

PUBLIC SUBMISSION

As of: August 07, 2012 Received: July 31, 2012 Status: Pending_Post Tracking No. 810bb913 Comments Due: July 31, 2012 Submission Type: Web

Docket: NRC-2011-0012
 Disposal of Unique Waste Streams

RADB Review
8/7/2012
R.

Comment On: NRC-2011-0012-0020
 Low-Level Radioactive Waste Management Issues: Public Meeting

Document: NRC-2011-0012-DRAFT-0029
 Comment on FR Doc # 2012-04090

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7/11/2012
77 FR 40817
15

General Comment

See attached file(s)

Attachments

HealCommentsPart61July2012

SUNST Review Complete
Template = ADM-013

LEADS = ADM-03
Call = D. Lowman (dble)



July 31, 2012

Cindy Bladely
Chief, Rules, Announcements, and Directives Branch (RADB), Office of Administration
US Nuclear Regulatory Commission
Washington, DC 20555-0001

Submitted electronically via www.regulations.gov

Subject: Comments on Docket ID NRC-2011-0012

Dear Ms. Bladely:

HEAL Utah is submitting these comments related to proposed revisions to 10 CFR Part 61 after participating in a recent public meeting held July 19, 2012.

- 1) **Waste Acceptance Criteria based on Site Specific Performance Assessment for All Waste, not just "unique waste streams."** We do NOT believe that Part 61 should be modified to provide an alternative to the waste class tables, namely the proposed Waste Acceptance Criteria (WAC) based upon site specific performance assessments for all low-level waste. Creating this alternative pathway for waste acceptance will lead to substantially diminished public confidence in the safety of waste disposal here in Utah and nationally. There are several reasons for this.
 - a. **Economic incentive to manipulate models to justify a pre-determined outcome.** Licensees, who clearly have a strong economic incentive to justify the acceptance of nuclear waste, will pay for site-specific performance assessments. They hire consultants, of whom there are only a few qualified firms, to perform these studies. Thus, it is reasonable for members of the public to conclude that such performance assessments, paid for by a nuclear waste company or operator, can be "gamed" or manipulated to justify the acceptance of particular nuclear waste streams that the licensee finds economically valuable. The public is rightfully concerned that the hired consultant running the models "must" reach the conclusion that waste streams are acceptable for disposal if that consultant wishes to keep receiving contracts.
 - b. **Non-transparent site specific models.** Modern site-specific probabilistic performance assessments are incredibly complex and non-transparent. They rely on thousands of assumptions about site conditions as well as what future conditions will be like. Those assumptions are often built into computer models, which, even if they are made available to the public, are very difficult for even informed public interest groups like HEAL Utah to interpret and evaluate. In addition, as we've seen, the modeler chosen by a licensee to complete a site-specific performance assessment has many ways to "bury" important assumptions that impact whether a particular waste stream is deemed to be "safe for

disposal" at a given site. And, as noted above, the modeler also has an economic incentive to "justify" for the licensee that economically valuable waste streams can be taken at a disposal site. Otherwise, the modeler reasonably risks losing future modeling business with the licensee. It's also not clear that agreement states have the capacity, expertise, time, or resources to adequately review such complicated performance assessments. There is a reason that states have relied upon more rigid tables to make decisions about nuclear waste disposal.

- c. **Federal review and approval of site specific performance assessments and waste acceptance criteria.** It has been suggested by at least one waste disposal company, EnergySolutions, that site specific performance assessments and associated Waste Acceptance Criteria should be reviewed and approved by the Nuclear Regulatory Commission, rather than state regulators. In the case of Utah, which accepts the vast majority of the country's commercial low-level nuclear waste, this change would essentially remove Utah officials from making health and safety evaluations and decisions about waste streams coming to the state. We believe this situation would be unacceptable to the vast majority of Utahns and our elected leaders. The State of Utah and its people are those who will have to live with the nuclear waste site and its ongoing liability and costs – not the Federal NRC from its seat in Maryland. Therefore, the State of Utah, with robust participation from the Utah public, is the appropriate decision-maker with regard to the evaluation of nuclear waste streams coming to Utah.
- d. **Utah's ban on Class B and C nuclear waste.** Most disturbingly, the Waste Acceptance Criteria approach appears to be a Federally-designed attempt to undermine a Utah state ban on Class B and C nuclear waste, passed by the State Legislature in 2005. Utah Code 19-3-103.7 states, "No entity may accept in the state or apply for a license to accept in the state for commercial storage, decay in storage, treatment, incineration, or disposal: ... class B or class C low-level radioactive waste...." If the WAC approach allows EnergySolutions, a Utah licensee, to seek and obtain permission from the Federal NRC to accept waste that meets the Class B or C definitions, then the state ban on Class B and C waste will have effectively been overridden by NRC regulations. That ban, it is worth pointing out, was widely supported in Utah: The vote to pass it was 26-0 in the Utah Senate and 57-13 in the Utah House, before being signed by Gov. Jon Huntsman¹. Polls at the time showed that an astounding 86 percent of Utahns favored the ban². For federal officials to overturn that ban is an unacceptable outcome, and one that could have far-reaching and unpredictable consequences. For instance, could angered Utah officials ultimately use their authority through the Northwest Interstate Compact to stop the acceptance of **all** low-level waste from outside the Compact, as a reaction to perceived Federal overreach and interference with state's rights? That would certainly be one approach that our organization would consider advocating if this situation comes to pass.

¹ <http://le.utah.gov/~2005/htmldoc/sbillhtm/SB0024S01.htm>

² <http://www.deseretnews.com/article/600115917/B-C-waste-were-the-big-land-issue.html?pg=all>

- 2) **Compliance period for long-lived waste.** We do not believe that long-lived waste streams such as concentrated depleted uranium should only be modeled for a compliance period that is “reasonably foreseeable,” for the simple reason that concentrated depleted uranium does not have a “reasonably foreseeable” hazard life. We believe “safe disposal” can only be demonstrated if the public will be protected from unsafe doses over the hazard life of the waste stream being evaluated. If, as some in the nuclear waste disposal industry complain, such modeling over very long timeframes (10,000 to one million years) leads to unacceptably large uncertainty in the calculation, then that uncertainty should be viewed as evidence that such disposal is not acceptable. A compliance period of 1,000 years for concentrated depleted uranium – which grows more dangerous for hundreds of thousands of years – is utterly nonsensical. Similarly, a “qualitative” evaluation – which must conclusively demonstrate irreversible and catastrophic impacts in order for a waste stream such as concentrated depleted uranium to be found unacceptable for disposal – places far too large a burden on states, like Utah, that host nuclear waste disposal sites. For long-lived waste streams like concentrated depleted uranium, the compliance period should be a minimum of 10,000 years. Better yet, it should consider the time when the activity of the waste stream reaches its peak.
- 3) **Disposal site stability.** Similarly, we strongly believe that disposal site stability is a cornerstone of protecting the public from nuclear waste. As such, “site stability” must be demonstrated over the hazard life of long-lived hazards such as concentrated depleted uranium. If site stability cannot be assured over the hazard life of the waste stream, the waste stream should be unacceptable for disposal.
- 4) **Unique waste streams as “Class A” waste.** We strongly believe that concentrated depleted uranium—with a hazard life lasting one million years—does not belong in the same Class A category as waste that decays to a reasonable level of hazard after only 100 years. Unique waste streams not previously evaluated as part of the classification system, such as concentrated depleted uranium and blended wastes, should belong to their own unique class – perhaps Class U (for “unclassified”). To the extent that these waste streams would be evaluated for classification, we believe that some assumptions underlying the current Federal classification system should be retained (see below).
- 5) **The current waste classification system.** Although the current waste classification tables in 10 CFR Part 61.55 are by no means perfect, we believe they have several commendable characteristics that should be recognized in the context of the current proposed revisions.
 - a. The concentration limits in the tables were devised by Federal regulators, not private companies with an economic incentive to accept nuclear waste. The classification system was developed as part of a rulemaking process that could be observed, and participated in, by many national stakeholders. As such, stakeholders can have more confidence in the outcomes of the development of these tables than of potentially dozens of site-specific performance assessments and associated waste acceptance criteria, playing out state-by-state, as envisioned in the present rulemaking.



- b. The logic underlying the current waste classification scheme is sound. The fundamental notion behind the waste classes A, B, and C is the concept of hazard longevity, with increasingly stringent controls required for waste streams that have increasingly longer hazard lives. For waste that is hazardous longer than 500 years, near-surface disposal is typically not acceptable. This framework, which offers state regulators and officials clear guidelines when making decisions about waste streams, disposal sites, and long-term risks, makes much more sense than a framework that allows a licensee to justify the near-surface disposal of waste streams no matter how long they are dangerous. Such a scheme invites irresponsible manipulation of a model to justify the acceptance of waste streams a licensee is determined to take.
- c. We believe the current 100-year institutional control period is reasonable.
- d. We believe a stylized intruder occupant scenario makes sense as a measuring stick to evaluate future protection of the public. The intruder occupant scenario is not meant as a prediction of future events; rather, it provides a conservative and rational way for decision-makers to evaluate the hazard a nuclear waste disposal site will pose at a given time in the future.

We appreciate the opportunity to comment on the proposed revisions to 10 CFR Part 61. Allow us to reiterate our central point: Any system that would overturn a ban on hotter wastes for which Utahns fought so hard, or force the state to accept waste streams it has deemed unnecessarily risky, will be met with unified opposition, from our elected officials, our public interest organizations, and our citizens. We urge the NRC to move forward very carefully before jettisoning a system that has worked for over 30 years.

Sincerely,

Christopher Thomas
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