

Common Goals and Elements for All Licensees for Extended Low-Level Radioactive Waste Storage

The following is intended to represent the goals and elements that are common to extended storage of low-level radioactive waste (LLRW) by all types of licenses and all types of storage circumstances. The rigor needed for implementation of these elements for different types of licensees varies significantly.

Goals:

Worker Protection - protection of workers directly or indirectly impacted by storage from radiological and other hazards.

Protection of the general population - protection of general population from direct radiation, potential radioactive effluents, and the possibility of inadvertent intrusion.

Protection of the environment - protection of the natural environment from radioactive effluents.

Security - verification that storage security is consistent with characteristics and attractiveness of stored waste.

Material Control - continued assurance that radioactive material remains under the unambiguous control of the licensee and that the licensee has the capability, financial and otherwise, to maintain control.

Communications - clear and transparent interactions with the public and other stakeholders to provide objective information, understand the need for radioactive materials that generate LLRW and address public perceptions.

Elements:

Design basis - minimum performance requirements for storage system whether stand alone dedicated storage facility or an ad hoc shared facility.

Construction verification - verification that storage system has been built, fabricated, or established in a manner that ensures compliance with the design basis.

Inspection frequency, content, and basis - how often to inspect a storage facility, what to inspect, and why.

Recordkeeping and reporting - content of records associated with extended storage, reporting requirements and frequency.

Waste package integrity - assurance that waste package remains capable of safely containing its waste contents.

Waste form- assurance that waste form is, or can be rendered consistent with, extended storage, transportation for processing or disposition, and disposition or disposal.

Storage environment - verification of the compatibility of the storage area with an adjacent facility or land use.

Worker training and competency - verification that waste storage radiation workers and rad techs have training and/or competency necessary for waste storage management activities.

Worker availability - verification that the work force is sufficient and available to perform waste storage activities.

Performance verification - verification that the storage facility, area, and stored waste is continually performing according to design basis and operational objectives.

Environmental monitoring - effluent and/or direct radiation monitoring, if necessary, to verify protection of the general public and the environment.

Financial assurance - adequacy and permanency of the financial resources necessary to affect all aspects of end-of-life management of LLRW; guidance on acceptable methods for determining storage; and ultimate disposal costs.

Liability transparency - unambiguous lines of responsibility for management and disposition of LLW, including responsibility for any accidents, incidents or releases attendant with the LLW.

Emergency contingency planning - clear and comprehensive plans and implementation strategy associated with various unlikely but possible adverse circumstance.

Waste avoidance - minimization of LLRW produced.

Waste storage avoidance - alternative processing and disposal. Use of alternative technologies.

Emergency provisions for management and disposal of waste - take title, qualification of federal waste disposal sites.