

# EPA START

Reply To:  
Attn Of: HW-124

Ken Bracken, Director  
Waste Management Division  
Richland Operations Office  
U.S. Department of Energy  
P.O. Box 550 (A5-21)  
Richland, Washington 99352

Re: 1992 Report on Hanford Site Land Disposal Restrictions for  
Mixed Wastes  
EPA ID # WA 789000 8967

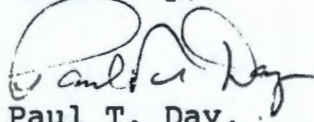
Dear Mr. Bracken,

The U.S. Environmental Protection Agency (EPA) Region 10 has reviewed the 1992 Report on Hanford Site Land Disposal Restrictions for Mixed Wastes (DOE/RL-92-15), prepared by the U.S. Department of Energy (DOE) in accordance with Milestone M-26. The Hanford Federal Facility Agreement and Consent Order requires that DOE update annually the plan for complying with land disposal restrictions (LDR) for radioactive mixed wastes.

The enclosed general and specific comments are based on a comprehensive technical review of this plan. As you will note, not all of EPA's comments, discussed in March 1992, were fully addressed in the April 1992 submittal. Specific areas to be included in the April 1993 submittal of this report are also addressed.

If any additional information is required, contact Daniel Duncan, Hanford RCRA Program Manager, at (206) 553-6693.

Sincerely,



Paul T. Day,  
Hanford Project Manager

Enclosure

cc:

Dan Duncan, EPA  
Dave Jansen, Ecology  
Betty Wiese, EPA  
Steve Wisness, DOE



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## GENERAL COMMENTS

The LDR Document does not adequately address all previous comments discussed with DOE and Westinghouse Hanford Company staff in March 1992, regarding three specific areas in the EPA and Ecology requirements document (Ecology and EPA, 1990).

### Comprehensive Waste Characterization Plan (Item 2)

The Plan should be updated to include additional information regarding LDR mixed waste characterization. Analytical data should be provided to verify process knowledge designation of mixed waste. The Waste Characterization Plan should be upgraded in the April 1993 submittal of this report.

### Commercial and Alternate Treatment Technologies (Items 4.b and 4.d)

The report should discuss alternative treatment technologies which might be used. The specific pretreatment technologies have yet to be determined. The Treatment plan should address the following specific areas: Treatability Tests, Feasibility analyses, Bench Scale and Pilot Scale Tests, Research, Development, and Demonstration projects, and Design Reports. These should be developed and included in the April 1993 submittal of this report.

### Waste Minimization (Item 7)

The Waste Minimization Section should include the areas as outlined in the June 12, 1989 Notice 54 FR 25056 which provided "Draft Guidance to Hazardous Waste Generators on the Elements of a Waste Minimization Program". This was non-binding guidance to generators of regulated hazardous waste on what constitutes a "program in place" to comply with the certification requirements of sections 3002(b) and 3005(h) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA). This certification requires the generators to implement programs to reduce the volume and the toxicity of hazardous waste to the extent economically practicable.

The Waste Minimization Program for the Hanford Site LDR Mixed Wastes should address the following areas:

- (1) Top Management Support: Top Management Support should ensure that waste minimization is a company-wide effort.
- (2) Characterization of Waste Generation: A waste accounting system to track the types, amounts and hazardous constituents of wastes and the dates they are generated.

(3) Periodic Waste Minimization Assessments: Materials which eventually be become waste should be tracked from receipt to the point which they become a waste.

(4) A Cost Allocation System: All managers and departments should be charged "fully-loaded" waste management costs for the wastes they generate, factoring in liability, compliance and oversight costs.

(5) Encouragement of Technology Transfer: Technical information should be exchanged on waste minimization from other parts of the facility, from other firms, trade associations, State and university technical assistance programs or professional consultants. Techniques which have been evaluated should be documented.

(6) Program Evaluation: Conduct periodic reviews of program effectiveness. These reviews will provide feedback and identify potential areas for improvement.

In addition guidance may also by found in the "Waste Minimization Opportunity Assessment Manual", EPA/625/7-88/003 dated July 1988.

The Waste Minimization Section does not address all the areas as outlined in the above guidance and therefore should be revised to be consistent with the this guidance as well as the Hanford Federal Facility Waste Minimization Plan. Waste Minimization of the LDR mixed waste streams identified in the April 1992 Report are to be addressed. This Waste minimization assessment is to be included in the April 1993 Mixed Waste Report.

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## SPECIFIC COMMENTS

### 1. Section 1.0, Page 1-1, Accelerated Treatment.

Although accelerated treatment is a requirement in the LDR requirements plan, it has not been addressed in the April 1992 submittal (Ecology and EPA, 1990). Accelerated treatment needs to be addressed in Sections 2.0 and 3.0. This is to be addressed in the April 1993 submittal.

### 2. Section 1.2, Pages 1-3 and 1-4, Assumptions.

The eighth assumption under the TPA needs to be changed to reflect the result of the April 3, 1992 dispute resolution settlement of Milestone M-14-00. This milestone was not completed by the U.S. Department of Energy as required by the Tri-Party Agreement.

The fourth assumption under DST waste needs to provide the rationale that double-shell slurry does not require pretreatment. To date data has been limited to one DST sample which showed that the waste met non-wastewater treatment levels.

The key assumption that SST waste are transferred to DST has not been addressed. This is specifically discussed in Section 3.1.1.1. This key assumption should be added to Section 1.2.

### 3. Section 2.4.1, Page 2-6, Double-Shell Tank (DST) Waste

The first paragraph seems to contradict the assumption in Section 1.2, Page 1-3, that DST Slurry will not require pretreatment. DST slurry which exceeds LDR organic treatment standards will require pretreatment. It is not clear if the Grout Treatment Facility will meet the LDR treatment standards for organic wastes.

### 4. Section 2.4.4, Page 2-7, 242-A Evaporator Process Condensate

The delisting petition has been prepared to delist the treated effluent from the Hanford 242-A PUREX Process Condensate Treatment Facility (F003, F005). The petition, number D0855, is currently under review by EPA-HQ. There is no mention of the Research, Development, and Demonstration, (RD&D) activity planned to determine the applicability of specific treatment technologies for the 242-A Evaporator Condensate.

5. Section 2.5, Page 2-10, Waste Reduction/Minimization

See General Comment on Waste Minimization.

6. Section 2.6, Page 2-11, Case-by-Case Extensions

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

7. Table 2-1, Page T2-1, Summary of Annual Waste Generation Projections.

This Table is incomplete. Data for "TBDs" should be provided to complete this table. This table should also be consistent with the Annual Dangerous Waste Report. The Note on this table is inconsistent with the assumption in Section 1.2 that PUREX will be shutdown or kept in cold standby and will not be restarted.

8. Table 2-4.1, Page T2-4.2, Storage Unit Characteristics.

Footnote "e" is missing from this table.

9. Table 2-5, page T2-5.2, Stored Waste Characteristics.

The footnote should indicate that Single Shell Tank (SST) waste is also managed as high-level waste (HLW).

10. Table 2-6, Page T2-6.13, Treatment of LDR Waste for Disposal.

Footnote "f" is incorrect. The WIPP will be required to obtain a RCRA Permit to operate the facility. The RMW wastes were determined to be subject to RCRA in November 1980. Since the facility was not in existence prior to November 1980, a RCRA Permit will be required prior to operation of this facility.

11. Section 3.1.1.1.2, Page 3-2, Plutonium Finishing Plant.

A table for PFP waste composition should be added to Section 3.0 similar to Table 3-1 in format.

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12. Section 3.1.2.5., Page 3-5, Schedule for Further Characterization.

A Table should be added in Section 3.0 which specifies the EPA analytical protocols for each of the constituents identified in Section 3.1.2.3

13. Section 3.1.2.4, Page 3-5, Uncertainty of Waste Designation.

Clarify if the waste codes were determined based solely process knowledge or are based on limited analytical data.

14. Section 3.1.4.2.1, Page 3-7, DST Slurry.

The first paragraph seems to contradict the assumption in Section 1.2, Page 1-3, that DST Slurry will not require pretreatment. DST slurry which exceeds organic treatment standards will require pretreatment. It is not clear if the Grout Treatment Facility will meet the LDR treatment standards for organic wastes. To date the analysis from one DST, 241-AN-106, has shown that the organic constituents meet the LDR treatment standards for non-wastewater. On January 9, 1992 EPA proposed new treatment standards for non-wastewater F001 - F005 spent solvents (57 FR 969-971).

15. Section 3.1.4.2.3, Page 3-8, Definition and Treatment of Neutralized Cladding Removal Solids Waste.

This section should specify when the pretreatment options study will be completed. Specific treatment milestones should be included.

16. Section 3.1.6, Page 3-9, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

17. Section 3.2.2.5, Page 3-11, Characterization.

This section should specify the number of cores which have been characterized to date.

18. Section 3.2.6, Page 3-13, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

19. Section 3.3.6, Page 3-19, Case-by-Case Extensions.

A recent Ninth Circuit Court ruling stated that RMW was subject to RCRA in November 1980 and not November 27, 1987. This decision was a result of a court case involving the WIPP.

20. Section 3.4, Page 3-20, 242-A Evaporator Process Condensate.

This section should specify when the 242-A Upgrades will be completed and when the 242-A Evaporator will be operational (October 1992).

21. Section 3.4.6, Page 3-24, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

22. Section 3.5.6, Page 3-27, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

23. Section 3.6.6, Page 3-31, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

24. Section 3.7.6, Page 3-35, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

25. Section 3.8.2, Page 3-36, Storage.

This section should specify that the storage will be limited to the two remaining original storage tanks which will be disposed of as part of the tank closure process.

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26. Section 3.8.5, Page 3-37, Waste Reduction.

This section should specify that this waste stream will be eliminated as a result of an expedited response action under the CERCLA Program.

26. Section 3.9.5, Page 3-42, Waste Reduction.

This section should be clarified i.e. how an increase in waste volume from .15 cubic meters to .21 cubic meters can be construed to be waste reduction.

27. Section 3.9.6, Page 4-32, Case-by-Case Extensions.

The expiration date for the 2 year national capacity variance was May 8, 1992 and not May 9, 1992 as cited. The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

28. Section 3.12.6, Page 3-51, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

29. Section 3.13.6. Page 3-61, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

Clarify if date for the initiation of WRAP Operations is 1996 or 1997.

30. Section 3.14.6, Page 3-67, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

Clarify if date for the initiation of WRAP Operations is 1996 or 1997.

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31. Section 3.15.6, Page 3-71, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

32. Section 3.16.6, Page 3-74, Case-by-Case Extensions.

The Federal Register Notice granting DOE case-by-case extension for radioactive mixed waste was signed on May 7, 1992. In effect this extension allows DOE to store LDR mixed wastes until May 8, 1993. This date can be extended for up to one additional year.

**REFERENCE**

Ecology and EPA, 1990: Requirements for Hanford LDR Plan, U.S. Environmental Protection Agency (Paul T. Day), and State of Washington Department of Ecology (Timothy L. Nord), April 10, 1990.

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