

- 1. How important is it to include “removal of key radionuclides to the maximum extent practical” in the definition of non-HLW?**
 - a. This criterion from the Waste Incidental to Reprocessing (WIR) process has been removed in the new interpretation. This criterion was developed by the NRC in the 90s and seems to have been intended as an additional safeguard against uncertainty over long time-scales. Because our knowledge of the waste composition in the tanks cannot be perfect, retrieval of key radionuclides seems an important precaution (e.g., for increasing confidence in long-term performance models). Uncertainty is a big part of risk.

- 2. Could this interpretation be used to close tanks without any waste retrieval beforehand? How does this fit HAB values?**
 - a. Without the requirement to remove key radionuclides, it opens the door to close tanks in place without doing any retrieval on those tanks (similar to Scenario 4 from the System Plan). One of the best things about DOE’s retrieval efforts is that they preferentially remove the more mobile radionuclides such as Technetium-99, which is the primary risk driver for C-Farm (relates to #1 above). Under this new interpretation, it would appear that the only thing preventing tank closure without retrieval would be the retrieval milestones in the TPA. Could these milestones be challenged by DOE if this interpretation becomes law?

- 3. How important is it that waste be “incorporated in a solid physical form”?**
 - a. The new interpretation removes this requirement, which originated from the WIR process. We know that grouted tank wastes would not be “incorporated” but instead “covered,” unless DOE were to refill a tank with water to mix with grout.
 - b. Especially if tanks are closed without retrieval, this would leave unretrieved tank wastes vulnerable to migration. It would beg the question of why we’re building a glass plant to treat tank waste in the first place if all we’re doing with tank wastes is covering them with grout. With no added protection from being in a durable waste form, we’re concerned about cumulative effects from an uncertain waste inventory.

- 4. Should other entities besides DOE play a role in making a non-HLW determination?**
 - a. [Section 3116](#) of the National Defense Authorization Act of 2005 requires NRC consultation on waste determinations, and specifies that a determination can only be made “pursuant to a State-approved closure plan.” These 3116 requirements give check-and-balance power to entities outside DOE. Order 435.1 does not include these checks.
 - b. Because this new definition is not WIR, it doesn’t have to follow the WIR processes in [435.1](#) or Section 3116. It would presumably follow a new, as-yet undefined process that we expect DOE would unveil in an updated Order 435.1 soon after the comment period for this interpretation is over (they’re addressing the most controversial piece out front).
 - c. If this new interpretation passes as-is, it would likely become the de facto preferred reclassification pathway, and the 3116 and 435.1 processes would probably fall by the wayside. Our concern is that this interpretation could cut out the NRC from its role in consulting and concurring with the determination that waste is not HLW, and in 3116 states we’re concerned that it would eliminate the requirement that determinations can

only be made, “pursuant to a State-approved closure plan.” This interpretation provides no assurances that DOE will not make determinations unilaterally.

5. How important is it to tie performance objectives to the NRC criteria for a low level waste disposal facility (10 CFR 61 Subpart C)?

- a. This interpretation allows an either/or satisfaction of the two listed criteria for “non-HLW”. If the waste can’t meet Class C concentrations, DOE can use a model to demonstrate that “applicable regulatory requirements” are met. The current WIR processes (435.1 and 3116) both include reference to the NRC regulation 10 CFR Part 61 as the performance standard. This new interpretation does not specify what safety standards must be demonstrated to call something non-HLW. Conceivably, this means that whatever performance requirements DOE puts forth in its own regulations will be the standard, and these standards would therefore be mutable at DOE discretion. This also further serves to cut NRC out of the process, because they would not be in a position to weigh in on whether their standards are being met.

6. Is this interpretation needed in order to send grouted tank waste to a facility such as WCS in Texas?

- a. DOE already sent 3 gallons to Texas using the WIR process under Order 435.1, and they were intending to send another 2,000 gallons next year also using the 435.1 WIR process. We are confused by the assertions that this new interpretation will make offsite LAW grout shipment feasible. If they don’t need it now, what else is this interpretation aimed at? We are concerned that this interpretation may make it easier to leave waste where it is than make it easier to get it offsite.

7. What would this interpretation do to the Waste Treatment Plant? What happens if we blur the line between HLW glass and LAW glass/grout by deleting the requirement for removal of key radionuclides during pretreatment?

- a. The scuttlebutt seems to be that DOE is seriously considering Direct-Feed HLW, which would remove some of the pretreatment steps separating HLW from LAW. Under a direct-feed scenario, waste would be moved into a tank at the TWCS facility (still not developed) and they’d do a settle/decant process, essentially sipping the liquid off the top to send to LAW. If that LAW is then grouted for disposal, either offsite or at Hanford, it will likely change the amount of key radionuclides in LAW. The ultimate effect of this “blurring” is uncertain and hard to predict.

8. Could this interpretation be used to dispose of grouted LAW onsite at Hanford?

- a. Our understanding of the requirements is that Mixed HLW requires vitrification, but Mixed LLW would be able to use grout as the treatment to satisfy RCRA land disposal restrictions. If an updated performance assessment (supported by a supplemental EIS) shows that this waste form can be disposed at Hanford, we don’t see how DOE would be incentivized or required to transport this waste offsite.

9. How might this interpretation be applied to waste sources such as the Cesium/Strontium capsules, the TSCR ion exchange resins, or leaked wastes in soil under tanks? Does this interpretation make it easier for these sources to stay at Hanford? How does this relate to HAB values?