

Questions and Answers

1. What is NRC's position on blending of LLW to reduce its waste classification?

Answer: Blending is not prohibited or explicitly addressed in NRC's regulations. NRC guidance discourages blending that in some cases, and acknowledges that it may be appropriate in others. For example, blending of LLW which reduces worker radiation exposures or enables a plant to operate more efficiently by consolidating wastes is consistent with existing NRC guidance.

2. Is NRC saying that "dilution is the solution to pollution" with its position on LLW blending?

Answer: No. Dilution is used to mean the mixing of clean and contaminated materials together for release to the general environment. Dilution increases the volume of waste through the addition of clean materials to a mixture, and enables the release of materials to the general environment where members of the public could be exposed to the hazard, however small. Blending, in the context of NRC's current activity, involves the mixing of higher and lower concentrations of contaminated materials, not clean materials, and disposal in a licensed disposal site, not release to the general environment. Thus, the undesirable characteristics of dilution are not present in this kind of blending.

3. Hasn't NRC has changed its position on blending by now allowing large scale blending of LLW from nuclear power plants. What is the basis for this change in position?

Answer: No, NRC has not changed its position on blending. There is an industry proposal to perform larger scale blending of ion exchanges resins from nuclear power plants at a waste processor regulated by an NRC Agreement State.

4. If foreign waste is imported to the U.S., will it be blended with domestic waste to disguise its origin?

Answer: Waste imported into the U.S. from foreign countries is subject to the public notification requirements in NRC's 10 CFR Part 110 import-export regulations. A Federal Register Notice on any waste import application is published, and NRC staff consults with States and LLW compacts, as applicable, prior to issuing an import license for LLW. Thus, NRC's licensing process for foreign waste is highly transparent. Once waste is imported into the U.S. under NRC license, it is subject to the domestic licensing requirements, which could allow some processed wastes to be attributed to the waste processor that receives the waste. The staff is not aware of any specific proposal to blend foreign waste and attribute it to the domestic waste processor.

5. What policy issues will the staff address in its Commission paper?

Answer: The staff is soliciting public input on identification of policy issues associated with blending of LLW that the Commission should consider. Among the policy issues raised to date by some stakeholders are 1) the effect of large scale blending of Class

B/C waste on the national LLW program, especially the economic viability of a new facility and 2) whether NRC's position on blending should be promulgated in a rulemaking.

5. Is NRC taking into account the fact that blending increases waste volumes and takes up limited U.S. disposal capacity?

Answer: Yes. Although blending per se does not increase waste volumes, if waste that would otherwise be Class B/C waste is blended into a Class A mixture, the volume reduction processes normally used for B/C waste would be eliminated. Thus, a somewhat greater waste volume could result. The staff will obtain data on this issue for its Commission paper.

6. What opportunities will there be to comment on the staff's proposed recommendation to the Commission on blending?

Answer: The staff will have a public meeting to solicit stakeholder views on blending, and will be formally soliciting comments in a Federal Register Notice. With respect to the staff recommendation to the Commission, NRC's process does not allow for public comment on draft Commission papers. These papers are normally made publicly available shortly after they are completed, and if the Commission decides to revise its blending position, there will likely be additional opportunities for public involvement.

7. Volume reduction is a fundamental principle of waste management. How can NRC allow licensees to violate this principle by allowing blending?

Answer: Blending as discussed here is not dilution, i.e., the mixing of clean and contaminated materials with a resulting increase in waste volume. Blending of wastes with Class B/C concentrations with Class A to form a Class A mixture could result in somewhat more waste than is currently produced. Some Class B/C waste is typically volume reduced before disposal. The benefits of blending, however, such as access to a disposal site, may offset what appears to be a small increase in waste volume. The staff will obtain additional information on this issue in developing its Commission paper.

8. Can States adopt stricter guidance and/or regulations on blending of LLW than NRC's?

Answer: NRC regulations do not prohibit, nor do they address blending of LLW, and so there are no "compatibility" requirements for blending of LLW by Agreement States. Agreement States are not required to follow NRC guidance and may develop their own guidance on blending.

9. Texas regulations do not allow dilution to lower the waste classification. Why can't NRC follow the Texas example?

Answer: The staff will consider the Texas approach to LLW blending regulation in its Commission paper.

10. How will you ensure that blending does not result in these wastes being disposed of in municipal landfills or other facilities not licensed for radioactive waste?"

Answer: The scope of the staff's effort on blending of LLW is for waste to be disposed of in licensed LLW disposal facilities, not landfills.

11. Is blending another means of reducing the radioactivity of material so it can be released into consumer products?

Answer: No. The blending being addressed by the staff is for blending of waste batches with each other for disposal in a licensed LLW disposal facility.

12. When does NRC expect to revise its guidance on blending and how should blending be approached until there is additional clarification?

Answer: The Commission has requested a vote paper on the issue of blending in the spring of 2010. The Commission will decide what actions, if any are needed, including whether revisions to existing guidance are appropriate, after it receives the staff paper. In the meantime, NRC's existing guidance in the January 17, 1995, Concentration Averaging Branch Technical Position, Section 3.1 applies. This guidance places certain constraints on blending, but recognizes that when occupational dose reductions or operational efficiencies can be obtained by licensees, the constraints are not necessary.

13. Has NRC considered the potential conflict between a policy that allows blending and the principles of the compact system in the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLWPAA)

The LLWPAA makes each State responsible for providing, either by itself or in cooperation with other States in a regional compact, for the disposal of Class A, B, and C LLW generated within the State. The LLWPAA also makes the Federal government responsible for disposal of greater-than-class C (GTCC) waste. Increased amounts of blending by industry could affect the relative amounts of Class A, B, C, and even potentially GTCC for disposal. The staff will solicit views of States and compacts for whatever policy implications there might be as a result of increased blending. Another possible interest of the States is blending of waste that eliminates the identity of the original generator and State/Compact of origin for the waste. The staff is not aware of any blending proposals that attribute the waste to a waste processor, rather than the original generator, a practice which is permitted now, but will obtain further information in its public meeting on blending.

14. Why is blending a controversial issue? If the waste meets the acceptance criteria for a disposal facility and the performance objectives for the disposal facility are met, isn't that what's most important?

Several stakeholders have expressed concerns with blending of LLW that lowers the waste class. These concerns include, but are not limited to, the possible impact of large scale blending on the economic viability of a proposed new disposal facility; the perception that Class B/C waste would be disposed of in a Class A facility if these

wastes were blended to Class A concentrations (in fact, the radioactivity in that waste which was previously Class B/C would be disposed of in a Class A facility, but within Class A limits); and the increase in volume of waste that would be disposed of because Class B/C waste proposed for blending is volume reduced, while blended Class A would not be. Any blended waste would have to meet the acceptance criteria and performance objectives for a disposal facility to ensure that public health and safety and environment were protected. At the same time, these other concerns will be considered by the Commission in its consideration of the blending issue.