

April 1983
Criteria
INPO 83-014



XA04N2803

INIS-XA-N--230

Performance Objectives and Criteria for Plant Evaluations

MAINTENANCE

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MAINTENANCE ORGANIZATION AND ADMINISTRATION

PERFORMANCE OBJECTIVE

Maintenance organization and administration should ensure effective implementation and control of maintenance activities.

CRITERIA

- A. The organizational structure is clearly defined.
- B. Staffing and resources are sufficient to accomplish assigned tasks.
- C. Responsibilities and authority of each management, supervisory, and professional position are clearly defined.
- D. Personnel clearly understand their authority, responsibilities, accountabilities, and interfaces with supporting groups.
- E. Administrative controls are employed for maintenance activities important to plant safety and reliability.
- F. Performance appraisals are effectively utilized to enhance individual performance.

PLANT MATERIAL CONDITION

PERFORMANCE OBJECTIVE

The material condition of the plant should be maintained to support safe and reliable plant operation.

CRITERIA

- A. Fluid system leaks are minimized.
- B. Mechanical systems and equipment are in good working order and in a good state of preservation.
- C. Electrical and electronic equipment is operable and appropriately protected from adverse environmental conditions.
- D. Instrumentation, controls, and associated indicators are operable and calibrated as required.
- E. Good lubrication practices are evident.
- F. Mechanical operators, fasteners, and supports are in place and operable.
- G. Equipment, structures, and systems are properly preserved and insulated.

WORK CONTROL SYSTEM

PERFORMANCE OBJECTIVE

The control of work should ensure that identified maintenance actions are properly completed in a safe, timely, and efficient manner.

CRITERIA

- A. The work control system provides management with the means for determining the status of outstanding work orders and maintenance planning.
- B. Advance planning is established for unscheduled outages.
- C. The work to be accomplished is clearly defined by the work document.
- D. Management control of work is accomplished through the use of a priority system. The backlog of work is minimized.
- E. Work planning includes considerations such as material, tool, and manpower requirements; interdepartmental coordination; safety considerations; radiological protection requirements; and quality control requirements.
- F. Scheduling of maintenance effectively utilizes available manpower.
- G. The work order package identifies or includes applicable guidelines and/or procedures.
- H. Requirements for post-maintenance testing and plant restoration are defined.
- I. Completed work control documents are reviewed to ensure awareness of material conditions, to consider preventive maintenance program adjustments, and to verify completion of administrative requirements.

CONDUCT OF MAINTENANCE

PERFORMANCE OBJECTIVE

Maintenance should be conducted in a safe and efficient manner to support plant operation.

CRITERIA

- A. Maintenance practices ensure the exclusion of foreign materials and contaminants from open systems and components.
- B. Work sites are orderly.
- C. Proper tools are employed.
- D. Good industrial safety, radiological protection, and maintenance practices are followed.
- E. Operations, quality control, and radiological protection personnel are involved in appropriate maintenance activities.
- F. Maintenance re-work is minimized.
- G. Managers and supervisors observe maintenance activities and ensure adherence to station policies and procedures.
- H. Maintenance is performed by, or under the direct supervision of, qualified personnel.
- I. Maintenance personnel are knowledgeable in appropriate lessons learned from industry and in-house maintenance experiences.
- J. Contract and other non-utility personnel conducting plant maintenance operate under the same controls and procedures and to the same standards as plant maintenance personnel.

PREVENTIVE MAINTENANCE

PERFORMANCE OBJECTIVE

Preventive maintenance should contribute to optimum performance and reliability of plant equipment.

CRITERIA

- A. A preventive maintenance (PM) program is effectively implemented and includes systems and equipment important to plant safety and reliability.
- B. Inspection, lubrication, and maintenance are performed at appropriate intervals determined by vendor recommendations and operational experience.
- C. The backlog of preventive maintenance is minimized. Preventive maintenance is not waived or deferred for extended periods of time without management approval.
- D. Preventive maintenance documentation provides a record of PMs performed, associated data, and where appropriate, the condition of the equipment.
- E. The effectiveness of the preventive maintenance program is periodically evaluated, and the results are used to make program improvements.

MAINTENANCE PROCEDURES AND DOCUMENTATION

PERFORMANCE OBJECTIVE

Maintenance procedures should provide appropriate directions for work and should be used to ensure that maintenance is performed safely and efficiently.

CRITERIA

- A. The preparation, review, approval, and revision of procedures and documents are properly controlled.
- B. Procedures are clear, concise, and contain adequate information for users to understand and perform their activities effectively.
- C. Hold points for quality control checks are included in procedures as necessary.
- D. Procedures are readily available and clearly identified.
- E. Procedures are approved and validated.
- F. Work procedures, vendor manuals, and reference materials used in support of maintenance are technically accurate and up-to-date.
- G. Portions or steps of other documents that are used or referred to when performing a procedure are specifically identified in the procedure.
- H. A policy governing the use of procedures is implemented. The policy includes the following:
 - 1. action to be taken when procedures are found to be inadequate for the intended tasks or when unexpected results occur
 - 2. directions for when procedures are to be used as general guidance, are to be followed step-by-step, or require sign-off for each step

3. identification of procedures required to be in-hand when performing the operation to which they pertain
 4. action to be taken if procedures conflict
- I. Documents, drawings, and other technical data are available, authorized, and properly controlled.

MAINTENANCE HISTORY

PERFORMANCE OBJECTIVE

Maintenance history should be used to support maintenance activities and optimize equipment performance.

CRITERIA

- A. Maintenance history records are maintained for major systems, equipment, and components.
- B. Malfunctions, repairs, modifications, and inspection/test results are effectively documented.
- C. Maintenance history records are readily accessible.
- D. Maintenance history records are appropriately considered in planning for corrective maintenance, modifications, and preventive maintenance.
- E. Maintenance history is utilized to identify and evaluate trends and persistent maintenance problems. Appropriate corrective action is initiated.

MATERIALS MANAGEMENT

PERFORMANCE OBJECTIVE

Materials management should ensure that necessary parts and material are available when needed.

CRITERIA

- A. Programs are implemented to provide proper parts and material for normal maintenance, outages, and modifications.
- B. Mechanisms are in place to provide for the expeditious procurement of parts and material on a high priority basis when needed.
- C. The quality of stored equipment, parts, and material is maintained by preventive maintenance and environmental and shelf-life controls.
- D. Materials are stored and identified in a manner that results in timely retrieval of requested items.
- E. Parts and components critical to safe and reliable operation of the plant are identified and controlled.
- F. Proper engineering control and approval is obtained on any deviation from the design specifications for parts or material.
- G. Stock records are maintained, and purchase orders are tracked.

TECHNICAL SUPPORT

- TS.1 TECHNICAL SUPPORT ORGANIZATION AND ADMINISTRATION**
- TS.2 SURVEILLANCE TESTING PROGRAM**
- TS.3 OPERATING EXPERIENCE REVIEW PROGRAM**
- TS.4 PLANT MODIFICATIONS**
- TS.5 REACTOR ENGINEERING**
- TS.6 PLANT PERFORMANCE MONITORING**
- TS.7 TECHNICAL SUPPORT PROCEDURES AND DOCUMENTATION**