



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
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May 21, 2010

Mr. Thomas D. Gatlin  
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SUBJECT: PUBLIC MEETING TO DISCUSS FIRE PROTECTION SCREENING CRITERIA  
IDENTIFIED AT BROWNS FERRY AND THEIR IMPLICATIONS TO  
VIRGIL C. SUMMER NUCLEAR STATION – DOCKET NO. 50-395

Dear Mr. Gatlin:

The Nuclear Regulatory Commission (NRC) requests your participation in a Category 2 public meeting on June 8, 2010, in Atlanta, GA. The purpose of the meeting is to update you on recent NRC efforts to evaluate certain plants against screening criteria developed using Browns Ferry and other greater-than-Green findings related to fire protection; and to provide you an opportunity to update the NRC on how these criteria may have been addressed at your site. The meeting notice, which will be available on the NRC public web site, provides specific details regarding the logistics of the meeting.

As documented in a letter dated April 19, 2010, the NRC recently issued a final significance determination for a fire protection inspection at Browns Ferry Nuclear Plant (ML101090503). One of the findings identified during this inspection dealt with multiple cable separation issues that was determined to have substantial safety significance. Subsequently, an NRC working group was created to identify the factors that led to the safety significance of the Browns Ferry finding, and to identify other plants that may have characteristics similar to those at Browns Ferry.

The focus of the working group was on protection and separation of safe shutdown equipment for scenarios that do not involve control room evacuation; therefore, the evaluation started with a screening question to determine whether a unit has potential issues with protection or separation. Subsequent to this entry condition, the working group conducted a review of the circumstances surrounding the historical greater-than-Green fire protection findings (including the findings at Browns Ferry) in order to identify the major contributing factors to the greater-than-Green findings. Eight screening criteria were identified as the more significant contributors to fire risk. The group then identified plants with known cable separation issues and further evaluated each of these plants against the eight additional screening criteria.

The working group utilized existing and readily-available information in their initial evaluation. Limited data gathering was only performed in a few cases. The evaluations were based on the results of the most recent triennial inspection along with inspector(s) knowledge of the site. The screening criteria are:

1. A relatively large number of operator manual actions (OMAs) used to mitigate cable separation issues.
2. A single fire that could affect more than one unit. A multi-unit site with significant cross-unit distribution of safety-related and safe shutdown electrical loads while at power may necessitate multi-unit shutdowns for a fire in a single area, making operator response more complex.
3. The use of thermoplastic cable insulation. In postulated fires, damage to such cables occurs at lower temperature and longer distances from the fire source, compared to the more commonly used thermoset cables.
4. Limited documentation of cable routing within the plant. Licensees possessing limited information regarding the routing of all cables could result in higher reliance on safe shutdown strategies with elevated risk.
5. A Self-Induced Station Black-Out (SISBO) strategy (isolating on-site power to basically everything except the protected train to prevent spurious actuations) for fires in areas without adequate cable separation. This strategy may unnecessarily remove equipment that may not be damaged by the fire and therefore might otherwise be available for safe shutdown. The working group considered this strategy sufficiently important that they decided to double-weight this criterion. The SISBO strategy was only considered where the entire plant was de-energized downstream of the startup transformers. Plants that had breaker realignments due to coordination problems or limited equipment isolation were not considered as using the SISBO strategy.
6. Use of complex OMAs. Complex OMAs are those which require several steps to restore a function or require coordination between more than one operator in different locations. Whether or not operators would have sufficient time to complete the OMAs was also a consideration when determining if the OMAs could be implemented in a fire scenario.
7. Mitigation of a fire requires cross-tying electrical or mechanical systems from multiple units in order to achieve safe shutdown for a fire in a single area.
8. Symptom-based fire response procedures with complex OMAs. Requiring operators to identify and diagnose multiple equipment damage scenarios in order to select the appropriate responses increases the complexity and operator stress involved, potentially reducing the reliability of the OMAs. Also, because of the potential for fragmented responses through use of these procedures, initial actions may be disrupted by later operator actions.

In addition to the entry condition of having potential issues with protection or separation, the working group preliminarily determined that your plant may share the conditions described in criteria 1, 5, and 6 above.

During the June 8, 2010 public meeting the NRC staff will be available to discuss these screening criteria in more detail and will provide you with an opportunity to present any information on the applicability of these criteria to your plant. For example, these criteria may have been identified and appropriately mitigated through your plant's transition to NFPA 805. It would be beneficial if an individual familiar with your fire protection safe shutdown program and fire PRA attended the meeting.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room (PDR) or from the Publicly Available Records (PARS) component of the Agencywide Document Access Management System (ADAMS). ADAMS is accessible from the NRC web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this meeting, please contact me at 404-997-4530.

Sincerely,

*/RA/*

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cc: See page 4

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Letter to Thomas D. Gatlin from Rebecca L. Nease dated May 21, 2010.

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