procedure is implemented after every containment entry and during each refueling outage, prior to entering Mode 4 from Mode 5 and establishing containment integrity. After the transition to Mode 4, the procedure also requires that any material taken into containment be logged in and out. Logged materials remaining inside containment after Mode 4 entry must be attended at all times and capable of being removed promptly in the event of an emergency. The primary purpose of this procedure is to ensure compliance with the Vogtle Technical Requirements Manual by verifying that no debris is present in the Containment Building which could be transported to the emergency sump and cause restriction of ECCS pump suctions during LOCA conditions. The procedure includes a data sheet detailing materials normally left inside containment. The data sheet is used to evaluate the status of these materials and verify that approved

limits are not exceeded.

In addition to the Operations Department procedures described above, Vogtle administrative procedures establish comparable controls for ensuring emergency sump cleanliness and integrity for containment entries in Modes 1 through 4.

Conclusion

Based upon the above discussions, SNC has determined that safety will be maintained until all corrective actions are completed during the spring 2008 outage.