

Enclosure 3
NEI Handouts
Meeting Summary of the 12/10/08 Reactor Oversight
Process Working Group Public Meeting
Dated December 30, 2008

MC 0305 Comments -

Page 3, 04.14. Please explain the logic in this new definition of repetitive degraded cornerstone. How was it selected? Separate comment on definition: If the third white is a PI, it should only result in a degraded cornerstone if the PI was still white in the most recent (fifth) quarter.

Page 3, 04.16. Should be "receive" not receives.

Page 3, 04.17. Should begin: "A comprehensive evaluation by qualified (through experience and training) individuals of the nuclear safety culture. The assessment involves a representative sample of the licensee staff population."

Page 3, Section 4.17 – the word "formal" when it is used in "formal education" is undefined...thus, the word "formal" should be removed so as to not limit the qualification to anyone who does not have a formal degree in psychology or whatever is intended by formal, if appropriate other coursework or training in the area has been completed. Either remove "formal" or recognize that coursework or training in the area (i.e., something short of a degree) is allowed as "formal education". Another way to address this is if "formal education" is changed to "formal training".

On Page 4 in the same Section 4.17, change "direct authority or responsibility" to "direct authority or direct responsibility".

Page 5 at the top in section 5.03a has the phrase "within their respective regions" repeated twice.

Page 5 Section 5.03d, mentions involvement of the public now, thus, is the meeting category changing for the routine annual assessment meeting where the public will not participate during the meeting as opposed to observing the first half of the meeting and then asking questions of the NRC following the meeting. What is the change in public involvement in the annual assessment meeting? We believe this change inappropriately changes the meeting focus. (Also see pg 16 and 17 comments)

Page 6, Section 5.11g, the word "developments" should be "develops"

Page 9, Section c, second paragraph...How will it be determined that a plant has a "high potential of transitioning to the Multiple/Repetitive Degraded Cornerstone"? (also see pg 12 and 13 comments)

Page 16, Section 6.04a, change "security performance at public meetings" to "security performance" to not imply that security performance will be reviewed at public meetings.

Page 16, 06.04 a. Why aren't public meetings required sooner after annual assessment letter?

Page 17, Section c, is the open house, round table discussion or poster board session now part of the assessment meeting of licensee performance with the expectation that the licensee attends/participates in these sessions. If not, then it should be stated that these sessions are not part of the formal annual assessment meeting with the licensee, but allow for the NRC to more directly interact with the public. Licensees of course may choose to attend, but should not be required to attend due to the open nature and format of these activities.

Page 17, h. Suggest that you not use the word "boilerplate"; it demeans your process.

Page 19, bottom of the page. It is unclear what "appropriate elements from IP95003" are.

Page 20, 4. Industry is preparing a guideline document on how to conduct nuclear safety culture assessments.

Page 22, end of Section 4, why is the currently allowed 200 hours of direct inspection being extended to 400 hours by adding the words "per year over a maximum two-year period"? It should remain at 200 hours unless concurrence is received as is currently required to maintain prudent and challenged justification for charging more hours of review on an issue.

Page 26, Section 2 Part 1, remove open parenthesis mark if the closed parenthesis mark is being deleted.

Page 30. Regarding "parallel PI inspection finding": There should not be ANY parallel inspection finding. While the PI is still greater than green, there is no reason to have a parallel inspection finding if you are not going to count the parallel inspection finding in the action matrix; this is just confusing to the public. If the PI turns green before the 95001 or the 95001 is not successful, then an inspection finding of equivalent color should be entered until the 95001 is successful. A "parallel" inspection finding is an unnecessary complication.

Page 30, Section d, the sentence "Additionally the finding should take effect in the quarter the supplemental inspection period ended, or the beginning of the quarter in which the PI reverted back to Green, whichever comes first..." implies that the NRC will know whether a finding is necessary when the PI reverts back to Green. This is not the case as due to timing issues, some PIs can revert to Green in one or less than one quarter. Thus, does that mean that if the supplemental inspection has not occurred a parallel finding must be opened for a PI just due to the inspection not being completed to meet the requirement to have a finding take effect the "quarter in which the PI reverted back to Green". If so, this will cause findings based on inspection timing and should not be the case. The words need to be changed to reflect what the intent is here.

Page 30, Section e, if the licensee remains in the regulatory response column due to one white PI that cleared the quarter before, it could be confusing to the public to show that the licensee is in the regulatory response column even though there are no greater than green findings are present. The column that the licensee is in should continue to reflect current PI and finding status, not be based on timing of the inspections.

Page 31, Section e, first paragraph on page...if there is a 95002 scheduled due to scrams, then does that inspection now cover a newly issued white finding in security even if it is new and the root cause has not been completed? Does the 95002 then get delayed due to not being ready to be inspected for the security issue? Flexibility is needed here. This requirement to cover all in one inspection should not be required in all cases as it could affect timing of closure for the other issues or force a premature inspection on the new issue.

Page 31, Section e, fourth paragraph that begins..."Likewise, any inspection finding that is satisfactorily inspected and resolved through the conduct of a IP 95002 inspection..." We agree with the concept stated in this paragraph that findings resolved through the conduct of a 95002 inspection can be

removed from consideration in the action matrix once the finding has been input into the action matrix for four quarters. However, we believe this concept should also apply to performance indicators.

Page 35, first paragraph: The added sentences (beginning with "Inspectors should also identify...") should be moved to the end of section 1. The present location is confusing when one reads the following paragraph which begins "For example." The example does not refer to traditional enforcement and is confusing.

Page 36, b.1. Four aspects in a year are not a trend or a "theme." In addition, to be cross-cutting, the aspects need to be across organizations, not just across cornerstones.

Page 36/37, Section b.2. The fourth bullet in this section introduces the concept that a reasonable duration of time must pass before actions are proved effective. We believe this concept of a "reasonable duration of time" also applies to the first three bullets in this section. Therefore, please add "even though a reasonable duration of time has passed" to the remaining section bullets. This comment also applies to the SCWE list under Section 2 on pages 37/38.

Page 37, Section 1, the timeframe for SCWE cross cutting aspect evaluation for an issue should not be extended to 1-1/2 years from the current 1 year given that it has such a low threshold (1) for evaluation in the first place.

Industry White Paper on Counting MSPI Failures that Occur after Maintenance has been Completed but Prior to the Equipment Being Returned to an Operable Status

Background:

The staff has proposed a White Paper to change the long-standing practice that many licensees have of considering components to be available (at risk) prior to declaring the component operable. The proposed change is based on assumptions and implications. For example (emphasis added):

- ... equipment is **apparently** relied upon by control room operators to perform its intended function should an event occur with the same expectation as equipment that is in an operable state.
- The term “before returning the SSCs to service” **appears to be equivalent to** “before making the SSCs available.”
- Declaring equipment available **implies** that it is ready for operation and this declaration **potentially** changes the mindset of operations ...
- ... then their reliance on the equipment could **potentially** adversely affect their decision process
- Licensees that recognize the equipment as being available in the risk assessment process **may** underestimate the associated on-line risk

Before we consider changing such a widespread, long-standing practice, the staff needs to provide more than anecdotal information and suppositions as the basis for making this change.

The staff is continuously blurring the distinction between “available” and “operable” even though there is a real distinction. Rather than making assumptions about what the operators mindset is or how online risk assessments consider equipment that is available but inoperable, more concrete information is necessary. Industry has conducted an informal survey of the Maintenance Rule Users Group to see what process licensees use to declare a component available but still inoperable. The overwhelming response is that the assumptions in the staff’s White Paper are incorrect. For example, is the unavailability call done real time by Operations personnel or is it done after the fact by System Engineers reviewing Ops logs? Most of the licensees contacted so far use a process where Operators declare a component inoperable and operable and other personnel (usually System Engineers) determine when the equipment was available but still inoperable. This usually takes place several days or weeks after the SSC was declared operable. Most, but not all respondents said that licensees do not take credit for the component in their online risk assessment if the component is available but inoperable.

The staff's White Paper states:

"It also appears that some licensees may decide to wait to perform the post maintenance test (PMT) on equipment after completion of the maintenance work for up to several days before the scheduled PMT is conducted."

The only instance that we know of where this is the case is coming out of an outage for PWR Turbine Driven Auxiliary Feedwater pumps where the pump is available after maintenance but cannot be declared operable until Mode 3 is entered and successful completion of a surveillance test. This example provided by the staff is not germane to this discussion since it occurs when the reactor is not critical and unavailability is not reported. With safety as the primary focus, Operations personnel want the equipment to be available and operable as soon as possible.

The staff needs to recognize that reporting the unavailability of trains/segments is not isolated to MSPI. Licensees still have to report unavailability under 10 CFR 50.65 (The Maintenance Rule) and to the World Association of Nuclear Operators (WANO) and have a strong incentive to minimize that amount of unavailability. If the staff's position was to be adopted, it would introduce yet another difference between reporting of unavailability and failures for MSPI components and the rest of Maintenance Rule components. This is counter to one of the basic tenets of the implementation of MSPI.

Part of the staff recommendation is the following:

"If the equipment remains in an unavailable status, then the licensee need not count any subsequent demand or failure of a MSPI component if the failure was related to the maintenance performed, and planned or unplanned UA must be accrued."

This would result in licensees having this guidance only applicable to MSPI components and a different set of rules for reporting unavailability in all other systems for Maintenance Rule and WANO.

The staff has identified concerns with the industry approach that were summarized into four issues:

- Undercounting the impact of a failure
- Over confidence in equipment reliability
- Minimizing the available/not operable condition
- Unclear approach to on-line risk assessment

Undercounting the Impact of a Failure

We feel that the staff position on this issue is incorrect. In fact, if the staff proposal were to be implemented, it would over estimate the impact of these types of failures. In the staff's White Paper they reference the industry White Paper on the treatment of human errors which says that the impact of a failure on MSPI is larger than the associated unavailability impact. What is left out of this discussion is that the White Paper says that because the impact is larger for failures than that of unavailability, failures should not be counted in these instances. That is because these failures are not indicative of equipment reliability. In addition, the impact of failures is larger than the impact of unavailability to make up for when the equipment is in an unknown failed state. As long as the failure was introduced during the maintenance, there is no, or a very short, unknown failed state so counting the failure overestimates the impact of it. In all cases, unplanned unavailability should be counted from the time of the failure.

Over Confidence in Equipment Reliability

The staff's basis for this concern is that **if** the operators believe that the equipment is available, then their reliance on the equipment could potentially adversely affect their decision process (e.g., performing maintenance on other equipment that places the plant at greater risk than that if the equipment were considered unavailable). There has been no evidence provided by the staff that this is the case. Again, in the informal survey done, the overwhelming response has been that operators do not consider the equipment available. This declaration is done by other personnel after the equipment has been declared operable. Even if the declaration of available is made by Operations, there is no evidence that Operators do not understand the distinction.

Minimizing the Available/Not Operable Condition

Industry agrees that the amount of time that equipment is in a available/not operable condition should be minimized. We also believe that it is being minimized. If equipment is in an unavailable or inoperable state longer than what the schedule calls for, it is not uncommon for licensees to enter this into their corrective action program.

Unclear Approach to On-line Risk Assessment

The staff position is that it is unclear as to proper means to account for this available/not operable state when assessing and managing risk in support the Maintenance Rule A4 process. They contend that licensees that recognize the equipment as being available in the risk assessment process may underestimate the associated on-line risk. They also contend that licensees that do not recognize the equipment as being available appear to be in conflict with availability credit that is being taken in the MSPI program.

It should be noted that the maintenance rule guidance for counting **segments** of systems as unavailable for the purposes of 10 CFR 50.65(a)(2) is different than the guidance for counting **systems** unavailable in paragraph (a)(4).

For (a)(2) NUMARC 93-01 (Appendix B page 6) says unavailability is defined as follows:

$$\frac{\text{planned unavailable hours} + \text{unplanned unavailable hours}}{\text{required operational hours}}$$

This is cut and dry and does not allow for any exceptions unless the licensee takes credit for a dedicated operator in a procedure.

On the other hand for (a)(4), NUMARC 93-01 section 11 is "Assessment Of Risk Resulting From Performance Of Maintenance Activities." Page 42, section 11.3.2 General Guidance for the Assessment – Power Operations and Shutdown" step 7 specifically states:

The assessment may take into account whether the out-of-service SSCs could be promptly restored to service if the need arose due to emergent conditions. This would apply to surveillance testing, or to the situation where the maintenance activity has been planned in such a manner to allow for prompt restoration. In these cases, the assessment may consider the time necessary for restoration of the SSC's function, with respect to the time at which performance of the function would be needed. [Note the definition of "unavailability" in Appendix B applies to monitoring of SSC unavailability to comply with other paragraphs of the maintenance rule, and is not intended for direct applicability to the configuration assessment.]

Note that it clearly states that the on-line risk assessment for (a)(4) is different than the unavailability monitoring for (a)(2). NUMARC 93-01 has been endorsed by NRC Regulatory Guide 1.160 "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." This industry guidance says that licensees can take credit for things when doing (a)(4) risk assessments that cannot be credited for counting unavailability in (a)(2). It is not impossible currently for systems to be available in (a)(4) while a segment of the system is unavailable under the guidance in (a)(2). There is no unclear approach to on-line risk assessment for practitioners of Maintenance Rule and those who perform on-line risk assessment. If the staff's proposal were adopted NEI 99-02 would not usurp existing federal regulations. It would add less, not more clarity the overall reporting of unavailability and failures.

Recommendation:

The staff recommendation is:

“NEI 99-02, Appendix F, pages 25-26 should be revised to require that failures that occur with the equipment in an available status but prior to the equipment being declared operable be counted toward this indicator, as well as any associated demands. If the equipment remains in an unavailable status, then the licensee need not count any subsequent demand or failure of a MSPI component if the failure was related to the maintenance performed, and planned or unplanned UA must be accrued.”

The industry recommendation is that unless the staff has a concrete basis (not anecdotal conjecture) for recommending this change, NEI 99-02 Appendix F, pages 25-26 should be changed to clearly articulate that failures that occur during Post Maintenance Tests (that were not independent of the maintenance) when the SSC is available but not yet operable do not count in this indicator but unplanned unavailability is reported from the time that the component was determined to be available.

