

NRC INSPECTION MANUAL

IQMB

INSPECTION PROCEDURE 62707

MAINTENANCE OBSERVATION

PROGRAM APPLICABILITY: 2515

FUNCTIONAL AREA: MAINTENANCE (MAINT)

62707-01 INSPECTION OBJECTIVE

To verify that maintenance activities for structures, systems, and components (SSCs) within the scope of the maintenance rule (Ref. 1) are being conducted in a manner sufficient to ensure reliable, safe operation of the plant and plant equipment¹ and to meet the requirements of the maintenance rule, 10 CFR 50, Appendix B and other regulatory requirements.

62707-02 INSPECTION REQUIREMENTS

02.01 Observation of Preplanned Maintenance Activities

- a. Select a preplanned maintenance activity for review on the basis of its complexity, safety (or risk) significance, or other considerations discussed in paragraph 03.01.a. of this inspection procedure.
- b. Review the work permits, equipment tagouts, procedures, drawings, and vendor technical manuals associated with that maintenance activity.
- c. Verify by observing the maintenance activity and interviewing maintenance personnel that the activity is being performed in accordance with the licensee's procedures and regulatory requirements, that personnel are appropriately trained and qualified, and that appropriate radiological controls are followed.
- d. Verify that the maintenance activity was completed and the SSC was returned to service satisfactorily.

¹ For this inspection procedure, the term "equipment" includes structures, systems, or components (SSCs).

02.02 Observation of Emergent Maintenance Activities

- a. During walkdowns of the plant, evaluate ongoing or emergent work activities to determine if they warrant detailed inspection because of

their complexity, safety significance, or other considerations discussed in paragraph 03.01.a. of this inspection procedure.

- b. Taking care to minimize any interference with the maintenance activity, ask the licensee's maintenance personnel to explain what activity is being performed and what work permits, equipment tag-outs, procedures, and vendor technical manuals are being used to control the activity.
- c. If possible, review the work permits, equipment tag-outs, procedures, drawings, and vendor technical manuals that are being used at the job site. If it is not possible to do this at the job site, note the title and revision number of these documents so they can be reviewed after the job is completed.

02.03 Follow up on Maintenance-Related Plant Events, Trips and Safety System Actuations. In addition to any follow up inspections performed in accordance with other inspection procedures, such as IP 93702, "Prompt Onsite Response to Events at Operating Power Reactors," determine if the failure of an SSC caused, contributed to the severity of, or prevented the mitigation of a plant event (accident, incident, scram, safety system actuation, etc.). If so, verify that the SSC was included within the scope of the maintenance rule and that the requirements of the rule, described in section 02.04 below, were satisfied.

02.04 Verification of Maintenance Rule Requirements. Whenever a preplanned or emergent work activity is inspected, or follow up on a maintenance-related event is performed, verify that the basic requirements of the maintenance rule, listed below, have been satisfied for the SSC under review.

- a. Goal setting and monitoring, 50.65 (a)(1). For an SSC being monitored under (a)(1) of the maintenance rule, verify that the licensee has implemented appropriate goal setting and monitoring.
- b. Preventive maintenance, 50.65 (a)(2). For an SSC being monitored under (a)(2) of the maintenance rule, verify that the licensee has established appropriate performance criteria and monitoring to demonstrate that the performance or condition of the SSC is effectively controlled through the performance of preventive maintenance.
- c. Periodic Evaluation, 50.65(a)(3)
 - 1. At least once every refueling cycle, review the periodic evaluations required by paragraph (a)(3) of the maintenance rule.
 - 2. At least once every refueling cycle, verify that the licensee is making adjustments where necessary to ensure that the objective of preventing failures of SSCs through maintenance is appropriately balanced against the objective of minimizing unavailability of SSCs due to monitoring or preventive maintenance activities.

3. For each maintenance activity reviewed, verify, based on a review of licensee's records and interviews with appropriate personnel, that the licensee has assessed the overall safety impact before taking the SSC out of service for monitoring or preventive maintenance.

62707-03 INSPECTION GUIDANCE

General Guidance

Users. This procedure may be used by resident or region-based inspectors to review routine maintenance activities; follow up on events (reactor trips, safety system actuations, accidents, equipment damage, etc.) caused by maintenance problems; and as otherwise directed by NRC management.

Core and Regional Initiative Inspection Programs. Inspection Procedure (IP) 62707 is listed as a core inspection procedure in Appendix A of NRC Inspection Manual Chapter 2515. Core inspection procedures emphasize the observation and evaluation of ongoing facility operations and supporting activities affecting the safety function of facility structures, systems, and components. Core inspection procedures are intended to monitor licensees' activities and identify any adverse trends. Regional initiative and reactive inspection procedures (such as IP 62706, "Maintenance Rule," (Ref. 2)) listed in MC 2515, Appendix B, can be used to further investigate trends or problems identified by the core inspection procedure IP 62707.

Implementation Guidance. Except when the licensee proposes an alternate method for complying with specified portions of the maintenance rule, the methods described in Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants" (Ref. 3), will be used to evaluate the effectiveness of maintenance activities of the licensee. This regulatory guide endorses NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants" (Ref. 4), and provides methods acceptable to the NRC for complying with the maintenance rule. Become familiar with Regulatory Guide 1.160 and NUMARC 93-01 before initiating this inspection. Also be aware that licensees may use methods other than those described in Regulatory Guide 1.160 and NUMARC 93-01 to satisfy the requirements of the maintenance rule. Where other methods are used, the licensee must demonstrate that those methods satisfy the requirements of the rule. Where a licensee implements the rule partly in accordance with Regulatory Guide 1.160 and NUMARC 93-01 and partly in accordance with other methods, the licensee must demonstrate that those other methods meet the applicable parts of the rule.

Resource Estimate. The resource estimate of 15 hours per month for this inspection procedure is only intended as a guideline. It is not intended to force inspectors to expend inspection time observing routine maintenance activities just to meet the guideline

for a particular month. Similarly, during periods of high maintenance activity, the guideline is not intended to limit the inspector's reviews of maintenance activities to 15 hours per month. The inspector need not verify all inspection requirements (62707-02) for each maintenance activity observed. The inspectors should use their knowledge and experience to select a sample of inspection requirements for review. These estimates are not goals, standards, or limitations; rather they, are included to assist in planning resource allocations and will be revised periodically, as necessary. The actual hours required to complete this inspection procedure at a particular site may vary from the estimate. The NRC inspection program covers only small samples of a licensee's activities in any particular area. If an inspector believes that significantly more maintenance inspection hours are needed to follow up on suspected adverse trends or problems at a specific site, regional management should be informed. The inspection program gives the regional administrators flexibility in applying inspection resources to deal with issues and problems at specific plants.

Scheduled vs. Emergent Maintenance Activities. Both preplanned (scheduled) and emergent (nonscheduled) maintenance activities should be reviewed. The advantage of selecting scheduled maintenance activities is that the inspector will have time to prepare by reviewing the drawings, procedures, radiation work permits, quality assurance requirements, and equipment tagouts before the job begins. However, because of emergent work and changes in the schedules for preplanned work, be prepared to review ongoing maintenance activities identified during plant walkdown inspections. Where there is no opportunity to prepare for the inspection, take good notes when observing the activity. After the activity is completed, review the drawings, procedures, work orders, quality assurance requirements, and equipment history records to determine if the work was performed in accordance with the requirements contained in those documents.

Engineering Support. Verify that the licensee has provided an appropriate level of engineering support for maintenance activities. Not all maintenance activities require engineering involvement, but timely engineering support should always be available to the maintenance staff. Areas where engineering can provide valuable assistance include evaluating when a repair constitutes a design change; specifying replacement parts; performing root cause analyses; and evaluating performance trends. Delays in responding to requests for support, repetitive equipment failures, and superficial root cause analyses could indicate inadequate engineering support.

Troubleshooting Activities. Periodically observe troubleshooting activities, giving particular attention to the use of jumpers and the possibility of technical specification limiting condition for operation (LCO) violations. Licensees are expected to have procedures for controlling troubleshooting activities such as removing and returning SSCs to service, use of lifted leads and jumpers, and post activity testing. Although a licensee should have a procedure that addresses the general plan of the troubleshooting activity, it is not always necessary that all of

the steps performed as part of a troubleshooting activity be defined in a step-by-step procedure. However, documentation of troubleshooting activities should provide evidence that the activity was performed properly.

Also ensure that the licensee is not using troubleshooting to circumvent the requirements of the standing maintenance procedures and policies, nor is troubleshooting being used as a means to implement a work-around for a problem instead of repairing it.

Inspection Priorities. In general, the inspector should focus on maintenance activities and equipment performance rather than on the program or the procedures. If the maintenance activities are performed effectively and the plant equipment performs reliably and is capable of performing its intended functions, there may be no need to review the licensee's maintenance procedures and processes in detail. However, if the inspector notes problems during the observations, or if plant equipment is not sufficiently reliable (or not maintained operable), the inspector may wish to examine the licensee's program, processes, and procedures to determine the cause of the problems. In addition, the maintenance rule contains some specific programmatic requirements that must be met by the licensee. The inspector may need to review the licensee's processes and procedures to verify that these requirements have been met.

Enforcement Options. The maintenance rule, 10 CFR 50.65, contains requirements that apply to safety-related equipment and certain balance-of-plant equipment. Failure to meet any of the maintenance rule requirements could result in a notice of violation. Enforcement guidance for the maintenance rule is provided in IP 62706, Appendix A.

In addition, failure to establish measures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, and nonconformances of safety related equipment, are promptly identified and corrected can be cited as a violation of Criterion XVI of 10 CFR Part 50, Appendix B. A licensee's failure to meet commitments in responses to Notices of Violation may also be a violation of Criterion XVI. A licensee's failure to conduct an evaluation before departing from commitments in their final safety analysis report (FSAR) may be a violation of 10 CFR 50.59. Other failures to meet written commitments, contained in safety analysis reports, in licensee event reports, or in a licensee's response to a notice of violation, NRC bulletin, or other licensee commitment, not amounting to a violation of a requirement, may be subject to notices of deviation.

Shutdown Risk. Paragraph (a)(3) of the maintenance rule requires that an assessment on the overall effect on plant safety be made before taking equipment out of service for monitoring or preventive maintenance activities. This requirement applies during all operating modes, including power operation and shutdown.

Non-routine activities and the unavailability of some equipment during shutdown may increase the probability of complex events which challenge operators in unfamiliar ways. Some licensees have

not rigorously considered accident sequences during shutdown operations; as a result of this omission, instances have occurred in which emergency procedures were unavailable or inadequate, or instrumentation and mitigative equipment were unavailable.

The NRC has established few explicit regulatory requirements concerning the licensee's activities during shutdown. Some plants have operability requirements for equipment in their technical specifications and others do not. Licensees continue to report events that occur during shutdown conditions which affect their ability to remove decay heat. These events indicate the importance of carefully planning and coordinating anticipated outages of equipment, tests of systems and components, and plant conditions.

During the inspection consider shutdown risk when observing maintenance activities; assess the licensee's plans and procedures for controlling shutdown activities to ensure that shutdown cooling is always available when needed; and examine the effect that maintenance activities might have on shutdown risk or the loss of shutdown cooling.

Systematic Assessment of Licensee Performance (SALP). The inspections performed using IP 62707 are an important source of information for evaluating a licensee's performance in the maintenance area. The number of SSCs in the (a)(1) category verses the number in the (a)(2) should not be used as an indicator of maintenance effectiveness (i.e., a large number of SSCs in the (a)(1) category is not an indicator of poor maintenance). The inspectors should adequately document observations and findings so that they can be used as input into the SALP process.

Specific Guidance

03.01 Observation of Preplanned Maintenance Activities

- a. Selecting Maintenance Activities for Inspection. Select a representative sample of licensee maintenance activities for review. Attend the licensee's maintenance planning meetings or review maintenance schedules to determine what maintenance activities are ongoing. When there are many ongoing maintenance activities to choose from, as during a refueling outage, the following criteria may be useful for deciding which activities to inspect. When there are few maintenance activities to choose from, as is sometimes the case during power operation, the following criteria could be used to help decide if it is worthwhile to inspect any of the available maintenance activities.
 1. Scope of the Maintenance Rule. In general, select SSCs that are within the scope of the maintenance rule. The maintenance rule includes safety-related SSCs and non-safety-related (balance-of-plant) SSCs that are relied upon to mitigate accidents or transients; or are used in plant emergency operating procedures; or whose failure could prevent safety-related SSCs from fulfilling their safety-related function; or whose failure could cause a reactor scram or actuation of a safety-related system.

To implement the maintenance rule, each licensee should have developed a list of SSCs that are within the scope of the maintenance rule. Refer to this list to determine which SSCs are within the scope of the rule. If there is a concern that the licensee's scoping list may be incorrect, perform an independent evaluation of the licensee's scoping activities using the guidance contained in IP 62706.

2. Use of risk insights. Consider the risk significance of systems, structures, and components (SSCs) as one input in the selection of a sample of inspection items. The maintenance rule (10 CFR 50.65), as implemented using NUMARC 93-01, recommends that the results of a probabilistic risk assessment (PRA) be considered when categorizing SSCs within the scope of the maintenance rule as either "safety (risk) significant" or "non-safety (non-risk) significant."

Refer to IMC 2515 Appendix C for detailed guidance on the use of PRA insights. Obtain initial PRA insights from licensee PRA specialists, if possible. If necessary, contact NRC PRA specialists (e.g., Senior Reactor Analysts or NRR Probabilistic Safety Assessment Branch) for assistance.

3. Problematic SSCs. Focus on maintenance of equipment that has proved to be unreliable or failed repeatedly, either at that plant or at a similarly configured plant.
 4. Back shift. Periodically inspect maintenance activities being performed on all shifts including the evening and midnight shifts.
 5. Various Activities. Inspect maintenance performed on all types of equipment including electrical and mechanical equipment, structures, and instrumentation and controls.
- b. To prepare for reviewing a maintenance activity, review the work procedures to become familiar with the planned maintenance activity and verify:
1. All required work permits have been approved (operations, health physics, quality assurance, etc.) valve lineups have been performed, and required procedures and drawings are up to date and available at the work site.
 2. Technical specification limiting conditions for operation (LCOs) will be met and 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 before performing the planned activity (as required by (a)(3) of the maintenance rule). If an LCO will be entered to perform elective maintenance, verify that unavailability of equipment taken out of service was not excessive and that activities were appropriately prioritized. While verifying that the activities are not violations of the LCO, determine if

the activity involves a voluntary entry into an LCO. Although voluntary entry into an LCO is allowed, ensure that these situations are appropriately managed by the licensee and assessed for overall impact on plant risk. The licensee's work control or equipment control program should ensure that redundant and diverse equipment is operable and that the work activities are appropriately prioritized. In addition, preventive maintenance activities should be planned and coordinated to preclude frequent entry into individual LCOs. Repeatedly entering and exiting an LCO may indicate a maintenance or an equipment performance problem.

3. Appropriate redundant systems or trains will be operable in accordance with technical specification requirements.
4. Adequate precautions will be taken to preclude a loss of shutdown cooling with the reactor coolant system in a partially drained condition.
5. Adequate operations oversight will be provided for maintenance or modification activities performed on or near equipment which is still in service.
6. Contingency guidance was provided to operations personnel when maintenance activities were being performed which could have a significant impact on plant operation. For example, were the licensee elects to use freeze plugs, the inspector should verify that adequate emergency contingency procedures are available in the event of freeze plug failure, that maintenance and operations personnel have been trained in the use of these procedures, and that personnel at the site of the freeze plug maintain adequate communication with the control room.
7. Considering the skills of the workers involved, the procedures were adequate to achieve the desired results, incorporated appropriate recommendations of the equipment vendor, and addressed special maintenance activities such as using a freeze seal or plug. Although licensees are required to obtain and review vendor technical information, they are not required to incorporate all vendor recommendations into their maintenance program. If a licensee determines that a vendor recommendation is not appropriate, they may decide to disregard it. More information is provided in Generic Letter 90-03 (Ref. 5).
8. Licensee management is involved in the planning and oversight of maintenance activities and is cognizant of and maintains control of the maintenance process and the work being performed.
9. Preventive maintenance activities are not routinely being scheduled to "Precondition" equipment prior to performing surveillance tests in order to help ensure the test is passed satisfactorily. Inspectors should examine the sequence of preventive maintenance (PM) activities to

determine if the licensee routinely schedules PMs prior to a surveillance tests. This could mask an equipment deficiency which would inhibit its ability to perform its intended function.

10. Equipment history and maintenance records for safety significant plant equipment are periodically reviewed to identify repetitive failures or other adverse trends which may indicate ineffective or inadequate maintenance.
- c. While observing the work activity, the inspector should verify the following:
1. Required personnel (health physics, quality assurance, operations, and mechanics, etc.) are present at the job site and have received proper pre-job briefings, and required tools and materials have been pre-staged.
 2. Work is performed in accordance with approved procedures.
 3. The maintenance workers have communicated appropriately with operations personnel throughout the maintenance activity and have obtained the necessary approvals for the work package or procedure prerequisites.
 4. Appropriate ignition, fire prevention, and personnel safety controls were established and implemented.
 5. Adequate radiological controls were established, radiation work permits were issued, and appropriate as-low-as-reasonably-achievable (ALARA) radiation exposure reviews were performed.
 6. Replacement parts are either identical to the original part or the substitute part had a proper engineering evaluation and has been found to be a suitable substitute. Care must be taken to ensure that any replacement commercial grade hardware meets the original design requirements (strength, corrosion resistance, etc.). Information on commercial grade dedication is provided in Inspection Procedure IP-38703, "Commercial Grade Procurement." Also verify that special tools (such as torque wrenches) were used where specified in the maintenance procedures or design specifications.
 7. Procedures included appropriate quality control or independent verification hold points to ensure that critical work steps were performed adequately.
 8. Workers, including contractors, received sufficient training to ensure the maintenance activity was completed satisfactorily. Some special processes such as nondestructive examination and welding have formal qualification requirements. If the maintenance task being reviewed involves these activities, verify that the

personnel performing the activity are qualified by reviewing qualification records or by questioning the maintenance personnel performing the task.

9. Contract workers received a level of supervision and quality assurance monitoring equivalent to that afforded licensee workers. Contract personnel who work directly for regular plant staff maintenance supervisors are subject to oversight under the licensee's established quality assurance program. However, outside vendors with whom licensee contracts to complete specific tasks may provide their own quality assurance program. In that case, the licensee must perform audits to verify that a contractor's quality assurance program is adequate.
- d. After the maintenance activity is complete, verify that the licensee:
1. Ensured the operability of plant systems and components after the completion of maintenance by reviewing and assessing the material condition, the availability of the system, and the results of surveillance and post maintenance tests.
 2. Properly tested and calibrated equipment before returning it to service. The licensee should have tested the important attributes of the equipment that may have been affected by the maintenance and not just attributes that are tested by the surveillance test required in the technical specifications.
 3. Ensured that post-maintenance test deficiencies are appropriately evaluated and/or corrected before to returning the equipment to service. If only the technical specification surveillance test is used after maintenance, the inspector should verify that appropriate attributes of the equipment have been tested.
 4. Properly returned to service any equipment being maintained and its associated system, including independently verifying the alignment of valves and breakers.
 5. Properly reassembled environmentally qualified electrical equipment after completing maintenance, surveillance, and testing. Numerous failures of environmentally qualified safety-related electrical devices have resulted from moisture intrusion when enclosures were improperly reassembled following maintenance or surveillance activities. The inspector should verify that maintenance activities include adequate controls to ensure that vapor barriers, gaskets, and seals are restored to the environmentally qualified condition.
 6. Fulfilled the requirements for inspections and tests of applicable American Society of Mechanical Engineers (ASME) codes for repairs and replacements. If the

equipment is subject to the ASME codes, then any maintenance activity performed on the equipment may void the results of ASME code tests or inspections. The licensee must ensure that appropriate ASME code pre-service or in-service tests are re-performed as necessary to fulfill code requirements. For example, testing to re-establish baseline data should be redone following the overhaul or repair of a code pump.

7. Updated the equipment maintenance history and performance trend records to reflect the maintenance activity.
8. Verified that SSCs returned to service after the performance of maintenance are capable of performing their intended function. The inspector should verify this by:
 - (a) Observing the equipment in operation (e.g., an instrument responding to changes in plant conditions),
 - (b) Observing the tests performed on the equipment, providing they are performed with the system in a normal lineup,
 - (c) Independently verifying the alignment of valves and switches, and
 - (d) Verifying that the applicable technical specification surveillance tests are re-performed after the maintenance activity is complete.

03.02 Observation of Emergent Maintenance Activities (Use applicable specific guidance from paragraph 03.01 above)

03.03 Follow up on Maintenance Related Plant Events, Trips, Safety System Actuations. For guidance on which SSCs are included within the scope of the maintenance rule, the inspectors should refer to paragraph 03.04 of IP 62706.

03.04 Verification of Maintenance Rule Requirements

- a. For those SSCs under paragraph (a)(1) of the rule, verify that the licensee:
 1. Is monitoring the performance or condition of structures, systems, and components (SSCs) against licensee established goals in a manner sufficient to provide reasonable assurance that such SSCs, defined in 10 CFR 50.65(b), are capable of fulfilling their intended functions.
 2. Has established goals commensurate with safety and, where practical, has taken into account industry-wide operating experience.

3. Has taken appropriate corrective action when the performance or condition of an SSC does not meet established goals.
- b. For those SSCs under paragraph (a)(2) of the rule, verify that the licensee:
 1. Has established performance criteria and is monitoring the SSCs against those criteria to demonstrate that the condition of an SSC is being effectively controlled through the performance of appropriate preventive maintenance, or has made the determination that the SSC is inherently reliable and has low safety significance and that therefore, preventive maintenance was not required and the SSC could be allowed to run to failure.
 2. Has established goals and monitoring under (a)(1) for any SSC that has experienced a repetitive maintenance preventable functional failure or has exceeded (not achieved) its performance criteria.
 - c. For all SSCs under the scope of the rule:
 1. At least once every refueling cycle, review the periodic evaluation required by paragraph (a)(3) of the maintenance rule. The rule requires that this evaluation be performed by the licensee at least every refueling cycle, provided the interval between evaluations does not exceed 24 months. For SSCs under paragraph (a)(1), verify that the licensee has reviewed goals, monitoring, and preventive maintenance activities and made adjustments where performance has not met established goals. For SSCs under paragraph (a)(2), verify that the licensee has adjusted preventive maintenance activities where performance criteria were exceeded and had established goals and monitoring under paragraph (a)(1) for those SSCs that exceeded their performance criteria or had experienced repetitive maintenance preventable functional failures (MPFFs). Also verify that the licensee had taken industry-wide operating experience into account, where practical, when performing this evaluation. The licensee should evaluate sources like NRC bulletins, generic letters, and information notices, technical information letters, and incorporate the appropriate information into their preventive maintenance program.
 2. At least once every refueling cycle, verify that the licensee made adjustments where necessary to ensure that the objective of preventing failures of SSCs through maintenance is appropriately balanced against the objective of minimizing unavailability of SSCs due to monitoring or preventive maintenance activities. Licensees may establish their own schedule for performing these reviews and making any needed adjustments to their preventive maintenance activities. However, at a minimum, the licensee shall perform this balancing at

least once every refueling cycle and include an evaluation of this activity as part of the refueling cycle evaluation process described above. This process can be qualitative, but it should be documented. Select a sample of high-safety-significant SSCs that were subjected to this process and verify that the adjustments made to balance availability and reliability appear to be reasonable.

3. For each maintenance activity reviewed, verify that the safety assessments described in paragraph (a)(3) of the rule are being performed. Under paragraph (a)(3) of the rule, the NRC expects (but does not require) licensees to assess the total impact on plant safety before taking plant equipment out of service for monitoring or preventive maintenance. This assessment is to be performed whenever a safety-significant SSC is taken out of service for monitoring or preventive maintenance, not just during the periodic evaluation performed each refueling outage. Perform this assessment regardless of plant mode, i.e., whether the plant is operating or shutdown. Assessing the cumulative impact of out-of-service equipment on the performance of safety functions is intended to ensure that the plant is not placed in safety (or risk) significant configurations. A quantitative assessment of probabilistic safety is not necessarily required. However the PRA or IPE may provide useful information on safety significance of various SSCs. The level of sophistication with which such assessments are performed is expected to vary and may range from a simple matrix to the use of an on-line living PRA or risk meter. It is expected that, over time, assessments of this type will be refined as the technology improves and experience is gained. To accomplish these assessments, licensees must keep track of whether plant equipment is in or out of service. The status of the equipment may be kept as a manual list or on a database but must be easily accessible and kept up to date.

Additional guidance is provided in Section 11.0 of NUMARC 93-01, paragraph 03.03.c of IP 62706, and the INPO guideline, "Managing Maintenance During Power Operations" (Ref. 6)

62707-04 RESOURCE ESTIMATE

The resource estimate for this inspection procedure is approximately 15 hours of direct inspection effort each month.

62707-05 REFERENCES

1. *U.S. Code of Federal Regulations*, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," 10 CFR 50.65.

2. U.S. NRC, "Maintenance Rule," Inspection Procedure 62706, August 31, 1995.
3. U.S. NRC, "Monitoring the Effectiveness at Nuclear Power Plants," Regulatory Guide 1.160.
4. Nuclear Management and Resources Council, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," NUMARC 93-01, Revision 1.
5. U.S. NRC, "Relaxation of Staff Position in Generic Letter 83-28, Item 2.2, Part 2, `Vendor Interface for Safety-Related Components,'" Generic Letter 90-03, March 14, 1990.
6. Z.T. Pate, Institute of Nuclear Power Operations, letter to James M. Taylor, U.S. NRC, transmitting the guideline "Managing Maintenance During Power Operations," March 1, 1995.

END