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RULES AND DIRECTIVES

General Comment

See attached file(s)

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Attachments

NIRS Comments Yucca SEIS 11-20-2015

YM verbal comments AV hearing 091815

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November 20, 2015

Comments of Nuclear Information and Resource Service RE:

Yucca Mountain Proposed Nuclear Waste Repository Supplemental EIS, NUREG 2184 Submitted to Docket # NRC-2015-0051 and Federal Register Vol 80, No 162, pages 50875—50877.

Before commenting on the document that NRC has docketed for comment, captioned above, NIRS first responds to Federal Register Notice: **Federal Register** / Vol. 80, No. 162 / Friday, August 21, 2015 / Notices pages 50875—50877. From that Notice:

II. Discussion This supplement evaluates the potential environmental impacts on groundwater and impacts associated with the discharge of any contaminated groundwater to the ground surface due to potential releases from a geologic repository for spent nuclear fuel and high-level radioactive waste at Yucca Mountain, Nye County, Nevada. This supplements DOE's 2002 "Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" and 2008 "Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," in accordance with the findings and scope outlined in the NRC staff's 2008 "Adoption Determination Report for the U.S. Department of Energy's Environmental Impact Statements for the Proposed Geologic Repository at Yucca Mountain."

The assertion in the Federal Register Notice Discussion that the Supplement is an evaluation of "potential environmental impacts on groundwater..." means that the Nuclear Regulatory Commission (NRC) Staff has decided to write fiction. In order for an evaluation of environmental impacts of the proposed Yucca Mountain project to be rooted in reality, NRC staff would have to first update all of the documents that it states above the SEIS will be based on. Instead, NRC is engaging in fiction because it is using the same data and assumptions that the Department of Energy (DOE) proffered in its License Application for a repository at Yucca Mountain and the documents cited here (FEIS 2002 and FSEIS 2008). Here is a short rundown of a portion of the substantive revisions to the project that would require a revision to all of the basic assumptions in the DOE's prior evaluations and impact analyses.

- The Nuclear Regulatory Commission approved a higher enrichment fuel that stays in reactors longer producing a high-burnup waste (greater than 45 GigaWatt Days) which is thermally hotter, more highly radioactive, contains more fissile material (Plutonium and other transuranics), and more highly toxic elements, as well as more long-lasting fission products;

- The use of this new fuel and the process-history that goes with it reduces the integrity of fuel cladding raising questions about waste form;
- Hotter waste may mean less-full containers and therefore more shipments than contemplated;
- AND the Nuclear Regulatory Commission approved on-site dry storage in containers it certifies, but not supplied by the Department of Energy, violating the Standard Contract agreement for waste acceptance, raising many questions about what will happen to existing dry-store waste;
- AND the Department of Energy cut the plan for TAD containers for Transport Aging and Disposal that are a center-piece of the "System Architecture" for the Yucca proposal and featured in the existing FEIS from 2008, and therefore by reference in the Staff's "Adoption Determination Report;"
- AND the President in 2015 issued an Executive Order that would remove the military waste from the Yucca repository proposal;
- The military waste had a key functional role in the proposed Yucca repository design because of its reduced heat load;

All of these pieces (and others not named here) are significant. Any one of them would substantially change the assumptions in DOE's Total System Performance Assessment (TSPA), work done prior to 2008 and upon which the NRC staff rely to provide the "Starting point" for the current document NUREG 2184. Taken together, the factors enumerated here make the existing TSPA fiction; and therefore NRC Staff's work on the SEIS fiction as well. (Appendix A of the SEIS documents the extent to which Staff relies on this out-dated document).

The fiction, in full form is this: that without starting over with all of these new starting points, NRC cannot have any reality-based idea what the "Source Term" (meaning waste characterization with chemical and physical properties and the amount of time it must be isolated in order to protect human health and safety) will be. If the Source Term is not known, and the physical and process-history of the waste package is not known, then it is impossible to state even what the waste-form will be. The discussion of release of radioactivity from containers and from the site is pure conjecture. Groundwater travel time and discharge rate cannot be assessed unless the starting point on what the waste and waste package are known. It is simply not credible for NRC Staff to do this Draft SEIS, or to ask the public to comment "conjecture."

NIRS urges NRC to withdraw this document. Licensing authority to allow an industry to produce deadly waste carries with it licensing responsibility to do that job right. This SEIS is not right. Please pull it.

Nuclear Information and Resource Service here incorporates the comments of the Armargosa Conservancy on the SEIS, delivered at the NRC public meeting in Armargosa NV on September 17, 2015.

Respectfully Submitted,

_____/s/_____

Mary Olson

Nuclear Information and Resource Service



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**Amargosa Conservancy verbal comments on the
Yucca Mountain Nuclear Waste Repository Supplemental EIS**

**Public meeting at Amargosa Valley Community Center, Amargosa Valley, NV
September 17, 2015**

Good evening. My name is Patrick Donnelly, and I'm the Executive Director at the Amargosa Conservancy, a non-profit based just down the river in Shoshone, California. The Amargosa Conservancy has been actively involved in groundwater issues in the Amargosa Basin for eleven years, and has long maintained opposition to the Yucca Mountain Nuclear Waste Repository.

I will not claim any particular expertise on radionucleotide transport in complex aquifers, and as such I am not speaking tonight to take exception with the conclusions of the EIS. Rather, tonight I would like to offer comments that the models and data being utilized as the basis for the analysis in this Supplemental EIS are out of date and insufficient.

The Nature Conservancy and the Amargosa Conservancy have funded hydrogeological investigations in the waters of the Middle Amargosa Basin- the Shoshone and Tecopa area- for a decade. These investigations have revealed new knowledge about the sources of the water flowing from our abundant and life-giving springs, and have also confirmed beyond a doubt ideas about the water which were long speculated on but never known for certain. This work has been most recently reported by Andy Zdon, in his "State of the Basin Report 2014," which we will be happy to provide to the Nuclear Regulatory Commission and any other interested parties.

The most pertinent conclusion of the State of the Basin Report to the current discussion is that there is indeed a hydrologic connection between the Amargosa Desert and the springs of the Middle Amargosa Basin. This connection is greatest at the springs on the western side of the Basin, particularly Shoshone Spring and Borax Spring. Waters emerging from those springs at least partially originated right here where we stand this evening.

The analysis presented in the EIS ignores this connection. Section 2.2.2 says that transport beyond Alkali Flat is "unlikely," and then denigrates our stretch of the River as "small, intermittent springs." I would encourage each person involved in the preparation and evaluation of this EIS to travel down the river to Shoshone and Tecopa- your "small, intermittent springs" are perennial gushers, flowing at hundreds or even thousands of gallons per minute every day of the year.

Dedicated to the future of the Amargosa Watershed



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If this EIS will entertain scenarios as remote as one million years from now, and will analyze numerous possibilities of flowpath and contaminant transport, then it is essential to add to this Supplemental EIS an analysis of potential impacts to the ecology and communities which rely on groundwater discharge in the Middle Amargosa Basin.

Thus, the present analysis is incomplete. The Middle Amargosa Basin is home to critically endangered species such as the Amargosa vole, the least Bell's vireo, and several species of pupfish. Analysis needs to be conducted on these species, and if this reveals even a remote possibility of impacts to endangered species or their habitat, a Biological Opinion from the US Fish and Wildlife Service should be required.

Additionally, based on the connections previously described, there is a significant environmental justice issue that needs to be addressed. The community of Tecopa is federally designated as Severely Disadvantaged. Our economy is entirely reliant on eco-tourism, and those tourists come for one reason only: to experience the wonder of our waters and the biodiversity that they support. If the Amargosa River becomes a toxic waste dumping ground, our economy will suffer. While people here in Nye County may relish the thought of high-tech jobs, our severely disadvantaged community will get none of those jobs. Instead, the jobs we currently have will wither on the vine, because what tourist wants to visit a nuclear waste dumping ground? We will experience the negative impacts that people up here in Nye County be less concerned about. It is unjust to dump the impacts of nation's nuclear waste problem on a severely disadvantaged community. This needs to be considered in your analysis.

Finally, and more broadly, the entire 30 year environmental review process for Yucca Mountain has been a charade. Since 1989 and the "Screw Nevada Bill," there has been no substantive evaluation of program alternatives, which is a requirement of NEPA. Since the only site being considered is Yucca Mountain, the NEPA process has turned into DOE, or in this case NRC acting in their stead, justifying a foregone conclusion.

A true NEPA analysis would do a comprehensive search for a suitable solution to a problem. And that best solution would likely not end up being a mountain in an active faulting zone with recent volcanic history and a population of human beings just a few miles away.

Our communities of Shoshone and Tecopa are united in our opposition to Yucca Mountain. The analysis presented in the EIS Supplement and in previous EISs is insufficient, and the Middle Amargosa Basin must be analyzed in this supplement. Additionally, past EISs need to be updated to reflect the latest science and data. To do anything less is to subvert both the letter and intent of the National Environmental Policy Act.

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