

**U.S. Nuclear Regulatory Commission (NRC) Response to June 10, 2010,
Information Request**

1. How does blending alter the characterization now bestowed on Class B and Class C waste?

Response:

Waste is classified according to its concentrations of certain radionuclides. Blending, as discussed in the NRC staff's policy paper is the mixing of waste that contains Class B or C concentrations with waste that contains Class A concentrations to produce a mixture that is within the Class A concentration limits. It is the concentration in the waste at the time it is prepared for disposal that is important to protecting public health and safety.

2. Would a landfill designed only for a 100 year radioactive decay rate qualify for storage of blended waste?

Response:

Such a landfill (i.e., a licensed low-level waste (LLW) disposal facility) could qualify for disposal of blended waste that meets Class A concentration limits. After 100 years, there will have been sufficient radioactive decay of Class A waste so that a member of the public would not receive an unsafe dose. As a result of the Commission's October 13, 2010, decision on LLW blending, a safety evaluation should be conducted and a demonstration should be made that such waste meets the 10 CFR Part 61 concentration limits and performance objectives. These actions will ensure adequate protection of public health and safety.

3. Will the public lose confidence in the NRC waste disposal licensing process when a Class A disposal site is actually receiving Class B and C waste?

Response:

Waste must meet the concentration limits of Class A waste in order to be disposed of in a Class A disposal facility. In other words, a disposal facility that is licensed only for Class A waste would not be disposing of Class B or C waste. As noted above, waste classification is determined by a waste's radionuclide concentrations at the time of shipment for disposal. It is important to note that the Class B and C wastes contain the same types of radionuclides as Class A, including long-lived radionuclides. The only difference is that Class B and C wastes contain higher concentrations of certain radionuclides.

Recognizing the level of public interest in this topic, the NRC will continue to adjust its level of public involvement and communication appropriately. The Commission's October 13, 2010, decision is based on substantial public input, a policy paper that addresses all of the issues raised by stakeholders, and conformance of the agency's LLW blending position with the agency's overall policy for using risk-informed, performance-based regulation. The NRC's decisions are based on protection of public health and safety, and the agency believes that these factors will contribute to public confidence.

4. Would facilities licensed only for Class A waste need to be relicensed if the radioactivity level of stored material increases due to blending?

Response:

The Commission is developing a rule that will require a site-specific analysis be performed for large volumes of blended waste. Currently, all operating LLW disposal sites are regulated by the states in which they are located. Those regulatory entities will be responsible for conforming appropriately with NRC's final rule and will therefore decide whether a license amendment may be needed for safe disposal of blended waste.

5. If the NRC decides to permit blending, how would this affect states, like Utah, that do not allow Class B or Class C waste to be disposed of in their LLRW sites?

Response:

Waste must meet the concentration limits of Class A waste in order to be disposed of in a Class A disposal facility. A disposal facility that is licensed only for Class A waste would not be disposing of Class B or C waste.

In its direction to NRC staff regarding blended waste, the Commission stated that the staff should work closely with the states to provide maximum flexibility in drafting the proposed rule, while still ensuring that blended waste is disposed of safely. This will ensure that state views are considered during rule development.

6. Is the only purpose of Option 2 to allow disposal of Class B and C waste in the Clive, Utah, site, by mixing it with large volumes of Class A waste and then claiming that the "average concentration" is Class A for disposal purposes?

Response:

Option 2 in the staff's policy paper is intended to implement the agency's policy to use risk-informed, performance-based regulatory approaches in its programs. Option 2 will establish a more specifically defined basis and criteria for determining when blending is acceptable. It will also provide a clear and explicit regulatory pathway for the disposal of large quantities of blended Class A waste.

While a recent proposal for large-scale blending includes potential disposal at Clive, Utah, the NRC's proposed regulatory framework will be general and will apply to any other proposals that might be made in the future for other disposal facilities.

From the information provided by licensees, the NRC staff understands that blending, whether under the rulemaking in Option 2 or the existing guidance, not only allows for disposal of some waste that would otherwise be Class B or C, but may also provide other benefits, such as operational efficiencies and worker dose reductions.

7. The newly licensed low-level radioactive waste disposal site in Texas is authorized to take Class B and C waste. Why would downblending be a permissible or preferable option when we have an appropriately licensed facility specifically for Class B and C waste?

Response:

The Commission considered the issue of LLW blending and has determined that it can be performed safely, if appropriate controls are utilized. Given that the agency's role is to set the standards for safe disposal rather than advocate particular business practices, the Commission has not taken a position on whether blending is preferred over other LLW management alternatives. With respect to disposal of Class B or C waste, although the Waste Control Specialists (WCS) facility in Texas is licensed for disposal of these wastes, it can currently only accept waste from generators in the states of Texas and Vermont.