STATEMENT SUBMITTED

BY THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

TO THE

SUBCOMMITTEE ON ENERGY AND AIR QUALITY

COMMITTEE ON ENERGY AND COMMERCE

UNITED STATES HOUSE OF REPRESENTATIVES

CONCERNING

STATUS OF THE YUCCA MOUNTAIN PROJECT

PRESENTED BY

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CHAIRMAN

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Mr. Chairman, members of the Committee, I am pleased to join you to testify on behalf of the Nuclear Regulatory Commission (NRC) concerning the NRC's regulatory oversight role in the U.S. program for management and disposal of high-level radioactive waste and spent nuclear fuel.

The Commission continues to believe that the long-term success of the national program to secure spent fuel and other high-level radioactive waste requires a permanent disposal solution, and that a geologic repository can provide the appropriate means for the United States to secure these wastes in a safe manner. We also believe that public health and safety, the environment, and the common defense and security can be protected by deep underground disposal of these wastes. However, the Commission takes no position at this time on whether construction of a repository at Yucca Mountain, Nevada, should be authorized. In the interim, the NRC considers the available technologies for wet and dry storage of spent fuel at reactor sites to be safe, and their use will continue to provide adequate assurance of public health and safety until such time that a permanent disposal solution is available. Both wet and dry storage provide adequate storage for decades but they are not suitable for disposal.

The Nuclear Waste Policy Act of 1982 and the Energy Policy Act of 1992 provide that the NRC is to serve as an independent regulator to ensure that any licensed geologic repository adequately protects the public health and safety, the environment and common defense and security. I am pleased to state that the NRC has consistently met its obligations established by these Acts. We are now in the midst of preparations for an important transition - - from the pre-licensing role to the role of licensing authority.

The President's Recommendation

As you know, in July 2002, Congress approved the President's site recommendation and the Department of Energy (DOE) was authorized to submit to the NRC a license application for a repository at Yucca Mountain, Nevada. When DOE does so, several important steps must be taken before the Commission can decide whether to authorize construction of a potential repository at Yucca Mountain. First, DOE must submit a complete, high-quality license application. Second, the NRC staff will determine to what extent, if any, it can adopt DOE's Environmental Impact Statement (EIS). To the extent the NRC cannot adopt the EIS, it would need to be supplemented. Third, NRC staff must conduct an independent safety review to determine whether or not the DOE proposal to design and construct a repository meets NRC's regulatory requirements. The results of this review will be documented in a safety evaluation report that would be made available to the public. Fourth, the NRC will conduct a full and fair public hearing prior to reaching a decision on whether to authorize construction of the repository. The Commission determination on whether the DOE license application meets regulatory requirements will be based on the entire record, including a review of the record of the issues contested in the NRC hearing process, as well as the uncontested issues pertaining to findings necessary to issue a construction authorization.

The Nuclear Waste Policy Act gives NRC the responsibility to establish licensing criteria for a potential repository, to provide our preliminary views on the sufficiency of certain DOE information collected during site characterization, and to comment, along with other federal agencies, on the EIS prepared by DOE for Yucca Mountain. The Act also requires the

Commission to be prepared to make a fair, informed, and timely licensing decision. The Commission takes these obligations seriously and I will discuss each of them in turn.

The Regulatory Framework

Under the Energy Policy Act of 1992, the Environmental Protection Agency (EPA) was directed to establish radiation dose-based environmental standards for Yucca Mountain. The NRC was directed to modify its technical requirements and criteria for the repository to be consistent with any final EPA standards issued. We have done that.

EPA issued its final standards in June 2001. In November 2001, after carefully considering and analyzing the public comments received on our proposed criteria, the NRC promulgated final health and safety regulations that will guide our licensing decision on Yucca Mountain. As required by law, our regulations are consistent with the health and safety standards established by the EPA. We are confident that a repository at Yucca Mountain, that can be shown by DOE to comply with these demanding standards and regulations, will provide reasonable assurance that there is no unacceptable risk to the environment or health and safety of the public today and in the future.

The EPA and NRC regulations are being challenged in the Federal courts. We expect a Court ruling later this year.

NRC Preparations for Licensing

As part of our overall pre-licensing strategy, we continue to hire staff with the knowledge, skills, and abilities needed to review a license application. We have also recently created a new organization dedicated solely to addressing the full scope of licensing activities associated with review of a DOE repository application. We have developed guidance to help focus the review on the issues most relevant to repository performance. Our staff has applied the experience gained in the reviews of DOE documents and pre-licensing interactions to the preparation of a Yucca Mountain Review Plan, which was published in final in July 2003. The Yucca Mountain Review Plan, which is available on our website, will guide the NRC's review of any DOE license application for the repository. Also, the staff is in the early stages of developing the inspection and enforcement programs that would be in effect if the license application is accepted for a detailed review.

In addition, our Atomic Safety and Licensing Board Panel is actively engaged in developing the infrastructure, including automation tools, for addressing the repository licensing hearing schedule set out in the Nuclear Waste Policy Act. We have developed an Internet-based Licensing Support Network (LSN) to provide a document discovery database to make the hearing process more efficient. Currently, the LSN provides electronic access to over 15,000 documents out of the anticipated millions of such pages that are likely to comprise the document discovery database when such documents are made available to the LSN by the parties and potential parties to the licensing proceeding through the LSN. Further, working with the General Services Administration, NRC awarded a contract for a hearing room facility in the Las Vegas area that should be operational by May 2005, in time for the start of hearings.

DOE's Collection of Information

Over many years, NRC has performed reviews of DOE program documents and pre-application technical material and held extensive pre-licensing interactions with DOE staff and various stakeholders, including the State of Nevada, affected units of local government, Indian Tribes, representatives of the nuclear industry, and interested members of the public. The DOE and the NRC staff have reached and documented numerous agreements regarding additional information that will be needed for a licensing review. Approximately two-thirds of these agreements call for DOE to provide information that is sufficient for the staff to undertake a detailed technical review of the DOE application. The remainder oblige DOE to perform specific tests or analyses, to document prior tests or studies, or to provide other information. DOE continues to address these agreements and the NRC staff continues to review the results promptly and notify DOE of its findings. Addressing these agreements increases the likelihood that DOE can assemble the information necessary for an application that NRC can accept for review. Last May, the staff provided DOE information on how NRC staff ranked the agreements in accordance with their importance to repository safety. The staff continues to use similar information and insights to focus its technical review and licensing and inspection programs on those areas most important to repository safety. NRC has made, and will continue to make, information on its regulatory program publicly available, and expects to have continued dialogue with DOE and other stakeholders on these matters.

It is important to note that the NRC staff is also focusing on the quality of DOE documentation that would support a license application for Yucca Mountain. Over the course of

its pre-licensing interactions, the staff has had ongoing discussions with DOE on its implementation of a quality assurance program and the quality of the data, models and software that DOE will rely on to support a license application. In a May 29, 2003, letter to NRC, the DOE committed to ensure that improvement initiatives in its quality assurance program will be fully and effectively implemented. Quality management remains a challenging program area for DOE, one which the NRC staff continues to monitor.

DOE's Final Environment Impact Statement

As required by the Nuclear Waste Policy Act, Secretary Abraham included a final EIS with his recommendation to the President along with the comments other agencies including those of NRC provided on the final EIS. Our comments were developed on the basis of reviews of DOE's draft EIS for Yucca Mountain, the supplement to the draft EIS and the final EIS. Our reviews were informed by the NRC staff's extensive pre-licensing interactions with DOE, the State of Nevada, affected units of local government, Indian Tribes, representatives of the nuclear industry, and interested members of the public. The analyses provided in the EIS appear to bound appropriately the range of environmental impacts. We expect that DOE's current efforts to refine the repository design and define transportation modes and routes will allow for more precise estimates of impacts. In this regard, DOE announced that if it selects a rail corridor, it will issue a Notice of Intent to initiate preparation of a rail alignment EIS. The outcome of such reviews will help inform an NRC determination regarding to what extent the EIS can be adopted, in connection with issuance of a construction authorization or license, as required by the Nuclear Waste Policy Act. NRC continues to interact with DOE and other

interested stakeholders to consider and address outstanding technical and environmental issues, as needed.

Safety and Security of Spent Fuel Transportation

The Commission believes that the spent fuel and high-level radioactive waste stored at multiple sites can be safely and securely transported to a single location for geologic disposal.

Responsibility for Federal regulation of spent fuel transportation safety is shared by the U.S. Department of Transportation (DOT) and the NRC. DOT regulates the transport of all hazardous materials, including spent fuel, and has established regulations for shippers and carriers regarding radiological controls, hazard communication, training, and other aspects. For its part, NRC establishes design standards for the casks used to transport licensed spent fuel, and reviews and certifies cask designs prior to their use. Further, cask design, fabrication, use and maintenance activities must be conducted under an NRC-approved quality assurance program. In addition, NRC periodically inspects cask vendors and has enforcement authority over such licensed activities.

NRC does not have authority to regulate shipments made by DOE. For spent fuel shipments made by commercial shippers, over which NRC has regulatory authority, NRC reviews and approves physical security plans. These plans provide information on how shippers and carriers comply with NRC spent fuel shipment protection requirements, including

advance notification of each shipment to the appropriate State Governor's designee, the establishment of redundant communication capability with the shipment vehicle, the arrangement of law enforcement contacts along the route, and provision of shipment escorts.

The Nuclear Waste Policy Act requires DOE to utilize NRC-certified casks for spent fuel shipments to a repository, follow NRC's advance notification requirements, and provide emergency response training along shipment routes. NRC has reviewed and certified a number of package designs that could be used for transport of spent fuel to a repository, and is ready to review any new design that may be proposed by DOE.

The NRC believes the safety measures provided by the current transportation regulatory system are well established. Nonetheless, we continue to examine the safety of the transportation program. In FY 2000, NRC re-evaluated its generic assessment of spent fuel transportation risks to account for the fuel, cask, and shipment characteristics likely to be encountered in future repository shipping campaigns. The NRC also began development of the Package Performance Study to conduct confirmatory research to demonstrate the robustness of full-scale spent nuclear fuel transportation casks using an enhanced public participation process. The confirmatory research will involve testing the integrity of a full-scale transportation rail cask and validating the scaling methodology used in cask design and transportation risk assessment analyses. NRC is also supporting a study by the National Academies' Board on Radioactive Waste Management that is examining radioactive material transportation, with a primary focus on spent fuel transport safety. As a part of its evaluation, the NRC staff has analyzed appropriate national transportation accidents, such as the 2001 train tunnel fire in

Baltimore, Maryland. For example, the staff analyzed a currently approved spent fuel transportation cask design, under thermal conditions similar to those experienced during the Baltimore tunnel fire, and concluded that there would be no release of radioactive material from such an event. Our reevaluation of generic assessments of spent fuel transportation risks, the significant history of safe shipments, the rigor of our pre-certification design reviews, and our inspections provide confidence that spent fuel can be shipped safely today and in the future. We are committed to continue to work with our stakeholders openly to increase public confidence in the NRC regulatory process. Finally, NRC is sponsoring a study to update its evaluation of cask response to acts of sabotage and will utilize the results of these studies as input to its overall assessment of the safety of cask design and transportation risks. Results to date show that a large commercial aircraft crashing into a transportation cask would not result in release of radioactive material.

Conclusion

The Commission believes that deep geologic disposal is appropriate for high-level radioactive wastes and spent fuel and that such wastes can be safely and securely transported to a disposal location. However, the Commission takes no position at this time on whether construction of a repository at Yucca Mountain, Nevada, should be authorized. NRC's role is to ensure that a regulatory program is in place that adequately protects public health and safety, the environment and common defense and security, and to review and evaluate any license application submitted to determine compliance with regulatory requirements. As I believe this

statement makes clear, we take that obligation very seriously and we are ready to fulfill our statutory role.

I will be pleased to answer any questions you may have.