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Subject: SDEIS Comment

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--> Comment Text :
Citizen Alert?s general comments on the

Supplement Draft Environmental Impact Statement (SDEIS)

for a high-level nuclear waste repository at Yucca Mountain

Prepared by John E. Hadder and Kalynda Tilges

July 6, 2001

Intent of the SDEIS

1... To Citizen Alert it appears as though the SDEIS is an attempt to facilitate an unrealistic timeline on the Yucca Mountain Project by avoiding a rewrite of the DEIS. Clearly, the department of Energy (DOE) has made changes to the repository design, which has ?evolved? sufficiently to be considered substantive requiring a
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1 cont. re-evaluation of the environmental impacts. However, the SDEIS continually refers to the Yucca Mountain Science and Engineering Report (YMSER) for details of the design changes. Most of these details should be readily available in the supplement to fully realize the impacts of new design; instead, one needs to read significant portions of the YMSER. Therefore, any quantitative and to some extent qualitative comment on the new design is effectively a comment on the YMSER that few have time to read in the allotted 55 days available for public comment.

The SDEIS doesn?t serve well as a stand alone document, and it is our opinion that it was never intended to serve in that capacity. Citizen Alert sees the SDEIS as cheating the public from an opportunity to comment in a complete and proper way on the new design concept.

2 Under the National Environmental Policy Act, the Draft Environmental Impact Statement (DEIS) for the proposed Yucca Mt. Repository must show a "Proposed Action", (in this case, "to construct, operate and monitor, and eventually close a geologic repository at Yucca Mountain for the disposal of spent nuclear fuel and high-level radioactive waste") as well as alternatives. This Supplement is insufficient because it does not provide specific design alternatives for the Proposed Action. Instead, it describes a range of design features and operational parameters that could be combined to arrive at two alternative designs - "above boiling drift wall temperature" or "below boiling waste container surface temperature". Page 2-20 shows proposed use of an area that hasn?t even been investigated yet.

If the repository design is still changing why are we being asked to review it? These identified features and parameters (see Table 2-1) are said to "bound" the design so the range of potential impacts could be analyzed. It does not identify specific alternatives for which these impacts could be compared. There is no reason to accept this "bounding" approach, since the 1999 DEIS made the same claim, and this Supplement has impacts that are outside THOSE bounds. What will happen with the Final EIS as the design continues to "evolve"?

3 According to the Nuclear Regulatory Commission (NRC) The DOE must have a final design for the license application. The site recommendation is more important than the license application, because it is what the President will make his determination on whether or not to recommend Yucca Mt. to congress. The Final EIS must be as clear as the NRC license application, and must indicate a final design choice. This Supplement does nothing to achieve that.

4 Additional design work in this Supplement, as well as assertions by the DOE of safety, etc., are based on the presumption that currently proposed regulations will be finalized (thereby disregarding hundreds if not thousands of comments to the contrary). The supplemental DEIS asserts that the proposal is safe by these new, less rigorous guidelines. There can be no Final EIS until all proposed regulations are finalized, and the DOE can assert that the proposed action can meet them. All of this additional design work is based on the presumption that the proposed regulations will be adopted. This entire process is premature, the DOE cannot move forward without final, safe, publicly acceptable guidelines in place.

5 The entire Total Systems Performance Assessment is undergoing international peer review at this time. It is clear that even the worldwide scientific community is questioning the validity of the DOE?s methods to characterize the Yucca Mt. site. The Supplement does not acknowledge any uncertainties now on record regarding repository performance. These include uncertainties of alloy 22, (the metal which is supposed to keep the waste isolated from the environment), titanium drip shields, (which would not be put in place until closure of the Repository, up to 300 years from emplacement of the waste) and uncertainties in subsurface performance of these metals. This Supplement does not acknowledge the orders of magnitude of uncertainty that the DOE waste package peer review,as well as the TSPA peer review is now questioning. Nor does it take include the comments and suggestions of the International Atomic Energy Agency Review Team (IRT), An International Peer Review of the Biosphere Modelling Programme of

On-site aging facility

6 An on-site aging facility is suggested that could have a capacity of as much as 40,000 MTHM, which is essentially the existing commercial SNF inventory. Citizen Alert views this facility as a defacto interim storage site, which facilitates the nuclear utilities objective of removing the SNF from the reactors sites as soon as possible. Given the published SNF receipt schedule (~ 3,000 MTHM per year) at Yucca Mountain it is not clear why such a large facility would be needed; would not a capacity of 15,000 - 20,000 be sufficient? Is the DOE expecting that relatively young SNF will be shipped first; hence, a large capacity is required?

7 Yucca Mt. is in the third most active earthquake zone in the U.S. In 1992 there was a magnitude 5.6 earthquake in the vicinity of Yucca Mountain, which did several million dollars of damage to existing DOE surface facilities. In the Supplement, the DOE considers aging (cooling) up to 4,500 dry storage casks of spent commercial fuel for up to 50 years on 200 acres of cement pad near the North Portal (page 2-8; 3-7; figure 2-4).. Potential impacts of similar or even more severe seismic activity on the aging facility have not been considered for this facility. Clearly, a seismic event could at the very least damage welded seams, etc. resulting in radioactive releases. If it had to be licensed separately under NRC rules for "Independent Spent Fuel Storage Facility Installations" (10 CFR Part 72) it would probably fail.

8 If fuel aging is part of the selected design, why not age the fuel at the reactor sites for 50 years? This would be a modification (realistic) for the No-Action Alternative in the DEIS. It would reduce transportation hazards, and allow more time for responsible scientific research and review.

9 The Waste Handling Building would have a large storage pool, holding 12,000 fuel assemblies, as an inventory for fuel blending. The "design basis accident" used is the seismic collapse of the Waste Handling Building (page 3-11). The dose stated is less than that presented in the original DEIS, without this pool in the design. This is because the accident scenario includes damage to all the spent fuel in dry containers in the building in both cases. The pool is ignored as a risk. However, if the building collapses, the pool will too, because it is built to the same specifications as the building. Therefore the accident scenario should include the consequence of damaging all the fuel in the pool as well, as well as water-born contamination.

Cross country transportation

10 The release of the SDEIS offered the opportunity to address deficiencies in the transportation analysis from the DEIS, yet there is no added discussion here.

The DEIS never really clarified that very young SNF is likely to be shipped. Appendix A of the DEIS gives SNF characteristics and sites a typical age of the SNF (25-27 years), but does not explicitly state the details of the transportation profile. However, the SDEIS, in its discussion of the fuel blending and likely need of a surface aging facility brings to light that young SNF is expected. While the SDEIS states that there is no change to the transportation scheme as a result of the changes in the design, we feel at Citizen Alert that this is ?false advertising.? If the DOE was aware during the creation of the DEIS that as young as 5 year fuel is likely to be shipped, then why did the DOE use the typical age figure in its accident and severe accident calculations? To best inform the public the DOE needs to show the worst case and best case results of any of the analyses including the transportation of the SNF.

Fuel Blending

11 "Fuel Blending"- the process of mixing fuel assemblies of different temperatures to lower a waste package temperature has never been done before. To do this safely, the exact history of each fuel assembly must be known. Any mistakes in record keeping could lead to mistakes in packaging, and more uncertainties in the repository performance. The Supplement fails to talk about any specific plans or mechanics for fuel blending. The Supplement makes no mention of possible impacts of incorrect record keeping, and unknown waste package temperatures from blending.

The DOE can?t use water it doesn?t have

The waste water from the fuel pools, and from washing down the transportation casks, would go through an ion exchange, supposedly trapping all the radionucleides in a filter. The water would then go to evaporation pools, while the filters would be
12 disposed of as low-level radioactive waste. The Supplement should not assume the repository water supply will come from appropriated water from the State (page 2-19 and 3-6. Water will not be available unless the State Engineer is overturned on appeal. The Supplement should look at alternative water sources and evaluate the impacts of these alternatives.

Flooding

13 A U.S. Geological Survey study shows that flash flooding in the 300-square-mile area including Yucca Mountain and the Test Site could close highways disrupting the transportation of nuclear waste - and could interfere with above-ground repository operations. The observations made by USGS scientists during storms in 1995 and 1998 showed that the Amargosa River "has the potential to transport dissolved and particulate matter well beyond the boundary of the (Nevada Test Site) and the Yucca Mountain area during periods of moderate to severe stream flow," the report concluded. Contaminated water could travel as far as Death Valley in California, the report found. The SDEIS does not consider runoff into Fortymile Wash or Topopah Wash, the subjects of the USGS report. The Supplement should include a storm water flooding analysis of the proposed 200 acre dry storage pad near the North Portal.

Use of the Yucca Mountain site violates Western Shone Treaty

14 Section 3.1.1 talks about how DOE would obtain "permanent control" of the land surrounding the repository site, yet makes no mention of how it plans to "own" that area. The area in question (in fact all of Yucca Mountain) is part of the Western Shoshone Nation, who oppose this project. The Nuclear Regulatory Commission requires DOE to prove ownership of the lands it plans to use, yet the DOE does not have ownership, only control

Conflicting comment periods

15... Citizen Alert is reminded of two years ago when the DOE released its proposed changes to the Site Suitability Guidelines for Yucca Mountain and the DEIS at about the same time creating an overlap in the comment periods for both. That process complicated the overall public comment period making it much more difficult for people to engage in the hearings. At Citizen Alert we would have conversations with members of the public that went something like this:

Public: ?I saw a flier for hearings this Tuesday at seven on Yucca Mountain and your telling me that the hearing is on Thursday. Which is it??

Citizen Alert ?There are two; one is on the Environmental Impact Statement and the other is on the Site Suitability Guidelines?

Public ?So, I am to comment twice on Yucca Mountain in one week. Isn?t that just repetitious?

Citizen Alert ?No, its not. They cover different issues.?

Public ?But, both about Yucca Mountain?

Citizen Alert ?Yes, but Site Suitability Guidelines determine whether Yucca Mountain is acceptable for disposing of the nation?s high-level radioactive waste.?

Public ?Isn?t that what an EIS is supposed to determine??

Citizen Alert ?Ultimately, yes, but the guidelines are a criteria for selection that the EIS assumes that the site must meet.

Public ?So, your saying that these guidelines are part of the EIS. Why are we commenting separately? Or ...

You get the idea.

15cont. `The comment periods for these distinct component of the process should have been well separated in time to allow the public, who usually do not have time to study the procedures in detail, to know why they are commenting and how the particular hearing they are attending fits into the overall scheme. Now, history is repeating with comment periods for this SDEIS and the Site Recommendation are concurrent. Citizen Alert would rather see, as requested in our letter to Secretary Richardson dated June 2000, all the hearings around the EIS completed with the final EIS done and released to the public before the Site Recommendation comment is open.

Inadequate hearing schedule

16 Yucca Mt. is a national program, and there has been a great deal of national interest already. This Supplemental EIS should be presented in national public hearings. Hearings should also be held throughout Nevada. They should not just be limited to Amargosa Valley, Pahrump and Las Vegas Nevada has two major population centers, and many impacted people in rural areas, being no less worthy the urban areas, have just as much right to take advantage of the poster session, question and answer period as well as express their opinions on these documents. While the DOE is questionably upholding its legal responsibilities according to the Nuclear Waste Policy Act, this is another example of the DOE failing to uphold it?s moral and ethical responsibility to the public.

Inadequate comment period

17 Fifty-five days is an unbelievably short allowance for a technical document and again fits into an unrealistic timeline. The DOE has been studying Yucca Mountain for over ten years, certainly we can spare a little more time for the public to understand the nature and specific impacts of the changes in the SDEIS.

The selective extension of the comment deadline is an abuse of discretion that favors some interested citizens based on arbitrary and previously unannounced terms. DOE should consider that citizens may not have requested copies of the Supplement assuming that there was insufficient remaining time to gain a copy, review it, and prepare comment. Now it is revealed that those who did not receive a copy in timely manner will be awarded an additional 30 days to comment. Some of the late receivers of the SDEIS are libraries, does this mean all the citizens who review the SDEIS from the library get the arbitrary extension? Citizen Alert asserts that extending the comment period for all would be no great burden for the Department of Energy since the Department is extending the deadline for a few, there is obviously no real deadline. Extending the comment period would go along way toward providing equal and adequate access to the process for all interested citizens. Ninety days is in Citizen Alert?s opinion a

Allowed additional time, it would be Citizen Alert?s to resubmit our comments with additions.