



January 9, 2002  
RC-01-1839

Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Gentlemen:

Subject: VIRGIL C. SUMMER NUCLEAR STATION  
DOCKET NO. 50/395  
OPERATING LICENSE NO. NPF-12  
RESPONSE TO UNRESOLVED ISSUE  
NRC INSPECTION REPORT 50-395/01-09

South Carolina Electric & Gas (SCE&G) has received NRC Inspection Report No. 50-395/01-09 and agrees with the non-cited violation green finding on emergency lighting; however some comments are provided in response to the identified finding on the lack of operator training for entry into Fire Emergency Procedures.

Subsection 'A', "Summary of Findings", states:

- *A finding was identified, in that, the lack of operator training combined with licensee management's expectations regarding when to enter fire emergency procedure (FEP)-4.0, Control Room Evacuation Due to Fire, could result in the operators taking actions during a fire in the main control room (MCR) that would not be consistent with the licensee's safe shutdown analysis, fire hazards analysis, or procedure FEP-4.0. The operator training program neither addressed nor had job performance measures (JPM)/simulator scenarios for MCR operator actions and evacuation due to a fire in accordance with procedure FEP-4.0.*

*This finding was determined to have a credible impact on safety because it affected the ability of the operators to perform actions (within the times required by the licensee's safe shutdown analysis and fire hazards analysis) necessary to achieve and maintain post-fire safe shutdown conditions. Licensee management's philosophy and expectations contributed to the operators' performance and slow response in deciding whether to enter procedure FEP-4.0 and evacuate the MCR during two simulator scenarios observed by the team.*

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SCE&G has identified this issue in our corrective action program as Condition Evaluation Report (CER), 0-C-01-1839. As noted in the inspection report, a copy of this document was provided to the inspection team for their review.

Evaluation of this condition has concluded that under most circumstances, Emergency Operating Procedures and Abnormal Operating Procedures provide sufficient direction to mitigate events. Entry into Fire Emergency Procedure (FEP)-4.0 is a very drastic action, and has the highest potential for core damage of any scenario evaluated during the IPEEE process. In consideration of this, Operations management philosophy has been that entry into FEP-4.0 was warranted only at such time as when multiple hot shorts could cause a loss of control that could not be mitigated by operator actions from the control room, and only as a last resort. In the event of other unforeseen significant problems, the duty Shift Supervisor may also exercise discretion for entry into this FEP.

During the inspection, two simulator scenarios were conducted. On October 16, 2001 a postulated fire in the administrative office adjacent to the control room failed to meet any criteria for entry into a Fire Emergency Procedure. Although the fire was in the control room envelope, it was not in the main control room where it would threaten to cause hot shorts and it was not located in an area which could affect any safe shutdown equipment. The operators remained in full control of the plant at all times. Based on these results, the inspectors agreed that another scenario would be run the following day.

The second scenario, run on October 17, postulated a fire in the main control board (panel XCP-6109). This panel contains the controls for pressurizer spray valves and the pressurizer power operated relief valves. This scenario included spurious equipment operation due to hot shorts caused by the fire. To successfully mitigate a reactor coolant system pressure transient caused by a failed open pressurizer spray valve, the Control Room Supervisor (CRS) utilized his knowledge of EOP alternative actions and ordered that reactor coolant pump (RCP) "A" be secured. It should be noted that reactor power at this time was ~25%; therefore, one RCP could be secured without a reactor trip. This action would require that the plant be shutdown in accordance with the Technical Specifications. Subsequent to the failure of the pressurizer spray valves, the scenario imposed two additional failures; 1) a pressurizer power operated relief valve failed open, and 2) its associated block valve failed to close on operator demand. At this point the CRS entered FEP-4.0.

Management's expectations have been communicated to operators through classroom training. The training, which incorporates risk insights gained from the IPEEE, is provided every two years as a part of the licensed operator re-qualification program. It was last conducted in September and October of 2001. SCE&G is aware that the inspectors desired that the scenarios place the operators into situations requiring entry

into Fire Emergency Procedures; however, neither scenario was of a nature that required immediate entry into FEP-4.0. SCE&G believes that in both scenarios the operators acted in accordance with management's expectation, as they were trained, and with due regard for plant risk associated with abandoning the control room.

The inspection report, as written, may lead one to conclude that operators had no training regarding entry into FEP-4.0 and that management's expectations were not communicated. In fact, classroom training has been, and continues to be, conducted on this subject. SCE&G believes that the failure to develop simulator scenarios supplementing the classroom training led to the concerns identified in the finding and does agree that enhancements are necessary in this area. As a result of the inspection, and our subsequent evaluation, the following corrective actions have been identified for the Condition Evaluation Report.

- Training will develop and conduct simulator exercises that require entry into Fire Emergency Procedures, consistent with management's expectations. This will reinforce the existing classroom training referenced in the preceding discussion.
- Training and Operations will develop job performance measures that will be used to evaluate operator's proficiency when faced with conditions that may warrant entry into FEP-4.0.

Should you have any questions, please call Mr. Mel Browne at (803) 345-4141.

Very truly yours,



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