

permitted construction of the repository and subsequent emplacement of waste. Per the requirements of 10 CFR 63.131, the program must provide data that indicate, where practicable, whether “[a]ctual subsurface conditions encountered and changes to those conditions during construction and waste emplacement operations are within the limits assumed in the licensing review.” Also, the performance confirmation program must be started during site characterization and continue until permanent closure.

This section of the Yucca Mountain Review Plan has been modified to clarify the site characterization description.

Issue 2: Should the definition of the location and characteristics of the reasonably maximally exposed individual be clarified?

Comment. One commenter stated that Review Method 2 of draft Yucca Mountain Review Plan, Section 3.5, “Description of Site Characterization Work,” incorrectly stated that the location and characteristics of the reasonably maximally exposed individual had already been specified by regulation. The commenter argued that it is the responsibility of DOE to propose these details in its license application.

Response. The Yucca Mountain Review Plan text has been revised consistent with 10 CFR 63.312 to reflect the required location and characteristics of the reasonably maximally exposed individual.

3.3 Material Control and Accounting Program

Issue 1: What level of detail is appropriate for the material control and accounting program for a construction authorization?

Comment. One commenter noted that the information on material control and accounting activities may be in rudimentary form and not as detailed as other areas at the construction authorization stage. Commenters concluded that the related information would not need to be complete at the time of construction authorization application. Commenters further suggested that the license application should describe the material control and accounting program and contain a commitment to meet the requirements at 10 CFR 63.78.

Response. Pursuant to 10 CFR part 63, there are specific requirements for the material control and accounting program that go beyond a simple commitment at the time of application for a construction authorization. Pursuant to 10 CFR 63.21(b), a license

application must contain a description of the material control and accounting program to meet the requirements of 10 CFR 63.78, including design basis information, an assessment of potential impact of the material control and accounting program on design features, and a description of physical aspects of the material control and accounting program.

The introductory paragraph to Section 3.4, “Material Control and Accounting Program,” of the draft Yucca Mountain Review Plan has been modified to clarify these requirements.

Issue 2: How will spent nuclear fuel and high-level radioactive waste in storage be inventoried?

Comment. One commenter noted that there are no specific guidelines in the Yucca Mountain Review Plan for a detailed inventory process of spent nuclear fuel and high-level radioactive waste after the waste is placed within sealed disposal canisters. Another commenter stated that inventory of emplaced waste would be ensured by controlling access to the subsurface.

Response. The Yucca Mountain Review Plan states, in accordance with 10 CFR 63.21, that the applicant must provide a description of how physical inventories of the repository will be planned, conducted, assessed, and reported. Consistent with the performance-based regulations in 10 CFR part 63, the Yucca Mountain Review Plan does not prescribe the methods for a demonstration of compliance. Accordingly, the applicant has the flexibility to design and implement a material control and accounting program that meets regulatory requirements.

No changes have been made to the Yucca Mountain Review Plan in response to this comment.

Issue 3: Under what conditions would spent nuclear fuel or high-level waste be transferred out of the geologic repository operations area?

Comment. One commenter asked for a definition of conditions that would require movement of waste from a repository.

Response. The geologic repository operations area is defined by 10 CFR part 63 as a high-level radioactive waste facility that is part of a geologic repository, including both surface and subsurface areas, where waste handling activities are conducted. As the Commission has previously indicated (66 FR 55732, 55743, November 2, 2001) “[w]aste retrieval is intended to be an unusual event only to be undertaken to protect public health and safety.”

No changes were made to the Yucca Mountain Review Plan as a result of this comment.

Issue 4: Should the Yucca Mountain Review Plan define the quantity of material that would initiate reporting the loss of nuclear materials?

Comment. One commenter suggested that the review methods and acceptance criteria of draft Yucca Mountain Review Plan Section 3.4, “Material Control and Accounting Program,” that address reporting requirements for lost nuclear material should apply not only to a significant quantity, but to any quantity of material that may be missing. Another commenter asked who would be responsible for preventing theft of special nuclear material.

Response. NRC must be notified of any loss of special nuclear material.

As is the case for other NRC-licensed facilities, the licensee, in this case DOE, is responsible for the safe and secure operation of the facility and for safe receipt and possession, including prevention of theft of nuclear material. NRC staff will review the license application to determine whether DOE has adequate physical protection and material control and accountability programs. Additionally, if a license is issued, NRC staff would conduct inspections to verify whether physical protection, and material control and accountability programs, are being properly implemented.

The term “significant quantity” was deleted from this section of the Yucca Mountain Review Plan.

Issue 5: Should the Yucca Mountain Review Plan address storage of emplaced waste?

Comment. One commenter expressed concern that the statement “the reviewer should consider that emplaced waste is stored until the repository is closed” in the Yucca Mountain Review Plan implies (because of requirements in 10 CFR 72.72) that physical inventory would be required at least yearly for waste packages in the subsurface. The commenter suggested deleting this statement, arguing that 10 CFR 63.2 defines disposal as “the emplacement of radioactive waste in a geologic repository with the intent of leaving it there permanently,” which distinguishes disposal from storage operations. The commenter believes that the inventory aspect of the material control and accounting program could be met by controlling access to the subsurface, in conjunction with the use of Material Status Reports and the requirements in 10 CFR 63.71(b) for a record of movement of wastes within the geologic repository operations area.