

WCO outreachCEM Resource

From: Mary Olson [olson.mary@gmail.com]
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Subject: Comment on Draft report for comment: "Background and Preliminary Assumptions for an Environmental Impact Statement—Long-Term Waste Confidence Update".
Attachments: 03-19-2012 Comments to NRC -- longterm.pdf

Please see attached.

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Never doubt that a small group of people can change the world -- indeed, it is the only thing that ever has --
Margaret Mead

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Comments Re: Nuclear Regulatory Commission *Background and Preliminary Assumptions for an Environmental Impact Statement – Long-Term Waste Confidence Update* (December 2011) (“Draft Report”)

Nuclear Information and Resource Service submits the following comments on the NRC’s draft report, *Background and Preliminary Assumptions for an Environmental Impact Statement – Long-Term Waste Confidence Update* (December 2011) (“Draft Report”), today March 19, 2012. Due to unforeseen disruption in email for the past 72 hours, other organizations that have expressed an interest in supporting these comments are not reflected on this document. These will be added and resubmitted in another 72 hours. We regret the delay, but offer the content of the comments here, and the term "we" may be understood to reflect all signers.

We represent organizations with members who live near: nuclear power reactors, current and proposed radioactive waste disposal sites, transport routes, nuclear fuel-cycle facilities and mining areas.

We do not support the project that NRC has undertaken here and broadly support all the points in comments submitted by a number of allied organizations, authored by their counsel Diane Curran and Geoff Fettus.

We specifically agree with those commenters that there is no basis whatsoever for section 8.1 (pages 9 -- 11).

While NRC can say, no, of course not -- that is why we are doing this study -- to see what impact time may have given any set of arbitrary assumptions; nonetheless, we believe that the starting point will determine the ending point, and that this starting point is fatally flawed.

8.1 (1) The continued use of nuclear power is assumed in projecting long-term spent nuclear fuel generation rates.

-- We disagree that NRC can assume the growth of nuclear power generation in the United States without also doing a detailed factoring the following:

1. Water
 - a. sea level rise
 - b. drying of climate -- so less fresh surface water
 - c. growing municipal consumption of all freshwater resources
 - d. rising temperature of surface water

2. Seismic issues and an actual "lessons learned" from Fukushima, if not by NRC, then by:
 - a. mothers (a new generation)
 - b. financial officers at nuclear corporations
 - c. elected and appointed officials

3. Peak uranium
 - a. rising cost of nuclear
 - b. implications of a plutonium economy (including security)
 - c. implications of plutonium fuel use on projected rate of accidents over the period -
- by the way @ one major nuclear catastrophe per decade, the US should look ahead at one every 40 -- 50 years (or so) if the US retains 20 -- 25% of the world's reactor fleet.

4. Radiation findings
 - a. growing global body of research showing that low-dose radiation is more harmful than previously thought
 - b. BEIR VII findings that women are significantly more impacted by ionizing radiation than men
 - c. BEIR VII findings that little girls are the most impacted by ionizing radiation
 - d. influencing section 2 above

5. Energy Economics of the 21st Century
 - a. NRC has not, apparently noticed that people are using less power and therefore the "need for baseload" is shifting
 - b. NRC has not, apparently noticed that a growing sector of the energy economy is "distributed" and that there is a shrinking need for large, static baseload generation
 - c. NRC has not, apparently noticed that solar energy and wind energy continue to drop in cost, while nuclear requires ever more draconian taxes and delegated taxation (CWIP) which are less and less viable as other sectors of the economy no longer tolerate "nuclear welfare" as a "given."
 - d. As healthcare costs become increasingly a concern of society, it will be harder for nuclear to deny its contribution to those costs -- both in terms of nuclear workers, nuclear accident victims and those exposed on a "routine" basis

6. If NRC notices any or all of the above, it may also notice that supporting the continued generation of this highly challenging waste is immoral. We suppose this final point combined with NRC's mandate, are together the reason that NRC chooses not to notice the points above.

8.1 (2) Current light-water reactor spent nuclear fuel will be used as the baseline in extended storage scenarios.

It is completely INCREDIBLE that NRC would assume another 300 years of reactor operation, and then assume that LEU will dominate the waste pile. There is no way that there will be enough LEU to fuel 20% of power for 300 years unless the Mayan prophecies, or the zombie movies are just as accurate as the NRC's (implying the US population is decimated).

8.1 (3) Dry cask storage technologies will be the primary mode of storing spent fuel over extended periods. However, some percentage of the inventory of spent fuel will be stored in pools.

These commenters have gone to great lengths to support hardened on-reactor-site dry storage combined with reactor phase-out and ceasing the generation of more waste over all other currently-available options for short-term waste management. Nonetheless, we must now once again register our incredulity that NRC could honestly believe that 300 years of storage in the currently available containers is a viable assumption. Dry casks as they exist today rely on the integrity of the fuel rod. There is no basis for assuming that the fuel rods will remain structurally viable for 300 years -- so not amount of recontainerization will matter if instead of fuel rods and assemblies, the stewards are left with a pile of fuel pellets.

This author was introduced to a concept by employees of the old Office of Civilian Radioactive Waste Management that apparently NRC staff have not heard of: The Day of The Drop. When I admitted ignorance of the Day of The Drop -- I was informed by these DOE waste technicians that The Day of The Drop was what they were engineering for -- the day when all the fuel pellets fell down into the bottom of whatever container they were in.

On what possible basis does NRC attribute an indestructible profile for the cladding (the only structural member) of an irradiated fuel rod -- particularly since the cladding is irradiated continuously.

8.1 (4) Long-term transportation impacts will be based on current package technologies, transportation infrastructures, and regulatory requirements.

Three hundred years ago the transportation profile in North America was significantly different than it is today. It is completely specious to assert that modes of transport will remain as they are today over the next three centuries. To assert what such modes of transport will be would be equally unfounded. Why does NRC include transportation in this study?

NRC has said it was not a "policy setting" body. Why does it then proceed with the inclusion of centralization of storage in its planning?

It is equally impossible to project the regulatory framework -- and agree wholeheartedly with the comments of Curran and Fettus that the timeframe and assumption of regulatory control are inconsistent with existing NRC regulations, and therefore cannot be supported. If, in fact, the assumption about the use of nuclear energy is wrong, the NRC itself is unlikely to exist 300 years from now.

8.1 (5) Long-term storage and handling facilities will operate under a framework of aging management that is designed to monitor, detect, and mitigate significant aging impacts.

Aging -- again there is a blunt, unstated assumption that fuel rods and fuel assemblies are durable and that "aging" would pertain to the package for these rods and assemblies. The sooner someone realizes that they need to be engineering for individual fuel pellets, the better.

This line also opens the question as to why licensees should be allowed to remove the fuel pool prior to the final disposition of the waste. Why not assume instead of new structures that NRC has a vested commitment to doing this job right? Why not say that extended license for storage of irradiated fuel rods depends upon extended operation and maintenance of a fuel pool on the site for purposes of waste handling?

8.1 (6) The storage of spent fuel will remain under a regulatory program comparable to the current program. Regulatory oversight and maintenance of storage facilities and activities, such as spent fuel repackaging, will continue, as appropriate. Current and future NRC licensees are responsible for the financial resources to support long-term storage operations. However, in the event licensees cannot fulfill their legal financial obligations, the U.S. Government will provide sufficient resources and protection to ensure continued safe and secure storage.

-- again the commenting organizations agree with Curran, Fettus et al that it is very inappropriate to assume a regulatory framework that 1) cannot be assumed given an unknown future for nuclear power and 2) does not conform to current NRC regulations.

8.1 (7) The EIS will assess the impacts of storing and transporting reprocessing wastes

-- It is completely inappropriate for a regulatory agency that claims it is not the one to "set policy" to introduce the idea that reprocessing of existing or future radioactive waste will occur. There are multiple "camps" among the boosters for a "nuclear future" and unless or until they form a larger body of agreement, it is unlikely that any of them will prevail in obtaining the large amount of taxpayer subsidy that would be required to bring about reprocessing or any other novel program. While it is clear there is currently a residual commitment to some level of new nuclear development left over from Cold War type support for nuclear activities, it is not at all clear that this will extend to the level of enabling the enormously catastrophic mistake of reprocessing to be repeated here. West Valley, Sellafield, Myak and LaHague stand as enormous monuments to the monumental disgraceful environmental crime that is reprocessing. Every single one of the proposals for "new" reprocessing carry an equal or greater level of risk. NIRS has supplied comments on this previously, and can supply supporting documents again. [Most are posted here: <http://www.nirs.org/radwaste/reprocessing/reprocesshome.htm> and here: <http://www.nirs.org/radwaste/decommissioning/decommissioninghome.htm>

8.1 (8)

The EIS will assess impacts from a range of accident scenarios involving storage and transportation, and the accident analysis will be informed by the information available about a range of accidents, including recent events.

If the CRAC accident numbers are not used, NRC should supply a complete written statement as to why not. "Because our group of corporate clients don't like it" is not a sufficient reason.

Commenters repeat this portion of the comments from our allied groups:

The Draft Report should be withdrawn because the assumptions it proposes are inconsistent with the National Environmental Policy Act ("NEPA") and NRC regulations. In addition, by indicating that the NRC plans to prepare an EIS that discusses the environmental impacts of long-term SNF disposal without also discussing the impacts of SNF disposal in a repository and the impacts that may occur if SNF disposal is never achieved, the NRC unlawfully segments the environmental analysis for SNF disposal. Finally, the NRC's decision to issue the Draft Report without publishing a notice in the Federal Register is inconsistent with the NRC's open government policy and long-established practice.

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Again, due to loss of internet function, these comments will be sent in again with co-signers.