

Charles R. Pierce
Regulatory Affairs Director

Southern Nuclear
Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, AL 35242

Tel 205.992.7872
Fax 205.992.7601



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Docket Nos.: 50-424

NL-15-1425

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

Vogtle Electric Generating Plant Unit 1
Response to Request for Additional Information on License Amendment
Request for Residual Heat Removal Pump Motor

Ladies and Gentlemen:

By letter dated June 4, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML 15155B593), Southern Nuclear Operating Company (SNC) submitted a license amendment request for the Vogtle Electric Generating Plant (VEGP), Unit 1, to revise the completion time for one inoperable residual heat removal (RHR) train from 72 hours to 7 days to allow for replacement of an RHR pump motor. By letter dated July 15, 2015, the Nuclear Regulatory Commission (NRC) staff issued a request for additional information (RAI) in order to continue the review. The Enclosure provides the SNC response to the NRC RAIs.

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
Regulatory Affairs Director

CRP/RMJ/lac

Sworn to and subscribed before me this 22 day of July, 2015.


Notary Public

My commission expires: 10-8-2017

Enclosure: SNC Response to NRC RAI

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 – Fleet Operations
Mr. M. D. Meier, Vice President – Regulatory Affairs
Mr. B. K. Taber, Vice President – Vogtle 1 & 2
Mr. B. J. Adams, Vice President – Engineering
Mr. G. W. Gunn, Regulatory Affairs Manager – Vogtle 1 & 2
RType: CVC7000

U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Regional Administrator
Mr. R. E. Martin, NRR Senior Project Manager – Vogtle 1 & 2
Mr. L. M. Cain, Senior Resident Inspector – Vogtle 1 & 2

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

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Enclosure

SNC Response to NRC RAI

NRC RAI #1

In response to a request for additional information on another LAR (PRA RAI 27) (ADAMS Accession No. ML13184A267), dated July 2, 2013, SNC identified four Fire PRA methods which may not be consistent with NRC-accepted methods. The licensee stated that those methods would be removed from the Vogtle fire PRA. The licensee further stated that the resulting model would be refined as necessary using the accepted methods. Confirm that the PRA model used to calculate risk results presented in the June 4, 2015 LAR incorporated the necessary refinements using the accepted methods.

SNC Response to NRC RAI #1

The Vogtle 1 & 2 configuration risk management program (CRMP) model (model of record) was used to calculate risk results presented in the June 4, 2015 LAR, and does include methods which may not be consistent with NRC-accepted methods. The refinements to the Fire PRA to incorporate accepted methods are actively being incorporated to support future transition to the risk managed technical specifications (RMTS) program. Upon incorporation of the accepted methods, incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP) will be calculated in the same manner as reported in the Jun 4, 2015 LAR (i.e. CDF and LERF are calculated for a baseline, zero-maintenance case and for a preventive maintenance case). In order for the NRC to complete its Safety Evaluation (SE), SNC will provide a supplemental letter to report the calculation results. This letter will be expedited to support timely NRC review of the June 4, 2015 LAR.

NRC RAI #2

SNC's application states that defense-in-depth is maintained, in part, via every effort will be made to ensure that the 1A RHR pump is not removed from service for the motor replacement during a period of time of impending inclement weather. Enclosure 2 of the application, under Tier 2: "Restrictions are established for Dominant Risk-Significant Configurations," states the compensatory actions taken by the licensee for the proposed Completion Time of 7 days. The NRC staff requests that:

- a) SNC provide a clarification of the steps taken to ensure that the 1A RHR pump is not removed from service for the motor replacement during a period of time of impending inclement weather;

SNC Response to NRC RAI #2.a

In accordance with SNC procedures NMP-DP-001, "Operational Risk Awareness", and NMP-GM-031, "On-Line Configuration Risk Management Program", the plant will assess the potential for severe weather conditions to occur and the impact of the weather conditions relative to the proposed scheduled out of service activities. This assessment will take place prior to removal of the pump from service. It

will be determined whether severe weather conditions are imminent or have a high probability of occurring during the planned out-of-service duration. The RHR pump's removal from service may be rescheduled accordingly based on established compensatory measures. In the case where unanticipated severe weather develops during the out-of-service duration, efforts will be taken to ensure other equipment or components important to safety will remain in-service. These steps include provisions for establishing protected train/division and protected equipment requirements for maintaining inventory in the reactor core.

- b) SNC provide clarification of the steps taken to ensure that the 1B RHR pump will remain OPERABLE if the 1A RHR pump is out of service.

SNC Response to NRC RAI #2.b

The 1B RHR pump will remain operable using the site procedure NMP-OS-010 "Protected Train/Division and Protected Equipment Program". During the time that the 1A pump is removed from service, the 1B pump will become "Protected Equipment", which is defined in the procedure as follows:

"Systems or components that have been identified as essential to ensuring that safety functions or unit generation is maintained for given plant conditions. Components or equipment redundant to equipment that has failed, is taken out of service, or is otherwise unavailable when the redundant equipment is required for current plant conditions. Physical barriers or signage is used to alert personnel to maintain a safe distance from the Protected Equipment in order to prevent unintended consequences from operation, maintenance, or nearby activity."

Per the guidance of NMP-OS-010, the following actions will be taken to ensure 1B RHR pump operability:

- Work will be restricted on the 1B RHR pump and its associated breakers and switchgear.
- Signage will be put up to increase the sensitivity of personnel in the areas of these components and point out the additional requirements that have been put in place to maintain the 1B pump operable.
- The protected status of the 1B RHR pump will also be included on daily status reports and will be included in crew briefings.
- Permission from the Shift Manager will be required to work on or near the protected equipment, which will only be authorized if the work is required to restore a Key Safety Function on the protected equipment.

NRC RAI #3

General Design Criterion (GDC) 5 – “Sharing of structures, systems, and components,” of 10 CFR Part 50, Appendix A, states the following:

Structures, systems, and components important to safety shall not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, an orderly shutdown and cooldown of the remaining units.

With 1A RHR pump out of service, and the 1B RHR pump remaining OPERABLE, can a cross tie to VEGP Unit 2 be made to have available inventory to cool the reactor core? The staff requests that the licensee provide a clarification regarding whether a cross tie is available for VEGP when Unit 1 1A RHR Pump is out of service and if it meets GDC 5.

SNC Response to NRC RAI #3

There is no cross-tie capability of the RHR systems between Units 1 and 2.

NRC RAI #4

On page E1-3 (page 6 of 39) of the June 4, 2015 LAR, SNC states that, “The risk-informed analysis identified compensatory actions that will be put in place to both decrease the likelihood of failure of a second ECCS system, as well as decreasing the likelihood of an initiating event during the time the 1A RHR pump is out of service..” Although the submittal states that compensatory actions are described in Enclosure 2, the staff requests further detailed information, as follows:

- Describe all compensatory actions being proposed in support of the LAR.
- Describe how the compensatory actions will be implemented and by whom.

SNC Response to NRC RAI #4

The compensatory actions being proposed in support of the LAR are provided on pages E2-5 – E2-7 of the LAR.

To implement these compensatory actions, operations will issue a standing order in accordance with SNC procedure NMP-OS-007-003, “Plant Operating Orders”, prior to the 1A RHR pump being removed from service. The standing order informs all operations personnel, including those with work release authority, to not allow work which would jeopardize the 1B pump or its associated power supplies or controls. The Work Week Managers will be briefed on the status of the pump as well, and will ensure no work will be scheduled that could impact the operability of the 1B RHR pump. The standing order will remain active until the 1A RHR pump is restored to an operable status or until the LCO applicability is exited. SNC is currently tracking the issuance of this standing order via the corrective action program (CAP) system.