

August 11, 2009

MEMORANDUM TO: Frederick D. Brown, Director  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation

THRU: John Munro, Acting Chief **/RA/ LVick for**  
Operator Licensing and Human Performance Branch  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation

FROM: Michael Boggi  
Operator Licensing and Human Performance Branch  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation

SUBJECT: PUBLIC MEETING TO DISCUSS PART 26, SUBPART I  
IMPLEMENTATION

Enclosed is the meeting summary for the July 15, 2009, stakeholder meeting regarding the implementation of 10 CFR Part 26, Subpart I, "Managing Fatigue." This was the second in a series of public meetings to allow interested stakeholders an opportunity to provide the NRC information regarding industry's implementation of Part 26, Subpart I, as part of the NRC's efforts to monitor implementation status. The first meeting was held on May 22, 2009, at NRC Headquarters, Two White Flint North, 11555 Rockville Pike, Rockville, MD 20852.

The meeting was noticed on June 26, 2009. The notice is available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html> where the public can access the text and image files of NRC's public documents in the NRC's Agencywide Document Access and Management System (ADAMS). The meeting notice can be found under accession number ML091750499.

The meeting participants included NRC staff and contractors, members of the power reactor licensee community, representatives from the Nuclear Energy Institute (NEI), and a representative of the International Brotherhood of Electrical Workers (IBEW).

CONTACT: Michael Boggi, NRR/DIRS/IOLB  
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Enclosures:

1. Meeting Summary
2. Meeting Attendance List
3. NRC meeting presentation
4. FAQ Hand-outs

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## Summary of July 15, 2009, Public Meeting Regarding 10 CFR Part 26 Subpart I Implementation

On July 15, 2009, the second of a series of public meetings was held regarding the implementation of 10 CFR Part 26, "Fitness-for-Duty Programs," Subpart I, "Managing Fatigue." The first meeting was held on May 22, 2009. The purpose of the meeting was to allow interested stakeholders an opportunity to provide the NRC with information regarding industry's implementation of Part 26, Subpart I as part of the NRC's efforts to monitor implementation status. The meeting was held at NRC Headquarters, Two White Flint North, 11555 Rockville Pike, Rockville, MD 20852.

The meeting was noticed on June 26, 2009. The notice is available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html> where the public can access the text and image files of NRC's public documents in the NRC's Agencywide Document Access and Management System (ADAMS). The meeting notice can be found under accession number ML091750499.

The list of the meeting attendees is included as Enclosure 2.

The meeting began with introductions and a discussion of the status of NRC activities related to Subpart I implementation that have changed since the previous public meeting. The full list of activities and the status of each was distributed at the meeting and is included here as Enclosure 3. Participants discussed the status of the following items:

1. Public Engagement:
  - The NRC will hold the next public meeting on this topic on September 17, 2009.
  - Select Office of Nuclear Reactor Regulation (NRR) and Nuclear Security and Incident Response (NSIR) staff have been invited to and will visit the Beaver Valley site to understand their implementation of Subpart I.
2. NRC staff will attend the NEI Fatigue Management Implementation Workshop in St. Louis, MO, in August 2009.
3. NRC inspector training has been completed for all Regions. An NEI representative asked whether the NRC will share the training materials with industry. The NRC agreed to make the training materials publicly available.
4. Staff review of technical specification amendment requests is ongoing. The staff has received requests from 47 sites to date.
5. On June 9, 2009, the NRC issued a letter relaxing the April 29, 2003, NRC Order regarding security officer work hour controls. This letter is available to the public via ADAMS at ML091060582.

6. The enhancements to Inspection Manual Chapter 0612 have been completed. Two examples were added regarding Subpart I. An NEI representative asked whether the NRC will share the examples that were added to the chapter. The staff responded that this information is publicly available on the NRC's website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/index.html>.
7. Industry requested an update on the progress of the review panel to ensure regulatory consistency at the September 17, 2009, public meeting. The staff indicated they are working toward having the panel established prior to the implementation deadline of October 1, 2009.

The next portion of the meeting consisted of discussion of open Frequently Asked Questions (FAQs) that the staff is working to address. The FAQs and the draft responses that were discussed are included as Enclosure 4. The following summarizes the discussion of key topics.

### **1. Evaluation of Structures, Systems, and Components (SSCs) under 10 CFR 50.65(a)(4)**

At the May 22, 2009, meeting, industry representatives had asked the NRC about the application of the "maintenance rule" (10 CFR 50.65) with regard to activities subject to the requirements of Subpart I. Industry noted that the FFD rule, as well as NRC-endorsed NEI guidance, allow the use of a process similar to one used under 10 CFR 50.65(a)(4) to determine the safety-significance of maintenance and operations activities, but, using this process, many of the SSCs listed are not safety-significant during outages. At the May meeting, attendees discussed the pros and cons of creating a static list of risk-significant activities versus a dynamic list. Since that meeting, industry submitted an FAQ on this topic to the staff.

In response to the FAQ the staff stated that licensees may use the same processes as used for § 50.65(a)(4) or any other risk-informed evaluation process to determine applicable SSCs. However, for the purposes of Subpart I, the list of SSCs is generally static. The intent is to minimize the instance of latent defects in safety-significant SSCs. Industry expressed agreement with the staff's interpretation, also noting that the list should be re-verified prior to an outage.

The discussion turned to the resolution of the NRC-endorsed guidance (NEI 06-11) which might be interpreted to imply that a list of SSCs could vary with the mode of the plant. As this was not the intent, NEI will investigate whether there is a need to update its guidance document before October 1, 2009. Accordingly, the NRC may need to periodically update RG 5.73, as needed.

An industry representative asked whether the NRC expects licensees to have in their procedures a copy of a list of applicable SSCs. The NRC staff acknowledged that the licensees may document the process for developing their list of safety-significant SSCs as opposed to maintaining a list of SSCs.

### **2. Weather-Related Emergencies**

At the May 22, 2009, meeting, an industry representative explained that licensees sometimes increase staffing levels before the declaration of a weather-related emergency (as in the case of a hurricane watch), but, in some instances, the actual emergency is never declared. Since that meeting, industry submitted to the staff an FAQ regarding how to address early staffing due to the threat of a hurricane.

In response, the staff requested more information (e.g., a day-by-day narrative) regarding how a hurricane scenario affects staffing at a station. The staff also requested scenarios for other weather-related events, such as tornadoes and blizzards. Industry responded that providing this information would be nearly impossible, because no scenario could anticipate the unique impacts of weather-related events.

Industry noted that the apparent options for addressing weather-related anticipatory staffing would be (1) the issuance of waivers for each instance that an individual exceeds the work-hour limits, (2) an approved exception to the rule requirements, or (3) early declaration of an emergency.

Industry stressed the need for a consistent approach to weather-related events that is proactive, not reactive, and expressed a desire to work with the NRC to develop such an approach. The NRC staff agreed that creating a solution in advance of the problem is preferable to resolving the issues on-demand, also noting that an exemption request must be sufficiently noticed. The staff also noted that NRC emergency preparedness staff and other NRC experts were not present at the meeting and would be integral to a discussion of plant-specific exemptions. The NRC agreed to coordinate a separate public meeting on this topic to ensure that all stakeholders and NRC experts are present. Industry agreed to prepare outlines for the types of requests it may submit.

### **3. Fuel Handling**

Industry submitted to the NRC staff an FAQ concerning whether fuel handling activities, including fuel handling Senior Reactor Operator (SRO) duties, would be considered a maintenance or an operations function under Part 26. Industry stated that consistent application of the rule would be to apply maintenance work hour requirements to all fuel handling personnel, including the responsible SRO who would be directing the implementation of a design modification.

The NRC staff responded that the movement of fuel should be considered an operations function; thus, individuals who handle the fuel or direct the movement of fuel should be subject to operations work hour controls. The NRC explained that the movement of fuel in and around the reactor vessel and spent fuel pool is an operations function because it involves a reactivity change. Further, fuel movement is a core alteration, which is not a maintenance function.

Industry stated that fuel movements are maintenance functions and noted that SROs are not necessarily present at the spent fuel pool. Industry expressed concern that, according to the NRC's response, operator involvement is synonymous with an operations function, which would have an impact on other maintenance functions.

The staff noted that the industry should submit separate questions for activities that do not involve reactivity. Industry agreed to develop new questions that solicit additional information from the staff.

NEI requested the basis for the NRC's decision and its definition of "reactivity change." The staff referenced section 50.54, and agreed to provide further clarification regarding this issue.

#### **4. Travel Time**

At the May 22, 2009, public meeting, the participants discussed whether travel time from an individual's residence to his or her place of work or between work sites should be included in the calculation of work hours. The NRC staff and industry representatives discussed the complexity of the issue with respect to the calculation of work hours, including the implications for tracking travel time and assigning travel schedules.

Since the May meeting, the staff has continued to develop its position on travel time with respect to the calculation of work hours. The staff did not distribute its draft position at this meeting, as it was under review by OGC, but it did summarize the position. The staff stated that travel to an alternative work location is considered to be work performed for the licensee and should be counted against the work hour control limits. However, normal commuting time from an individual's home to his normal work site (and vice versa) would not be counted in the calculation of work hours.

The staff presentation was in regards to how to count travel hours as work hours and what may be excluded from the calculation.

Industry expressed several concerns with the staff's position, including the following:

- It will create significant logistical burden for licensees.
- It will add complexity to the rule but no apparent value.
- It will require the licensee to regulate individual's personal time, which is an expansion of the current scope of the regulation.
- It does not address how to approach situations in which the individual has options for travel (e.g., plane ride vs. driving).

An industry representative suggested that the staff refer to the discussion in RG 5.73 regarding paid time not included in work hour calculations for insight on how to provide flexibility. Industry also asked which licensee must count the hours if two licensees share employees and whether licensees are responsible for calculating vendor travel time. The staff responded that the receiving licensee must include the travel time/work hours. Staff also indicated that it will consider the question regarding vendors and respond at a later time.

#### **Closing Comments**

Industry noted that licensees have already begun implementing the rule and that the issues discussed seem to be a change from industry's understanding of the rule when it was published. Thus, industry contended that changing compliance mechanisms and materials at this late date will cause considerable disruption to licensees. Industry urged the NRC to consider a way to implement resolutions, for this type of emergent issue, that would minimize the negative impact on licensees. The NRC staff acknowledged that these types of issues could continue to arise throughout the implementation phase, and the staff will try to work with industry to minimize the impacts of emergent issues on NRC positions.

**July 15, 2009, Public Meeting Regarding 10 CFR Part 26 Subpart I Implementation**

Attendance List

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| Howard Benowitz   | NRC                  |
| Bob Birchell      | TVA                  |
| Mike Boggi        | NRC                  |
| Ed Brennan        | Dominion             |
| Fred Brown        | NRC                  |
| John Butler       | NEI                  |
| Wayne Chalk       | NRC                  |
| Peter Defilippi   | Westinghouse         |
| Jack Desando      | Constellation Energy |
| David Desaulniers | NRC                  |
| Greg Halnon       | First Energy         |
| Jeff Hansen       | Exelon               |
| Glen Kaegi        | Exelon               |
| Kevin Kingsley    | Entergy              |
| Al Lindsay        | Duke Energy          |
| Tim Kolb          | NRC                  |
| Kamishan Martin   | NRC                  |
| Todd Newkirk      | IBEW                 |
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| Deann Raleigh     | Scientech            |
| Don Rickard       | STARS                |
| Tom Rohe          | FPL                  |
| Russell Smith     | NEI                  |
| Ross Telson       | NRC                  |
| Georgia Thu       | ICF                  |
| Dale Vincent      | Xcel Energy          |
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| Mark Shaffer      | PSEG                 |
| Autumn Szabo      | NRC                  |
| Tom Underwood     | STP                  |
| James Wicks       | AEP                  |

Enclosure 3

## **NRC Meeting Presentation**

\*\*\*WITHDRAWN\*\*\*

## FAQ Responses

### Fuel Handling

#### Question:

The industry normally considers the disassembly and reassembly of the reactor components as a maintenance activity. Additionally, the industry considers the removal of the fuel, shuffle of components in the spent fuel pool, and fuel load as implementation of a modification. The normal practice of the industry as described in SOER 96-2, Design and Operating Considerations for Reactor Cores, is to treat core redesign as a design modification. The fuel handling SRO would be directing the implementation of a design modification. The definition of maintenance provided by the rule includes modification activities as a maintenance duty. A consistent application of the rule would be to apply the maintenance category of work hour restriction to all fuel handling personnel including the fuel handling SRO. Are fuel handling activities, including the fuel handling SRO duties, considered as maintenance or operating duties as defined by Part 26?

#### Response:

Staff considers the movement of fuel to be an operations function and individuals who handle the fuel or direct the movement of fuel should receive operations work hour controls. This is supported by the following conditions: 1) Most utilities have the fuel handling procedures associated with or part of the Operations procedures, 2) The CFR requires an SRO to directly supervise fuel movements, 3) Technical Specifications require a direct line of communication with the control room Reactor Operator during fuel movement, 4) Operations is responsible for the overall evolution of moving fuel, and 5) The Reactor Operator must concur on every fuel movement and monitors reactivity instrumentation during all fuel moves.

Moving fuel is a reactivity manipulation and is therefore required to be performed or directed by an Operator with a license. The actual fuel mover (person operating the refuel bridge or machines) does not require a license but must be directed by an individual with a Senior Operator license. The consequence of a dropped fuel assembly or misposition error can have radiological consequences. Additionally 10 CFR 50.54(m)(2)(iv) states that fuel movements are alterations of the core. Alterations are not considered to be modifications.

**\*\*\*WITHDRAWN\*\*\***

Hurricane

Question:

Facilities in hurricane zones stage crews in anticipation of the arrival of hurricanes. The current practice is to increase staffing prior to the declaration of emergency classifications. The industry believes that this early staffing practice supports the safety of their employees as well as the health and safety of the public.

The work hour restriction of Part 26 allows the licensee to not meet the work hour restrictions during declared emergencies but does not include this early staffing. The early staffing will conflict with the break times and minimum days off requirements of Part 26. There are some alternative options for allowing the early staffing and would recommend that a consistent method be established. What would be the NRC's recommendation for addressing the early staffing?

- An approved exception to rule requirements
- A large number of waivers to the rule
- Declaration of the EAL at the time of early staffing

Response:

There are provisions in Subpart I such the average minimum day off requirement that can be used to address extended work hours. Also, sites always have the option of ending one shift cycle mid-cycle and start a new. For individuals who are staged in anticipation of a hurricane perhaps there is the possibility of a within-shift break and rest periods from which licensees may exclude from the calculation of an individual's work hours that portion of a break or rest period during which there is a reasonable opportunity and accommodations for restorative sleep. However, staff requests more specific information regarding how a hurricane scenario plays out at a station to specifically answer this question. The scenario should, preferably, be a day-by-day narrative regarding what happens on site to prepare for the arrival of a hurricane and how work hour controls affect the scenario. Staff also requests to receive scenarios for other weather related events, such as tornadoes and blizzards if it is foreseen that an exemption from work hour controls will possibly be requested.

## Maintenance Rule

### Question:

Need clarification on how to determine significance to the public health and safety for maintenance and ops covered activities.

Part 26 rule states use 10 CFR 50.65(a)(4) but lot of items in a(4) are not safety significant during outages. For example auxiliary feedwater is not risk significant during an outage. Everything in a(4) is significant to public health and safety per definition so everything is covered.

Maintenance rule a(1) and a(2) high safety significance is a different set of systems than a(4). Which part of the maintenance rule should we be using?

### Response:

Licenseses may use the same process as used for § 50.65 (a)(4) or any other risk-informed evaluation process to determine applicable SSCs. However, the NRC staff interpretation is that, for the purposes of Subpart I, the list of SSCs is static. The intent is to minimize the instance of latent defects in safety-related SSCs so that a risk significant SSC will perform its safety function when called on to do so.

Once identified as a risk significant SSC, in any plant mode, for the purposes of Part 26, the SSC is considered to be a "covered" SSC, in any plant mode.

As background, excerpted from the SOC page 17178. "Compared to rested workers, fatigued maintenance personnel would have a higher probability of (1) taking longer to complete maintenance activities or using non-conservative work practices, (2) making errors that would increase the risk of failure of the affected SSCs to perform their functions or operate for their required mission time during post maintenance testing, thus delaying their return to unrestricted service, and (3) making errors that could introduce latent defects that may not be readily detected by post-maintenance testing, but that may cause degraded reliability (i.e., degraded performance or failure of the SSCs at a later time)."