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MEMORANDUM TO:

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FROM:

Joseph R. Gray
Joseph R. Gray, Acting Director
Office of Enforcement

SUBJECT:

ENFORCEMENT GUIDANCE MEMORANDUM INTERIM GUIDANCE FOR
10 CFR 50.65 - THE MAINTENANCE RULE

This Enforcement Guidance Memorandum (EGM) is being issued to provide interim enforcement guidance for evaluating issues that may be identified during maintenance rule inspections of licensee facilities. The enclosed guidelines have been developed in close coordination with the Division of Reactor Controls and Human Factors of NRR.

The guidelines in the attachment are intended to provide guidance to the NRC staff to facilitate consistent categorization of severity levels for failing to comply with the requirements of the maintenance rule. It is important to note that these guidelines are not currently contained in the Enforcement Policy and are, therefore, not controlling. They should be used to assist in applying the definition in Section IV of the Policy for: (1) instances of very significant regulatory concerns (for Severity Level II violations), (2) significant regulatory concerns (for Severity Level III violations), or (3) more than of minor concern (for Severity Level IV violations).

It is recognized that maintenance issues can overlap with other issues such as quality assurance and operability. For some enforcement considerations, other issues relative to the case may result in another enforcement approach being taken. In some cases, the issues can be categorized by either result or the root cause. For example, in some instances, the root cause may be more

significant than the result, whereas in other circumstances, the opposite may hold true. In deciding whether to use the enclosed guidance or the existing Supplement I to the Policy, the selection should normally be whichever provides the higher severity level and the clearer message.

The form and philosophy of the rule encourages "maximum flexibility" for licensees in establishing their programs to meet the intent and requirements of the rule. Within these broad requirements, enforcement action would be appropriate for licensees who have inadequately implemented aspects of the rule or whose performance demonstrates a continuing ineffectiveness of maintenance activities.

Escalated enforcement would be appropriate where there was a failure to make reasonable efforts to implement the requirements of the rule or where significant degradation of SSCs could have been prevented through effective implementation of the maintenance rule. The following presents general guidance that is more fully expanded in the examples in the attachment:

- A single violation would be a Severity Level IV violation

NOTE: In considering whether to make a citation for a violation involving a relatively isolated, low safety significant SSC, consider the flexibility in the rule; the risk significance of the SSC; the reasonableness of the licensee's efforts to implement the rule, including consideration of its and industry's prior operating experience; and the licensee's corrective action. If the licensee has acted reasonably, a citation might not be warranted.

- A single violation involving a high safety significant SSC that causes a plant transient that would have been prevented by effective implementation of the maintenance rule would be a Severity Level III violation. Supplement I, Example C.9, provides that equipment failures caused by inadequate or improper maintenance that substantially complicates recovery from a plant transient is considered a Severity Level III violation or problem.
- Multiple examples of maintenance failures that demonstrate a "programmatic breakdown," would normally be considered a Severity Level III violation. This is consistent with Supplement I, Example C.7, which provides that a breakdown in the control of licensed activities involving a number of violations that are related that collectively represent a potential carelessness toward licensed responsibilities is considered a Severity Level III violation or problem.
- Multiple examples of maintenance failures of high safety significant SSCs that cause a plant transient or complicate the recovery from a plant transient, indicate a programmatic breakdown in implementation of the requirements of the rule and would be considered a very significant regulatory concern and should be

considered for issuance as a Severity Level II violation or problem.

The maintenance rule does not supersede any existing requirements, such as those contained in 10 CFR Part 50 (including Appendix B and other sections) or a licensee's technical specifications. These requirements remain in effect for maintenance activities. When preparing notices of violation for maintenance activities, the maintenance rule should be used for citations whenever a licensee has violated a specific requirement of the maintenance rule. When a set of facts indicates that there are violations of both the maintenance rule and another NRC regulation, cite both requirements with one "contrary to." However, where maintenance violations are caused by licensee activities not covered by the maintenance rule, cite against the requirements of Appendix B or the plant technical specifications. Also, please note that the failure to perform the safety assessment provided for in 10 CFR 50.65 (a)(3) requires special attention. This is addressed in Part A, Paragraph D in the attachment.

Because the maintenance rule takes a performance based approach to inspecting licensee maintenance operations (a relatively new technique with limited enforcement experience in these types of performance based inspection activities), it is anticipated that the guidance provided in the attachment will require modification as more inspections are completed and further experience is gained. It is estimated that a minimum of six months will be required until sufficient information can be collected. At that time, the Office of Enforcement expects to revise the Enforcement Policy by adding further guidance to the supplements, after consulting with the Commission.

Additional enforcement guidance has been provided in EGM 96-001, dated July 3, 1996, which established a Maintenance Rule Enforcement Review Panel that will meet periodically to review enforcement issues that are disclosed during the performance of maintenance rule and other routine NRC inspections. This should contribute to the consistency of enforcement actions in this area.

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ATTACHMENT 1: MAINTENANCE RULE VIOLATIONS

I. Examples of Activities That Would Be Violations of the Maintenance Rule:

A. Failure to include safety related¹ or non-safety² related structures, systems, and components (SSCs) (as defined in 10 CFR 50.65 (b)(1) and (2)) within the scope of the program.

1. Severity Level III - violations involving, for example:

a. Failure to include one or more SSCs, where they should clearly be included within the scope of the rule, that as a result of the failure to include the SSC: 1) complicates the recovery from a plant transient or 2) in the case of high safety significant SSCs, causes a plant transient (if this example applies and indicates programmatic failures involving high safety significant SSCs, then a violation at Severity Level II should be considered).

b. Failure to include multiple SSCs within the scope of the rule which indicates a programmatic failure to implement the requirements of the rule.

2. Severity Level IV - violations involving, for example:

a. Failure to include an SSC within the scope of the rule.

B. Failure to establish goals for SSCs in (a)(1) or performance criteria for SSCs in (a)(2)³. Establishment of goals that are inconsistent with

¹All safety related SSCs should be clearly defined in the licensee's quality assurance program and should be identified and included within the scope of the rule.

²Because of the flexibility in the rule, special consideration needs to be given to determine whether a non-safety related SSC was properly excluded from the scope of the rule. 10 CFR 50.65 (b)(2) governs non-safety related SSCs. In determining whether a violation occurred, consider the reasonableness of the licensee's actions in evaluating industry-wide and plant experience and existing analyses (e.g. FSAR, IPE, etc.) to identify events that would indicate that a particular non-safety related SSC should have been included within the scope of the rule. Since licensees are not expected to consider hypothetical scenarios, it is possible that some SSCs (with no history of industry-wide and plant experience of failures) that were excluded from the scope of the rule, may fail and cause an event. The failure to include such an SSC in the scope of the rule prior to the first failure of the SSC or event would not be considered a violation. However, the licensee would be expected to include the SSC within the scope of the rule following the first failure of the SSC.

³The licensee has the option under (a)(2) of the rule to demonstrate that the performance or condition of the SSC is being effectively controlled through the performance of appropriate preventive maintenance such that the

safety significance or industry experience, where practical, are not considered sufficient goals to meet the rule and would also be violations.

1. Severity Level III - violations involving, for example:

- a. A single failure to establish a goal for an SSC under (a)(1) or a performance criterion under (a)(2) that: 1) complicates the recovery from a plant transient or 2) in the case of high safety significant SSCs, causes a plant transient (if this example applies with more than one failure and indicates programmatic failures involving high safety significant SSCs, then a violation at Severity Level II should be considered).
- b. Multiple examples of failures to establish either goals for SSCs under (a)(1) or performance criteria under (a)(2) that indicate a programmatic failure to implement the maintenance rule.
- c. Multiple examples of the failure to take industry-wide operating experience into account when establishing goals or performance criteria, where industry-wide operating experience was readily available, that indicate a programmatic failure to meet this requirement of the rule⁴.

2. Severity Level IV - violations involving, for example:

- a. A single failure to establish a goal for any SSC under (a)(1) or a performance criterion for any SSC under (a)(2).
- c. Failure to establish a monitoring program (this would include the failure to take timely and appropriate corrective action in the evaluation of monitoring activities) that adequately supports the goals set under 10 CFR 50.65 (a)(1) or the performance criteria set under 10 CFR 50.65(a)(2). The monitoring program must be sufficient in scope and

SSC remains capable of performing its intended function. NUMARC 93-01 uses the establishment of performance criteria to accomplish this. The licensee also has the option of not establishing goals or performance criteria if a determination is made that low safety significant SSCs are inherently reliable or could be allowed to run to failure. However this determination must be made and documented in advance of the failure.

⁴Evidence that industry-wide operating experience was taken into consideration is not required for every goal. However, if multiple examples of goals and performance criteria are reviewed where industry-wide operating experiences are readily available and examples are not found where the licensee can demonstrate that they were taken into consideration, then the licensee's program indicates a programmatic failure.

frequency to adequately support a determination as to whether SSCs are meeting their assigned goals or performance criteria.

1. Severity Level III - violations involving, for example:

- a. A single failure to establish a monitoring program that adequately supports a goal set under (a)(1) or a performance criterion under (a)(2) that: 1) complicates the recovery from a plant transient or 2) in the case of high safety significant SSCs, causes a plant transient (if this example applies with more than one failure and indicates programmatic failures involving high safety significant SSCs, then a violation at Severity Level II should be considered).
- b. Multiple failures to establish a monitoring program that adequately supports a goal set under (a)(1) or a performance criterion under (a)(2) that indicate a programmatic failure to implement the requirements of the maintenance rule.
- c. A failure to establish a monitoring program that adequately supports a goal set under (a)(1) or a performance criterion under (a)(2) that results in repetitive maintenance preventable functional failures (MPFFs)⁵.

2. Severity Level IV - violations involving, for example:

- a. A single failure to establish a monitoring program that adequately supports a goal set under (a)(1) or a performance criterion under (a)(2).

D. Failure to take timely and appropriate corrective action (this would include evaluation of monitoring activities) when a goal or performance criterion is exceeded. Repetitive failures due to inappropriate or ineffective corrective action could be considered a violation under this rule for all SSCs within the scope of this rule or a violation of 10 CFR 50 Appendix B for safety-related SSCs.

1. Severity Level III - violations involving, for example:

- a. A single failure to take timely and appropriate corrective action when a goal or performance criterion for an SSC is exceeded (failed) which 1) complicates the recovery from a plant transient or 2) in the case of high safety significant

⁵ Maintenance Preventable Functional Failures (MPFFs) are defined in NUMARC 93-01, Appendix B, as the failure of an SSC within the scope of the Maintenance Rule to perform its intended function, where the cause of the failure of the SSC is attributable to a maintenance-related activity. The staff has endorsed the use of MPFFs as a tool for monitoring SSC maintenance performance in Revision 1 of Regulatory Guide 1.160 (January 1995).

SSCs, causes a plant transient (if this example applies and indicates programmatic failures involving high safety significant SSCs, then a violation at Severity Level II should be considered).

- b. The failure to evaluate the results of monitoring activities which results in repetitive MPFFs.
- c. Multiple failures to take timely and appropriate corrective action when a goal or performance criterion is exceeded (failed) that indicates a programmatic failure to implement the requirements of the maintenance rule.

2. Severity Level IV - violations involving, for example:

- a. A single failure to take timely and appropriate corrective action when a goal or performance criterion is exceeded (failed).

E. Failure to make a reasonable effort to identify and determine the cause of MPFFs of SSCs covered under (a)(2) would be a violation. Failure to develop a rationale or justification for continuing to cover an SSC under (a)(2) after it has experienced a repetitive MPFF would be a violation.

1. Severity Level III - violations involving, for example:

- a. Multiple failures to make a reasonable effort to determine the cause of MPFFs of SSCs covered under (a)(2).
- b. Multiple failures to develop a rationale or justification for continuing to cover these SSCs under (a)(2) after they have experienced a repetitive MPFFs that indicate the programmatic failure to implement the requirements of the rule.

2. Severity Level IV - violations involving, for example:

- a. A single failure to make a reasonable effort to determine the cause of a MPFF of an SSC covered under (a)(2).
- b. The failure to develop a rationale or justification for continuing to cover that SSC under (a)(2) after it has experienced a repetitive MPFF.

F. Failure to perform the required periodic assessment for the activities described under (a)(3) would be a violation.

1. Severity Level III - violations involving, for example:
 - a. The failure to perform any required periodic assessment which indicated a programmatic failure to meet the requirement of the rule.
 2. Severity Level IV - violations involving, for example:
 - a. The failure to include a review of performance and monitoring activities and associated goals and preventive maintenance activities (i.e., all (a)(1) and (a)(2) activities) in the periodic assessment.
 - b. Completing this assessment in an untimely manner⁶.
 - c. The failure to take industry-wide operating experience into consideration when performing the periodic assessment.
- G. Failure to periodically (once per refueling cycle, not to exceed 24 months between evaluations) balance reliability and unavailability due to monitoring/maintenance activities would be a Severity Level IV violation.
- H. A failure to develop, implement or adhere to any of the procedures developed by a licensee to implement the rule may be a violation and could be assessed as a violation of the licensee's technical specifications or 10 CFR 50 Appendix B.
1. Severity Level III - violations involving, for example:
 - a. A single failure to develop or follow procedures involving the maintenance of an SSC that 1) complicates the recovery from a plant transient or 2) in the case of high safety significant SSCs, causes a plant transient (if this example applies and indicates programmatic failures involving high safety significant SSCs, then a violation at Severity Level II should be considered).
 - b. The failure to develop or follow procedures that results in repetitive MPFFs.
 - c. Multiple examples of failures to develop or follow procedures that indicate a programmatic failure to implement the requirements of the maintenance rule.
 2. Severity Level IV - violations involving, for example:
 - a. A single failure to develop or follow procedures.

⁶At least one assessment during each refueling cycle provided the interval between assessments does not exceed 24 months.

II. Examples of Activities That Would Not Necessarily Be Violations of the Maintenance Rule:

- A. A failure to meet a licensee developed goal under (a)(1) would not be subject to enforcement action as long as appropriate corrective action had been taken when the goal was not met.
- B. It is intended that licensees be allowed flexibility when establishing goals and not be subject to enforcement on goal selection as long as these goals are reasonably based on safety and industry operating experience. The NRC does not intend to second guess the details of these goals. However, the NRC will review these goals to ensure that they are reasonably based on safety and industry operating experience.
- C. The details of the monitoring program would not be subject to enforcement action as long as the monitoring was sufficient to adequately support the goals and provided for an evaluation whenever a goal was exceeded (See example of violations C and D above).
- D. Since the rule states that, in performing monitoring and preventive maintenance activities, an assessment of the total plant equipment that is out of service should be taken into account to determine the overall effect on performance of safety functions, the failure to perform this assessment would not be a violation of 10 CFR 50.65(a)(3). However, licensees are expected to perform this assessment.

If the inspector finds that a licensee is not performing this assessment using the methods detailed in NUMARC 93-01, Section 11, or equivalent methods, then the inspector should consider this to be an issue that should be referred for resolution to NRC management and the Maintenance Rule Enforcement Review Panel, established by EGM 96-001.

In a case where this failure to perform a safety assessment contributed to the severity of another violation of the regulations, or exacerbated the consequences of an event or transient, the failure to perform a safety assessment could be taken into account as an escalating factor in any escalated enforcement action.

In addition, the failure to consider the overall impact of taking equipment out of service that: (1) exhibits a pattern supporting a programmatic issue, (2) causes the initiation of a plant trip or a transient with the potential for a trip, or (3) demonstrates the potential for a high risk system configuration is of significant regulatory concern and should be considered for enforcement action. Depending on the circumstances, the enforcement related action (enforcement conference, Demand for Information, Order, etc.) should be utilized to focus the licensee on the need to

modify its maintenance activities because of its demonstrated failure to consider the overall safety impact of removing equipment from service.

- E. Deficiencies in records and documentation would not in themselves be subject to enforcement. However, if they contribute to an inappropriate action or inaction to correct the performance of an SSC, these record or documentation deficiencies may be cited as contributing factors in an enforcement action.