



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

NRC INSPECTION MANUAL

TEMPORARY INSTRUCTION 2500/26

INSPECTION REQUIREMENTS FOR NRC COMPLIANCE BULLETIN 87-02,
"FASTENER TESTING TO DETERMINE CONFORMANCE WITH
APPLICABLE MATERIAL SPECIFICATIONS"

2500/26-01 PURPOSE

To provide guidance for participating in the licensees' selection of fasteners in response to NRC Bulletin 87-02.

2500/26-02 OBJECTIVE

To ensure fasteners selected in response to NRC Bulletin 87-02 are representative of installed fasteners and that suspect fasteners are selected for testing.

2500/26-03 BACKGROUND

For background discussion, see NRR Bulletin 87-02.

2500/26-04 BASIC REQUIREMENTS

At each nuclear power plant site with an operating license or a construction permit, an NRC inspector will participate in the licensee's selection of the fasteners to be tested.

Ten (10) non-safety related studs, bolts and/or capscrews; 10 nonsafety related nuts; 10 safety related studs, bolts and/or capscrews and 10 safety related nuts shall be selected from warehouse stock for testing. If a utility does not maintain separate stocks of safety-related and non safety related fasteners and uses safety-related fasteners in non-safety related applications, all 40 samples will be selected from safety-related stock.

2500/26-05 INSPECTION REQUIREMENTS

05.01 Review the licensee's receipt inspection program/procedures for safety-related and non-safety-related fasteners to determine what characteristics are inspected and compare it to the licensee's description provided in the bulletin response. (If receipt inspection procedures/requirements have been revised in the past two years, review the earlier revisions to determine the significance and/or reasons for the changes.)

05.02 Review the licensee's maintenance/warehousing procedures for issue and control of safety-related and non safety-related fasteners and compare it to the licensee's descriptions provided in the bulletin response.

05.03 Participate in the licensee's selection of samples required by action paragraph 2 of Bulletin 87-02. Fasteners should be selected roughly in proportion to in-plant use from the following material specifications: A-193 grades B7, B8, and B16; SAE J429 grades 5 and 8; A-449; A-325 Types 1, 2 or 3; A-354 grades BB, BC, BD; A-490; A-307; and A-320 L7M. For example, if the proportion of installed studs and/or capscrews is 50 percent A-193 B7, 30 percent A-325, 19 percent A-449, and 1 percent three other specifications; the sample could consist of three A-193 B7, two A-325, two A-449 and one each of the remaining three other specifications. If in-plant use cannot be estimated, an equal number of fasteners for each specification should be tested. Nuts manufactured to A-194 or A-563 are of interest.

In addition, if the NRC inspector should see any fasteners during selection of the sample that: 1) do not have manufacturer's markings or specification and grade markings and the markings are required by the applicable specification; and 2) bolts with the following manufacturer's mark: KS, J, M, FM, NF, RT, H, A, or MS, the licensee should be made aware of these observations and of NRC's interest for him to also consider including these in the sample selected. Fastener specification and grade markings can be found in the ASTM specifications. If not available, this information can be requested from the contact noted in Section 08 below.

It is emphasized that there is no intent to require utilities to perform studies or tabulate the use of bolts in the plant for the purpose of selecting a representative sample. This is to be done based on information readily available to the licensees. Should an inspector disagree with the sample selection by the licensee taken to satisfy the requirements of Bulletin 87-02 or should the licensee select not to consider including fasteners noted by 1 or 2 in the above paragraph, the NRR contacts listed in Section 07 should be consulted to determine whether a supplemental NRC sample is appropriate.

The inspector shall confirm through selective examination the information on the Fastener Testing Data Sheet (ref. Attachment 1 to NRC Bulletin 87-02), assure that fasteners are properly tagged and confirm that the instructions to the testing laboratory reflect the requirements associated with the relevant specification, grade and class of the fasteners. If the fasteners were purchased to ASME Section III requirements, any additional tests required by Section III (e.g., impact tests) are also to be performed. NRR will compile and evaluate the results of the tests.

05.04 Review the licensee's description of further action being taken as required by action paragraph 2 of Bulletin 87-02.

2500/26-06 REPORTING REQUIREMENTS

- 06.01 The inspection effort shall be documented in a routine inspection report. Copies of the inspection reports should be sent to Edward Baker and James Conway, NRR.
- 06.02 When inspection activities required by this TI are completed, enter the status of these activities in the SIMS data systems. The SIMS issue number for this TI is BL-87-02.

2500/26-07 EXPIRATION

This TI shall remain in effect until June 1, 1988.

2500/26-08 CONTACTS

Questions concerning this TI should be addressed to Edward Baker, NRR at (301) 492-4783 or James Conway, NRR at (301) 492-9740.

2500/26-09 STATISTICAL DATA REPORTING

Record actual inspection effort to this TI against Module Number 25026.

2500/26-10 ORIGINATING ORGANIZATION INFORMATION

- 10.01 The Vendor Inspection Branch of NRR initiated this TI.
- 10.02 It is estimated that approximately 6 inspection hours per site or a total of 432 (.27 FTE) hours will be necessary to complete this TI at all plants.

2500/26-11 REFERENCE

NRR Bulletin 87-02, "Fastener Testing to Determine Conformance with Applicable Material Specifications."

END