



U.S. NUCLEAR REGULATORY COMMISSION

STANDARD REVIEW PLAN

17.6 MAINTENANCE RULE

REVIEW RESPONSIBILITIES

Primary - Organization responsible for the review of operations support and maintenance

Secondary - None

I. AREAS OF REVIEW

This SRP section addresses the Maintenance Rule program based on the requirements of 10 CFR 50.65 and the guidance in NUMARC 93-01 as endorsed by Regulatory Guide (RG) 1.160. For Paragraph (a)(4) of 10 CFR 50.65, the guidance contained in the February 22, 2000, revision to Section 11 of NUMARC 93-01, as endorsed by RG 1.182, is effective until this guidance has been incorporated into a revision of NUMARC 93-01 later than Revision 3 and endorsed by a revision of RG 1.160 later than Revision 2, which will supercede RG 1.182.

The specific areas of review are as follows:

1. Scoping per 10 CFR 50.65(b)
2. Monitoring per 10 CFR 50.65(a)
3. Periodic evaluation per 10 CFR 50.65(a)(3)
4. Maintenance risk assessment and management per 10 CFR 50.65(a)(4)

March 2007

USNRC STANDARD REVIEW PLAN

This Standard Review Plan, NUREG-0800, has been prepared to establish criteria that the U.S. Nuclear Regulatory Commission staff responsible for the review of applications to construct and operate nuclear power plants intends to use in evaluating whether an applicant/licensee meets the NRC's regulations. The Standard Review Plan is not a substitute for the NRC's regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide an acceptable method of complying with the NRC regulations.

The standard review plan sections are numbered in accordance with corresponding sections in Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)." Not all sections of Regulatory Guide 1.70 have a corresponding review plan section. The SRP sections applicable to a combined license application for a new light-water reactor (LWR) are based on Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)."

These documents are made available to the public as part of the NRC's policy to inform the nuclear industry and the general public of regulatory procedures and policies. Individual sections of NUREG-0800 will be revised periodically, as appropriate, to accommodate comments and to reflect new information and experience. Comments may be submitted electronically by email to NRR_SRP@nrc.gov.

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5. Maintenance Rule Training and Qualification
6. Interface with the reliability assurance program in the Operations Phase
7. Maintenance Rule Program Implementation
8. Inspection, Test, Analysis, and Acceptance Criteria (ITAAC)
None for this operational program
9. COL Action Items and Certification Requirements and Restrictions
The Maintenance Rule program is an operational program addressed in a COL application.
10. Operational Program Description and Implementation For a COL application, the staff reviews the Maintenance Rule program description and the proposed implementation milestones. The staff also reviews final safety analysis report (FSAR) Table 13.x to ensure that the Maintenance Rule program and associated milestones are included.

Review Interfaces

Other SRP sections interface with this section as follows:

1. The Reliability Assurance Program in the operational phase reviewed in SRP Section 17.4, "Reliability Assurance Program," may be implemented by the maintenance rule program in conjunction with the quality assurance program, reviewed in Section 17.5 and the underlying maintenance and surveillance programs.
2. For COL reviews of operational programs, the review of the applicant's implementation plan is performed under SRP Section 13.4, "Operational Programs."

The specific acceptance criteria and review procedures are contained in the referenced SRP sections.

II. ACCEPTANCE CRITERIA

Requirements

Acceptance criteria are based on meeting the relevant requirements of the following Commission regulations:

1. 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants."

SRP Acceptance Criteria

Specific SRP acceptance criteria acceptable to meet the relevant requirements of the NRC's regulations identified above are as follows for the review described in this SRP section. The SRP is not a substitute for the NRC's regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical

techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide acceptable methods of compliance with the NRC regulations.

1. NUMARC 93-01 as endorsed by RG 1.160, represents an acceptable approach for implementing a Maintenance Rule program per 10 CFR 50.65. For 10 CFR 50.65(a)(4), the guidance contained in the February 22, 2000, revision to Section 11 of NUMARC 93-01, as endorsed by RG 1.182, is effective until this guidance has been incorporated into a revision of NUMARC 93-01 later than Revision 3 and endorsed by a revision of RG 1.160 later than Revision 2, which will supercede RG 1.182.

The applicant's program should be consistent with the industry guidance as endorsed. Deviations should be explained and justified.

2. Operational Programs

For COL reviews, the description of the operational program and proposed implementation milestones for the Maintenance Rule program are reviewed in accordance with 10 CFR 50.65. The implementation milestones are plant specific except that 10 CFR 50.65 will require that the program be fully implemented by the time fuel load is authorized.

III. REVIEW PROCEDURES

The reviewer will select material from the procedures described below, as may be appropriate for a particular case.

These review procedures are based on the identified SRP acceptance criteria. For deviations from these acceptance criteria, the staff should review the applicant's evaluation of how the proposed alternatives provide an acceptable method of complying with the relevant NRC requirements identified in Subsection II.

In general, the staff reviews the description of program procedures and computer software, if any, for Maintenance Rule implementation in accordance with NUMARC 93-01 as endorsed by Regulatory Guide 1.160, including, but not limited to the following areas:

Note 1: Deviations from the guidance in NUMARC 93-01 as endorsed by RG 1.160 should be explained and justified.

Note 2: At the time of the review, the NRC-endorsed version of the industry guidance on implementation of 10 CFR 50.65(a)(4) may still be contained in the February 22, 2000, revision to Section 11 of NUMARC 93-01, which was endorsed by RG 1.182. This is the effective guidance for 50.65(a)(4) until the NRC endorses a later revision of NUMARC 93-01 (later than Revision 2) that incorporates this guidance through a later revision of RG 1.160 (later than Revision 2) which will supercede RG 1.182. RG 1.182 will then be cancelled.

Note 3: Applicants referencing a certified design must address the COLA information or action items in Section 17.6 of the SER-approved generic design certification document.

Note 4: The program description should identify for program procedures the status in procedural hierarchy, whether treated as safety-related or non-safety-related, level of compliance expected, responsibility for preparation, review, approval, use, compliance oversight, and disposition.

Note 5: Submission of actual procedures or software for review is not required or expected for the COL application, but they must be available for NRC inspection by the time the program is required to be implemented, i.e., by the time fuel load is authorized.

Note 6: If an applicant proposes to use the existing MR program used for its operating plants for new plants, applicability to, and adjustments required by the new plant design must be addressed.

1. Scoping per 10 CFR 50.65(b)
 - A. The applicant should fully describe process for determining which plant structures, systems, or components, will be included in the scope of the Maintenance Rule (MR) program in accordance with paragraph 50.65(b) of the rule and the NRC-endorsed guidance, as prescribed by program procedures. The functions for both safety-related and non-safety-related SSCs that cause them to be within the scope of the Maintenance Rule should be documented in the program and the MR procedure description. The procedure should identify that additional SSC functions may be added to the MR scope prior to fuel load, as appropriate, as additional information is developed (e.g., EOPs) after the license is issued. The description of the MR scoping procedure should address:
 - I. The criteria in accordance with paragraph 50.65(b)(1) for including Safety-related SSCs relied upon to remain functional during and following design-basis events to:
 - (a) Protect the integrity of the reactor coolant pressure boundary; or
 - (b) Provide the capability to shutdown the reactor and maintain it in a safe shutdown condition; or
 - (c) Provide the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposure comparable to 10 CFR Part 100 guidelines.
 - ii. The criteria in accordance with paragraph 50.65(b)(2) for including non-safety-related SSCs:
 - (a) That are relied upon to mitigate accidents or transients as described in the Final Safety Analysis Report (FSAR);
 - (b) That are used in Emergency Operating Procedures, meaning those that are directly used to mitigate the accident or transient (explicitly mentioned in the EOPs or in steps of referenced procedures needed to accomplish the EOP step) and those whose use is implied and that provide a significant portion of the mitigating function. In addition, the applicant should describe the

process and procedures for identifying SSCs explicitly mentioned in the EOPs (including those mentioned in referenced procedures), but that are proposed not to be included in the MR scope. The process for exclusion certain SSCs from scope should address the bases for their inclusion in the EOPs to begin with, the portion of any and all mitigating functions they provide, the expectation of their reliability in EOP application(s), and the means by which operators are alerted (e.g., procedural warnings, cautions, disclaimers, signs, etc.) to reduced assurance or expectation of those SSCs' reliability.

- (c) Whose failure could prevent safety-related SSCs from fulfilling their safety-related functions. Systems and system interdependencies should be discussed, including the method for determining failure modes of non-safety-related SSCs that could directly affect safety-related functions. The term "directly" applies to non-safety-related SSCs whose failure could prevent a safety function from being fulfilled; or whose failure as a support SSC could prevent a safety function from being fulfilled.
- (d) Whose failure could cause scrams or unwanted engineered safeguard feature actuations and those whose failure caused a reactor SCRAM or actuation of safety-related systems at the applicant's plant or plants of similar design. This discussion should include the method for identifying relevant utility-specific and industry-wide operating experience.

- B. Specific information on the actual structures, systems, or components (SSCs) within the scope of the MR program will be reviewed as part of the operational program implementation inspection by the NRC, including, for each SSC in scope, the following:
 - i. Specific MR requirement(s) in paragraph 50.65(b) that require the SSC to be in scope.
 - ii. For each SSC, for each paragraph 50.65(b) scoping criterion, the function(s) that require the SSC to be in scope.
 - iii. For each SSC, for each paragraph 50.65(b) scoping criterion, as applicable, the failure modes and effects that require the SSC to be in scope.
 - iv. For each SSC scoping function or vulnerability, the functional performance requirements/success criteria and/or functional failure definitions and implications.
- C. The applicant's submittal should describe the process for determining the safety/risk significance classification of SSCs within the scope of the MR program as prescribed by program procedures, including risk metrics/importance measures and values, operating experience, vendor information, D-RAP scope (or modified O-RAP scope as required), and any other factors considered by the

expert panel. The MR procedure description should address the criteria for risk ranking of passive components in the new plant designs, especially if it involves a deviation from NUMARC 93-01 and RG 1.160.

- D. If the applicant proposes to credit its MR program (along with QA, testing, surveillance and underlying maintenance programs) in implementing the RAP in the operations phase, the applicant should include a description of how the D-RAP SSCs (as identified in Section 17.4.1) will be included in the MR program scope and also included in the high-safety-significant (HSS) category.

In addition, the process and procedures controlling how the D-RAP SSC list may be modified by site-specific requirements and information (e.g., SSCs included in the EOPs) should be described. Because not all modifications, if any, to the D-RAP list are expected to be available at the time of the COLA (e.g., the EOPs are not expected to be fully developed at this time), then it is important that information provided in the FSAR clearly identifies the scope, purpose and essential elements of the program, such that there is assurance that the design reliability established by the D-RAP will be maintained.

If a licensee's expert panel determines that it is appropriate to modify the MR program scope (i.e., to exclude one or more SSCs) or to change the safety significance classification of one or more SSCs from high to low within the MR program scope, and such modification involves D-RAP SSCs, then the criteria or justification used must be consistent, to the extent appropriate to the new plant design and new plant design and operational PRAs, with the criteria for inclusion of SSCs in the D-RAP list as well as consistent with the requirements of 10 CFR 50.65(b) and guidance in NUMARC 93-01 as endorsed by RG 1.160. Also Refer to Section 17.4.2.

The safety/risk classification and treatment of SSCs in the MR program scope, including those in the D-RAP scope, and the modified RAP scope for the operations phase, will be reviewed during NRC inspection.

- E. The applicant's submittal should describe the process for determining the type of monitoring (i.e., performance (availability and/or reliability) and/or condition) and level (i.e., component, system, pseudo-system, train, or plant) of monitoring/tracking, as prescribed by program procedures.

The standby or continuously operating status and associated type of monitoring (i.e., availability, reliability, and/or condition) and level (i.e., component, system, pseudo-system, train, or plant) of monitoring/tracking and the basis thereof of each SSC within the scope of the MR program will be reviewed by NRC inspection.

- F. The applicant's submittal should describe the process for identification and determination of treatment of SSCs or equipment (e.g., circuit breakers, motorized valve actuators, etc.) that may need to be monitored/tracked at the component level or in special component classes or "pseudo systems" that may involve applications in multiple systems and the bases thereof (e.g. industry operating experience (IOE), common failure modes, etc.) as prescribed by

program procedures. Any such SSCs to be monitored in this category and the basis thereof will be reviewed by inspection.

2. Monitoring per 10 CFR 50.65(a):

The applicant's submittal should identify and describe the program procedures and documents (including computer software and data) that prescribe or govern monitoring in accordance with 10 CFR 50.65(a), including the items below.

- A. The process for determining which SSCs within the scope of the MR program will be monitored in accordance with paragraph 50.65(a)(1) as prescribed by program procedures. Procedures should address the method for establishing risk-informed, performance-based criteria (including industry operating experience) to determine initially which SSCs must have goals established and monitoring activities performed in accordance with paragraph 50.65(a)(1).

Specific SSCs, if any, whose performance or condition will be monitored initially per paragraph 50.65(a)(1) and the basis thereof will be reviewed by NRC inspection.

- i. The process for establishing performance or condition monitoring goals for SSCs in 50.65(a)(1) status, including how goals are ensured to be commensurate with safety and how IOE is taken into account, as prescribed by program procedures. The process should address how reliability goals will be expressed in terms of MR functional failures (MRFFs), i.e., failures of one or more of the functions for which the SSC was included in the MR program scope, and/or maintenance-preventable functional failures (MPFFs), including treatment of repetitive MRFFs or MPFFs. The method of monitoring against availability or unavailability goals should also be discussed, including safety/risk category considerations and conditions under which unavailability will be charged.

For each SSC to be in 50.65(a)(1) status, the performance monitoring (availability and reliability) or condition monitoring goals established, the basis thereof, how the goals are commensurate with safety and how IOE was taken into account will be reviewed during NRC inspection.

- ii. The process for disposition of SSCs in 50.65(a)(1) status that do not meet goals, including administration of corrective action as prescribed by program procedures. The applicant should describe how procedures ensure prompt, comprehensive and thorough corrective action that (a) addresses the proximate and ultimate causes of degraded performance or condition, (b) encompasses the extent of condition, and (c) institutes preventive measures, including changes that may be required in maintenance and/or maintenance support practices, procedures and training. This discussion should also address how failures will be evaluated against MR functions, since not all failures that cause loss of some function are MR functional failures, and also how maintenance-preventable functional failures will be identified and dispositioned.

- iii. Any plant management policies, procedures or practices that involve the 50.65(a)(1) status of MR SSCs, e.g., for MR staff performance evaluation, etc.
- B. The process for determining which SSCs within the scope of the MR program will be tracked to demonstrate effective control of their performance or condition in accordance with paragraph 50.65(a)(2) as prescribed by program procedures. The 50.65(a)(2) procedures should address the following:
- i. The process for developing performance criteria or condition monitoring criteria used to demonstrate effective control of performance or condition for SSCs in 50.65(a)(2) status as prescribed by program procedures. The applicant's submittal should explain how the program ensures that performance criteria are commensurate with safety (including PRA risk insights) and good engineering practice, take industry operating experience into account, and are reasonable and sensible, i.e., achievable and sufficiently sensitive to degraded performance or condition such that meeting them could adequately demonstrate effective control of the performance or condition of the SSC through appropriate preventive maintenance and such that the SSC would remain capable of performing its function(s) and not fail in a manner adverse to safety.

The procedures should address how effective control of performance or condition of SSCs in 50.65(a)(2) status will be demonstrated (i.e., included in the formal PM program, determined to be inherently reliable, visual inspection during walkdowns to meet licensee requirements that already exist, or determined to be allowed to run to failure as discussed below). Discuss how the PM program is determined to be effective in achieving the desired results of minimizing component failures and increasing or maintaining SSC performance, including performance of applicable PM activities, inspection and testing, predictive maintenance, inspection and testing, performance trending, ongoing maintenance effectiveness evaluation, and condition monitoring of passive SSCs (e.g., structures) and SSCs for which no failures are deemed acceptable.

For each SSC to be in 50.65(a)(2) status, performance (availability and/or reliability) criteria or condition monitoring criteria and the bases thereof, the extent to which they are consistent with industry guidance, as endorsed by NRC, commensurate with safety, including PRA insights, and good engineering practice, reasonable and sensible, etc., i.e., achievable and sufficiently sensitive to degraded performance or condition, such that meeting them could adequately demonstrate effective control of the performance of the SSC through appropriate preventive maintenance and such that the SSC would remain capable of performing its function(s) and not fail in a manner adverse to safety will be reviewed during NRC inspection.
 - ii. For reliability performance criteria, the process for defining, evaluating and treating functional failures, MR functional failures (MRFFs), maintenance-preventable functional failures (MPFFs), and repetitive MPFFs as prescribed by program procedures.

- iii. For availability performance criteria, the process for defining and tracking availability or unavailability (planned and unplanned), including exceptions and credits and the basis thereof, as prescribed by program procedures. The process should address safety/risk category considerations and the conditions under which unavailability is charged.
 - iv. For condition monitoring criteria, the process for addresses sensing, surveillance, tracking & trending, action levels, predictive maintenance, etc., as prescribed by program procedures.
 - v. The process for disposition of SSCs for which effective control of performance or condition is not demonstrated, including not meeting performance criteria or condition monitoring criteria, as prescribed by program procedures. Conditions under which the expert panel may justify not placing an SSC in 50.65(a)(1) status when performance criteria are not met/exceeded should be described.
- C. The process for identification and treatment of SSCs categorized in a "run-to-failure" status, including consideration of (a) SSC function(s) and success/failure criteria, (b) ability to detect degradation in performance or condition prior to failure, (c) ability to predict failure based on IOE (e.g., average failure rates, application vulnerabilities, mean times between failure, etc.) and vendor information, (d) consequences of failure (modes, effects, safety significance), both with and without prompt detection and correction/repair or replacement, (e) ability promptly to detect failure (e.g., self revealing), (f) means to ensure prompt identification and resolution, (g) procedures for identification and disposition of excessive failure rates, including vendor interaction.
3. Periodic Evaluation per 10 CFR 50.65(a)(3):

Identify and describe the program procedures and documents, including computer software and data, that prescribe or govern periodic evaluation of the Maintenance Rule program in accordance with 50.65(a)(3), including the following:

- A. Scheduling and timely performance of paragraph 50.65(a)(3) evaluations
- B. Documenting, reviewing and approving evaluations, providing and implementing results
- C. Review of 50.65(a)(1) goals, 50.65(a)(2) performance criteria, condition monitoring criteria, SSC performance and condition history, and effectiveness of corrective action
- D. Making adjustments to achieve or restore balance between reliability and availability
- E. Use of Industry operating experience (IOE)
 - i. Obtaining IOE Information, including information from NRC, The Institute for Nuclear Power Operations (INPO), The Electric Power Research Institute (EPRI) and EPRI-sponsored organizations. For example, the

applicant should describe its participation in the Maintenance Rule Users Group (MRUG), The Configuration Risk Management Forum (CRMF), Circuit Breaker Users Groups, NSSS owners groups, other owners and users groups. How vendor technical information and OE is obtained and treated should also be discussed, including the applicant's Vendor Equipment Technical Information Program (VETIP), or other program(s) established pursuant to NRC GL 83-28, Section 2.2.

- ii. Processing IOE Information, including admin controls, routing/distribution, applicability screening and engineering/technical staff involvement
- iii. Implementing/using IOE Information, including corrective action, maintenance, testing and inspection changes, modifications, improvements, procedures, practices, training, qualification and IOE feedback to the processes for safety significance classification, monitoring or tracking type and level determination, goal setting and performance/condition criteria development, procurement engineering (e.g., receipt criteria, commercial-grade dedication), and material handling, storage, issue

4. Maintenance Risk Assessment and Management per 10 CFR 50.65(a)(4):

Identify and describe the program procedures and documents (including computer software and data) that prescribe or govern maintenance risk assessment and management accordance with paragraph 50.65(a)(4). Procedures should address how removing SSCs from service will be evaluated, since it is important to be aware of what MR function(s) is/are being lost so the impact of removing multiple SSCs from service can be determined. Procedures should also prescribe how the risk assessment and management program will preserve plant-specific key safety functions. Procedures for implementing paragraph 50.65(a)(4) procedures should also prescribe the following:

- A. Determination of the scope (or limited scope) of SSCs to be included in 50.65(a)(4) risk assessments.
- B. Risk assessment and management during work planning, addressing as a minimum: qualitative, quantitative or blended approach in different modes of plant operation, pre-established plant risk categories or bands and basis (e.g., baseline core damage frequency multiples, addressing time limits, and/or incremental conditional core damage probability), defense in depth, preservation of key safety functions, standard risk management actions for the various risk bands, provisions for configuration-specific risk management plans.
- C. Risk assessment and management of emergent conditions and updating risk assessments as maintenance situations and plant conditions and configurations are changed.
- D. Assessment (quantitative and qualitative capabilities) and management of risk of external events or conditions, including fire (internal, external and fire-risk-sensitive maintenance activities), severe weather, external flooding, landslides, seismic activity and other natural phenomena; grid/offsite power reliability for

grid-risk-sensitive maintenance activities (respond to or refer to responses to MR-related questions in NRC GL 2006-02), and internal flooding.

- E. Assessment and management of risk of maintenance activities affecting containment integrity.
- F. Assessment and management of risk of maintenance activities when at low power or when shut down (including implementation of NUMARC 91-06).
- G. Assessment and management of risk associated with the installation of plant modifications and assessment and management of risk associated with temporary modifications in support of maintenance activities (in lieu of screening in accordance with 10 CFR 50.59), in accordance with latest revision of NEI 96-07 as endorsed by latest revision of RG 1.187.
- H. Risk assessment and management associated with risk-informed technical specifications.
- I. The scope and level of the probabilistic risk analysis (PRA) (i.e., operational modes, Level I or II, internal and/or external events, etc.) and risk assessment tool or process derived from that PRA to be used for paragraph 50.65(a)(4) risk assessments and its capabilities and limitations.

5. Maintenance Rule Training and Qualification:

Describe the program, including procedures and documentation, for Maintenance Rule training and qualification of the following personnel (or their functional equivalents, regardless of organizational structure) consistent with SRP Section 13.2.1, "Reactor Operator Training," and SRP Section 13.2.2, "Training For Non-Licensed Plant Staff."

- A. Typical MR responsibilities would include:
 - i. Maintaining overall implementation responsibility and perform oversight of the MR program.
 - ii. Maintaining the necessary MR program documentation;
 - iii. Ensuring collection of performance data for availability, reliability, and condition monitoring during operation and shutdown.
 - iv. Assisting system managers in developing and revising 50.65(a)(2) performance criteria, 50.65(a)(1) goals, and corrective actions.
 - v. Preparing the 50.65(a)(3) periodic evaluation of maintenance effectiveness.
 - vi. Coordinating and facilitating Expert Panel meetings.
 - vii. Evaluating functional failures to determine the impact of the functional failures on plant level performance criteria.

- B. The process for selection, training and qualification personnel with MR-related duties, should be applicable to, but not limited to:
- I. The Maintenance Rule Coordinator or equivalent
 - ii. The Maintenance Rule Expert Panel or equivalent
 - iii. Engineering Personnel including System/ Component Engineers, Procurement Engineers, Maintenance Engineers, Probabilistic Risk Analysts/Safety Assessors (or equivalents)
 - iv. Maintenance Personnel, including Work Planners, Maintenance Foremen and Shop Supervisors, Technicians and Craftsmen (or equivalents)
 - v. Operations Personnel including Shift Supervisors, Shift Technical Advisors, Senior Reactor Operators, Licensed Reactor Operators, Unlicensed Plant Operators
 - vi. Licensing Personnel
 - vii. Basic Indoctrination of New Personnel
 - viii. Management Training

6. Interface with the Reliability Assurance Program (RAP) in the Operations Phase:

As discussed in detail above, the applicant should describe the relationship and interface between MR and RAP (See SRP Section 17.4). The NRC has determined that the reliability assurance program may be implemented in the operations phase by (a) the 10 CFR Part 50, Appendix B, quality assurance (QA) program, (b) the maintenance and surveillance program, and (c) the maintenance rule program. If the applicant's maintenance rule program is to be used in implementation of RAP, in conjunction with the QA program and the underlying maintenance and surveillance programs, the COL application submittal should describe how the maintenance rule program will ensure that all RAP SSCs are included within the MR scope in the HSS category.

7. Maintenance Rule Program Implementation:

Describe the plan or process for implementing the MR program as described in the COL application, including sequence and milestones for establishing program elements, commencing monitoring or tracking of performance and/or condition of SSCs as they become operational. The maintenance rule will require that the program be implemented by the time that fuel load is authorized.

8. ITAAC

There are no ITAAC associated with this SRP section

9. COL Action Items and Certification Requirements and Restrictions

The Maintenance Rule program is an operational program addressed in a COL application.

10. Operational Programs

The reviewer verifies that the Maintenance Rule Program is fully described and that implementation milestones have been identified. Note that “fully described” for operational programs, in accordance with SECY 05-197, includes identification of the plant-specific program choices made by the applicant where allowed by the regulations and NRC-endorsed guidance. The reviewer verifies that the program and implementation milestones are included in FSAR Table 13.x.

Implementation of this program will be inspected in accordance with NRC Inspection Manual Chapter IMC-2504, “Construction Inspection Program - Non-ITAAC Inspections,” specifically, IP 62706.52, “Maintenance Rule Program Implementation Inspection.”

IV. EVALUATION FINDINGS

The reviewer verifies that the applicant has provided sufficient information to fully describe the Maintenance Rule Program, i.e., in particular in areas involving applicant choices, those choices are stated and explained in accordance with SECY 05-197. A satisfactory finding is that the staff is satisfied that the applicant’s proposed Maintenance Rule program, as described, is sufficient for a finding of reasonable assurance that the program when implemented satisfies 10 CFR 50.65, for issuance of a COL.

V. IMPLEMENTATION

The staff will use this SRP section in performing safety evaluations of DC applications and license applications submitted by applicants pursuant to 10 CFR Part 50 or 10 CFR Part 52. Except when the applicant proposes an acceptable alternative method for complying with specified portions of the Commission’s regulations, the staff will use the method described herein to evaluate conformance with Commission regulations.

The provisions of this SRP section apply to reviews of applications submitted six months or more after the date of issuance of this SRP section, unless superseded by a later revision.

VI. REFERENCES

1. 10 CFR 50.65, “Requirements for monitoring the effectiveness of maintenance at nuclear power plants,” and the associated Statements of Considerations (SOCs)
2. NUMARC 93-01, “Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants”
3. RG 1.160, “Monitoring the Effectiveness of Maintenance at Nuclear Power Plants”
4. The February 22, 2000, revision to Section 11 of NUMARC 93-01 (if a revision of NUMARC 93-01 later than Revision 2 has not been endorsed by the NRC at the time of the review)

5. RG 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants," (unless canceled or superceded by a revision of RG 1.160 later than Revision 2 at the time of the review)

The following references will be required for inspection of operational programs:

1. NRC Inspection Manual Chapter IMC-2504, "Construction Inspection Program - Non-ITAAC Inspections"
2. IP 62706.52, "Maintenance Rule Program Implementation Inspection"

PAPERWORK REDUCTION ACT STATEMENT

The information collections contained in the Standard Review Plan are covered by the requirements of 10 CFR Part 50 and 10 CFR Part 52, and were approved by the Office of Management and Budget, approval number 3150-0011 and 3150-0151.

PUBLIC PROTECTION NOTIFICATION

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.
