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SOUTHERN COMPANY
Energy to Serve Your World℠

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LCV-1149-B

Docket Nos. 50-424
50-425

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

Ladies and Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS
CONTAINMENT PENETRATIONS AND CONTAINMENT
VENTILATION ISOLATION INSTRUMENTATION

By letter dated June 26, 1998, (LCV-1149) Southern Nuclear Operating Company (SNC) proposed to revise the Vogtle Electric Generating Plant (VEGP) Unit 1 and Unit 2 Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.3.6, Containment Ventilation Isolation Instrumentation, and LCO 3.9.4, Containment Penetrations. In support of their review of the proposed amendment, the NRC staff has requested additional information. The requested information is provided in the enclosed Response to Request for Additional Information.

Sincerely,

J. B. Beasley, Jr.

JBB/NJS

Enclosure: Response to Request for Additional Information

xc: Southern Nuclear Operating Company
Mr. J. T. Gasser
Mr. M. Sheibani
NORMS

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. D. H. Jaffe, Senior Project Manager, NRR
Mr. John Zeiler, Senior Resident Inspector, Vogtle

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

Enclosure

Vogtle Electric Generating Plant
Request to Revise Technical Specifications
Containment Penetrations and Containment
Ventilation Isolation Instrumentation

Response to Request for Additional Information

The containment ventilation isolation function isolates the containment purge supply and exhaust penetrations. These penetrations are equipped with four valves each (for a total of eight valves between the two penetrations). Each penetration is equipped with two valves in parallel inside containment and two valves in parallel outside containment. The parallel flowpath arrangement provides each penetration with both a 24-inch flowpath that can be used in Modes 5 and 6 in parallel with a 14-inch flowpath that can be used for containment purge during Modes 1 through 4 as well as Modes 5 and 6. The 24-inch purge supply valves are HV-2626A (inside containment) and HV-2627A (outside containment), and the 14-inch purge supply valves are HV-2626B (inside containment) and HV-2627B (outside containment). The 24-inch purge exhaust valves are HV-2628A (inside containment) and HV-2629A (outside containment), and the 14-inch purge exhaust valves are HV-2628B (inside containment) and HV-2629B (outside containment). Each valve is equipped with its own handswitch located in the control room on Section 2 of the QHVC panels, and the handswitches are grouped together. FSAR Figure 18.1-1 shows the location of the QHVC panels in relation to the main control boards. The panels are easily accessible for an operator at the main control boards.

During core alterations, the Technical Requirements Manual (TRM), TR 13.9.2, requires that direct communications be maintained between the control room and personnel at the refueling station. If direct communication is not maintained, Required Action A.1 of TR 13.9.2 requires immediate suspension of all core alterations. Therefore, if a fuel handling accident were to occur, the control room would be immediately notified. In addition, the alarm function of the containment radiation monitors (gaseous, particulate, iodine, and area low range) will be in service, providing additional assurance that control room operators will be alerted to a fuel handling accident inside containment. The QHVC panels are readily accessible to the control room operators, the handswitches are grouped together on the QHVC panels, the operators will be immediately notified of a fuel handling accident inside containment, and the purge supply and exhaust penetrations can be isolated within the allotted time for closing the airlock doors, i.e., 15 minutes.

When this TS amendment is implemented, operators will be trained on the changes via requalification training. This training will make them aware that fuel movement inside containment or core alterations may be made without the capability for automatic or system level containment ventilation isolation. Therefore, should the need arise, they will understand that containment ventilation isolation will be accomplished by closing the purge and exhaust isolation valves using the individual valve handswitches as described above. The annunciator response procedures for high containment radiation already direct the operators to verify containment ventilation isolation. These procedures will be revised as necessary to reflect the changes in TS requirements.

In addition to the above discussion, the NRC staff has requested that SNC address Information Notice (IN) 97-78, "Crediting of Operator Actions in Place of Automatic Actions and Modifications of Operator Actions, Including Response Times," with respect to the removal of the TS requirements for automatic initiation of containment ventilation isolation during core alterations and/or during movement of

irradiated fuel assemblies within containment. This IN presents guidelines for crediting operator actions in place of automatic actions, and it states, in part, that the NRC's review of licensees' analyses typically include, but are not limited to, (1) the specific operator actions required; (2) the potentially harsh or inhospitable environmental conditions expected; (3) a general discussion of the ingress/egress paths taken by the operators to accomplish functions; (4) the procedural guidance for required actions; (5) the specific operator training necessary to carry out actions, including any operator qualifications required to carry out actions; (6) any additional support and/or equipment required by the operator to carry out actions; (7) a description of information required by the control room staff to determine whether such operator action is required, including qualified instrumentation used to diagnose the situation and to verify that the required actions have successfully been taken; (8) the ability to recover from credible errors in performance of manual actions; and (9) consideration of the risk significance of the proposed operator actions. These nine criteria are addressed for the proposed change as follows:

(1) The specific operator actions required are to first recognize the need for containment ventilation isolation, and then to walk to the QHVC panels and manipulate the handswitches for the purge and exhaust isolation valves that may be open. As stated above, the control room personnel will be in direct communication with personnel inside containment at the refueling station. In addition, the containment radiation monitor alarms (gaseous, particulate, iodine, and area low range) will be available per TS 3.3.6 to alert the operators as well. In the event of a fuel handling accident, the control room will be immediately aware of the condition, and will be able to effect containment ventilation isolation within the time committed for closing the airlock doors, i.e., 15 minutes.

(2) All of the required operator actions take place in the control room. There will be no harsh or inhospitable conditions encountered.

(3) Referring to FSAR figure 18.1-1, it can be seen that the ingress/egress paths to accomplish the manual containment ventilation isolation are simple. Depending on where he is at the time that he is notified of the event, the operator simply has to walk a few feet to the QHVC panel to manipulate the handswitches.

(4) Procedural guidance for required actions is discussed above with respect to the annunciator response procedures.

(5) Operator training is discussed above. No special operator qualifications are required to close the purge and exhaust isolation valves.

(6) No additional support and/or equipment are required. If there is only one operator "at the controls", then another operator will be dispatched to manipulate the handswitches. However, this will not result in a delay beyond the 15 minutes allotted for closing the airlock(s).

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(7) The information required by the control room staff is, (1) communication with personnel at the refueling station; (2) radiation alarms; and (3) the knowledge obtained from training that containment ventilation isolation may have to be accomplished by manually closing the open purge and exhaust isolation valves. Position indication for each valve is displayed on the Main Control Board, handswitches, and plant computer.

(8) The only credible operator error to be considered would be the failure to close one or more of the open purge and exhaust isolation valves. It is expected that the operator will take action to recover from such an error, but such action would not be required because the dose analysis supporting the proposed change already assumes the release of all activity from a fuel handling accident (LCV-1149, June 26, 1998).

(9) Since the containment ventilation isolation can be accomplished within the same time allotted for closing the personnel airlock, there is no additional risk significance associated with the operator actions.

In addition to the above, the NRC staff also asked if we plan to have two designated individuals for closing the airlocks, one for the personnel airlock and one for the emergency airlock, or if the one designated individual would be responsible for closing both airlocks should they both be open at the same time. The emergency airlock will not normally be open during core alterations or fuel movement inside containment. Therefore, in the event that the emergency airlock is open at the same time that the personnel airlock is open, SNC will designate another individual to be responsible for closing the emergency airlock (within 15 minutes) in addition to the individual designated to close the personnel airlock.

In addition, the staff asked about the location of the emergency airlock in relation to the personnel airlock and the control room air intake and dose to the control room operators. The emergency airlock is farther away from the control room air intake than the personnel airlock. Therefore, the release path from the personnel airlock remains bounding for control room dose. Similarly, potential release paths from the purge supply and exhaust ductwork are no closer than the personnel airlock release path. Offsite dose is not affected by the relative locations of the personnel and emergency airlocks, or the containment purge supply and exhaust ventilation.