

NRC INSPECTION MANUAL

DQASIP

INSPECTION PROCEDURE 48055

STRUCTURAL STEEL AND SUPPORTS RECORD REVIEW

PROGRAM APPLICABILITY: 2512

48055-01 INSPECTION OBJECTIVES

01.01 To review structural steel and support records to determine whether:

- a. The licensee system for preparing, reviewing, maintaining records is functioning properly.
- b. The selected records reflect work accomplishment consistent with specifications and procedures.
- c. The records indicate any potentially generic problems, management control inadequacies or other weaknesses that could have safety significance.

Inspection Schedule

May Be Started

In conjunction with
Inspection Procedure
(IP) 48053

Must Be Started

Before work is
50% complete

Must Be Completed

Six months after all
safety-related structural
steel and supports are
installed

48055-02 INSPECTION REQUIREMENTS

Review licensee/contractor requirements for QA record generation and management. Determine who prepares each record and, importantly, who is required to review the records for accuracy and for assuring that the recorded information meets requirements.

02.01 Review the documentation generated for approximately one-half of the structural steel activities and supports reviewed in Inspection Procedure (IP) 48053. Select for review at least three other safety-related structures or supports not reviewed in IP 48053. Determine whether the licensee/contractor system for documenting safety-related work is functioning properly. Review a sample of these records by verifying:

a. Receipt Inspection and Material Certification

1. Records confirm that required material characteristics, performance tests, nondestructive tests, environmental qualification tests and other specification requirements were met.
2. Original records or certification system met requirements of applicable criteria.

b. Installation Inspections

1. Records confirm that specified components were installed as specified.
2. Records confirm that the required inspections, including NDE, were performed, and acceptance criteria are defined.
3. Production test records quantitatively indicate test results and acceptance criteria, including measuring and test equipment calibration.
4. Records confirm that required protection was provided after installation.

02.02 Review a sample of records to verify that:

a. Nonconformance/Deviation Records

1. Records include current status of these items (review about 10 nonconformance reports to ascertain adequacy).

In addition, be aware that some nonconformance/deviation reports for piping and equipment supports may affect the structural adequacy of plant structures. A sample of these reports (3-5) should be reviewed to determine the scope of the structural review performed (interface control between the piping, mechanical, and civil engineering units). The structural engineering review should ensure that structures have been adequately designed for the actual, as-built loading conditions.

2. Records are legible, complete, reviewed by QC personnel, and are readily retrievable.
3. Nonconformance reports include the status of corrective action or resolution.

b. Training/Qualification Records of Craft, QA, and Inspection (QC) Personnel

1. Records are complete and current.
2. Records establish that QA/QC personnel are adequately qualified for their assigned duties and responsibilities.
3. Records indicate that craft personnel have been trained in their assigned tasks.

c. QA Audits

1. Records establish that the required audits were performed.

2. Records show that deficiencies identified during audits were corrected and that corrective action was such that repetition of the deficiency, or similar deficiencies, would be precluded.

48055-03 INSPECTION GUIDANCE

General Guidance. The primary purpose of the inspection requirements of 02 above, is to determine whether the documentation requirements have been met concerning materials receipt, storage, fabrication, erection, inspection, and testing of steel structures and supports. As in IP 48053, the inspector should select the records of structures and supports in various stages of overall completion, i.e., when structural steel or support activities are one-third, two-thirds, or fully complete.

03.01 Specific Guidance

Note: The numbering of the guidance below refers to specific subsections of 02, above.

02.02a1 This review may need to be performed at the designer's office. Adequate controls should exist to ensure that safety-related structures have been adequately designed for the actual, as-built loading conditions. Preliminary design loads may not be sufficient in all cases to cover all unforeseen loads or load changes. Inadequate structural engineering reviews or a lack of control over design reviews may indicate a need for an "as-built" load verification program.

48055-04 REFERENCES

SAR, Chapters 1, 3, 5 and 17, including pertinent codes and standards referenced in those chapters.

Regulatory Guide 1.38, Quality Assurance Requirements for Packaging Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants.

Regulatory Guide 1.58, Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel.

Regulatory Guide 1.88, Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records.

Regulatory Guide 1.146, Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants.

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