EIS001922

Alliance for Nuclear Accountability

A national network of organizations working to address issues of nuclear weapons production and waste cleanup

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Western States Legal Foundation
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Women's Action for New Directions
Arlington, MA

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Ms. Wendy R. Dixon, EIS Project Manager
M/S 010
U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 30307
North Las Vegas, NV 89036
Fax 1-800-967-0739

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Comments on the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain

1 The Alliance for Nuclear Accountability is a coalition of organizations living in the shadow of the US nuclear weapons complex. We have a long history of dealing with the federal government's faulty decisions on nuclear issues and have borne the health and environmental consequences of those decisions around the nuclear weapons complex. Our communities will also be subject to the resulting contamination from the Yucca Mountain decision. For this reason and the reasons outlined in this response, we oppose the proposal to use Yucca Mountain as a geological repository. We do this on the grounds that it is an ethically and scientifically unsound proposal, primarily motivated by political forces.

2 The flaws outlined in the Draft Environmental Impact Study (DEIS) are numerous and serious. These serious flaws should either disqualify Yucca Mountain as a repository or should change the fundamental content of the DEIS so as to warrant a reissuing of the DEIS in order to lawfully comply with NEPA.

Sections of the DEIS that warrant careful reevaluation and analysis are summarized here and covered in more detail in the remainder of the letter: 1) The No Action Alternative 2) the Hydrology of the Site 3) The EPA's standards vs. Congressional Standards, 4) Cancer and Dose Estimates, 5) Air Quality, 6) Waste Transportation / Emergency Response / Property Values, 7) Environmental Justice, 8) Container Design, and 9) Human Intrusion Problems.

3 1) NO ACTION ALTERNATIVE

The no action alternative should provide a basis for meaningful evaluation of the proposed action, not to act as a proponent for the preferred action. The No Action Alternatives in the DEIS are not realistic scenarios and therefore do not provide a basis for meaningful evaluation of the proposed action. It is ludicrous to propose no action alternatives that would create such an enormous risk to the public and are patently false, such as 10,000-year institutional control or no control at all after 100 years. This is a brazen attempt to color the outcome of the EIS process. A more sensible and realistic no action alternative would include leaving the waste on-site in retrievable monitored storage. This is the best option currently available and it should be explored in the Environmental Impact Statement (EIS). This option would also eliminate the dangers inherent in waste transportation. This option would be enhanced by a commitment to leave the waste where it is for the next fifty years, thereby allowing much of the lethal radioactivity to be degraded in the event of future transportation. As an added incentive, technology may provide clearer answers in the future for radioactive waste management. These issues should be further explored in the EIS.

4... 2) HYDROLOGY OF THE SITE

A tremendous amount of scientific uncertainty currently surrounds hydrothermal incursions of groundwater at the site. It is unclear whether flooding has previously occurred, and if it has, how

Seattle Office: 1914 North 34th St., Suite 407, Seattle, WA 98103, 206/547-3175, Fax: 206/547-7158
Washington, DC Office: 1801 18th St. NW, Suite 9-2, Washington, DC 20009, 202/833-4668, Fax: 202/234-9536

4 cont. recently it occurred. The DEIS makes the assumption that the repository will remain unsaturated and its estimates of how long the container packages will last are based on that assumption. If the EIS in incorrect regarding hydrothermal incursions and the project continues, the consequences could be astronomical in terms of groundwater contamination and damage to the public and environment. The EIS should address the potential effects of water incursion on container packages.

The groundwater at the site currently is used for agriculture. The Amargosa Valley farming community relies directly upon the groundwater from the site for its livelihood and drinking water. The DEIS does not fully address the consequences of contamination of the groundwater and its impact on regional uses. It incorrectly assumes dilution will reduce concentrations of radiation to acceptable levels. Given that the longevity of the container and the mountain barrier have not been determined, this assumption is premature at best, woefully underestimated at worst.

The alarming and potentially devastating effects of upwelling and associated surface and groundwater contamination was not dealt with in the DEIS and should be addressed. An upwelling of contaminated water could impact a large land area and significantly alter the pathway and the maximum individual dose assumptions.

5 3) EPA'S STANDARDS VS. CONGRESSIONAL STANDARDS

If Yucca Mountain was required to meet the Environmental Protection Agency's (EPA) waste repository release limits that were established in 1985, Yucca Mountain would have long ago been dismissed as a possible repository. This is a clear example of defining away a problem, rather than seeking a safer solution. The EIS does not discuss this and should be more forthright about the failures of Yucca Mountain as a repository site, rather than altering the facts to support the preferred alternative. Yucca Mountain should be held to the original standards set by the EPA and at a minimum should abide by the EPA standards proposed for Waste Isolation Pilot Project (WIPP), which would mean a reduction from 25 millirem/year to 15 millirem/year. Nevada's citizens deserve at least the same protections as New Mexicans.

6 4) CANCER AND DOSE ESTIMATES

Not only are the latent cancer fatality estimates conservative, but the peak dose rate is measured five km from the site. This is unacceptable. The EIS should be amended to include the dose estimate directly at the boundary of the
7 site. In addition, the containment of radiation is based on integrity of the casks. When the DEIS estimates accident scenarios, it underestimates the risks posed by groundwater flowing directly from the site to the agricultural community in Amargosa Valley. It is impossible and fallacious to develop the assumption that the casks will not leak during transportation and emplacement, when the casks have not been designed yet. We feel that, at the very least, the containers should be determined and subjected to full-scale testing. The DEIS should be revised to reflect new container information.

8 Moreover, the DEIS only covers a time span of 10,000 years when DOE's own data indicates that the maximum releases will occur about 300,000 years after the wastes are buried. Given the short life span of any container (in relative terms), the fact that the containers have not yet been designed or constructed, and the uncertainty surrounding water intrusion and corrosion, this is unacceptable.

9 5) AIR QUALITY

The DEIS does not adequately address the fact that the site will not meet the current Carbon 14 (C-14) emissions standard for waste facilities, nor does it examine the consequences of such releases.

10 6) WASTE TRANSPORTATION / EMERGENCY RESPONSE / PROPERTY VALUES

The DEIS grossly underestimates the transportation risks from the unprecedented 50,000 truck shipments (estimated) of nuclear waste over 24 years of operation. Containers have not yet been constructed or tested. Therefore realistic estimates of radiation leakage or container performance in an accident are not possible. The DOE's assumption that accidents will not occur is entirely unreasonable. In sum, EPA's analysis of transportation impacts is entirely unreliable and should not be used as a basis for decision-making. It is important to reiterate here the potential benefits of waiting fifty years before transporting irradiated nuclear fuel so that the material will be much less radioactive and thus less deadly in the likely event of an accident.

11... Further, the DEIS does not address the issue of emergency response along the transportation routes, including the training, equipment, and funding that would be necessary in the case of an accident. Without such equipment and

11 cont. training, fatalities would be expected to increase significantly among first responders as well as the exposed community.

12 A Court case in New Mexico concluded that property values decrease when located on waste transportation routes. This is not factored as a cost in the preferred alternative section of the DEIS. This should be noted in the EIS so that communities will be made aware of the consequences of being located on a waste route and will be able to respond accordingly. In addition, a June 1999 study funded by DOE and done by the University of New Mexico conclusively determined that in populous urban areas, "property values were lowered in a substantive manner" by spent fuel shipments to the Savannah River Site (Kishore Gawande and Hank Jenkins-Smith, "Nuclear Waste Transport and Residential Property Values: Estimating the Effects of Transient Perceived Risks.") This information must be included and impacts of declining property values along transportation routes in urban areas must be assumed. The EIS must discuss mitigation or compensation measures for such losses in property values which could total billions of dollars.

13 Finally, the EIS fails to identify the proposed routes for waste shipments. Without such information, citizens along the routes cannot make adequate estimates of their risk or respond appropriately. Neither can EPA make adequate assessments of environmental damage along routes without first identifying such routes. A generic assessment is not acceptable.

14 7) ENVIRONMENTAL JUSTICE

The DEIS notes that the Western Shoshone Nation maintain the position that the Ruby Valley Treaty of 1863 gives them the right to Yucca Mountain. We feel that this issue was not adequately discussed in the DEIS, including the fact that the Western Shoshones strongly oppose use of Yucca Mountain as a repository. Given the history of the relations between the United States government and the Native American tribes regarding broken treaties and land contamination, this issue should be recognized more fully in the EIS.

15 8) CONTAINER DESIGN

Due to the fact that the container design is not yet publicly known, it is impossible for us to adequately comment on this area. We feel that the DEIS should be amended with an extended comment period once the final container design is made public. It should be noted in the EIS that DOE is relying on as yet to be designed containers, and not the mountain, to contain the radioactivity. Given this fact it is hard to understand how an appropriate analysis of the impacts of Yucca Mountain could be done, absent container information. Additionally, the release levels and exposures in the longer time frame, during the periods of maximum release, should be addressed and additional fatalities estimated.

16 9) HUMAN INTRUSION PROBLEMS

It is unconscionable to dismiss the potential problems of human intrusion in the long term. Markers are not an adequate means of keeping non-human life forms out of the site and markers and barriers have a high probability of not withstanding thousands of years. Furthermore, it is incomprehensible to attempt to communicate with humans ten thousand years from now. The EIS should note exactly what kind of barriers are planned and should include barriers to non-human life as well as humans.

CONCLUSION

17 An unimaginable number of generations to come must live with the decisions that we make regarding the storage and containment of radioactive waste. There is no doubt that something must be done to remedy this problem. However, Yucca Mountain is not a solution. Yucca Mountain is not based on sound science, and furthermore it has not even been adequately assessed. The right questions must be asked in order for the truth to be revealed. The DOE must begin asking questions that address environment, safety and health as their ultimate focus without bending to
18 political agendas. This DEIS should be redone with close attention paid to the hundreds of comments made on this project because in the end, the people who will have to live near this waste will be the true stewards, and they deserve to have their concerns genuinely addressed.

Sincerely,

Maureen Eldredge
Program Director