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**TESTIMONY
OF
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BEFORE THE U.S. SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
March 1, 2006**

Mr. Chairman and Members of the Committee:

Good afternoon. My name is Bill Wehrum and I am the Acting Assistant Administrator for the Office of Air and Radiation at the United States Environmental Protection Agency (“EPA”). I am pleased to be here today to provide you with an update on the status of EPA’s public health and safety standards for the proposed spent nuclear fuel and high-level radioactive waste repository at Yucca Mountain, Nevada.

I would like to begin by providing the Committee with a short history of EPA’s responsibilities and why we have proposed revised standards. The Nuclear Waste Policy Act of 1982 described the roles and responsibilities of federal agencies in the development of disposal facilities for spent nuclear fuel and high-level waste. EPA was identified as the agency responsible for establishing standards to protect the general environment for such facilities. In the Energy Policy Act of 1992, Congress delineated EPA’s roles and responsibilities specific to the federal government’s establishment of the potential repository at Yucca Mountain. EPA’s role is to determine how the Yucca Mountain high-level waste facility must perform to protect public health and the environment. Congress directed EPA to develop public health and safety standards that would be incorporated into the Nuclear Regulatory Commission’s (“NRC”) licensing requirements for the Yucca Mountain facility. The Department of Energy (“DOE”) would apply for the license to construct and operate the facility and the facility would open only if NRC determines that DOE can meet EPA’s standards. In establishing EPA’s role, Congress also stated that the EPA’s safety standards are to be based upon and consistent with the expert advice of the National Academy of Sciences.

EPA established its Yucca Mountain standards in June 2001. As required by the Energy Policy Act, these standards addressed releases of radioactive material during storage at the site and after final disposal. The storage standard set a dose limit of 15 millirem per year for the public outside the Yucca Mountain site. The disposal standards consisted of three components: an individual dose standard, a standard evaluating the impacts of human intrusion into the repository, and a ground-water protection standard. The individual-protection and human-intrusion standards set a limit of 15 millirem per year to a reasonably maximally exposed individual, who would be among the most highly exposed members of the public. The ground-water protection standard is consistent with EPA's drinking water standards, which the Agency applies in many situations as a pollution prevention measure. The disposal standards were to apply for a period of 10,000 years after the facility is closed. Dose assessments were to continue beyond 10,000 years and be placed in DOE's Environmental Impact Statement, but were not subject to a compliance standard. The 10,000 year period for compliance assessment is consistent with EPA's generally applicable standards developed under the Nuclear Waste Policy Act. It also reflects international guidance regarding the level of confidence that can be placed in numerical projections over very long periods of time.

Shortly after the EPA first established these standards in 2001, the nuclear industry, several environmental and public interest groups, and the State of Nevada challenged the standards in court. In July 2004, the Court of Appeals for the District of Columbia Circuit found in favor of the Agency on all counts except one: the 10,000 year regulatory timeframe. The court did not rule on whether EPA's standards were protective, but did find that the timeframe of EPA's standards was not consistent with the National Academy of Sciences' recommendations. The National Academy of Sciences, in a report to EPA, stated that the EPA's standards should cover at least the time period when the highest releases of radiation are most likely to occur, within the limits imposed by the geologic stability of the Yucca Mountain site. It judged this period of geologic stability, for purposes of projecting releases from the repository, to be on the order of one million years. EPA's 2001 standards required DOE to evaluate the performance of the site for this period, but did not establish a specific dose limit beyond the first 10,000 years.

EPA proposed a revised rule in August 2005 to address the issues raised by the appeals court. The new proposed rule limits radiation doses from Yucca Mountain for up to one million years after it closes. No other rules in the U.S. for any risks have ever attempted to regulate for such a long period of time. Within that regulatory timeframe, we have proposed two dose standards that would apply based on the number of years from the time the facility is closed. For the first 10,000 years, we would retain the 2001 final rule's dose limit of 15 millirem per year. This is protection at the level of the most stringent radiation regulations in the U.S. today. From 10,000 to one million years, we propose a dose limit of 350 millirem per year. This represents a total radiation exposure for people near Yucca Mountain that is no higher than natural levels people live with routinely in other parts of the country. One million years, which represents 25,000 generations, includes the time at which the highest doses of radiation from the facility are expected to occur. Our proposal requires the Department of Energy to show that Yucca Mountain can safely contain wastes, even considering the effects of earthquakes, volcanic activity, climate change, and container corrosion over one million years.

The public comment period for the proposed rule closed on November 21, 2005. We are currently reviewing and considering the comments as we develop our final rule. We held public hearings in Las Vegas and Amargosa Valley, Nevada, and Washington, D.C. We are considering comments from these hearings, as well as all of the comments submitted to the Agency's rulemaking docket. A document describing our responses to all comments will be published along with the final rule.

Thank you again for the opportunity to appear before the Committee and present this update on EPA's Yucca Mountain standards. This concludes my prepared statement. I would be happy to address any questions.