



**Department of Energy**  
Washington, DC 20585  
September 23, 1999

Mr. Peter Eglinton  
Office of Management and Budget  
Office of Information and Regulatory Affairs  
725 17th Street, N.W.  
Washington, D.C. 20503

Dear Mr. Eglinton:

Re: Comments on "OMB Review" [7/29] Draft of EPA Proposed Rule regarding  
*Storage, Treatment, and Disposal of Mixed Waste*

On August 2, 1999, EPA submitted to the Office of Management and Budget (OMB), Office of Information and Regulatory Affairs, a draft proposed rule concerning storage, treatment, and disposal of mixed waste. The rule, as proposed, would provide regulatory flexibility for generators of low-level mixed waste (LLMW) by authorizing a conditional exemption from hazardous waste requirements imposed by the Resource Conservation and Recovery Act (RCRA) for storage and treatment in tanks/containers of LLMW at the generator's site when the generator is licensed by the Nuclear Regulatory Commission (NRC) or an NRC Agreement State. Additionally, the proposed rule would establish a conditional exemption from RCRA hazardous waste requirements for LLMW that is manifested, transported, and disposed of pursuant to NRC or NRC Agreement State regulations for low-level waste.

Pursuant to OMB's August 10, 1999 request for comments, DOE conducted a review of the draft proposed rule. Based on this review, DOE has prepared the attached comments for OMB's consideration. In general, we support EPA's efforts to explore mixed waste management options that increase regulatory flexibility and decrease dual regulation. Thus, we would support OMB's approval of the draft proposed rule with certain clarifying changes, which are itemized in the attached comments.

DOE appreciates the opportunity to comment on this draft proposed rule. If you have questions regarding any of these comments, please contact Bill Fortune of my staff at (202) 586-7302, or at the following e-mail address [william.fortune@eh.doe.gov](mailto:william.fortune@eh.doe.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "T. Traceski", followed by a vertical line.

Thomas T. Traceski  
Director, RCRA/CERCLA Division  
Office of Environmental Policy and Assistance

cc: N. Strauss, GC-74

**United States Department of Energy**  
**COMMENTS ON OMB REVIEW DRAFT OF**  
**EPA NOTICE OF PROPOSED RULEMAKING (NPRM) REGARDING**  
**STORAGE, TREATMENT, AND DISPOSAL OF MIXED WASTE**

**General Comments:**

1. The Department of Energy (DOE) appreciates the opportunity to comment on the OMB's review draft of the EPA notice of proposed rulemaking (NPRM) regarding storage, treatment, and disposal of mixed waste. In general, DOE supports EPA's efforts to explore options that increase the flexibility in requirements applicable to treatment, storage, and disposal of low-level radioactive mixed waste (LLMW). DOE agrees that requirements imposed on LLMW to implement the Resource Conservation and Recovery Act (RCRA) may duplicate requirements imposed on LLMW to implement the Atomic Energy Act of 1954, as amended (AEA). DOE favors eliminating such duplication, and concurs with EPA's approach of establishing conditional exemptions from RCRA hazardous waste management requirements when equivalently protective AEA requirements apply and other appropriate conditions will be met. DOE believes that final disposition of some of its mixed waste could be expedited if the rule is finalized as proposed, thereby reducing storage costs. For these reasons, DOE urges OMB's approval of the NPRM with certain clarifying changes, which are itemized in the specific comments below.
2. Notwithstanding DOE's support for publication of EPA's NPRM, DOE believes that, while the final rule will provide some relief for DOE-generated LLMW, such relief will be available to only a small percentage of DOE's total LLMW inventory. Furthermore, DOE believes that low-level radioactive waste (LLW) management facilities complying with AEA requirements *as specified in DOE directives* (e.g., orders, manuals, guidance documents) are equally as protective of human health and the environment as LLW management facilities complying with AEA requirements *as specified in NRC and Agreement State regulations and licenses*. Therefore, with the successful promulgation of this rulemaking, DOE would be interested in working with EPA and the States to further explore how a conditional exemption from RCRA hazardous waste management requirements could be structured for treated LLMW generated by DOE and disposed in DOE-controlled LLW disposal facilities. The Department is confident that the protectiveness of LLW disposal facilities complying with DOE directives can be demonstrated. Hence, while DOE acknowledges that past discussions with EPA and the States did not identify a successful resolution of certain legal issues related to independent regulation of DOE activities, the Department believes fiscal responsibility obligates continued negotiations. Since the potential cost savings from avoiding unnecessary dual regulation of DOE-generated LLMW not disposed at NRC- or Agreement State-licensed facilities could be substantial, DOE submits that continued investigation of options supporting such avoidance warrants pursuit.
3. In section VI.G.2 of the draft NPRM, EPA inquires whether States, the NRC-regulated community, or non-NRC licensees (such as DOE) would be interested in an approach, other than the conditional exemption approach, whereby dual regulation of LLMW disposal could be avoided on a case-specific basis. The alternative method would allow States to develop

a regulatory process for granting variances from RCRA requirements based on site-specific risk assessments. DOE will support the alternative site-specific, risk-based variance approach described in section VI.G.2 of this proposed rule, which would allow DOE to work directly with mixed-waste-authorized States to devise appropriate risk levels and exemption requirements to support RCRA-exempt disposal of DOE-generated LLMW in DOE low-level radioactive waste disposal facilities.

### Specific Comments:

#### Which acronyms are used in this preamble?

1. NARM/NORM — Neither “NARM/NORM” or “NARM” appears anywhere in the preamble other than in the list of acronyms. Therefore, “NARM/NORM” should be replaced in the list of acronyms with “NORM”. Alternatively, the term “NORM” could be replaced throughout the preamble and in the proposed regulatory text with either “NARM/NORM” or “NARM”. If EPA intended to refer to both naturally occurring and accelerator produced radioactive material, then DOE recommends the latter alternative, and prefers using “NARM”. In either case, a definition of “NARM” should be added to the list of definitions. One possible definition is as follows:

*NARM* - means any radioactive material that is either naturally occurring or produced in a charged particle accelerator, and is not source, special nuclear, or byproduct material, as defined by and regulated under the AEA. In addition, to be NARM, the composition, radionuclide concentrations, availability, or proximity to man of naturally occurring radioactive material must have been increased by or as a result of human practices. NARM does not include the natural radioactivity of rocks or soils, or background radiation.

#### Definition of Terms Used in the Preamble

2. Modify, as indicated, the following draft definitions:

- a. To be consistent with 10 CFR 150.1 and 10 CFR 150.3:

*Agreement State* - means a state that has entered into an **effective** agreement with the NRC under **subsection 274b** of the **Atomic Energy Act** AEA of 1954, as amended (**68 Stat. 919**), to assume responsibility for regulating ~~most nuclear materials~~ **source, special nuclear, or byproduct material in quantities not sufficient to form a critical mass.**

- b. *Legacy waste* - means waste that ~~is stored LLMW for which no treatment technology or disposal capacity has been available~~ **was generated by past activities and is in storage because appropriate treatment technologies have not been developed, or treatment and disposal capacity has not been available.** It has been stored longer than RCRA regulatory time limits.

- c. ~~Low-Level mixed waste (LLMW) - is a mixed waste containing “low-level waste” defined below~~ means low-level radioactive waste containing a hazardous waste component.
- d. ~~Low-level radioactive waste (LLW) - defined in 10 CFR 61.2,~~ means radioactive waste containing source, special nuclear material, or byproduct material, but which is not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in §11(e)(2) of the Atomic Energy Act, or naturally occurring radioactive material.
- e. ~~LDR treatment standard compliant waste - means LLMW mixed waste that has been treated to meet, or meets as generated, the applicable met the RCRA LDR treatment standards as one of the conditions of disposal exemption.~~
- f. ~~Mixed waste - defined in RCRA, as amended by the Federal Facility Compliance Act of 1992, means a waste that contains both hazardous waste and source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954, as amended. A hazardous waste is either listed under 40 CFR Part 261, Subpart D, and/or exhibits a characteristic described in 40 CFR Part 261, Subpart C. A radioactive waste is generally classified as source, special nuclear, or byproduct material, which is exempt from the definition of solid waste at 42 U.S.C. 6903, 40 CFR 261.4(a)(4). (51 FR 24504; July 3, 1986).~~
- g. ~~Mixed waste treatment facility - means a waste treatment facility that is authorized to treat and otherwise manage, as necessary, hazardous waste either under interim status (as defined in 40 CFR Part 270, Subpart G, “Interim Status”, or equivalent state regulations), or under a valid RCRA permit (issued according to 40 CFR Part 270, “EPA Administered Permit Programs: The Hazardous Waste Program,” or equivalent state regulations) and is authorized under the AEA (by NRC or Agreement State license or DOE Orders) to treat and otherwise manage, as necessary, radioactive waste or NORM-contaminated hazardous waste. permitted by EPA to treat hazardous waste and licensed by the Commission to manage radioactive waste.~~
- h. ~~Naturally-occurring radioactive material (NORM) - means any naturally occurring radioactive materials that is not source, special nuclear, or byproduct material, as defined by and regulated under the AEA, and whose composition, radionuclide concentrations, availability, or proximity to man have been increased by or as a result of human practices. NORM does not include the natural radioactivity of rocks or soils, or background radiation.~~
- i. ~~NRC or Agreement State license - means a license issued by the Nuclear Regulatory Commission or an Agreement State under authority granted by the AEA or state law.~~

3. Add the following definitions:

- a. *Hazardous waste* - means any material which is defined to be hazardous waste in accordance with 40 CFR 261.3, “Definition of Hazardous Waste.”
  - b. *Radioactive waste* - means any garbage, refuse, sludges, and other discarded material, including solid, liquid, semisolid, or contained gaseous material that must be managed for its radioactive content.
4. Delete the following draft definition:

*Commission* - means the Nuclear Regulatory Commission (NRC) or an Agreement State which has entered into an effective agreement under subsection 274b of the Atomic Energy Act of 1954, as amended.

This definition of the term “Commission” may be confusing. In federal laws such as the AEA and the Nuclear Waste Policy Act of 1982, the term “Commission” refers to either the NRC or the Atomic Energy Commission, but is never used to refer simultaneously to NRC and Agreement States. If a discussion needs to include both the NRC and Agreement States, the text usually says something like “NRC/Agreement State” or “NRC or Agreement State”. Common usage in the nuclear community is consistent with that convention. Note that the preamble to this NPRM uses not only “Commission” to refer collectively to the NRC and an Agreement State, but also often uses “NRC or Agreement State.” DOE suggests that EPA be asked to eliminate the use throughout the preamble and proposed regulatory text of the term “Commission” when referring to NRC and Agreement States. In its place, DOE suggests substituting the term “NRC or Agreement State”. Similarly, DOE suggests that “Commission license” be changed throughout the preamble and proposed regulatory text to “NRC or Agreement State license”, and that “Commission-licensed” be changed to either “NRC- or Agreement State-licensed” or “NRC/Agreement State-licensed”.

### Who is Eligible for This Rule?

5. Table 1. Facilities Potentially Affected by the Proposal, last row, 2<sup>nd</sup> column — Modify as follows:

~~Facilities, installations, and laboratories operated by Federal and State Agencies, including, but not limited to, DOE (including the Naval Nuclear Propulsion Program) installations that conduct research and development of nuclear materials and products, National Institutes of Health, Bureau of Standards, and Department of Defense installations, and other governmental laboratories.~~

### I. STATUTORY AUTHORITY

6. 1<sup>st</sup> paragraph, 1<sup>st</sup> sentence — Modify as follows:

The statutory basis for this rule is in ~~the Resource Conservation and Recovery Act (RCRA), Sections 2002(a), 3001, 3001(a), 3002,~~

3004, 3006, and 3007 of the Solid Waste Disposal Act of 1970, as amended, ~~including amendments~~ by the Resource Conservation and Recovery Act of 1976 (RCRA); and the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. 6912(a), 6921, 6922, 6924, 6926, and 6927.

## II. SUMMARY OF TODAY'S ACTION

7. 2<sup>nd</sup> paragraph, 4<sup>th</sup> sentence — Modify as follows:

... ~~Any generator may send LLMW not requiring onsite storage and meeting the LDR treatment standards may be sent for disposal to a low-level radioactive waste disposal facility (LLRWDF) licensed by the Commission NRC or an Agreement State, if the LLMW meets applicable LDR treatment standards when shipped, and using an NRC manifest is used.~~ ...

8. Figure title — Add figure number (i.e., “Figure 1:”) before the figure title.

9. Figure 1, Note 1 — Modify as follows:

All licensees (whether NRC or Agreement State) generating LLMW ~~may be~~ are eligible for...

10. Figure 1, Note 3 — Modify as follows:

Ignitable, corrosive, and reactive hazardous wastes exit RCRA Subtitle C when LDR standards are met. Listed waste may meet HWIR99 exit levels, ~~which EPA is proposing in a separate NPRM developed in parallel with this proposal.~~

11. 3<sup>rd</sup> paragraph, 2<sup>nd</sup> and 3<sup>rd</sup> sentences — Consistent with the suggested change in the definition of “NRC license” (see comment #2(i), above), DOE suggests that EPA be asked to change the terms “NRC license” and “NRC licensee” throughout the NPRM to “NRC or Agreement State license” and “NRC or Agreement State licensee”, respectively.

## II. SUMMARY OF TODAY'S ACTION

### B. What regulatory changes are we proposing for disposal of LLMW?

12. 1<sup>st</sup> paragraph, 1<sup>st</sup> sentence — See specific comment #1, above, regarding use of the term “NORM”.

13. 2<sup>nd</sup> paragraph, 1<sup>st</sup> sentence — Modify as follows:

Under this exemption, you may not send your conditionally-exempt LLMW ~~or NORM-contaminated hazardous waste~~ for disposal to a DOE radioactive waste disposal facility. ...

### III. WHY ARE WE PROPOSING A LLMW STORAGE, TREATMENT, AND DISPOSAL RULEMAKING?

14. General Comment — This section contains no explanation of why NORM-contaminated hazardous waste is included in the scope of this rulemaking. Since NORM waste is not subject to regulation under the AEA, DOE suggests that EPA be asked to provide in this section some explanation of its inclusion within the scope of this rulemaking.
15. 1<sup>st</sup> paragraph, 1<sup>st</sup> sentence — If the scope of the proposed conditional exemption for mixed waste disposal is intended to cover NORM-contaminated hazardous waste, as well as LLMW, consider modifying as follows:

Mixed waste is regulated under multiple authorities: ~~for hazardous constituents by RCRA (for the hazardous waste component), as implemented by EPA or Authorized States; and AEA (for the source, special nuclear, or byproduct material component), and for radionuclides in the mixed waste by the Atomic Energy Act (AEA) of 1954, as amended, as implemented by either the NRC or an Agreement State (for commercially-generated mixed wastes), NRC or NRC Agreement States for other mixed waste, or the Department of Energy (DOE) (for defense-related radioactive mixed waste generated by DOE activities).~~ NORM-contaminated hazardous waste is also regulated under multiple authorities: RCRA (for the hazardous waste component); and State law (for the NORM component), as implemented by an agency designated by the State law.

DOE also suggests that, if EPA decides against including NORM in the definition of low-level radioactive waste (as is suggested in specific comment #2(d), above), EPA be asked to consider modifying other parts of the remainder of the preamble so that the text consistently reflects the inclusion of NORM-contaminated hazardous waste within the scope of the proposed conditional exemption for disposal.

### III. WHY ARE WE PROPOSING A LLMW STORAGE, TREATMENT, AND DISPOSAL RULEMAKING?

#### A. Need to address dual regulation concerns

16. 1<sup>st</sup> paragraph, 1<sup>st</sup> sentence — Modify as follows:

The regulated community has informed us that the applicability of RCRA and ~~NRC~~ AEA requirements (as implemented by the NRC or an Agreement State) to LLMW is burdensome, duplicative, and costly and does not provide more protection of human health and the environment than that achieved under one regulation. ...

DOE also suggests that EPA be asked to consider changing “NRC requirements” to “AEA requirements (as implemented by the NRC or an Agreement State)” throughout the

preamble, as appropriate. This would provide consistency of form in references to the legal origins of hazardous waste requirements (i.e., RCRA) and radioactive waste requirements (i.e., AEA).

17. 3<sup>rd</sup> paragraph, 1<sup>st</sup> sentence — Modify as follows:

We, through this action, propose regulatory relief intended to allow the disposal of certain LLMW (such as legacy waste requiring long-term storage due to lack of treatment and disposal capacity), that have, until now, been stored ~~onsite by NRC licensees~~ as mixed waste subject to both RCRA ~~permitting and NRC licensing~~ requirements **and AEA requirements (as implemented by the NRC, an Agreement State, or DOE).**

### **III. WHY ARE WE PROPOSING A LLMW STORAGE, TREATMENT, AND DISPOSAL RULEMAKING?**

#### **D. Need to address concern about capacity for LLMW treatment and disposal**

18. 3<sup>rd</sup> paragraph, 5<sup>th</sup> sentence, 1<sup>st</sup> bullet — Modify as follows:

- **increases its own mixed waste treatment capacity or** uses commercial mixed waste treatment capacity to meet land disposal treatment standards; and

### **V. LOW-LEVEL MIXED WASTE STORAGE AND TREATMENT**

#### **D. What background information did we use for this proposal?**

##### **1. What are the findings of our comparison studies?**

- a. What did our review of NRC license requirements indicate?

19. 1<sup>st</sup> paragraph, 2<sup>nd</sup> sentence — Modify as follows:

... We reviewed provisions in low-level waste generator licenses, and in particular nuclear power plant licenses, concerning the on-site storage of LLW to assess whether these requirements are protective of human health and the environment **with respect to potential releases of hazardous waste constituents.**

### **VI. LOW-LEVEL MIXED WASTE DISPOSAL**

20. 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> paragraphs — DOE suggests that EPA be asked to consider mentioning in these introductory remarks that the scope of the proposed conditional exemption for disposal includes NORM-contaminated hazardous waste.

## VI. LOW-LEVEL MIXED WASTE DISPOSAL

### A. How is this proposal different from the HWIR99 proposal?

21. 2<sup>nd</sup> paragraph, 4<sup>th</sup> sentence — Modify as follows:

... We, thus, believe that ~~the NRC an NRC- or Agreement State-licensed LLW~~ disposal facility provides sufficient protection of will protect human health against the potential chemical hazards that could be caused by releases of chemical constituents contained in RCRA-exempt LLMW, so long as the proposed conditions of the exemption are met. ...

## VI. LOW-LEVEL MIXED WASTE DISPOSAL

### B. How did we respond to States' concerns about extending the HWIR95 Proposal to DOE mixed waste?

22. 1<sup>st</sup> paragraph — This paragraph incorrectly characterizes DOE's authority under the AEA. Also, some statements in the paragraph regarding the proposed conditional exemption that DOE discussed with the States, are incorrect as worded. The paragraph would be more accurate if modified as follows:

In 1995, we published in the *Federal Register*, a notice of proposed rulemaking (referred to as the HWIR95), which, among other things, requested comments on several options for conditional exemption from RCRA Subtitle C management requirements (60 FR 66344; December 21, 1995). One option we suggested (60 FR 66344, 66400-66401) would have exempted mixed wastes from Subtitle C hazardous waste disposal regulations if they were treated to meet risk-based chemical constituent concentration levels and were managed in disposal facilities subject to controls imposed under the AEA. In response to the ~~Under the~~ HWIR95 proposal, the Department of Energy (DOE) submitted alternative suggestions for our consideration, which would have allowed certain treated mixed wastes generated by the Department of Energy (DOE) ~~would have exited~~ to be conditionally exempted from RCRA Subtitle C hazardous waste disposal requirements ~~and qualified as a nonhazardous radioactive waste only~~, if such mixed wastes were disposed in a DOE LLRWDF. That is, DOE's ~~the~~ HWIR95 proposal would have eliminated RCRA jurisdiction over certain treated DOE mixed waste. ~~Many~~ Several State RCRA agencies and the Attorneys<sup>2</sup> General expressed concern over ~~this possibility~~ DOE's proposals, and also opposed extending the HWIR95 risk-based exit levels to DOE mixed waste (see public comment in RCRA Docket in support of the HWIR95 proposal and Ref. \_\_). In particular, States were concerned that they or some other independent agency would no longer have any jurisdiction over DOE's RCRA-exempt LLMW. States and DOE had several discussions which ended in May 1998 without resolution because ~~the AEA gives DOE no legal~~

authority to delegate its regulatory responsibility regarding DOE-generated low-level waste certain provisions of the AEA prevent DOE from subjecting its nuclear activities, including radioactive waste management, to another entity external regulatory authority, such as NRC or the a States. Since then, DOE expressed interest in having its mixed wastes being eligible for any regulatory relief that we may be considering for commercially-generated LLMW, if the wastes are disposed in NRC-licensed LLRWDFs.

23. 2<sup>nd</sup> paragraph — The paragraph would be more accurate if modified as follows:

In 1995, then- Energy Secretary Hazel R. O’Leary launched an effort to move toward external regulation, ~~arguing~~ **indicating** that such action ~~was necessary to~~ **would help** restore public confidence in DOE’s nuclear ~~weapons and cleanup~~ **facility safety** programs. ~~Since then~~ **In 1997**, NRC and DOE ~~have been working on a joint program to study the costs and benefits of external regulation of DOE’s nuclear activities.~~ Among other things, DOE initiated several pilot projects to determine approaches for NRC oversight of DOE’s nuclear activities. ~~To date, they have conducted pilot projects at the following DOE facilities: Oak Ridge National Laboratory, Savannah River Site, and the Lawrence Berkeley national Laboratory. NRC and DOE had planned pilot projects at three additional facilities in FY 1999. In a February 19, 1999 Letter to the Senate Committee on Armed Services, DOE Secretary Richardson argued that the pilot projects have highlighted several significant and unresolved issues and stopped the work on the pilot programs~~ **executed a Memorandum of Understanding (MOU) establishing the framework for a pilot program to simulate regulation and test regulatory approaches at six to ten pilot facilities over two years. Pilot projects were conducted at the following DOE facilities: Lawrence Berkeley National Laboratory (LBNL), Radiochemical Engineering Development Center (REDC), Oak Ridge, and the Receiving Basin for Off-Site Fuels (RBOF), Savannah River. In addition, the Conference Report of the FY 99 Energy and Water Development Appropriations Act directed the Department to expand the scope of the pilot program to include all issues involving the Occupational Safety and Health Administration (OSHA), State and local regulation of worker safety and health at LBNL. All findings of the expanded LBNL pilot were presented in a comprehensive report delivered to the Committee on Appropriations on March 31, 1999. Comprehensive reports on the remaining two pilot programs (REDC and RBOF) were submitted to Congress in Spring 1999.**

**In a February 19, 1999, letter to the Senate Committee on Armed Services, Energy Secretary Richardson noted that the three completed pilot projects highlighted several significant and unresolved**

issues, and that initiating more pilots would not clarify these issues or resolve the problems.

24. 3<sup>rd</sup> paragraph — The paragraph would be more accurate if modified as follows:

Note that DOE is subject to the requirements mandated by the Federal Facilities Compliance Act (FFCA) of 1992 and most of the DOE ~~operations~~ facilities (including Naval Nuclear Propulsion Program sites) that currently generate or store mixed waste have either a State-approved or EPA Region-approved Site Treatment Plans (STPs) or another type of Agreement. Each STP or Agreement requires treatment of ~~their~~ mixed waste (including LLMW) ~~according to in accordance with its provisions.~~ ~~their STPs~~ The FFCA does not address disposal of DOE mixed waste, however, DOE has been working with States, ~~to show where their LLMW meeting the provisions of State-approved STPs could be disposed of as mixed waste~~ to discuss the disposal options for its mixed waste.

25. 4<sup>th</sup> paragraph — The paragraph would be more accurate if modified as follows:

For DOE ~~decides to take advantage of~~ use the proposed conditional exemption, and for the commercial LLRWDFs licensed by the NRC or Agreement States to accept DOE LLMW, ~~the DOE LLMW;~~ (like commercial LLMW); must meet ~~the NRC regulations~~ waste acceptance criteria specified in the disposal facility's license. Minimum waste acceptance criteria for LLRWDFs licensed by the NRC or an Agreement State are defined in 10 CFR 61.56. These include: (a) restrictions on disposal of liquid LLW, (b) LLW packaging and waste form requirements found in 10 CFR 61, (c) the waste acceptance criteria of LLRWDFs subject to NRC regulations. In this manner, we believe, under the proposed regulatory relief, DOE's LLMW disposal dilemma would be addressed. ~~This possibility has further support given that~~ The commercial LLRWDFs have indicated that they would be willing to consider accepting DOE LLMW for disposal, if such acceptance does not conflict with their arrangements/agreement with the State low-level waste compacts.

26. 5<sup>th</sup> paragraph, last sentence — The sentence would be more accurate if modified as follows:

... In this regard, the proposal also ~~satisfies~~ partially addresses DOE's request to eliminate unnecessary dual regulation by providing RCRA regulatory relief for those DOE mixed wastes that qualify for the proposed conditional exemption, and are disposed of at a NRC- or Agreement State-licensed LLRWDF.

## VI. LOW-LEVEL MIXED WASTE DISPOSAL

### C. What specific regulatory relief are we providing under the LLMW disposal proposal?

27. General Comment — DOE suggests that EPA be asked to simplify and clarify this section, and ensure that its contents are responsive to the question posed in the title.

## VI. LOW-LEVEL MIXED WASTE DISPOSAL

### D. To whom does the LLMW disposal proposal apply?

#### 1. Does this rule apply to all LLMW generators?

28. 1<sup>st</sup> paragraph, 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> sentences — Note that the 1<sup>st</sup> and 3<sup>rd</sup> sentences are inconsistent. The 1<sup>st</sup> sentence states that this rule applies to all LLMW generators, while the 3<sup>rd</sup> sentence states that this rule does not apply to LLMW generators who generate wastewaters. Also note that the 2<sup>nd</sup> sentence is not completely accurate because meeting NRC regulations for disposal of LLW is not the only condition that generators must meet to benefit from this proposal.

29. Table 2. Facilities Potentially Affected by the Proposal, last row, 2<sup>nd</sup> column — Modify as follows:

~~Facilities, installations, and laboratories operated by Federal and State Agencies, including, but not limited to, DOE (including the Naval Nuclear Propulsion Program) installations that conduct research and development of nuclear materials and products, National Institutes of Health, Bureau of Standards, and Department of Defense installations, and other governmental laboratories.~~

30. 2<sup>nd</sup> paragraph, 1<sup>st</sup> sentence — Modify as follows:

Note that we did not evaluate the LLMW generated by United States defense programs (for example, **DOD and DOENNPP**). ...

31. 2<sup>nd</sup> paragraph, 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> sentences — Modify as follows:

... As discussed in section VI.B, **the proposal partially addresses DOE's request to eliminate unnecessary dual regulation by providing RCRA regulatory relief for those DOE mixed wastes that qualify for the proposed conditional exemption, and are disposed of at a NRC- or Agreement State-licensed LLRWDF. DOE's LLMW disposal dilemma due to the lack of onsite mixed waste disposal capacity could be reduced. DOE is eligible for a conditional exemption only in a narrow way. DOE's LLMW must meet all the conditions for the disposal exemption.** ...

## VI. LOW-LEVEL MIXED WASTE DISPOSAL

### D. To whom does the LLMW disposal proposal apply?

#### 2. Does this rule apply to all radioactive wastes that are mixed wastes?

32. 1<sup>st</sup> paragraph, 2<sup>nd</sup> and 3<sup>rd</sup> sentences — These sentences are confusing because 10 CFR 61.56 does not define “solid low-level waste”. What that section does contain are minimum requirements for waste acceptance criteria at NRC-licensed LLW disposal facilities. Among them are limitations on the amount of free standing liquids allowed to be present in solid wastes and solidified liquid wastes. This is not a definition for “solid low-level waste”. Consequently, the intended meaning of the term “liquid LLMW” in the 3<sup>rd</sup> sentence is also unclear because it appears that EPA intended it to mean any LLMW that is not a “solid low-level waste”.

Considering the RCRA LDR definition of “wastewaters” (i.e., wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS)), DOE suggests that EPA be asked to better explain in the preamble of the NPRM why wastes meeting that definition would not be eligible for the conditional exemption, if such wastes had been treated to meet both the applicable LDR treatment standard and the applicable waste acceptance criteria (placing limitations on the amount of allowable free standing liquids) in a LLRWDF’s NRC or Agreement State license.

33. 1<sup>st</sup> paragraph, last sentence and 2<sup>nd</sup> paragraph — DOE suggests modifying this passage of the NPRM as follows:

... Also, the exemption does not apply to high-level or transuranic waste that is a mixed waste, or to LLMW that contains radionuclides that are not **either NORM, or source, special nuclear, or byproduct material, as defined by the AEA** ~~regulated by NRC~~.

Although we have determined that these ~~LLMW~~ categories of **mixed waste** should not be eligible for RCRA regulatory relief under the proposed conditional exemption, **some may qualify in the future for they can** exit from RCRA Subtitle C if ~~these wastes met~~ the risk-based exit levels **and associated requirements** under the “generic” or “landfill only disposal” options ~~and associated requirements~~ of the HWIR99 proposal: **are finalized, and the wastes meet the exit levels.**

## VI. LOW-LEVEL MIXED WASTE DISPOSAL

### F. What conditions **must** you ~~must~~ meet prior to the disposal of LLMW?

34. 1<sup>st</sup> paragraph, 1<sup>st</sup> sentence and 2<sup>nd</sup> paragraph — See specific comment #32, above. Also, note that the minimum waste acceptance criteria regarding the presence of free standing liquids in the NRC regulations (i.e., 10 CFR 61.56(a)(3) and (b)(2)) require wastes that are solid to contain no more than 1% by volume free standing liquid and wastes that are liquid to be converted to a form that contains no more than 1% by volume free standing liquid. In contrast, the RCRA LDR program definition of “nonwastewaters” (i.e., 40 CFR 268.2(d)) states that nonwastewaters are wastes that do not meet the criteria for “wastewaters”. “Wastewaters” are defined as wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS) (40 CFR 268.2(f)). These do not appear “similar”. Also, it appears that RCRA nonwastewaters may contain significantly more than 1% by volume free standing liquid. Notwithstanding, they could

meet the NRC minimum waste acceptance criteria for liquid wastes, if they are converted as required by 10 CFR 61.56(b)(2).

**VI. LOW-LEVEL MIXED WASTE DISPOSAL**

**F. What conditions **must** you ~~must~~ meet prior to the disposal of LLMW?**

**1. How do the LDR treatment standards apply to the LLMW disposal proposal?**

a. How do the LDR treatment standards apply to your LLMW under the proposed conditional exemption?

v. *Contaminated soils from cleanup activities*

35. 3<sup>rd</sup> paragraph, 2<sup>nd</sup> sentence — Modify as follows:

However, if soil contains benzene at 500 mg/kg, it need only be treated to 100 mg/kg (10 x UTS) and not 50 mg/kg (90% reduction).

**VI. LOW-LEVEL MIXED WASTE DISPOSAL**

**F. What conditions **must** you ~~must~~ meet prior to the disposal of LLMW?**

**1. How do the LDR treatment standards apply to the LLMW disposal proposal?**

a. How do the LDR treatment standards apply to your LLMW under the proposed conditional exemption?

viii. *LDR variance from a treatment standard*

36. 1<sup>st</sup> paragraph, last sentence — This sentence states that “the variance at §268.44 is different than the variance discussed for contaminated soils generated from Superfund cleanups discussed above.” Note that there is no “above” discussion of a variance for contaminated soils generated from Superfund cleanups.

**VI. LOW-LEVEL MIXED WASTE DISPOSAL**

**F. What conditions **must** you ~~must~~ meet prior to the disposal of LLMW?**

**1. How do the LDR treatment standards apply to the LLMW disposal proposal?**

a. How do the LDR treatment standards apply to your LLMW under the proposed conditional exemption?

ix. *State-regulated NORM waste*

37. 1<sup>st</sup> paragraph — See specific comment #1, regarding use of the term “NORM”.

**VI. LOW-LEVEL MIXED WASTE DISPOSAL**

**F. What conditions **must** you ~~must~~ meet prior to the disposal of LLMW?**

**2. Why is notification a condition for the exemption?**

da. Why do you, the claimant, have to notify the LLRWDF receiving your exempted waste of the exempted status of your waste?

38. 2<sup>nd</sup> paragraph, 5<sup>th</sup> and 6<sup>th</sup> sentences — These sentences indicate that written notice to the LLRWDF “can be sent separately” (emphasis added), and when sent separately, “the claimant must ensure that it reaches the NRC- or Agreement State-licensed LLRWDF before the arrival of the exempted waste shipment” (emphasis added). This is inconsistent with section VI.F.6.c and proposed 40 CFR 266.325(b) and 266.335, which require written

notice to the LLRWDF before every shipment and confirmation of receipt by the LLRWDF of the written notice before the waste is shipped.

**VI. LOW-LEVEL MIXED WASTE DISPOSAL**

**F. What conditions ~~must~~ **must** you meet prior to the disposal of LLMW?**

**23. What are the conditions for manifesting and transporting the exempted waste?**

b. Why do claimants who self-regulate under the AEA have additional conditions to meet?

39. 1<sup>st</sup> and 2<sup>nd</sup> paragraphs — Modify as follows:

We are requiring claimants who are self-regulating their radioactive waste management activity's under the AEA authority, to follow **10 CFR 71 transportation requirements and 10 CFR 20 manifest requirements**~~the Commission's transportation and manifest regulations~~ as an additional condition for the exemption. **Claimants regulated by the NRC or Agreement State are already required to follow the transportation and manifest regulations.** For claimants who self-regulate under the AEA, this additional condition for exemption will ensure the consistent application of the manifest system for all sites shipping their mixed waste for disposal to an NRC licensed **LLRWDF**~~unlike claimants regulated by the Commission under the AEA.~~ We believe this condition is necessary for self-regulated claimants, because no independent, external oversight would otherwise track the waste shipments or oversee the transportation of their RCRA-exempted waste. Their self-regulating status would not allow the Commission to take enforcement action if they violated the Commission regulations. Because manifesting and transporting of exempted waste according to the Commission regulations is a condition for the exemption, the self-regulating facilities claiming an exemption would be subject to full RCRA hazardous waste regulations if they violated this condition. This mechanism provides a means for the RCRA regulatory agency to take enforcement action against the facilities claiming an exemption if they violated the Commission's manifest and transportation requirements.

We do not believe this condition would impose a significantly new burden on these facilities, since the NRC regulations require shippers to use the NRC manifest when shipping **LLW**~~low-level waste~~ to **an NRC-licensed LLRWDF**~~licensed by the Commission~~. Thus, our proposal is consistent with the NRC procedures. Since the exemption is contingent upon waste disposal in a LLRWDF who has agreed to accept the exempted waste for disposal, it is **important that one mechanism is in place to track all exempted waste in transit and confirm**~~critical that we have an enforceable confirmation~~ that the exempted waste arrived at the appropriate disposal facility. We believe our proposed conditions for the exemption provides these facilities with an opportunity to take advantage of the proposal while bearing a

reasonable regulatory burden.

**VI. LOW-LEVEL MIXED WASTE DISPOSAL**

**F. What conditions **must** you ~~must~~ meet prior to the disposal of LLMW?**

**5. Why must the exempted waste be disposed only in a LLRWDF licensed by the Commission?**

40. 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> paragraphs — Modify and combine as follows:

This is because our evaluation is based on the review and evaluation of LLRWDFs licensed by the **NRC or Agreement States** ~~Commission~~ for protection of human health and the environment from the potential chemical hazards from the disposal of LLMW at these facilities. Hence, we are proposing that the exempted waste be disposed of only in a LLRWDF licensed by the **NRC or Agreement States**. ~~Commission. In addition, we need to address the States' concern about DOE LLMW exempt from external oversight upon the disposal of the exempted waste at their self-regulated LLRWDFs.~~

The **NRC and Agreement States** ~~Commission~~ has ~~ve~~ primary responsibility for exercising regulatory authority over the possession and transfer of radioactive material by commercial entities, and some Federal facilities. ~~In contrast~~ Yet, DOE is responsible for regulating its own activities **under the AEA**. ~~through internal Orders and is outside of Commission's jurisdiction. In addition~~ By far, DOE generates and has in storage the majority of the LLMW in the U.S. **Because of DOE's unique self-regulatory status and the large volume of mixed waste that DOE has in storage, EPA's evaluation of risks associated with LLMW disposal in NRC- and Agreement State-licensed facilities, which are subject to 10 CFR part 61, does not apply to LLMW disposal in DOE LLRWDFs. Instead, a separate technical analysis would be necessary to justify extending the disposal conditional exemption to such disposal. Therefore, EPA is not proposing to extend the disposal conditional exemption to LLMW disposed in DOE LLRWDF's at this time., and is therefore, interested in getting relief from RCRA for its LLMW. An issue we encountered in developing this proposal, however, has been DOE's self-regulating status under AEA, and the disposal of the exempted waste in DOE's self-regulated LLRWDFs. Under the current dual regulatory framework for LLMW, EPA or the RCRA authorized States have jurisdiction over DOE's LLMW primarily because they can regulate the hazardous waste component of LLMW under their RCRA authority. However, if LLMW were exempted without conditions DOE would be able to dispose its exempted waste in its own LLRWDFs without external oversight. This has been a primary concern of the States, as expressed in their comments on the 1995 HWIR proposal (Ref. \_\_\_\_). To maintain external oversight of the DOE LLMW under RCRA, we are proposing that the exempted waste can only be disposed**

~~in a LLRWDF licensed by the Commission. This proposed action would allow us and mix waste authorized States to take enforcement actions, as appropriate. Under the proposed conditional exemption, DOE would be able to avail itself to today's regulatory relief if DOE can dispose the exempted waste at its own LLRWDFs if they become externally regulated and that agency (for example, NRC or a State) can monitor DOE's low-level waste management activities. However, If for some reason, DOE cannot gain regulatory relief under the conditional disposal exemption, DOE may consider petitioning the State for to developing site-specific, risk-based levels by following the site-specific risk based variance approach discussed in section VI.G.2 of this preamble. ...~~

41. 3<sup>rd</sup> paragraph, last sentence — Modify as follows:

... Note that DOE is also subject to ~~the State-approved~~ or EPA Region-approved Site Treatment Plans (STPs), or another type of Agreement requiring treatment of its mixed waste, as mandated by the Federal Facilities Compliance Act of 1992.

## VII. REGULATORY IMPACTS

### A. What are the regulatory benefits of this rule?

42. 1<sup>st</sup> paragraph, 3<sup>rd</sup> sentence — It is not clear where the estimates for DOE LLMW volumes in storage and generation were obtained. These estimates may have been obtained from the Mixed Waste Inventory Report. If so, then they need to be updated to reflect the most current estimates. Based on the WM PEIS, DOE's estimated LLMW generation is about 11,000 m<sup>3</sup>/yr (388,000 ft<sup>3</sup>/yr) and based on the 1998 Paths to Closure data, the LLMW in storage estimate is about 93,000 m<sup>3</sup>/yr (3.3 million ft<sup>3</sup>/yr).
43. 2<sup>nd</sup> paragraph, 3<sup>rd</sup> bullet — The bullet states “Other disposal cost savings: This rule would facilitate disposal of wastes in LLRWDFs, possibly saving between \$50,000 and \$1million each year.” It is unclear whether the cost savings include storage costs avoided by allowing waste to be moved from storage to disposal.
44. 3<sup>rd</sup> paragraph, 1<sup>st</sup> sentence — Modify as follows:

DOE may also save on transportation, **storage, and** disposal costs, to the extent that they choose to meet the conditions for exemption and dispose of wastes in commercial disposal facilities licensed by the ~~Commission~~ **NRC or an Agreement State.**

## VII. REGULATORY IMPACTS

### B. What are the costs of this rule?

45. 1<sup>st</sup> paragraph, 1<sup>st</sup> sentence — This sentence states that “Generators may incur some

increased spending for treatment and disposal relative to their costs under RCRA hazardous waste management if this rule is implemented, but not relative to how RCRA Subtitle C regulations would otherwise apply.” Note that these “increased costs” are actually current liabilities. As such, they should not be considered increases (i.e., mixed wastes must eventually be disposed of, which, under current regulations, would require hazardous waste generators to treat the wastes to meet LDRs and place the wastes in adequately protective disposal facilities).

46. 1<sup>st</sup> paragraph, last sentence — This sentence states that “Without this rulemaking, these legacy wastes might simply continue to be stored on site [sic] indefinitely, leaving the generators in violation of RCRA permit requirements.” Note also that generators would incur continued costs for storing these wastes.

## **VII. REGULATORY IMPACTS**

### **C. What are the economic impacts of this rule?**

47. 2<sup>nd</sup> paragraph, 2<sup>nd</sup> sentence — See specific comment #45, above, regarding “increased costs.”

## **VIII. STATE AUTHORIZATION**

48. 3<sup>rd</sup> paragraph — This paragraph reads as follows:

If mixed waste-authorized States where LLRWDFs licensed by the Commission are located (that is, the States of South Carolina, Utah, and Washington) have concerns related to “plausible” post-disposal releases of hazardous constituents in LLMW, these States when adopting this rule could consider more stringent requirements. For example, as part of the State-implemented conditional exemption, a State may require groundwater monitoring for potential chemical releases or use the LLRWDF-generated groundwater monitoring data for release of radionuclides as surrogate or indicator data for releases of hazardous constituents with similar fate and transport characteristics.

DOE is concerned that the advice this paragraph offers to States is not consistent with the NPRM’s goal, which is to reduce dual regulation of LLMW disposal facilities. As drafted, this paragraph suggests that, if States have concerns, they could adopt a disposal conditional exemption with more stringent conditions than the conditional exemption EPA proposes. DOE believes this suggestion may inadvertently encourage States to retain RCRA regulatory authority sufficient to undermine the original purpose of the conditional exemption. Furthermore, DOE submits that it is not necessary for EPA to advise the States in this manner. States are aware of their authority to adopt more stringent regulations, and often do so when they believe it is appropriate. It should be enough for the NPRM to note (as it does in the 1<sup>st</sup> paragraph of section VIII) that this rule is considered less stringent than existing federal regulations, making adoption by the States optional. For this reason, DOE suggests that EPA be asked to consider removing the paragraph quoted above from section VIII of the NPRM.

**IX. RELATIONSHIP WITH OTHER RCRA AND ENVIRONMENTAL PROGRAMS**

**A. What is the relationship of this proposal with other RCRA regulations?**

**3. How will the RCRA-exempted LLMW differ from those delisted per 40 CFR 260.22?**

49. 2<sup>nd</sup> paragraph, 2<sup>nd</sup> bullet, 3<sup>rd</sup> sentence — The sentence states “Using a specific waste volume as an input to various models we calculate exemption levels that may be somewhat higher than the levels proposed in today’s rule.” No specific levels are being proposed in “today’s rule” unless this refers to LDR treatment standards. This needs to be clarified.

**IX. RELATIONSHIP WITH OTHER RCRA AND ENVIRONMENTAL PROGRAMS**

**A. What is the relationship of this proposal with other RCRA regulations?**

**4. Will my waste analysis plan of my RCRA-permitted TSDF change?**

50. Title and 1<sup>st</sup> paragraph, 1<sup>st</sup> sentence — Change “TSDF” to “treatment facility”. It is unclear why a commercial disposal facility receiving conditionally exempt LLMW would be subject to a RCRA waste analysis plan if no hazardous waste but conditionally exempt LLMW was managed at the facility.

**IX. REGULATORY ASSESSMENT REQUIREMENTS**

51. Title — Note that this section was inadvertently misnumbered as section “IX”. It should be section “X” according to the Table of Contents.

**PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTE AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES**

52. §266.100 — See specific comment #s 2, 3, and 4, above, and apply the definition changes suggested therein to the proposed definitions in §266.100. DOE also suggests that EPA be asked to add to §266.100 the following definitions suggested in specific comment #s 2 and 3, for which EPA proposed no corresponding definitions in §266.100: Agreement State, hazardous waste, naturally-occurring radioactive material (NORM), and radioactive waste.
53. §266.240(b) — For consistency with the preamble section V.C.1 and proposed §266.240(a), DOE suggests revising this section to read as follows:

(b) You ~~can~~**automatically** lose your exemption for failure to meet any of the conditions. (see §266.230)

54. §266.255(a) — The current wording of this section is confusing because it is not clear whether the waste is to be considered “newly generated” for the purpose of storage under 40 CFR parts 260 - 271 after the decay-in-storage period ends, or if the waste must be placed into permitted storage facilities. To allow flexibility in managing waste onsite, DOE suggests that EPA be asked to consider revising this section to clarify (by specifying the applicable sections of 40 CFR) that at the end of its decay-in-storage period, previously mixed waste would be considered “newly generated” hazardous waste.

55. §266.310(a) —
- a. This section indicates that the term “NORM” is defined in §266.100, but it is not. See comment # 52, above.
  - b. This section indicates that the term “free liquids”, or “containing no free liquids” is defined in 10 CFR 61.56. However, 10 CFR 61.56 defines neither “free liquids” or “containing no free liquids.” Instead, 10 CFR 61.56 provides minimum characteristics for wastes placed in a low-level waste disposal facility licensed by the NRC or an Agreement State (i.e., minimum waste acceptance criteria). Among the minimum characteristics are limitations on the amount of free standing liquids allowed to be present in solid wastes and solidified liquid wastes, which does not seem to provide the “definition” attributed to it by EPA’s proposed §266.310(a).
56. §266.310(b) — It is unclear why EPA has limited wastes eligible for the disposal conditional exemption to those listed as items (1) through (7) in proposed §266.310(b). Furthermore, the list itself is also confusing because:
- a. Item (2) appears to be either a subset of, or the same as item (6);
  - b. Item (3) appears to be the same as item (7); and
  - c. Contaminated soil is specifically mentioned in item (5), but contaminated debris is not mentioned.
- DOE suggests that EPA be asked to confirm that items (1) through (7) are needed, and if so, to clarify the confusing parts mentioned above.
57. §266.355 and §266.360 — The use of “you” in these sections is confusing. “You” could refer to either the generator or the disposal facility. If it is meant to refer to the generator, it is unclear how the generator would “ensure” that the disposal facility complies with the container requirements in proposed §266.360.