

in a jointly regulated mixed waste disposal facility.

More recent information reported in our advance notice of proposed rulemaking regarding increased flexibility in RCRA regulations for storing mixed low-level radioactive waste (64 FR 10064, March 1, 1999) confirms the continued storage of mixed waste due to lack of treatment and reasonable disposal options. In particular, the Electric Power Research Institute documented such problems for certain mixed waste from nuclear power plants, hospitals, and universities in 1998 found small amounts of mixed waste with no commercially available treatment technologies, and our discussions with the American Chemical Society and the International Isotope Society further highlighted the difficulty of treating and/or disposing of certain mixed waste.

2. DOE LAMW

The DOE also continues to generate mixed waste (and therefore LAMW). In fact, DOE has a legacy of environmental and process wastes that require disposal. For many decades, many DOE sites did not dispose of their waste streams in a timely manner, allowing these wastes to accumulate in storage. DOE has indicated that continued indefinite storage of such wastes is unacceptable; however, continued storage in many cases was deemed necessary because appropriate treatment methods were not available. The Federal Facilities Compliance Act of 1992 recognized this situation and directed DOE to develop plans and timetables for treatment and disposal of mixed waste at its sites. DOE determined that it was necessary to conduct a programmatic review of waste management activities throughout the DOE complex. As a result, DOE has reviewed its options for managing of different categories of radioactive waste, including LLRW and MLLW. (See the "Final Waste Management Programmatic Environmental Impact Statement (WM PEIS)," DOE/EIS-0200F, May 1997.)

The WM PEIS evaluated various options for managing and disposing of MLLW and identified preferred alternatives, narrowing the list of sites that would be capable of treating or disposing of MLLW. In evaluating the role of the various DOE sites within each option, the following criteria were applied to the sites in question (WM PEIS Summary, Table 1.6-1):

- Consistency
- Cost
- Cumulative impact
- DOE mission

- Economic dislocation
- Environmental impact
- Equity
- Human health risk
- Implementation flexibility
- Mitigation
- Regulatory compliance
- Regulatory risk
- Site mission
- Transportation

DOE worked with affected States, stakeholders, and Tribal Nations to provide input towards qualitative criteria such as equity and stakeholder acceptance.

On February 18, 2000, DOE announced its record of decision regarding the treatment and disposal of MLLW. Accordingly, MLLW will be treated on a regional basis at the Hanford Site, the Idaho National Engineering and Environmental Laboratory, the Oak Ridge Reservation, the Savannah River Site, or on-site; MLLW will be disposed at the Hanford Site and the Nevada Test Site. (See "Record of Decision for the Department of Energy's Waste Management Program: Treatment and Disposal of Low-Level Waste and Mixed Low-Level Waste; Amendment of the Record of Decision for the Nevada Test Site," 65 FR 10061, February 25, 2000.) DOE has indicated that 43,000 cubic meters of MLLW from waste management operations will require off-site disposal, considering both waste in storage and waste to be generated over the next 20 years. While the above referenced record of decision did not address the use of commercial disposal facilities, DOE's decision does not preclude use of commercial treatment or disposal facilities for DOE's MLLW. DOE has estimated that approximately 22,000 cubic meters of MLLW from waste management operations may be considered for commercial disposal facilities. In addition, 53,000 cubic meters of MLLW from environmental restoration activities may be considered for commercial disposal facilities. Significant additional volumes of MLLW may also be generated from future cleanup activities. There is no breakdown of how much of this waste may be "low activity" MLLW. (See "Information Package on Pending Low-Level Waste and Mixed Low-Level Waste Disposal Decisions to be made under the Final Waste Management Programmatic Environmental Impact Statement," U.S. Department of Energy, September 1998.)

K. Questions for Public Comment: Disposal Concept for LAMW

We request public comment on a number of aspects related to this action.

In addition to the questions raised earlier in this action, the questions below generally highlight areas in which there is a lack of information or there are a variety of approaches that may prove viable. You are not limited to responding to the specific questions below; as always, you are welcome to comment on any aspect of this document or questions raised earlier in the text. In particular, we ask:

1. Is our description of the problems associated with mixed waste accurate? For example, what is the present status regarding the ability to dispose of low-activity mixed waste in a protective and cost-effective manner? Are some generators, such as medical or other researchers, using less current practices to avoid generating mixed waste? (section II.B.1)

2. What new information is available concerning the characteristics, treatment, storage, and disposal of LAMW? (II.A.1)

3. Is the approach we have outlined to allow disposal of LAMW in RCRA-C facilities viable? Would it help to alleviate generators' concerns?

4. What roles should EPA and NRC take in further developing this approach? Are there other actions that can be taken to minimize dual regulation or facilitate permanent disposal of LAMW? (II.A.3)

5. Are radionuclide concentration limits adequate for limiting the impacts from LAMW?

6. What concentration limits would address a significant proportion of your mixed waste? (II.A.1)

7. Should any rule or guidance apply only to commercial RCRA-C disposal facilities (roughly 20 operating)? To privately-owned facilities? To DOE facilities? (II.B.1)

8. Should a rule address disposal of low-activity material in RCRA-D (solid waste) facilities? (II.A.2)

9. Should such a rule apply to DOE wastes? Are there special issues associated with DOE waste (e.g., characterization, knowledge of historic generating processes, volumes)? (II.G)

10. What additional requirements would be necessary for RCRA facilities (e.g., related to post-closure care, land ownership, financial assurance, monitoring and corrective action)? (II.C.4)

11. Are the exposure scenarios we have outlined adequate? Is there a method other than modeling that could effectively determine the protectiveness of RCRA-C disposal of LAMW? (II.D.3.a, b)

12. What is the appropriate way to select site data for modeling? What level