INSPECTION PROCEDURE 84900

LOW-LEVEL RADIOACTIVE WASTE STORAGE

PROGRAM APPLICABILITY: 2600 and 2800

84900-01 INSPECTION OBJECTIVES

To determine whether fuel cycle and materials licensees who store low-level radioactive waste (LLW) are doing so safely and in accordance with license conditions. This procedure may be applied to any licensee who stores LLW, regardless of when the storage facility was established. The requirements of this procedure are separate from and in addition to those of Inspection Procedure 84850, which addresses the establishment and maintenance of procedures and quality assurance with respect to the waste form, classification, stabilization and manifest requirements of 10 CFR Part 20 and 10 CFR Part 61.

84900-02 INSPECTION REQUIREMENTS

02.01 Management Controls and Surveys. Review the license file and identify any special authorizations and requirements for LLW storage. Determine where LLW is being stored. Review how long the LLW has been stored and examine the licensee's accountability and security procedures for the waste. Determine whether the licensee is within the authorized possession limits. Review the licensee's procedures for safe placement, inspection and repackaging of LLW in storage. Determine whether or not the licensee has conducted and properly documented: (1) inspections of LLW packages to assure they maintain integrity; (2) radiation surveys of individual packages and the storage area, in general; and (3) any required effluent sampling. Review the licensee's records for waste placed in storage, and determine whether they are adequate to account for the LLW stored

02.02 Adequacy of Storage Area. Inspect the storage area(s) to assure its adequacy with respect to:

a. Access control and security.

b. Access to, and housekeeping around waste packages. Adequate lighting should be provided to permit identification of unsafe radiological and non-radiological conditions.

c. Stable placement of waste or waste packages.

d. Protection from environmental elements, fire and flooding, avoidance of temperature/humidity extremes, and ventilation considerations.

e. Posting and labeling.

02.03 Package Integrity and Labeling. Examine several waste packages to determine whether the packages are adequate for the expected term of storage. Determine whether the type of packaging maintains the package integrity and that the packages are properly labeled.

84900-03 INSPECTION GUIDANCE

General Guidance

As noted in Information Notice 90-09, LLW storage areas or facilities are being added by licensees as interim measures until their States or Regional Compacts construct LLW disposal facilities. Some licensees already have LLW storage facilities. Depending on the specific situation of a State or Compact, LLW may be in storage for anywhere from several months to several years. In general, because the safety hazard of LLW storage facilities--especially for dry LLW storage--is low, extensive inspection efforts are not warranted. The inspection effort, therefore, should be geared toward assuring that licensees who are storing LLW for such periods are in compliance with possession limits and license conditions, and do not develop an "out-of-sight, out-of-mind" attitude. This will best be done by examining the licensee's records to ensure that the required surveys, inspections and accountability checks are being done and then following up with a physical examination of the storage area and waste containers/packages.

Specific Guidance

03.01 Management Controls and Surveys. Determine whether the procedures for placement, inspection and repackaging of LLW are clear and available to all who need to use them, and that they have been approved by management. Confirm that inspections and surveys of stored LLW have been performed at the required frequency and properly documented, and that the licensee has conducted and properly documented all required effluent sampling. Review the results of inspections and surveys of LLW in storage focusing on licensee followup actions to problems identified. Check the licensee's records on LLW storage, determine whether the records provide accountability and determine how long LLW has been in storage. Confirm that the licensee is within authorized possession limits. Confirm that any required checks of fire protection systems have been performed.

03.02 Adequacy of Storage Area. Confirm that LLW is stored in a restricted area and is secured against unauthorized removal. Check that waste containers are visible to allow routine inspection and that they are readily accessible to licensee personnel. Confirm that the placement or stacking of containers is stable and that containers are not deformed under load, or likely to fall. Determine that ALARA considerations are used in the placement of the higher activity waste containers in the storage area. Check that the storage area is posted in accordance with Part 20 requirements.

Confirm that the containers are protected from reasonably expected environmental conditions, including fire and flooding, and that the storage location is not subject to extremes of temperature or humidity (i.e., near a boiler room, laundry area, etc.) Check ventilation of the storage area to determine if it is sufficient to prevent build-up of any gases produced by waste decomposition.

03.03 Package Integrity and Labeling. Examine a representative number of packages for signs of swelling, leakage, deformation or deterioration (i.e., rusting or other corrosion which may lead to breach).

Check to determine that the licensee's packages are clearly and properly labeled in accordance with 10 CFR 20.1904 and 20.1905 and that low level radioactive waste is transferred or disposed in accordance with 10 CFR 20.2006.

84900-04 RESOURCES

Most licensees currently have access to a low level waste disposal facility, and it is therefore expected that most of these licensees will not require extended storage of their generated wastes. Therefore, the resources required to implement this procedure are expected to be minimal, unless access to LLW storage facilities becomes unavailable to licensees. In such a case, it is expected that implementation of this procedure will require about 0.6 FTE nationwide.

84900-05 REFERENCES

NRC Information Notice No. 89-13, "Alternative Waste Management Procedures in Case of Denial of Access to Low-Level Waste Disposal Sites," February 8, 1989.

NRC Information Notice No. 90-09, "Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees," February 5, 1990.

NRC Information Notice No. 93-50, “Extended Storage of Sealed Sources.”

END