



webserver@yucca-web.ymp.gov on 01/10/2008 10:30:19 AM

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To: EIS\_Comments@ymp.gov  
cc:  
Subject: EIS Comment

User Filed as: Not Categorized in ERMS

January 10, 2008 10:30:19

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Comment Text :  
--> Yucca Mountain SEIS

#### Resubmission of Comments on Post-closure Section

For what should be a comprehensive EIS, the analyses presented are very limited. The analyses only address the limited regulatory compliance scenario. An EIS should go further and provide the public and regulatory agencies with additional important information regarding performance and its possible impact on the local population and environment.

1 [ The EIS claims that the performance, being based on the RMEI, is conservative. Is this true? There are alternatives to the exposure scenario given by NRC for demonstrating compliance with their rule. This should be done to avoid serious risk dilution arising from consideration of a single and simple exposure scenario out of a possibility of many possible scenarios. Rather than creating a scaled down version of agricultural Amargosa Valley at the point of compliance, a more likely model of future development is just a residential development (such as a dormitory community for future industrial/technological operations at the NTS). With such a community of say 100 dwellings, each with an annual water usage of around 1 acre-foot per year, the present radionuclide concentrations now based on an annual dilution into 3000 acre-feet of ground water would be much higher as this future land use would only give rise to dilution, on average, into 100 acre-feet. This very plausible scenario would increase radionuclide concentrations in ground water

by a factor of 30 or more thereby significantly increasing predicted doses and LCFs.

When discussing LCF the EIS only provides the LCF probability per person per year. Given we are trying to protect several thousand people for up to a million years, the public should be told the estimate of the total number of people who will be expected to die prematurely from a repository at Yucca Mountain. This should be a key parameter addressed in the EIS; it is not.

The EIS does tell the reader that there are two standards - pre 10,000 years where the mean dose must not exceed 15mRem and post 10,000 years where the median dose should not be above 350 mRem. However, the EIS fails in its duty to inform the citizens of Nevada, especially those poor directly affected people, that the median of the predicted doses is about an order on magnitude higher than the mean of the same predicted doses. Thus in terms of risk (and LCFs) the post 10,000 year limit is about 350 times higher than the pre-10,000 year limit. This massive increase of risk to future generations allowed by the regulation should have been identified and documented in the EIS. The whole justification concept for the repository was that our generation, the benefactors of nuclear power that generated this deadly waste, should not impose any burdens (financial, health or other) on future generations.]

2 [The approach to evaluating the seismic and volcanic events leaves a lot to be desired. The NRC in presentations on risk informed decisions often talks about the risk triplet; (1) what can happen, (2) how likely is it to happen, and (3) what are the consequences when it does happen. This is a very good basis to inform all concerned, including those at risk. In presenting the results of the lower probability events forecast to happen at Yucca Mountain, the EIS only gives the expected dose and not the two individual components of probability and consequence. For the volcanic intrusion event the expected dose is below the NRC imposed limit. However, should the event occur, the annual dose to the local population would be several thousands of Rem (not mRem). The result, if the event occurred, would be mass extermination of the entire local population.

Furthermore, the effects of such an igneous intrusive event would be felt all along the groundwater flow path into California (Death Valley Junction, Shoshone, Tecopa, and finally into Death Valley where the radionuclides would be precipitated out on to the surface where they would be available for continental scale dispersal by the winds - a consequence not addressed by the EIS). The groundwater along the entire flow path would be polluted to such an extent that the whole region would be uninhabitable for hundreds of thousands of years or possibly longer. Yes, maybe the event has a low probability but the attendant consequences are absolutely huge. Why did not the EIS point this out for all to see?

In a similar manner, if a volcano erupted through the waste, the doses to the local population would be tens to hundreds of Rem. This dose although high is inconsequential to the dose that the local population would receive a few thousand year later from the intrusion release into the ground water. However, the EIS makes no mention of the volcanic dose potentially delivered to the residents of Las Vegas. This dose would be expected to be well below the tens of Rem to the local population but because of the number of people exposed (one to two million) the number of LCF would be very significant over a long time. The EIS should have brought this risk to light.]

At Yucca Mountain, EIS must stand for Everyone Is Supportive!

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