

Activity Storage

1.0 Purpose To determine that material storage is adequate and complies with applicable codes, standards, and regulations.

2.0 Scope This guideline has been developed for use in evaluation of material storage and inventory control by ensuring minimization of the possibility of damage or lowering of quality due to corrosion, contamination, deterioration, or physical damage.

References

1. NRC Inspection Procedure, Procedure 38702.
2. ANSI N45.2.2, "Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants."
3. INPO Good Practice MA-311, "Material Storage Controls."

3.0 Guidelines

3.1 In preparation for and during the conduct of this surveillance

- Obtain and review implementing procedures, instructions, and drawings governing this activity.
- Prepare a guide or checklist using the selected items from this guideline.
- Review past surveys, audits, surveillances, and other evaluations/assessments.
- Ensure that checklists include, where applicable, actual observations of performance, general plant conditions, radiological work practices, housekeeping, work document controls and use, and safety practices.

Note: Refer to Chapter 1 for specific details on the attributes listed above.

3.2 Verify the existence of adequate procedures for the following aspects of material storage:

- A. Storage levels and appropriate environmental conditions, including definitions of levels and methods of storage.
- B. Storage controls, including access, identification of items, coverings, and preservatives.
- C. Periodic inspections of storage areas.
- D. Cleanliness and housekeeping practices in storage areas.
- E. Fire protection commensurate with the type of storage area and material involved.
- F. Measures to prevent entrance of animals.

- G. Item storage requirements are based on vendor information, material specifications, standards, experience, plant environment, and the requirements are included in purchase documents.

3.3 Inspect storage areas to verify that the following measures have been implemented:

- A. Access to storage areas is controlled.
- B. Cleanliness and good housekeeping practices are enforced in the storage areas and areas are cleaned to avoid accumulation of trash, discarded packaging material, and other detrimental soil.
- C. Fire protection is provided and maintained.
- D. Food, drink, and salt tablet dispensers are not stored in controlled storage areas.
- E. Measures to prevent entrance of animals have been taken to minimize possible contamination and damage to stored material.
- F. Items are stored in a manner as to permit ready access for inspection or maintenance without excessive handling.
- G. Items are arranged so that racks, cribbing, or crates are bearing the full weight without distortion.
- H. Hazardous chemicals, paints, solvents, and other similar materials are stored in well-ventilated areas and not in close proximity to important nuclear plant items.
- I. The hazardous material program is in place and effective or incompatible chemical storage and inert atmosphere.
- J. Weatherproof coverings, when used for outdoor storage, are flame-resistant. They are placed so as to provide drainage and to ensure air circulation. They are tied down to prevent moisture from entering laps and to protect the coverings from wind damage.
- K. Space heaters enclosed in electrical items are energized.
- L. Performance of maintenance requirements specified by manufacturer's instructions. There should be provisions for a tickler system to ensure that storage instructions are accomplished, preventive maintenance and lubrication/fluid level tasks are completed, and perishable items are restocked before expiration of shelf-life.

- 3.4 Select a sample of items which have limited shelf-life or require special environmental controls. Verify that shelf-life has not expired, and that they are maintained according to associated storage records.

4.0 *Other Guidelines for Consideration*

- 4.1 See Chapter 1, "General Quality Surveillance Guidance."
- 4.2 See Chapter 12, "Material Control."
- 4.3 See Chapter 17, "Receipt of Material."