

NRC INSPECTION MANUAL

DQASIP

INSPECTION PROCEDURE 71302

PREOPERATIONAL TEST PROGRAM IMPLEMENTATION VERIFICATION

PROGRAM APPLICABILITY: 2513

71302-01 INSPECTION OBJECTIVE

Assure that the licensee's management control system is effectively discharging its responsibilities over the preoperational testing program by direct observation of activities, tours of the facility, interviews and discussions with licensee personnel, and reviewing facility records.

71302-02 INSPECTION REQUIREMENTS

02.01 Weekly Inspection Items

- a. Tour the accessible areas of the facility to make an independent assessment of equipment conditions, plant conditions, security, and adherence to regulatory requirements. The following items should be observed or verified, on a sampling basis during the tours:
 1. General plant/equipment conditions.
 2. Plant areas for fire hazards. Examine fire alarms, extinguishing equipment, actuating controls, fire fighting equipment, and emergency equipment for operability. Verify that ignition sources and flammable material are being controlled in accordance with licensee's procedures.
 3. Activities in progress (e.g., maintenance, preoperational testing, etc.) are being conducted in accordance with licensee's procedures.
 4. Watch for abuse of installed instrumentation such as stepping or climbing on the instrumentation that could affect the calibration or ability to function.
 5. Observe cable pulling activities to see that cables are not being damaged.
 6. Listen for the public address system announcements to determine that blind spots don't exist; i.e., can't be heard clearly enough to be understood.

7. Be alert for unauthorized construction force work activities on systems or equipment.
 8. Look for uncontrolled openings in previously cleaned or flushed systems or components. If system openings are identified, verify that cleanliness controls established during flushing have not been invalidated.
- b. Review log books maintained by the test group to identify problems or plant activities that may be appropriate for additional followup. Determine that deficiencies identified by individual engineers are entered on a controlled list.

02.02 Monthly Inspection Items

- a. Verify by review of at least one turnover package that jurisdictional controls are observed for system turnover.
- b. Spot-check portions of systems or components to verify tagging is accomplished consistent with jurisdictional controls of 02.02a.
- c. Observe one maintenance activity in progress on safety-related equipment to determine if the licensee has developed the required maintenance procedure and is following his described maintenance program. Verify that the maintenance procedure is technically adequate.
- d. For the maintenance activity selected in 02.02c, verify that existing preoperational testing results have not been invalidated, or that retesting has been conducted, as appropriate.
- e. Verify that only qualified personnel performed the maintenance activity selected in 02.02c.
- f. For the maintenance activity selected in 02.02c, verify that the maintenance was:
 1. reviewed for generic failure implications, and
 2. recorded in equipment history files.
- g. Select one turnover package for equipment turned over from construction to the test/operations organizations. Verify that preventive maintenance or calibrations have been incorporated into a schedule and are accomplished in accordance with that schedule.

02.03 Quarterly Inspection Items

- a. Verify by review of turnover logs, records, or drawings, that jurisdictional controls are observed:
 1. prior to testing
 2. during repairs or modifications
 3. subsequent to testing
- b. Verify, by review of logs, examination of test procedures, or interview of test personnel, that the following are implemented:
 1. method for verifying a test procedure is current before its use

2. methods to assure personnel involved in the conduct of a test are knowledgeable of the test procedures
 3. methods to change (both major and minor) a test procedure during the conduct of testing
 4. criteria for interruption of a test and continuation of an interrupted test
 5. methods to coordinate the conduct of testing
 6. methods to document significant events, unusual conditions, or interruptions to testing
 7. methods for identifying deficiencies, documenting their resolutions, and documenting retesting
- c. Verify that a preoperational test schedule is maintained and is current.
 - d. Select four pieces of test and measurement equipment and review the calibration records to verify that the administrative controls have been implemented.
 - e. Witness the collection and analysis of water or smear samples from a safety-related system. Verify the technical adequacy of procedures and techniques.

71302-03 INSPECTION GUIDANCE¹

03.01a The plant tour provides an opportunity to see first-hand how the licensee is operating. Section 02.01a only highlights some of the activities the inspector might want to observe. He should methodically review and familiarize himself with the licensee's requirements and administrative controls. On plant walk-throughs, the inspector should probe to verify conformance to requirements and administrative controls. He should be aware of major job sequencing and determine during the tours that the work is being performed in proper sequence with particular attention to clean area activities that might be affected by other work.

03.02a Turnover packages should contain items such as marked-up drawings, deficiency lists, record of cleared deficiencies, construction test results data, and exceptions to design drawings.

03.02c The guidance provided in ANSI N18.7-1976 for establishing administrative control requirements for maintenance during plant operations is generally applicable to the preoperational test phase. Maintenance affects equipment reliability and may impact on the validity of test result data.

03.03a Records should indicate that the test organization has only conducted testing on items over which it held jurisdictional control at the time of testing.

¹ The digits and letters following the "03" numbers in this section refer to the equivalent digits and letters following the "02" numbers in Section 71302-02, "Inspection Requirements." For example, Section 03.01a offers guidance for Inspection Requirement 02.01a.

03.03b Raw data and reduced data should be maintained as part of the test package. Notes concerning the test procedure or performance should be included. Deficiencies, their resolution, and interruptions to testing should be indicated.

END