must be demonstrated through a performance assessment that meets the requirements specified at §63.114 of this subpart and §§63.303, 63.332 and 63.342 of subpart L of this part.

(d) The ability of the geologic repository to limit radiological exposures to the reasonably maximally exposed individual, in the event of human intrusion into the engineered barrier system, must be demonstrated through an analysis that meets the requirements at §§63.321 and 63.322 of subpart L of this part. Estimating radiological exposures to the reasonably maximally exposed individual requires a performance assessment that meets the requirements specified at §63.114 of this subpart, and §§63.303, 63.305, 63.312 and 63.342 of subpart L of this part.

§ 63.114 Requirements for performance assessment.

(a) Any performance assessment used to demonstrate compliance with §63.113 for 10,000 years after disposal must:

(1) Include data related to the geology, hydrology, and geochemistry (including disruptive processes and events) of the Yucca Mountain site, and the surrounding region to the extent necessary, and information on the design of the engineered barrier system used to define, for 10,000 years after disposal, parameters and conceptual models used in the assessment.

(2) Account for uncertainties and variabilities in parameter values, for 10,000 years after disposal, and provide for the technical basis for parameter ranges, probability distributions, or bounding values used in the performance assessment.

(3) Consider alternative conceptual models of features and processes, for 10,000 years after disposal, that are consistent with available data and current scientific understanding and evaluate the effects that alternative conceptual models have on the performance of the geologic repository.

(b) The performance assessment methods used to satisfy the requirements of paragraph (a) of this section are considered sufficient for the performance assessment for the period of time after 10,000 years and through the period of geologic stability.

§ 63.115 Requirements for multiple barriers.

Demonstration of compliance with §63.113(a) must:

(a) Identify those design features of the engineered barrier system, and natural features of the geologic setting, that are considered barriers important to waste isolation.

(b) Describe the capability of barriers, identified as important to waste isolation, to isolate waste, taking into