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NRC PROPOSES CHANGES TO REGULATIONS FOR LICENSING  
PROPOSED RADIOACTIVE WASTE REPOSITORY IN NEVADA

The Nuclear Regulatory Commission is proposing to revise its regulations to add site-specific criteria for licensing a proposed geologic repository at Yucca Mountain, Nevada, for the disposal of spent nuclear fuel and high-level radioactive wastes.

The criteria, which are being issued for public comment, would be contained in a new Part 63 of the Commission's regulations.

A different part of the Commission's regulations, Part 60, issued in 1983, contains criteria for licensing the disposal of spent fuel and high-level radioactive wastes in any geologic repository. The NRC proposes to modify that regulation to make clear that it no longer applies to a repository at Yucca Mountain.

The proposed changes are in response to the Energy Policy Act of 1992, which directed the NRC to modify its technical requirements and criteria to be consistent with health and safety standards to be issued by the Environmental Protection Agency (EPA) specifically for Yucca Mountain.

The EPA standards are to be based on 1995 recommendations of the National Academy of Sciences (NAS) and were to be issued not later than one year after the NAS findings were available to EPA. The Act also directed NRC to make its modifications within one year after issuance of final EPA standards. EPA has yet to issue its standards. To meet the law's schedule, NRC must develop regulations containing the modified criteria in parallel with EPA's development of standards.

Therefore, the NRC is proposing new, site-specific criteria for the proposed repository that it believes are consistent with the requirements of the Energy Policy Act and the Nuclear Waste Policy Act. The NRC recognizes that when EPA issues its final standards or if Congress enacts new high-level waste legislation into law, NRC's proposed regulations may need to be amended.

The proposed new regulations specify that the repository system at Yucca Mountain must include both natural and engineered barriers to the release of radioactive material. They also address licensing procedures, criteria for public participation, recordkeeping and reporting, monitoring and testing programs, performance confirmation, quality assurance, personnel training and certification, and emergency planning.

The performance objectives for the repository would include these provisions:

(1) After high-level waste has been placed in the repository and the facility has been permanently closed, the expected annual radiation dose to the average member of the so-called "critical group" from the radioactive material would not exceed 25 millirems per year. (Critical group is defined as the hypothetical group of individuals expected to receive the greatest exposure to radioactive materials released from the repository.) The 25-millirem all-pathways limit may be compared to the Commission's overall annual public dose limit of 100 millirems. The all-pathways limit will consider the dose contribution from the groundwater pathway. It is useful to note that the average individual exposure from natural background radiation in the United States is approximately 300 millirems per year.

(2) The repository's engineered barrier system, working in combination with natural barriers, would seek to prevent the 25-millirem expected annual dose limit from being exceeded at any time during the first 10,000 years after permanent closure.

(3) Active and passive controls would reduce the potential for inadvertent human intrusion into the site. If those controls failed 100 years after permanent closure, and someone drilled a single, nearly vertical borehole into the repository and penetrated the waste package all the way to the saturated zone, the 25-millirem expected annual dose limit would not be exceeded.

(4) During normal repository operations, before permanent closure, radiation exposures to members of the public located beyond the site boundary would not exceed 25 millirems.

In addition, the proposed regulations would preserve the option for retrieving waste on a reasonable schedule starting at any time up to 50 years after waste emplacement begins, unless a different time period is approved by the Commission.

Other details of the proposed changes are contained in a Federal Register notice published today.

Interested persons are invited to submit written comments by May 10. (Today's Federal Register notice gave an incorrect date for submitting comments. Wednesday's Federal Register will include a notice giving the correct May 10 date). The comments should be submitted to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff. Comments may also be submitted electronically via the NRC's interactive rulemaking web site at <http://www.nrc.gov/NRC/rule.html>.