

May 24, 2010

MEMORANDM TO: Timothy J. Kobetz, Chief
Reactor Inspection Branch
Division of Inspection & Regional Support
Office of Nuclear Reactor Regulation

FROM: Jeremy S. Bowen, Reactor Operations Engineer */RA/*
Reactor Inspection Branch
Division of Inspection & Regional Support
Office of Nuclear Reactor Regulation

SUBJECT: NOTICE OF FORTHCOMING MEETING TO DISCUSS FIRE
PROTECTION SCREENING CRITERIA IDENTIFIED AT BROWNS
FERRY AND THE IMPLICATIONS FOR OTHER NUCLEAR POWER
PLANTS

DATE & TIME: Tuesday, June 8, 2010
8:00 AM – 4:00 PM

LOCATION: Atlanta Marriott Marquis Hotel
265 Peachtree Center Avenue
Room TBD
Atlanta, GA 30303
www.atlantamarquis.com

PURPOSE: To update licensees 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
licensees an opportunity to update the NRC on how these criteria may
have been addressed at their sites.

CATEGORY 2:* This is a Category 2 meeting. The public is invited to participate in this
meeting by discussing regulatory issues with the Nuclear Regulatory
Commission (NRC) at designated points identified on the agenda.

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* Commissions' Policy Statement on "Enhancing Public Participation in NRC Meetings,"
67 *Federal register* 36920, May 28, 2002.

PARTICIPANTS: Participants include members from the NRC's Office of Nuclear Reactor Regulation, Region II, and Region IV.

NRC
NRR
Region II
Region IV

Industry
Entergy
Progress Energy
Southern Nuclear Operating Company
Florida Power & Light
South Carolina Electric & Gas

The NRC provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation to participate in a meeting or need a meeting notice, the transcript, or other information from a meeting in another format (e.g., Braille, large print) please notify the NRC's meeting contact. Determinations on requests for reasonable accommodation will be made on a case-by-case basis.

Interested members of the public can participate in this meeting via a toll-free audio teleconference. Please inform the meeting contact listed above before June 2, 2010 if you wish to participate in this manner.

Enclosure:

1. Meeting Agenda
2. Region II Lodging Information

T. Kobetz

PARTICIPANTS: Participants include members from the NRC's Office of Nuclear Reactor Regulation, Region II, Region IV.

NRC
NRR
Region II
Region IV

Industry
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Enclosure:
Meeting Agenda

DISTRIBUTION (via e-mail):

PUBLIC

- | | | |
|--------------------|---------------------|---------------------|
| F. Brown, NRR | J. Lubinski, RII | R. Caniano, RIV |
| M. Cheek, NRR | L. Wert, RII | D. Chamberlain, RIV |
| M. Cunningham, NRR | R. Nease, RII | N. O'Keefe, RIV |
| S. Weerakkody, NRR | S. Schaeffer, RII | J. Clark, RIV |
| T. Kobetz, NRR | R. Musser, RII | A. Sanchez, RIV |
| A. Klein, NRR | M. Sykes, RII | V. Dricks, RIV |
| D. Frumkin, NRR | G. McCoy, RII | W. Maier, RIV |
| J. Bowen, NRR | R. Hannah, RII | S. Burnell, OPA |
| J. Gitter, NRR | R. Trojanowski, RII | D. Decker, OCA |
| D. Broaddus, NRR | E. Crowe, RII | M. Landau, OEDO |
| G. Kulesa, NRR | P. OBryan, RII | N. Hilton, OE |
| M. Markley, NRR | S. Stewart, RII | G. Gulla, OE |
| K. Kalyanam, NRR | J. Zeiler, RII | J. Rogge, RI |
| F. Saba, NRR | T. Wertz, NRR | R. Daley, RIII |
| R. Martin, NRR | Q. Nguyen, NRR | |
| J. Paige, NRR | | |

ADAMS ACCESSION NUMBER: ML101400505 - Meeting Notice
ML101440094 - Region II Lodging Information

| OFFICE | NRR/DIRS/IRIB | RII/DRS/EB2*via phone | RIV/DRS/EB2**via e-mail | NRR/DIRS/IRIB |
|--------|---------------|------------------------|-------------------------|---------------|
| NAME | JBowen JB | RNease (NStaples* for) | N. O'Keefe** | T. Kobetz TK |
| DATE | 05/20/2010 | 05/20/2010 | 05/20/2010 | 05/24/2010 |

OFFICIAL RECORD COPY

AGENDA FOR THE JUNE 8, 2010 PUBLIC MEETING
CONCERNING FIRE PROTECTION SCREENING CRITERIA IDENTIFIED AT
BROWNS FERRY AND THEIR IMPLICATIONS FOR OTHER NUCLEAR POWER PLANTS

June 8, 2010
8:00 AM – 4:00 PM

Atlanta Marriott Marquis Hotel
265 Peachtree Center Avenue
Room TBD
Atlanta, GA 30303

| TIME* | TOPIC* | LEAD |
|-------------------|--|------|
| 8:00 AM – 8:15 AM | Opening Remarks & Introduction | NRC |
| 8:15 AM – 8:30 AM | Background on Browns Ferry Finding | NRC |
| 8:30 AM – 3:30 PM | Discussion of screening criteria and preliminary evaluations for: (order to be determined) <ul style="list-style-type: none"> • Arkansas Nuclear One • Brunswick • Farley • Turkey Point • V. C. Summer See attachment for additional information. | NRC |
| 3:30 PM – 3:45 PM | Opportunity for Public Comment | |
| 3:45 PM – 4:00 PM | Summary and Closing Remarks | NRC |

*Tentative schedule. Breaks will be taken as necessary.

Attachment:

1. Summary of Fire Protection Screening Criteria

ENCLOSURE

Summary of Fire Protection Screening Criteria
Identified at Browns Ferry and the Implications for Other Nuclear Power Plants

In a letter dated April 19, 2010, the NRC 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 the use of these procedures, initial actions may be disrupted by later operator actions.

Licensees were notified which screening criteria were preliminarily identified for their plant via separate correspondence. During the public meeting the NRC staff will be available to discuss these screening criteria in more detail and will provide each licensee with an opportunity to present any information on the applicability of these criteria to their plant. For example, these criteria may have been identified and appropriately mitigated through a plant's transition to NFPA 805. The meeting is not intended to be a detailed technical discussion. The specifics regarding each licensee will be discussed for a limited amount of time