



# NRC's Decision to Accept DOE's Repository License Application for Review

## Background

On September 15, 2008, the NRC Staff announced in the Federal Register that it had docketed the Department of Energy's (DOE's) license application for the proposed repository at Yucca Mountain, Nevada. Docketing the application indicates only that NRC will conduct a comprehensive technical review of the application, during which it may ask for more information from DOE. The decision to docket the application follows the NRC staff's determination that the application is sufficiently complete for the NRC staff to begin its full technical review. At a public meeting in Amargosa Valley, Nevada, near the proposed repository, NRC staff members were asked to provide a summary, in plain language, of the technical requirements that were used to decide whether or not NRC could accept DOE's application for review. This flyer was prepared in response to that request.

## What was the purpose of the NRC staff's "acceptance" review?

After receiving a license application on June 3, 2008, NRC assembled a team of staff and contractor experts to perform an "acceptance review." The purpose of this review was to decide whether the application is complete, that data are traceable, and that methods used to show compliance with NRC's regulations are reasonably transparent.

## What did NRC expect DOE to include in its application for Yucca Mountain?

NRC regulations state what DOE must include in a license application to construct a repository at Yucca Mountain. These criteria are listed in the "**Content of application**" section (§63.21) of **10 CFR Part 63—DISPOSAL OF HIGH-LEVEL RADIOACTIVE WASTES IN A GEOLOGIC REPOSITORY AT YUCCA MOUNTAIN NEVADA**.

In addition to these specific requirements (listed, in brief, on the back of this sheet), the NRC team examined the application to see whether or not:

- ▶ The application includes a description of how NRC's regulations are met;
- ▶ DOE's description of how it complies with NRC's regulations is sufficiently clear to allow NRC's detailed review to begin;
- ▶ Documents cited are appropriate references; and
- ▶ DOE sought any exemptions from NRC's regulations [It did not].

## Did DOE's application meet all of NRC's docketing criteria?

Yes. The NRC staff completed its acceptance review of the license application against all requirements (including those for electronic availability of supporting documents) and found that the application contains sufficient information and is acceptable for docketing. The NRC staff is now engaged in a detailed technical review of the license application. The results of this review will be documented in a Safety Evaluation Report.



# What NRC's Regulations Require for the Content of Application

Below is a brief summary of NRC's requirements for the content of an application (For the precise wording of the requirements, as they were applied by the NRC staff, please refer to the text of Section 63.21 of 10 CFR Part 63):

The application must contain general information and a Safety Analysis Report.

The **general information** must:

1. Describe the site
2. Propose schedules for building the repository and emplacing waste
3. Describe detailed security measures for protecting waste
4. Describe a control and accounting program for keeping track of waste
5. Describe how DOE characterized the site

The **Safety Analysis Report, or SAR**, must:

1. Provide a specific description of the site
2. Describe materials, codes and standards that DOE will use for design and construction
3. Describe the designs of the repository operations area and engineered barrier system
4. Describe the kinds and amounts of waste to be received and disposed in the repository
5. Analyze the safety of repository operation before permanent closure<sup>[1]</sup>
6. Describe plans for monitoring effluents and exposures to workers during operations
7. Describe plans for retrieval and alternate storage if waste retrieval is needed
8. Describe how design allows for closure, and for decontaminating and dismantling of surface facilities
9. Explain which features, events and processes affect compliance and how they affect waste isolation.
10. Evaluate potential response of natural systems to expected heat loads
11. Show the extent to which repository limits releases of radioactivity to the environment <sup>[1]</sup>
12. Show how repository system protects a reasonably maximally exposed individual, or RMEI, after closure <sup>[1]</sup>
13. Show how repository system protects a RMEI in the event of an assumed intrusion <sup>[1]</sup>
14. Evaluate natural and engineered features that are barriers important to waste isolation
15. Explain how field work, lab tests, monitoring, and natural analogs support performance assessment models
16. Identify where more study is needed to confirm safety of design; describe plans to resolve safety questions
17. Describe the performance confirmation program
18. Identify and justify probable subjects for license specifications
19. Explain the use of any formal processes for representing the range of expert scientific views
20. Describe the quality assurance (QA) program and how QA requirements will be met
21. Describe the emergency response plan
22. Provide information about DOE personnel and activities at the potential repository
23. Describe program for maintaining long-terms about the repository
24. Describe access controls for regulating land use after closure, including conceptual design of monuments

<sup>[1]</sup> Consistent with Standards established by the Environmental Protection Agency