

commenters suggested that the Yucca Mountain Review Plan be revised to clarify that the applicant will specify structures, systems, and components important to safety and natural and engineered barriers important to waste isolation, compatible with the risk-informed, performance-based regulations. The commenters noted that since these presumptions occur throughout the document, a general discussion in the Yucca Mountain Review Plan "Introduction" could address the issue.

One commenter stated that the general description of the geologic repository must include detailed descriptions of surface and interim storage facilities. The commenter also stated that the general information review should focus on natural threats to repository integrity and identified a number of such specific potential threats. Another commenter requested more detailed information on the status of activities to meet requirements for ownership and control of interests in land and on the schedule for meeting these requirements.

Another commenter stated that the general information section of the Yucca Mountain Review Plan indicates that information be presented at the level of an "executive summary," but the actual level of detail requested is more appropriate for discussion in the safety analysis report rather than in an executive summary.

Response. DOE has the responsibility to specify structures, systems, and components that are important to safety and multiple barriers both natural and engineered important to waste isolation. This responsibility is noted in several places in the Yucca Mountain Review Plan. The Yucca Mountain Review Plan makes no presumptions regarding these structures, systems, components, or barriers, and mentions specific design features only as examples or to restate language in NRC's regulations.

The general information submitted with a license application, as required by 10 CFR 63.21(b)(1) and (2), need not contain detailed descriptions of surface and interim storage facilities and other features, events, and processes that might exist or occur at a repository for high-level radioactive waste at Yucca Mountain, or of the status of compliance with specific regulatory requirements. The general information portion of a license application includes a description of the proposed repository at Yucca Mountain, including an identification of the location of the repository operations area, the general character of proposed activities, proposed schedules for construction,

receipt and emplacement of waste. This information should be at a level of detail to provide the reviewer enough background information to provide a context for detailed reviews of information using, for example, Chapter 4, "Review Plan for Safety Analysis Report," of the draft Yucca Mountain Review Plan. Reviews conducted using Chapter 4 of the plan will require detailed descriptions of surface and interim storage facilities proposed in the facility design as well as evaluations of the features, events, and processes that might occur at a repository. It is not necessary that such information be duplicated in the "General Information" section of the Yucca Mountain Review Plan.

In the general information section of the Yucca Mountain Review Plan, material should be addressed at the level of a summary and should not duplicate the detailed information required to be stated in the safety analysis report.

The Yucca Mountain Review Plan has been modified to clarify the purpose of the general information section is to request descriptive information (except with respect to the detailed security plan measures that are required by 10 CFR part 63), and to reflect in the Introduction section (now Appendix A) that NRC staff has made no presumptions regarding which items contribute to performance.

9.2 Information and Level of Detail Required for Each Licensing Step

Issue: Should the Yucca Mountain Review Plan more clearly acknowledge the step-wise licensing process and define the level of detail that would be applicable for each licensing step for a repository at Yucca Mountain.

Comment. Commenters stated that regulations in 10 CFR part 63 confirm that repository licensing will occur in steps and that the level of detail required to proceed with each licensing step will increase as more information is obtained. According to one commenter, in developing this step-wise approach to repository licensing, NRC drew on decades of experience in licensing nuclear reactors in discrete steps under regulations at 10 CFR part 50.

The commenters argued that the Yucca Mountain Review Plan should clearly acknowledge that a step-wise licensing approach is applicable to a repository and that the license application should include not only a description of the robustness of the system and an assessment of performance, but also an acknowledgment that additional

information will continue to be developed.

The commenters stated that the draft Yucca Mountain Review Plan does not clearly and consistently differentiate the information needed for the different steps of licensing. Accordingly, the plan does not differentiate how the areas of review, review methods, and acceptance criteria should vary for each of the licensing steps.

One commenter stated that, although DOE is expected to develop a sufficiently robust and well-documented license application that would permit NRC to independently determine the safety of a repository, DOE is not expected to have resolved all design and long-term repository performance issues at the construction authorization step. However, one commenter expressed a concern that the draft Yucca Mountain Review Plan inappropriately allows the DOE to simply commit to complying with certain regulatory requirements rather than to demonstrate actual compliance.

The commenter identified locations in the draft Yucca Mountain Review Plan that are related to these comments.

Response. The regulations at 10 CFR 63.21(a) require that "[T]he application must be as complete as possible in the light of information that is reasonably available at the time of docketing." The Commission addressed the step-wise licensing approach in its "Statement of Considerations" for 10 CFR part 63 (66 FR 55738-55739, November 2, 2001) in which it stated:

Part 63 provides for a multi-staged licensing process that affords the Commission the flexibility to make decisions in a logical time sequence that accounts for DOE collecting and analyzing additional information over the construction and operational phases of the repository. The multi-staged approach comprises four major decisions by the Commission: (1) Construction authorization; (2) license to receive and emplace waste; (3) license amendment for permanent closure; and (4) termination of license. The time required to complete the stages of this process (e.g., 50 years for operations and 50 years for monitoring) is extensive and will allow for generation of additional information. Clearly, the knowledge available at the time of construction authorization will be less than at the subsequent stages. However, at each stage, [the] DOE must provide sufficient information to support that stage. DOE has stated its intent to submit, and NRC expects to receive, a reasonably complete application at the time of construction authorization to allow the Commission to make a construction authorization decision. This is reflected in the requirement at Section 63.24(a) that the application be as complete as possible in light of information that is reasonably available at the time of docketing. The