

**NRCREP - LLRW Program Comments, Attn: Ryan Whited**

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**To:** "NRCREP@nrc.gov" <NRCREP@nrc.gov>  
**Date:** 09/05/2006 3:51 PM  
**Subject:** LLRW Program Comments, Attn: Ryan Whited

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See attached for subject comments. Thank you for exploring this timely issue and for the opportunity to offer comments.

<<NRC LLRW cmts.doc>>

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**Department of Defense Executive Agent for LLRW Disposal  
Responses to Request for Comments on the Nuclear Regulatory  
Commission's Low Level Radioactive Waste Program**

Regarding the Current LLW Disposal Regulatory System

**1. What are your key safety and cost drivers and/or concerns relative to LLW disposal?**

Our key safety issues relate to the fact that our Army camps, posts and stations are not set up for long term storage of LLW. If Barnwell closes as planned we will not have a disposal outlet for our class B and C wastes in 39 states, forcing long term storage. Because our facilities are not designed for long term storage we will increase the risk of personnel exposures through increased inventories and handling, as well as increasing the potential for accidental contamination events. We are concerned about creating target opportunities for terrorists seeking dirty bomb materials. Finally, we are concerned about the rising costs of Class B and C disposal. History has shown delaying disposal of wastes will increase the future disposal cost significantly, thereby reducing the quantity of waste we can dispose.

**2. What vulnerabilities or impediments, if any, are there in the current regulatory approach toward LLW disposal in the U.S., in terms of their effects on:**

**a. Regulatory system reliability, predictability, and adaptability;**

We see the most important long-term factor as the lack of opportunity for the free market to tackle the disposal issue. The regulatory system should allow for industry competition to drive innovation and find cost effective solutions. It has worked in the hazardous waste disposal arena and we believe it can work in LLW disposal. The competition to provide the best disposal service would also serve to stabilize costs as competition does for other services or products.

Since the implementation of the LLWPAA of 1985 no new licensed disposal sites have been developed other than the EnergySolutions (formerly Envirocare of Utah) site which is private. With the closure of the Barnwell site looming in 2008, we believe a stop gap solution is to allow disposal at the existing DOE sites for all generators until commercial sites are

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available. We also believe that disposal at DOE sites can be a permanent solution for all non-DOE federal generators.

**b. Regulatory burden (including cost); and**

Disposal, as the end of the life cycle of radioactive material use, may drive cost/benefit analyses to the point of selecting a non-radioactive alternative. The non-radioactive alternative may not be as effective, but without the expensive disposal liability would be considered the preferred option by the user. So, the user goes without the best option based on the politics of LLW disposal.

This is where the free market system, if allowed to tackle the issue based on technical merits, could drastically reduce disposal costs for all waste streams and allow more beneficial uses of radioactive materials and free up funds for other beneficial uses.

**c. Safety, security, and protection of the environment?**

The US Army does not generate large quantities of Class B & C and GTCC wastes. Without disposal access post mid-2008 we would have to put those type materials in storage, either on-post or at a licensed long term storage facility, probably contractor owned and operated. On-post storage, while secure, is not as secure as permanent disposal and is not desirable due to costs, trained personnel required to maintain management of the materials, uncertainties as to the future of the facility itself, increased risk of personnel exposures and increased risk of contamination events. Commercial storage poses similar concerns at a greater cost. In addition, the Army would lose direct control of the LLW. So, we have concerns about the security and the safety of any LLW that cannot be properly disposed.

Potential Alternative Futures

**3. Assuming the existing legislative and regulatory framework remains unchanged, what would you expect the future to look like with regard to the types and volumes of LLW streams and the availability of disposal options for Class A, B, C, and greater-than-class-C (GTCC) LLW five years from now? Twenty years from now? What would more optimistic and pessimistic disposal scenarios look like compared to your "expected future"?**

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In five years, assuming the existing legislative and regulatory framework remains unchanged, we anticipate there will be 39 States without a LLW disposal outlet for Class B, C and discrete Class A sources. We do not anticipate the opening of a new licensed disposal site capable of accepting those type wastes. We foresee generators continuing to reduce the use of radioactive materials and to look for recycle/reuse options. We see system developers looking for non-radioactive alternatives in new product design. These all lead to lower volumes of LLW for disposal. One consequence of this is reduced economy of scale for the burial sites, which will continue to drive the cost of disposal significantly higher. We fear if the costs are considered prohibitive by some generators, they may use other illegal, disposal methods or abandon material.

In 20 years, we still do not see the opening of a new licensed disposal site capable of accepting Class B and C LLW, assuming the existing legislative and regulatory framework remains unchanged.

With these assumptions, our opinion is that the most attractive alternative is to allow current DOE disposal facilities to accept LLW from non-DOE generators.

If, however, the legislative and regulatory framework encourages the free market to safely resolve the disposal problem, we see the potential for a new Class B and C disposal site to become available for commercial generators within 20 years.

**4. How might potential future disposal scenarios affect LLW storage and disposal in the U.S., in terms of:**

**a. Regulatory system reliability, predictability, and adaptability;**

If all LLW generators had access to cost effective disposal, it would seem to open the door for more reliable, predictable and acceptable regulations for the timely disposition of LLW. Regulations similar to the EPA 90-day clock for RCRA waste would be possible if available and cost effective LLW disposal outlets were available to all generators.

**b. Regulatory burden (including cost); and**

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We are concerned that without a cost effective disposal outlet, generators will rely more and more on reuse/recycle options, some of which may be not be practical. Regulating licensees who accept LLW for reuse/recycle will become a more pressing issue.

**c. Safety, security and protection of the environment?**

The best option is for all LLW generators to have access to cost effective disposal at properly engineered burial sites. If that were the case, the regulators could enforce reliable, predictable and acceptable regulations for the timely disposition of LLW. In the absence of a cost effective disposal outlet, generators may be tempted to look at less than completely legitimate disposition options.

Can the Future Be Altered?

**5. What actions could be taken by NRC and other federal and state authorities, as well as by private industry and national scientific and technical organizations, to optimize management of LLW and improve the future outlook? Which of the following investments are most likely to yield benefits:**

- a. Changes in regulations;**
- b. Changes in regulatory guidance;**
- c. Changes in industry practices;**
- d. Other (name).**

We feel option (a) is the best alternative assuming it could include law; change regulations/laws to allow all LLW generators to have access to cost effective DOE disposal facilities. We recognize there are hurdles to overcome but feel the benefits would outweigh the costs to implement.

**6. Are there actions (regulatory and/or industry initiated) that can/should be taken in regard to specific issues such as:**

- a. Storage, disposal, tracking and security of GTCC waste (particularly sealed sources);**

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GTCC is currently not a pressing issue for the Army. We have a successful working relationship with DOE to accept our GTCC waste.

**b. Availability and cost of disposal of Class B and C LLW;**

We see three options to alleviate the lack of disposal once the Barnwell, SC, site stops accepting LLW from outside compact; 1) petition the State of Washington to allow the Hanford site to accept waste from all 50 states; 2) petition the State of South Carolina to keep their site open; or 3) open up DOE disposal sites to non-DOE LLW generators.

**c. Disposal options for depleted uranium;**

Disposal of depleted uranium is currently not an issue for the Army; we have a successful disposal outlet with EnergySolutions (formally Envirocare of Utah) for licensed depleted uranium LLW.

**d. Extended storage of LLW;**

If Barnwell closes as planned, and another disposal option does not materialize for the 39 States that rely on Barnwell for disposal of their class B and C waste, we anticipate industry will develop long term commercial storage options.

**e. Disposal options for low-activity waste (LAW)/very low level waste (VLLW);**

Disposal of LAW and VLLW is currently not an issue for the Army; we have successful disposal outlets in Waste Control Specialists, US Ecology, ID and others. We see these recent options as an example of the free market system addressing an issue based on technical merits and drastically reducing disposal costs for LLW generators.

**f. On-site disposal of LLW;**

History tells us this is not a good option. The Army has looked at onsite disposal for certain LLW decommissioning waste streams in the past and we have always determined that for technical, political and land use restriction reasons, onsite disposal is not a viable option.

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g. Other (name).

No comment.

7. What unintended consequences might result from the postulated changes identified in response to questions 5 and 6?

Our preferred alternative is to open up DOE sites for all LLW generators. The DOE sites would provide a cost effective disposal outlet in existing, well designed and remotely located disposal cells. However, we would anticipate protests from the host States and local communities should that alternative be seriously considered.

Interagency Communication and Cooperation

8. Based on your observations of what works well and not-so-well, domestically and/or internationally, with regard to the management of radioactive and/or hazardous waste, what actions can the NRC and other Federal regulatory agencies take to improve their communication with affected and interested stakeholders?

No comment.

9. What specific actions can NRC take to improve coordination with other Federal agencies so as to obtain a more consistent treatment of radioactive wastes that possess similar or equivalent levels of biological hazard?

No comment.

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