

September 2, 1999

MEMORANDUM TO: File

FROM: August K. Spector, Communication Task Leader  
Inspection Program Branch (Original signed by:)  
Division of Inspection Program Management  
Office of Nuclear Reactor Regulation

SUBJECT: PUBLIC MEETING ON REACTOR OVERSIGHT PROGRAM ISSUES  
MAY 26, 1999

On May 26, 1999, a public meeting was held between the NRC and the NEI to continue exchanging information on the reactor oversight program. The meeting agenda, a meeting summary, a list of attendees and a copy of written information exchanged at the meeting are attached.

Attachments: As stated

Contact: August K. Spector  
301-415-2140

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\* See previous concurrence.

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**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

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Division of Inspection Program Management  
Office of Nuclear Reactor Regulation

A handwritten signature in black ink, appearing to read "August K. Spector", written over the typed name in the "FROM" field.

**SUBJECT:** PUBLIC MEETING ON REACTOR OVERSIGHT PROGRAM ISSUES  
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On May 26, 1999, a public meeting was held between the NRC and the NEI to continue exchanging information on the reactor oversight program. The meeting agenda, a meeting summary, a list of attendees and a copy of written information exchanged at the meeting are attached.

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## PUBLIC MEETING SUMMARY

### ISSUES DISCUSSED

1. Discussed Frequently asked questions. See attachment for Updated Q&A submitted by NEI and reviewed by NRC.
2. Reviewed by Region I public meeting training session. Generally agreed that the training was well received session. A lot of information was presented by a wide variety of presenters during the meeting.
3. Discussed pilot project
4. Fire Protection. See attachment information which was submitted related to Fire Protection issues discussed in the meeting.
5. NRC and the industry discussed Information System Support and Logistics for the oversight process performance data such as performance indicator plant issue motion and actions taken by the licensee/NRC
6. Participants asked questions regarding SDP process and methods of coloring finding and performance indicators. The NRC staff explained in detail how the assessment and SDP process work. Detailed draft guidance will be issued to pilot plants before the implementation of the pilot program.
7. NEI/NRC discussed their plans to survey public to assess their perception about the new process and to verify success criteria of the new process.
8. Responses for survey conducted to the licensee's plant manager level (see attached) were discussed briefly discuss the meeting.
9. Industry questioned the licensing fees charged during the pilot program implementation. The NRC staff stated that the guidelines will be discussed during the future meetings.
10. NEI stated that Mr. Lockburn will issue a report on the new program. The staff stated that it should be directed to OPA.
11. Maintenance Rule \_\_\_\_\_ definition and other maintenance rule related issues were discussed (see attached).

**ATTENDEES  
Public Meeting  
MAY 26, 1999**

**NEI**

John Butler  
Tom Houghton

**NRC**

August Spector  
Roy Mathew  
Don Hickman  
Tim Frye  
Alan Madison  
Ron Frahm, Jr.  
Tom Boyce

**OTHER**

Dennis Zarmoni  
Gabe Salamon

**AGENDA FOR MAY 26, 1999, NRC/NEI MEETING TO DISCUSS THE  
CONTINUED DEVELOPMENT OF RISK-INFORMED PERFORMANCE  
ASSESSMENT PROCESS AND INSPECTION PROGRAM  
IMPROVEMENTS**

- Introduction
- Purpose of Meeting
- Review/Discuss the Risk-Informed Inspection Program and Assessment Process
- Planning for Future Interaction

| FAQ LOG |           |  |  |                |        |
|---------|-----------|--|--|----------------|--------|
| No.     | Cat.      | Question   | Response   | Source:        | Status |
| 1.      | PP<br>SEP | <b>(PP-SEP) Reporting of Compensatory Hours for Multi-Unit Sites</b><br>For a multi unit site how are the CCTV and IDS Compensatory Hours to be reported? Are they reported under only 1 unit, all units, divided between the units, or separately as a site-wide program?                                       | Information supporting performance indicators is reported on a per unit basis. For performance indicators that reflect site conditions, this requires that the information be repeated for each unit on the site.  | Email,<br>5/4  | Draft  |
| 2.      | PP<br>FFD | <b>(PP-FFD) Reporting of FFD Data for Multi-Site Program</b><br>When reporting data for FFD/personnel screening for a multi-site company for which personnel are tested for both sites, how is the data reported?  | The Personnel Screening Program Performance Indicator provides a measure of the effectiveness of programmatic efforts to implement regulatory requirements outlined in 10 CFR Part 73. Where a programmatic failure affected (or had the potential to affect) multiple sites, the instance is reported for each affected unit. | Email,<br>5/4  | Draft  |
| 3.      | IE<br>UPC | <b>(IE-UPC) Preplanned Contingency Power Changes</b><br>If a reduction from 100% to 70% is planned, and an additional 25% must occur if the situation is worse than expected, can a licensee preplan (at the time of preplanning the 30% reduction) a "second contingency step planning" for the additional 25%. | The 72 hour planning period is used as a mark to indicate that necessary planning has occurred to address the proposed power change. This planning may include "contingency" power changes that would not be counted toward the performance indicator.   | email,<br>4/27 | Draft  |
| 4.      | IE        | <b>(IE-UPC) Overshoot of Planned Power</b>   | The Unplanned Power Changes Performance  | email,         | Draft  |

**Key:**

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 GEN - General

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 PSP - Personnel Screening Program Performance PI  
 RCSA - RCS Specific Activity PI

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 SEP - Security Equipment Performance PI  
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|     | UPC       | <p><b>Reduction</b><br/>           If a licensee plans to reduce from 100% to 85% (15% reduction) but due to equipment malfunction (boron dilution) overshoots and reduces to 70%. Since 15% was already planned, is the overall transient considered (100-70 = 30% and counted as a "hit"), or is it only for transients beyond that planned (85-70 = 15% and not counted as a "hit")?</p>   | Indicator addresses changes in reactor power that are not an expected part of a planned evolution or test. In the proposed example, the unplanned portion of the power evolution resulted in a 15% change in power and would not count toward the performance indicator.  | 4/27          |        |
| 5.  | PP<br>SEP | <p><b>(PP-SEP) Comp Posting for Non-Failure of Equipment</b><br/>           For Security Intrusion Detection Systems (IDS), if the number of IDS segment false alarms exceeds 5 per hour, licensees declare the IDS segment inoperable (due to excessive false alarms = note, these are not nuisance nor environmental alarms), comp post the segment, repair/test the segment, return the segment to operable and remove the comp post. The question is, if an IDS segment is removed from service and comp posted, but the resultant maintenance does NOT disclose any malfunction and the system is returned to service with essentially no corrective maintenance (some minor</p> | <p>If there is no equipment malfunction and the system would still have alarmed during intrusion (still capable of performing its intended function), then the compensatory man hours that were established as part of a precautionary maintenance activity would not be counted.</p> <p>In the example cited, the segment was out-of-service during the maintenance and would not have performed its intended function. Therefore, the compensation hours would count.</p> | email,<br>5/3 | Draft  |

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|     |           | tweaking of system sensitivity might be done since it is out of service, but for this discussion the sensitivity was not initially mis-set), do you count the comp posting hours against the metric.  |  |                |        |
| 6.  | PP<br>SEP | <b>(PP-SEP) Multiple Comp Postings for Single Equipment Failure</b><br>If two IDS segments can be covered by a single comp post (one watchperson) then the guidance says to only count one hour (don't double count the single post). What if one IDS segment must be covered by 2 or more comp posts (two or more watchpersons), do you count one hour or the hours expended by the watchpersons (i.e., 2 or more per hour). | Total compensatory man-hours should be counted. This performance indicator measures total man-hours of compensatory action, not vs: total hours of compensatory action.  | email,<br>5/3  | Draft  |
| 7.  | EP<br>DEP | <b>(EP-DEP) Misclassification of Event Subcategories</b><br>Some licensees have broken the 4 emergency action levels down into subcategories called "Event Tabs". If a licensee exercise correctly classifies the event (UE, Alert, SE, or GE) and makes the appropriate PAR recommendation, is this item considered a success even though the  | Misclassifications of licensee event tabs are not "hits" provided that the notification, EAL classification and PAR are appropriate to the event as specified by the approved plan and implementing procedures. The incorrect sub-classification should be noted in the drill critique for follow-up action. | Email,<br>4/27 | Draft  |

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|     |           | licensee may have misclassified the subcategory event tab.   |   |              |        |
| 8.  | PP<br>SEP | <p><b>(PP-SEP) Comp Hours for Multiple Equipment Failures</b><br/>Compensatory hours are not double counted when compensatory measures are assigned to multiple points (i.e. a single officer spending 4 hours watching both a camera and a zone). However, where are the comp hours assigned, to the camera or the zone.</p> <p>What If 1 MSF (Member of the Security Force) spent a total of 12.5 hours (one standard shift) on compensatory measures for malfunctioning equipment (0530 - 1800).<br/>Of the 12.5 hours =</p> <p style="padding-left: 40px;">0530 - 1400 MSF compensated for zone 4 (IDS) totaling 8.5 hrs</p> <p style="padding-left: 40px;">0700 - 1200 MSF compensated for camera 4 (CCTV) totaling 5 hrs</p> <p style="padding-left: 40px;">0900 - 1800 MSF compensated for camera 5 (CCTV) totaling 9 hrs</p> | Compensatory hours expended to address multiple equipment problems are assigned based upon the piece of equipment that first required compensatory hours. When this first piece of equipment is returned to service and no longer requires compensatory measures, the second piece of equipment carries the hours, etc. In the offered example, IDS-Zone 4 would be assigned 8.5 hours and CCTV-camera 5 would be assigned 4 hours. | Email<br>5/6 | Draft  |

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|     |           | How should we divide the hours up?   |   |                  |        |
| 9.  | EP<br>DEP | <b>(EP-DEP) Control Room Crew Opportunities</b><br>How many opportunities per year for evaluation of the Control Room crews are typical?   | There are nominally 20 to 30 opportunities per year for a typical 5 crew utility, depending upon how a utility designs their program.             | Email,<br>5/6/99 | Draft  |
| 10. | EP<br>DEP | <b>(EP-DEP) Table Top Exercises Opportunities</b><br>Does a table-top exercise count as an opportunity?  | Yes, if the scenario involves inter facility participation as described in NEI 99-02 and provides meaningful proficiency enhancing opportunities. | Email,<br>5/6/99 | Draft  |
| 11. | EP<br>DEP | <b>(EP-DEP) When does an Event Count as an Opportunity?</b><br>For an actual event there may be many non-emergency events that require evaluation of the event against the EALs. If this evaluation does not result in a classification – does the actual event count as an opportunity? | No- opportunities begin when a classification is made.  | Email,<br>5/6/99 | Draft  |
| 12. | EP<br>DEP | <b>(EP-DEP) Simulator Training Opportunities</b><br>Does simulator training count if it leads to simulated classification, notifications, and PARs?  | Yes, provided the utility designs the simulator scenario to support the EP function and assesses performance.                                     | Email,<br>5/6/99 | Draft  |
| 13. | EP        | <b>(EP-DEP) Training of Evaluators</b>   | Typical drill evaluation training and use of subject  | Email,           | Draft  |

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|     | DEP       | Do evaluators for drills have to be trained in order to assess opportunities correctly?   | matter experts is expected.  | 5/6/99        |        |
| 14. | GEN       | <b>(GEN) Performance within the Green Band</b><br>Is there a process that will allow the NRC to see decreasing performance even if the utility stays green?     | The PIs are only a part of the overall over-site sight process. A green performer should be allowed to identify and correct perceived problems. The utilities process of identifying and the timeliness of corrective actions will be inspected.                   | Email, 5/6/99 | Draft  |
| 15. | EP<br>DEP | <b>(EP-DEP) Event Notifications within 15 Minutes</b><br>For offsite notification the goal is initiating notifications within 15 minutes – what does this mean? | The 15 minute clock starts when an event classification is made and stops once contact is initiated with offsite agencies (even if they don't answer their normal phones).   | Email, 5/6/99 | Draft  |
| 16. | EP<br>DEP | <b>(EP-DEP) Counting of PARs and Notifications</b><br>How do you count PARs and notifications associated with PARs?   | Initial notification plus usually one or two follow-up changes due to such things as wind shift or dose assessment. You would get credit for the notification of PAR even if the PAR notification was made at the same time as the General Emergency notification. | Email, 5/6/99 | Draft  |
| 17. | EP<br>DEP | <b>(EP-DEP) Zero Opportunities In a Quarter</b><br>Is a quarter with no data a problem?   | A quarter with no data is OK – simply report zero opportunities and zero “timely and accurate” opportunities actions.  | Email, 5/6/99 | Draft  |
| 18. | EP<br>DEP | <b>(EP-DEP) Counting of Failure to Identify a General Emergency</b><br>If the ERO fails to identify a General Emergency then does this count as 3               | No – the General Emergency classification results in the need for the notification and the PAR therefore this would be only one classification failure.  | Email, 5/6/99 | Draft  |

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|     |            | failures – one for the classification, one for the notification, and one for the PARs?   |  |                  |        |
| 19. | EP<br>DEP  | <b>(EP-DEP) Counting of Multiple Opportunities for Classification</b><br>If the utility holds the ERO to the standard of identifying multiple EALs for the same classification should multiple opportunities for classification of a particular emergency classification be allowed?   | This is not allowed at present, but may be considered for later incorporation.   | Email,<br>5/6/99 | Draft  |
| 20. | EP<br>DEP  | <b>(EP-DEP) Subjectivity In Event Classification</b><br>During drill performance, the ERO may not always classify an event exactly the way that the scenario specifies that the classification should have been made. This could be due to conservative decision making, ED judgment call, or a simulator driven scenario that has the potential for multiple 'forks'. How do we deal with these correct classification determinations that may not follow the path the evaluators were expecting? | The acceptability of the classification will have to be subjective in nature – inspection of the licensees documentation of the evaluation process should obviously support the evaluators decision. | Email,<br>5/6/99 | Draft  |
| 21. | EP<br>EROP | <b>(EP-EROP) Qualification of Personnel in Multiple Positions</b>  | It maybe possible to ascribe participation credit in both positions if the drill was a proficiency enhancing   | Email,<br>5/6/99 | Draft  |

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|     |            | Concerning ERO Participation, how do you address a person who is qualified in more than one position and listed on your roster for all positions that he or she is qualified to fill? | experience. However, if positions are markedly dissimilar this would be inappropriate. Another option would be to evaluate the need to maintain this person qualified to fill multiple positions – if the depth of positions being filled is more than four deep then dual qualification of the individual may not be necessary. |                  |        |
| 22. | EP<br>EROP | <b>(EP-EROP) Participation In Multiple Positions</b><br>What if an individual participates in multiple positions – can that individual be counted twice or three times?..             | If the new position is a proficiency enhancing experience – this will be a subjective call.  | Email,<br>5/6/99 | Draft  |
| 23. | EP<br>EROP | <b>(EP-EROP) Frequency of Performance Training</b><br>Is once every 2 years the new minimum expectation for participating in a performance training environment?                      | Yes – one could surmise this from the PI, but the 80% + threshold provides flexibility.  | Email,<br>5/6/99 | Draft  |
| 24. | EP<br>EROP | <b>(EP-EROP) ERO Size</b><br>Is there a minimum ERO since this PI leads one to believe that smaller would be better in order to meet the PI?  | No, NUREG-0696 defines the functions required in an emergency. The plant should follow their list of ERO participants that fulfill the functions list. This list is not the required minimums.   | Email,<br>5/6/99 | Draft  |
| 25. | EP<br>EROP | <b>(EP-EROP) Counting of Participation</b><br>How do you count a person only once?  | Must look back in the records for 8 quarters - If this person has participated during this time frame then his/her participation counts only once. Licensees may want to computerize the 8 quarter look back to  | Email,<br>5/6/99 | Draft  |

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|     |            |   | simplify this process. This is not a rolling average – the utility should take a snapshot at the end of the quarter for all of those qualified at the end of the quarter.  |                  |        |
| 26. | EP<br>EROP | <b>(EP-EROP) Counting of Actual Events</b><br>Do actual events count for participation purposes?  | Yes. In addition, NEI 99-02 indicates that a person can get credit as a participant, mentor, coach, evaluator, or controller but not as an observer.   | Email,<br>5/6/99 | Draft  |
| 27. | EP<br>EROP | <b>(EP-EROP) Counting of SRO Training</b><br>The Control Room SRO must take a license exam every year on the simulator, therefore the opportunity for that person to stay qualified for this PI would be expected to be offered at least twice in the 8 quarter time frame. | Agreed, but not mandatory. The design of the simulator training evolution is left to the licensee.   | Email,<br>5/6/99 | Draft  |
| 28. | EP<br>EROP | <b>(EP-EROP) Counting of Participation</b><br>What is the expectation for someone that fails to classify properly – does this still count as participation?   | Yes, the participation would count. But the NRC believes that the licensee would take corrective actions to ensure he or she is proficient in the identified failure. The missed opportunity for proper classification would be reflected in the DEP PI.                   | Email,<br>5/6/99 | Draft  |
| 29. | EP<br>EROP | <b>(EP-EROP) Addressing ERO Changes</b><br>How do you deal with people moving around in the ERO?  | The participation must be a proficiency experience in the simulator or supporting positions. If the previous position provides a proficiency enhancing experience for the new position, the previous position remains valid for 8 quarters. The licensee will need to make | Email,<br>5/6/99 | Draft  |

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 SEP - Security Equipment Performance PI  
 SLHR - Scrams w/ Loss of NHR PI  
 SSFF - Safety System Functional Failures PI  
 SSU - Safety Systems Unavailability PI  
 UPC - Unplanned Power Changes PI  
 US - Unplanned Scrams PI

| No. | Cat.    | Question  | Response   | Source:       | Status |
|-----|---------|---|--|---------------|--------|
|     |         |   | this determination and the inspector will review the determination.  |               |        |
| 30. | EP ANSR | <b>(EP-ANSR) Sites that do not have Sirens</b><br>What are we going to do about sites that do not use sirens or use very few sirens – why only address sirens in the PI?                                | Will probably not address tone alert radios (TARs) or other such equipment as a PI; this will probably be an inspection item only. Sirens were chosen because they are critical components in ensuring public health and safety. In addition, siren availability reporting is currently required by FEMA for those sites that have sirens, which is the majority of sites. | Email, 5/6/99 | Draft  |
| 31. | EP ANSR | <b>(EP-ANSR) Tests during Siren Maintenance</b><br>How do you count siren failures resulting from maintenance activities?   | If the regularly scheduled test specifies a period, e.g.; biweekly rather than a specific time, e.g.; noon first Tuesday of the month, the licensee may choose to delay the test within the period to allow repair.  | Email, 5/6/99 | Draft  |
| 32. | EP ANSR | <b>(EP-ANSR) Siren Unavailability Due to Storms</b><br>If a siren is unavailable due to storm damage, would the missed siren tests prior to the siren being returned to service be considered failures? | Yes, they are part of the ANS design and their unavailability irregardless of reason is an indicator that the ANS system is at reduced capability.   | Email, 5/6/99 | Draft  |
| 33. | EP EROP | <b>(EP-EROP) Counting of Participation</b><br>If a person is not qualified to fill a position but participated in a drill in that position for training purposes, does that participation count?        | Yes. If the participation was a proficiency enhancing experience for the assigned duty position. The person is now qualified and placed on the duty roster, the participation will count.  | Email, 5/6/99 | Draft  |

**Key:**

ANSR - Alert and Notification System Reliability PI  
BI - Barrier Integrity Cornerstone  
CL - Containment Leakage PI  
DEP - Drill/Exercise Performance PI  
EP - Emergency Preparedness Cornerstone  
EROP - ERO Drill Participation PI  
FFD - Fitness-for-Duty/Personnel Reliability PI  
GEN - General

IE - Initiating Events Cornerstone  
MS - Mitigating Systems Cornerstone  
OECE - Occupational Exposure Control Effectiveness PI  
ORS - Occupational Radiation Safety Cornerstone  
PP - Physical Protection Cornerstone  
PRS - Public Radiation Safety Cornerstone  
PSP - Personnel Screening Program Performance PI  
RCSA - RCS Specific Activity PI

RCSL - RCS Leakage PI  
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| No. | Cat.       | Question   | Response              | Source:          | Status |
|-----|------------|--|-----------------------|------------------|--------|
| 34. | EP<br>EROP | (EP-EROP) Counting of Participation<br>Is the denominator "the number of people filling the positions that are required to be filled" or "the number of positions that are required to be filled"? | The number of people. | Email,<br>5/6/99 | Draft  |

**Key:**

ANSR - Alert and Notification System Reliability PI  
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 PP - Physical Protection Cornerstone  
 PRS - Public Radiation Safety Cornerstone  
 PSP - Personnel Screening Program Performance PI  
 RCSCA - RCS Specific Activity PI

RCSL - RCS Leakage PI  
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**Comment.** Three commentors expressed similar views related to high-risk activities. One noted that, under suitable controls, a shorter time in a more risk-significant configuration may be safer than a longer time in a less risk-significant configuration. Another noted that high risk-significant activities should be recognized and avoided, where practical, and limited in duration when they are necessary. The third noted that the proposed rule does not address situations in which failure to perform a maintenance activity may have a greater impact on risk than performing the high safety-significant activity.

**Response.** The NRC agrees that the proposed rule precluded entering risk-significant configurations, no matter the duration, when, in fact, situations may exist that would yield a net safety benefit by performing maintenance in a risk-significant configuration for a short time. The rule has been revised to require licensees to understand their options with respect to risk and to manage their maintenance activities according to their best judgment, considering insights from operating experience and deterministic and probabilistic analyses.

8. **Emergent maintenance requirements.**

**Comment.** Two commentors stated that the proposed rule does not address expectations for revising assessments upon the discovery of a previously unknown condition requiring maintenance (emergent maintenance). They also expressed concerns that if certain emergent maintenance activities are not completed immediately, the plant could be at greater risk.

**Response.** Under the revised rule, an assessment is required to be initiated following the discovery of emergent failures or changes in plant conditions to determine the safety impact of the failure or the change in plant conditions. For additional information on this subject, please see the discussion in Item 4 of Section III, "The Final Rule," below.

9. **Documentation of the assessment.**

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missing

pp. 1-8

**Comment.** Three utility commentors stated that the proposed rule is not explicit enough regarding assessment documentation expectations.

**Response.** The rule has no explicit documentation requirements. Instead, the rule emphasizes performance. A licensee's assessment process is expected to identify the impact on safety that is caused by the performance of maintenance. Licensees should use documentation to the extent necessary to assure themselves that the requirement for an assessment has been acknowledged and performed adequately. NRC expectations are that a licensee will have a requirement for the assessments and an explanation of the process to be followed in its maintenance rule program, along with a description of assessment tool(s) to be used and their limitations, implementing procedures, and explicit direction covering instances when the plant configuration is or is proposed to be outside the span of the assessment tool. Further, the assessment process is expected to be incorporated into the maintenance planning and scheduling process and into work package requirements. Moreover, control room operators, who are expected to understand, use, and know the limitations of the assessment tools, generally use and maintain a variety of documents, such as logs and checklists, that contain information relating to out-of-service SSCs.

**10. Definition of availability.**

**Comment.** Three commentors stated that the definition of availability will be key to this rulemaking. They also stated that the availability definition should take into account the time required to restore the functionality of an SSC and should also be risk informed.

**Response.** A definition of availability for licensee maintenance rule programs is set forth in NUMARC 93-01, Revision 2, which was endorsed by the NRC in Regulatory Guide 1.160, Revision 2, of March 1997. According to that document, availability is "(t)he time that a(n) SSC is capable of performing its intended function (expressed) as a fraction (usually as percent) of

the total time that the function may be demanded." Also according to that document, under the definition of "unavailability," is the following statement: "An SSC that is required to be available for automatic operation must be available and respond without human action." Additionally, in the instance where an SSC is taken out of service for testing but could be manually activated, the NRC has accepted that, as long as the dedicated operator's written procedure specifies a single action that would permit an automatic initiation of the out-of-service SSC in the event of an accident or transient during the test, the SSC could be considered available. (Meeting Summary – November 19, 1991 NRC/NUMARC Public Meeting on the Development of Guidance Documents for the Implementation of the Maintenance Rule (10 CFR 50.65), R.P. Correia, Office of Nuclear Reactor Regulation, memorandum to E.W. Brach, Office of Nuclear Reactor regulation, dated November 23, 1991.) The NRC's expectation is that, by procedure, the dedicated operator is stationed at the equipment and is ready and qualified to perform that single action in a moment. An acceptable single action could be the rapid repositioning of a switch or a lever; an unacceptable action would be racking in a breaker or, in some instances, opening a manual gate valve.

With respect to risk-informing the maintenance rule definition of availability, the reliance of initial availability performance measures on probabilistic risk assessment (PRA) data provided such a basis. However, in quality maintenance programs, availability is monitored to identify and trend the performance of equipment, thereby permitting certain conclusions to be drawn about the effectiveness of the equipment's maintenance program. Paragraph (a)(3) of the rule requires that the prevention of SSC failures (reliability) through maintenance is appropriately balanced against the objective of minimizing unavailability. Omitting unavailability time from the maintenance effectiveness determination analysis is flawed logic. Omitting unavailability time because, in an accident scenario, the equipment may not be needed for the time it may take to

restore its safety function recognizes the role of the equipment but masks the actual requirement for maintenance. The maintenance rule requires licensees to monitor the effectiveness of their maintenance programs. Omitting significant details, such as how much maintenance time an SSC requires in order to attain the objective of preventing failures, is contrary to the purpose of the rule.

Note also that maintenance rule "availability" is not technical specification "operability."

11. Backfit and regulatory analyses.

Comment. One commentator stated that the regulatory analysis does not justify the expansion of the maintenance rule to "normal shutdown operations" and that a revision of the analysis to better consider such expansion would show through backfit considerations that the expansion is not justified. Another commentator also presented a concern that the overall implications of the rule were not supported by the backfit analysis.

Response. The new preamble to the rule is an introductory sentence clarifying that the rule applies under all operating conditions, including normal shutdown. The Commission intended the rule to apply to all operating conditions, and it has been implemented by the NRC staff consistent with such an interpretation. Moreover, Section 11.2.3 of NUMARC 93-01 specifically states that "assessment applies during all modes of plant operation." The overall implications of the rule were assessed in the backfit analysis for the original maintenance rule, which was issued July 10, 1991.

12. Regulatory analysis cost estimates.

Comment. One commentator raised the concern that if facilities are required to develop numerical models for every combination of low safety-significant SSCs, the cost of implementing the program would be significantly higher than estimated in the regulatory analysis.

**NRC Clarification Questions: "Stakeholder Comments on Draft FP Inspection Module"**

Prepared by: Leon Whitney, FPES/SPLB/NRR/NRC

Prepared on: May 25, 1999

**First Commenter**

**"The inspection basis (last sentence) is inconsistent with the objective."**

NRC Clarification Comment: Please explicitly specify the sentences which are inconsistent and state what the perceived inconsistencies are.

**"Section 02.02.b appears to be demanding that we have an unannounced fire drill in a high risk area at a time of NRC's choosing."**

NRC Clarification Comment:

The NRC notes that the subject sentence begins with the phrase "may also include" rather than "will include." Nevertheless, NRC inspection teams do expect the licensee to conduct one fire drill during the onsite inspection period. The location of the drill may be unannounced to the fire brigade. However, the inspectors will have discussed with the licensee the timing and character of the fire drill during the information gathering visit weeks in advance of the inspection. A mutually agreeable scenario would be agreed upon at that time.

Is the commenter's issue the phrase "high risk area?" Are there other phrases which the commenter could suggest (e.g. "plant area in which a fire could require conduct of a post-fire safe shutdown")? Should the passage have some other form of rewrite?

Is the commenter's issue that the fire drill is unannounced? This is not equivalent to unplanned or unsupervised.

Please expand the comment to illustrate exactly what the commenter's fire drill issue is.

**"The triennial general guidance should pick a different high risk area than the previous inspection, to be most comprehensive. It should also include a sampling check of lower risk areas. Otherwise the utilities might be tempted to "teach the test" and rigorously keep the high risk areas at 100% and let other medium and low areas degrade."**

NRC Clarification Comment: Only in two places does the phrase "high risk" appear, 02.01b and 02.02b, both of which are related to observation of fire brigade drills or actual responses. Everywhere else the inspection planning is described as looking at selected risk significant areas, in some cases up to five such areas during each inspection, the selection of which is driven by a high number of determinants. Does the commenter believe that the selection processes are flawed such that the same plant locations will always be selected? If so, please elaborate on how this is so.

**"Section 03.01/2: Include the referenced information from the FPFi module to allow this to be sufficient."**

NRC Clarification Comment: The basic premise of the development of the baseline procedure was that the FPFi team inspection procedure will be published as part of the inspection program (that is, as a final rather than draft document), that the FPFi team inspection procedure would be the fundamental source of inspection lines of inquiry for the inspectors who conduct baseline/triennial activities, and that the inspectors who conduct baseline activities would be well qualified to extract information from the FPFi team inspection procedure. This obviates the necessity to replicate FPFi team inspection procedure information within the baseline procedure. Considering this information, does the commenter still believe that extracts should be put in the baseline procedure?

**"Section 03.02a should also request supporting calculations."**

NRC Clarification Comment: There was a typographical error whereby 03.02b was labeled 03.02a. The first 03.02a does ask for supporting calculations. Given that the "SRA's report will not focus on the validity of the modeling assumptions of the IPEEEs," it is not clear why (in the true 03.02b on the bottom of the fourth page) the SRA would necessarily need to ask for supporting calculations and analyses. Please elaborate or explain.

**Section 03.02b: The inspection results and non plant specific fire event information have little to do with ranking fire areas according to risk; this should not be the responsibility of the SRA to acquire/address."**

NRC Clarification Comment: Consider that inspection results (hypothetically for example repetitive findings of large quantities of transient combustibles in a given plant location) may affect SRA fire risk calculations. Also, the term "non-plant specific fire event information" refers to generic data which the SRA would use as input to his plant area fire risk calculations. It is not understood why the team's SRA should be prohibited from either of these information sources. Please elaborate.

#### **Second Commenter**

**"The main comment I have on the proposed guidance deals with the source of their criteria. The source of the data for the sprinkler systems, for example, comes from recent versions of NFPA 13. Those of us with older plants will not meet this criteria, even though we will be in full compliance with our committed code of record. This could result in being classified with a high degradation category deficiency, while being completely in compliance with our commitments.**

**One specific example is as follows: Older sprinkler codes only considered an obstruction below the head to be a problem if it was greater than 48" wide. The guidance provided states that an obstruction below the head of 24" or greater requires a head below the obstruction. A high degradation condition would be identified if two or more heads were obstructed in this manner. This would not be that uncommon with the presence of 24" wide cable trays and ducts.**

**It seems like we will be expected to backfit our systems to meet the current code if we are to have a satisfactory inspection."**

**NRC Clarification Comment:** This stakeholder comment appears to be directed toward the criteria used in the FPRSSM risk significance determination process. The staff considers situations in which FPRSSM risk values would result in Commission backfit actions to be unlikely. Nevertheless, risk assessments should consider all relevant information. Within the FPRSSM process, equipment and systems which were installed under commitments to older codes may be characterized as degraded (hypothetically, judged to be less than fully effective relative to newer, state-of-the-art designs). It is possible that such a degradation could be considered as an input into a risk significance determination calculation. However, the stringent criteria of 10 CFR 50.109 (Backfitting) would need to be met before a change to licensee code commitments would be directed by the Commission.

### **Third Commenter**

**If parts of the "Draft FPMI" module are going to be the basis/criteria applied in the triennial (or any other inspections) associated with this module, the specific review criteria should be incorporated into this module to make it a "stand alone" document. Referencing a "draft" document is not consistent with accepted practice in the nuclear regulations.**

**NRC Clarification Comment:** As stated above, the basic premise of the development of the baseline procedure was that the FPMI team inspection procedure will be published as part of the inspection program, that is, as a final rather than draft document. Furthermore, as stated above, the FPMI team inspection procedure will be the fundamental source of inspection lines of inquiry for the inspectors who conduct baseline/triennial activities. As such, the line items in the FPMI procedure are not requirements upon the licensee.

**"Risk significant" should be more stringently defined as "risk significant fire safe shutdown areas." Due to the IPEEE analysis methodology, an area may be "risk significant in IPEEE terminology, but not necessarily in safe shutdown terminology."**

**NRC Clarification Comment:** The point of this stakeholder comment is not clear. It would be helpful if the commenter could elaborate on the specific baseline procedure passages in which the term "risk significant" causes confusion, and then elaborate on the confusion which is perceived to result.

**"The module does not indicate if the corrective action program will be included in the triennial review scope."**

The NRC Reactor Assessment and Oversight Task Force plans to pilot and issue an inspection module specifically directed at the assessment of licensee corrective action programs. There is no intent to duplicate that effort within the fire protection inspectable area.

**From:** Leon Whitney  
**To:** Alan Madison, August Spector, INTERNet:fae@nei.o...  
**Date:** Wed, May 26, 1999 4:08 PM  
**Subject:** NRC FP Baseline Inspection Procedure Clarification Questions/Comments

**Fred:**

**Attached are NRR's Fire Protection Baseline Inspection Procedure Clarification questions and comments for industry consideration.**

**Augie Spector will put the attached document in the meeting minutes for either the 5/24 meeting or the 6/28 meeting.**

**Separate FPRSSM clarification questions will be sent next week by J.S. Hyslop and Pat Madden.**

**Leon Whitney**

## Suggested Approach for Assessing Fire Protection Inspection Findings

Fire protection deficiencies are but one way that safe shutdown equipment may not be able to perform their intended function. Other reasons may be due to environmental qualification, seismic, maintenance or quality assurance issues, etc. The Significant Determination Process (SDP) for the reactor safety cornerstones (initiating events, mitigation and barriers) is capable of assessing the significance of a finding that impacts plant safety equipment regardless of the cause. Fire can be both an initiating event and can affect mitigation capability. But, this is not unique – the same can be said for events, such as Loss of Offsite Power.

The attached SDP should be able to be used to assess fire protection deficiencies discovered during inspection activities. Fire protection deficiencies can be translated into an estimated frequency of having a meaningful fire (one that could reasonably disable safe shutdown equipment). This would be done as follows:

Meaningful fire initiating frequency = Fire ignition frequency times DID factor

Where DID factor = (automatic suppression) x (automatic detection) x (fire barriers) x (fire brigade effectiveness).

The fire ignition frequency for an area would be multiplied by the DID factor to arrive at a meaningful fire initiation frequency. This frequency would then be used as an entry point into Table 1 of the SDP. A robust DID factor would result in lower meaningful fire frequencies and thus any associated inspection findings would be assessed as having less significance. Conversely, a weak DID factor would result in higher meaningful fire frequencies and associated findings would be assessed as having higher significance.

With this approach, there would be no need to have a significantly different SDP process for fires. The only difference would be an adjustment for the entry frequency in Table 1 based on the DID factor, which is the direct expertise of the fire protection evaluators.