MEMORANDUM TO: Joseph L. Birmingham, Project Manager

Generic Issues, Environmental, Financial

and Rulemaking Branch

Division of Regulatory Improvement Programs, NRR

THROUGH: Richard P. Correia, Chief

Reliability and Maintenance Section Quality Assurance, Vendor Inspection, Maintenance and Allegations Branch

Division of Inspection Program Management, NRR

FROM: Peter A. Balmain, Operations Engineer

Reliability and Maintenance Section Quality Assurance, Vendor Inspection, Maintenance and Allegations Branch

Division of Inspection Program Management, NRR

SUBJECT: SUMMARY OF OCTOBER 21, 1999 MEETING BETWEEN THE

NUCLEAR REGULATORY COMMISSION (NRC) AND WINSTON AND STRAWN ON RECENT MAINTENANCE RULE (MR) IMPLEMENTATION

ISSUES

On October 21, 1999 members from the NRC staff, Winston and Strawn, Nuclear Energy Institute (NEI), licensee representatives, and members of the public participated in a public meeting at the NRC headquarters to discuss recent maintenance rule implementation issues. The meeting was held at the request of Winston and Strawn representing the industry Maintenance Rule Inspection Clearinghouse. Several public meetings with Winston and Strawn were held previously to discuss maintenance rule issues.

A summary of industry and public generated questions and corresponding NRC responses related to these discussion areas is provided as an attachment to this memorandum.

In conclusion, the meeting discussions were open and will be beneficial in ensuring that licensees implement effective maintenance rule programs.

Attachments:

- 1. Summary of discussion questions and responses
- 2. Attendance List

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Summary of Discussion Questions and Responses from the October 21, 1999 NRC/Winston & Strawn public meeting

As part of the discussions of recent maintenance rule implementation issues covered in this meeting, the meeting participants including Winston & Strawn, NEI, licensee representatives and members of the public presented experiences, comments and questions relating to monitoring the effectiveness of maintenance at nuclear power plants. These issues and NRC responses based on information provided at the meeting are summarized below.

Question 1:

Has the NRC been able to determine the effectiveness of the maintenance rule based on experience since the rule's implementation?

Response:

The Commission directed the NRC staff to evaluate the efficacy of the rule by July 2002. The NRC staff believes that it will be difficult to directly assess MR effectiveness until more experience is gained. The NRC is developing several possible indicators that may be useful for this purpose and also plans to utilize information emerging from the NRC oversight pilot program after this program is completed.

During this discussion, licensee participants commented that information regarding how effectively licensees are managing risk may provide a better measure of MR efficacy than results of equipment performance monitoring. The meeting participants also suggested incorporating resident inspector feedback into developing measures for determining the effectiveness of the MR and referred to a recent NRC analysis of the station blackout rule as a good example where the effectiveness of a regulation was evaluated.

Question 2:

Are the two methods for evaluating failures provided in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline" acceptable approaches for evaluating failures under the maintenance rule? Specifically, the NEI 99-02 philosophies where; (1.) "malfunctions that can be corrected within 10 minutes are not considered failures" and (2.) "a system is found to be failed while not required to be operable" are not considered failures.

Response:

In general, the MR is concerned with the evaluation of whether a malfunction results in a maintenance preventable functional failure rather than the duration of a particular problem. If a failure occurs when the function is not required then the failure is generally not considered a functional failure. However, when performing these evaluations, the NRC stressed that the licensee's failure evaluation must determine definitely when the actual failure occurred or if the equipment in question would have failed upon demand prior to discovery the malfunction. During this discussion an NEI representative

commented that NEI, NRC, and INPO are working to standardize definitions for failures and availability so the licensee burden of collecting and evaluating data for varius performance indicator and monitoring programs is minimized.

Question 3:

There is no concern with the NRC's "one operator, one action" definition of availability, however the requirement to have specific written procedures defining each of the activities where a single operator action is credited for maintaining availability seems to increase burden rather than decreasing burden.

Response:

There must be a extremely high probability of success in performing an operator action if licensees intend to take credit for the action when considering an SSC available to perform its intended function. The NRC definition of availability is intended to prevent the use of complex or improvised actions being credited for availability. The reference to having a procedure for these situations was not meant to cause licensees to create new or unique station approved procedures for each instance where a manual action was credited for availability but instead was referring to actions that may already be covered in existing operating procedures that operators have been trained and qualified on and use frequently.

This concept was approved by the commission in the statements of consideration for (a)(4). The definition provided in NEI 99-02, (Draft Rev C) enhances this position with regard to availability during testing by stating that a function is available if the function can be immediately restored, either by an operator in the control room or by a dedicated operator stationed locally for that purpose. Restoration actions must be contained in a written procedure, must be uncomplicated (generally, a single action) and must not require diagnosis or repair. Credit for a dedicated operator can be taken only if (s)he is positioned at the proper location throughout the duration of the test for the purpose of restoration of the train should a valid demand occur. The intent of this paragraph is to allow licensees to take credit for restoration actions that are virtually certain to be successful (i.e., probability nearly equal to 1) during accident conditions.

Question 4:

For monitoring availability/unavailability during maintenance activities, is it acceptable to assume equipment is available after maintenance is completed for the period between the time when maintenance clearance restoration is completed and the time when post maintenance testing is completed, provided the post maintenance test is then passed successfully? For example there can be several hours from the time when a diesel generator is restored from maintenance to the time when an operations test surveillance used as a combined surveillance and post maintenance test is performed successfully. There is no reason to believe that the diesel generator would not have been able to perform its intended function if needed between clearance restoration and the combined surveillance/ post maintenance test.

Response:

If the equipment is in its fully functional condition at the point when clearance restoration is completed with the exception of performing the post maintenance test then this approach is acceptable. Considering this equipment functional/available during this time does not imply that it is operable from a technical specification perspective. Generally, if the test fails for reasons directly related to the maintenance activity performed then only additional unavailability will accrue. If the test fails as a result of problems unrelated to the maintenance performed then the failure may also need to be evaluated for a maintenance preventable functional failure determination.

Question 5:

Is the NRC planning to publish a lessons learned document pertaining to maintenance rule baseline inspection experience as discussed in our previous meetings?

Response:

Yes, after October 29, 1999, NUREG-1648, Lessons Learned From Maintenance Rule Baseline Inspections, will be available to the public and it will also be posted on the maintenance rule home page (http://www.nrc.gov/NRR/mrule/mrhome.htm).

Question 6:

Will any revisions to the pilot oversight inspection procedures be available to licensees to review before they are issued? The licensee representative also commented that the NRC maintenance effectiveness training efforts for resident inspectors and the use of the maintenance effectiveness field work flow chart used for maintenance inspections was effective in focusing inspections on performance issues of risk significant SSCs.

Response:

Draft inspection procedures will be available through the Agency Document and Access Management System (ADAMS) in the early January 2000 time frame. Inspection procedures will also be a topic of discussion at a public "lessons learned" meeting to be held in Washington, D.C. during the week of January 10, 2000, to review experience with implementing the NRC pilot oversight program.

Question 7:

What will guidance for the (a)(4) assessment process require for the frequency for performing PRA updates?

Response:

The NRC suggests (not requires) evaluating the need for updating the PRA at the same frequency as the (a)(3) periodic evaluation frequency.

Question 8:

What was the basis for the Vermont Yankee MR violation concerning monitoring during refueling outage shutdown conditions?

Response:

Vermont Yankee did not appropriately capture certain SSC unavailabilities that occurred during refueling outages.

Question 9:

What is the preferred method for categorizing risk significance of SSCs for shutdown conditions?

Response:

There is no specific methodology recommended for risk ranking SSCs for shutdown conditions. The NRC considers that using a reasonable approach using information such as risk insights, operating experience etc., to categorize the risk significance of the SSCs and obtaining review and approval of the expert panel would be acceptable.

Question 10:

Is the NRC satisfied that existing quantitative and qualitative risk assessment processes are appropriate based on MR implementation experience?

Response:

The NRC considers well thought out approaches to managing risk that use tools such as matrices, risk monitors, etc. to be acceptable. Implementation experience has shown that the majority of licensees have implemented successful risk management processes.

Question 11:

The draft NEI guidance for (a)(4) assessments uses the word "should" in many places in the document. When "should" is used in other industry standards this word has a specific meaning. Activities described using "should" in these standards are recommendations and not requirements. What does "should" mean in the NEI (a)(4) assessment guidance?

Response:

Should as used in the regulatory guidance for (a)(4) assessments refers the recommended approach that constitutes an acceptable method for meeting the requirements of (a)(4). As with all regulatory guidance there may be other acceptable approaches which can satisfy intent of the regulation.

Question 12:

What is the status of NRC's effort to risk-inform the MR?

Response:

The NRC has developed a proposed rulemaking plan for risk-informing selected Part 50 rules, including the MR. The draft rulemaking plan along with a draft advance notice of proposed rulemaking are available on the NRC homepage. The advance notice of proposed rulemaking will be published pending a Commission negative consent decision to issue the notice.

Question 13:

Is the method of aggregating MR performance criteria for at power and shutdown modes into a one performance criteria that covers all applicable modes acceptable?

Response:

Yes.

Question 14:

Is a separate SSC risk ranking process required for licensees that have a shutdown PRA?

Response:

Consideration of shutdown conditions should be managed under existing programs. Licensee's with shutdown PRAs may want to take advantage of any risk insights the shutdown PRA provides to strengthen their MR programs.

Question 15:

Can low safety significant SSCs be excluded from the scope of (a)(4) assessments based on on their risk ranking?

Response:

The NRC's position is outlined in DG-1082, Assessing and Managing Risk Before Maintenance At Nuclear Power Plants.

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ISSUES

ORIGINATOR: PABalmain

SECRETARY: CTobe

DATE: April 26, 2002

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