



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

# NRC INSPECTION MANUAL

RPEB

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## INSPECTION PROCEDURE 93805

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### MAINTENANCE PROGRAM

PROGRAM APPLICABILITY: 2515

SALP FUNCTIONAL AREA: MAINTENANCE/SURVEILLANCE (SOMS)

#### 93805-01 INSPECTION OBJECTIVE

To provide programmatic inspection guidance for conducting diagnostic team inspections of a licensee's maintenance program where the staff perceives the existence of widespread deficiencies.

#### 93805-02 INSPECTION REQUIREMENTS

02.01 Commission Notification. Apprise the Commission of the region's intention to perform this programmatic maintenance inspection before using this inspection procedure.

02.02 Inspection. Implement the pertinent programmatic inspection requirements in Temporary Instruction (TI) 2515/97, Revision 1, "Maintenance Inspection" (microfiche address 75045/156 to 164). Followup inspection requirements are contained in TI 2515/108, "Maintenance Assessment Inspection" (microfiche address 75045/152 to 155).

#### 93805-03 INSPECTION GUIDANCE

General Guidance. The inspection guidance referenced in this procedure focuses on the adequacy of licensees' maintenance programs versus the results achieved through the implementation of the program. In the Staff Requirements Memorandum-Affirmation/Discussion and Vote dated June 28, 1991, the Commission voted to approve the maintenance rule, 10 CFR 50.65, and directed the staff to not incorporate the programmatic inspection guidance used for the maintenance team inspections into the routine inspection program. Instead, the Commission directed the staff to reserve the use of this type of guidance for conducting special diagnostic-type inspections of licensee maintenance activities where the staff perceives the existence of widespread deficiencies.

#### Specific Guidance

03.01 Commission Notification. The Commission directed the staff to apprise it of any instance where the staff plans to perform programmatic maintenance evaluations with a team inspection.

03.02 Inspection. Detailed guidance (Maintenance Inspection Guidance Volume 1 and Volume 2) is available in NUDOCS (microfiche address 75045/165 to 319). Maintenance program attributes that should be considered for inspection include the following:

a. Overall Plant Performance Related to Maintenance

Direct Measures. The team shall conduct appropriate examinations of plant operability, equipment availability, and plant material condition that can be directly related to the effective implementation of a maintenance process.

Before conducting the inspection of plant performance, the inspector should review available plant information on (1) availability, (2) operability, and (3) reliability. Information on these items can be obtained from the plant's operating history. Other sources for obtaining the information are systematic assessment of licensee performance (SALP) reports, performance indicator data, engineered safety features actuation studies, safety system unavailability studies, technical specification violations, monthly operating report data, capacity factors from NUREG-0020, and Office for Analysis & Evaluation of Operational Data (AEOD) scram studies. Data collection should be directed to those measures related to safety-significant aspects of the maintenance process. In addition, the inspector should conduct a detailed walkdown inspection of the overall plant material condition to assess the effectiveness of the licensee's maintenance process to the extent that it is reflected in plant housekeeping and in the external condition of equipment. The scope of the inspection should include examination of direct measures and a review of historical data.

b. Management Support of Maintenance

1. Management Commitment and Involvement. The examination of management effectiveness concerning maintenance should be directed to determining the extent of corporate and plant management awareness and support of the maintenance and resolution of maintenance problems and should include examination of the following:

- Application of industry initiatives.
- Extent of direct management participation in maintenance and in corrective actions (management vigor and example).

2. Management Organization and Administration. The inspection of management organization and administration controls should be directed to determining how the organization supports maintenance activities; what maintenance activity plan has been established; how the maintenance activity plan has been implemented, corrected, and controlled; and the control of resources. The inspection should include examination of the following:

- Program coverage for maintenance.
- Policy, goals, and objectives for maintenance.
- Allocation of resources.
- Definition of maintenance requirements.
- Performance measurement.
- Document control system for maintenance.

- Maintenance decision process.
3. Technical Support. The areas that are to be selectively examined for the technical support organizations with regard to maintenance are as follows:
- Internal and/or corporate communication channels.
  - Engineering control.
  - Licensee acknowledgement of risk significance.
  - Quality control.
  - Incorporation of radiological controls into maintenance process.
  - Safety review committees.
  - Regulatory documents.
  - Trending.

Examples of the applicable departments or organizations subject to this inspection are the following:

- Engineering (nuclear, instrumentation and control (I&C), mechanical, electrical, licensing, systems, etc.).
- Quality assurance (QA).
- Quality control (QC).
- Health physics (HP).
- Safety.
- Fire protection.
- Operations.

c. Maintenance Implementation

1. Work Control. The inspection of the work control process should be directed to work order documentation, equipment history, observation of testing in progress, planning and scheduling, and document review. The inspection should include selective examination of the following:
- Review of maintenance in progress.
  - Work order control.
  - Maintenance of equipment records and history.
  - Job planning.
  - Work prioritization.
  - Maintenance work scheduling.
  - Backlog controls.
  - Maintenance procedures.
  - Postmaintenance testing.
  - Review of completed work control documents.
2. Plant Maintenance Organization. The inspection of the plant maintenance organization should be directed to how the organization supports maintenance activities; how the maintenance activities are controlled, implemented, and corrected; how personnel are controlled; how the organization establishes documentation; the effectiveness of the coordination and feedback lines of communication between plant management and craft personnel; and the effectiveness of interactions with other departments, especially operations. The inspection should include selective examination of the following:

- ° Control of plant maintenance activities.
  - ° Control of contracted maintenance.
  - ° Deficiency identification, control, and corrective action system.
  - ° Maintenance trending.
  - ° Support interfaces.
3. Maintenance Facilities, Equipment, and Materials Control. The following are to be selectively examined for the area of facilities, equipment, and material controls, as well as for their support of the maintenance process:
- ° Maintenance facilities and equipment.
  - ° Material controls.
  - ° Maintenance tool and equipment control.
  - ° Control and calibration of measurement and test equipment.
4. Personnel Control. The following areas of personnel control are to be selectively examined, including consideration of staffing, training, and qualification:
- ° Staffing control.
  - ° Personnel training.
  - ° Test and qualification process.
  - ° Assessment of the current personnel control status.

#### 93805-04 INSPECTION RESOURCE ESTIMATE

The resource estimate for implementing TI 2515/97 was 38 staff-weeks, and the estimate for implementing TI 2515/108 was 10.5 staff-weeks. Details of how these hours are distributed between preparation, onsite inspection, and report writing are contained in the respective TI.

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