

## Nuclear Regulatory Commission

## § 60.160

(e) In situ monitoring of the thermomechanical response of the underground facility shall be conducted until permanent closure to ensure that the performance of the natural and engineering features are within design limits.

### § 60.142 Design testing.

(a) During the early or developmental stages of construction, a program for in situ testing of such features as borehole and shaft seals, backfill, and the thermal interaction effects of the waste packages, backfill, rock, and groundwater shall be conducted.

(b) The testing shall be initiated as early as is practicable.

(c) A backfill test section shall be constructed to test the effectiveness of backfill placement and compaction procedures against design requirements before permanent backfill placement is begun.

(d) Test sections shall be established to test the effectiveness of borehole and shaft seals before full-scale operation proceeds to seal boreholes and shafts.

### § 60.143 Monitoring and testing waste packages.

(a) A program shall be established at the geologic repository operations area for monitoring the condition of the waste packages. Waste packages chosen for the program shall be representative of those to be emplaced in the underground facility.

(b) Consistent with safe operation at the geologic repository operations area, the environment of the waste packages selected for the waste package monitoring program shall be representative of the environment in which the wastes are to be emplaced.

(c) The waste package monitoring program shall include laboratory experiments which focus on the internal condition of the waste packages. To the extent practical, the environment experienced by the emplaced waste packages within the underground facility during the waste package monitoring program shall be duplicated in the laboratory experiments.

(d) The waste package monitoring program shall continue as long as prac-

tical up to the time of permanent closure.

## Subpart G—Quality Assurance

SOURCE: 48 FR 28228, June 21, 1983, unless otherwise noted.

### § 60.150 Scope.

As used in this part, *quality assurance* comprises all those planned and systematic actions necessary to provide adequate confidence that the geologic repository and its subsystems or components will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to the physical characteristics of a material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

### § 60.151 Applicability.

The quality assurance program applies to all systems, structures and components important to safety, to design and characterization of barriers important to waste isolation and to activities related thereto. These activities include: site characterization, facility and equipment construction, facility operation, performance confirmation, permanent closure, and decontamination and dismantling of surface facilities.

### § 60.152 Implementation.

DOE shall implement a quality assurance program based on the criteria of appendix B of 10 CFR part 50 as applicable, and appropriately supplemented by additional criteria as required by § 60.151.

## Subpart H—Training and Certification of Personnel

SOURCE: 48 FR 28229, June 21, 1983, unless otherwise noted.

### § 60.160 General requirements.

Operations of systems and components that have been identified as important to safety in the Safety Analysis Report and in the license shall be