

## Kennedy, James

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**From:** Fordham, Earl W (DOH) [Earl.Fordham@DOH.WA.GOV]  
**Sent:** Friday, February 17, 2012 5:52 PM  
**To:** Persinko, Andrew  
**Cc:** Camper, Larry; Kennedy, James; Ridge, Christianne; Suber, Gregory; LLWForumInc@aol.com; GLR0303@aol.com; Fordham, Earl W (DOH); Elsen, Mike (DOH); Schwab, Kristen (DOH); Murphy, Sean J (DOH); Opila, Jennifer  
**Subject:** State of Washington comments on the DRAFT CA BTP

February 17, 2012

Hello Andrew,

Thank you for the opportunity to submit the following comments on the Draft CA BTP. It was a pleasure to meet with Jim and Christianne in Dallas a week ago to discuss the intent behind several portions of the document.

If you have any questions regarding these comments, please direct them to Earl Fordham at 509-946-0234 or [earl.fordham@doh.wa.gov](mailto:earl.fordham@doh.wa.gov).

While Jim Kennedy noted the BTP is only guidance, in Washington the BTP is incorporated into the license thus making the BTP part of the waste acceptance criteria (WAC). As such, broad statements in the BTP need examples or further detail so site operators as well as disposal site state regulators can ensure an equivalent level of understanding with NRC staff intentions. Examples of this issue are provided below.

Comments:

Comment #1:

In Section 3.1, what kind of "mixtures" does the NRC believe will be produced under this CA BTP (if adopted as is)? Suggest you add what mixtures (e.g., Class B/C resins mixed with Class A) are anticipated to the BTP.

Comment #2:

Disposal sites only get limited data on the NRC Forms 540, 541 and 542. With the demands of the CA BTP (e.g., gamma controlling radionuclides, x10 within class limit, sizes < 0.01ft<sup>3</sup>), site operators/state regulators need additional methods to verify compliance. Does the NRC envision the site operators/sited state regulators being able to verify compliance? If so, how? Or does the NRC default to the generators (Section 3.7) and generator state regulators?

Comment #3:

The manifest waste descriptor "Contaminated materials" is a very broad term (e.g., similar to DAW) and should be avoided. In fact, under the new blending concepts, isn't all material in the disposal package supposed to be "(radioactively) contaminated"? As such, this waste descriptor would be added to every package listed on the manifest. Waste descriptors on disposal manifests should relate to the BTP & WAC categories. I recommend more specificity in waste descriptors for the benefit of site operators & state regulators.

Comment #4:

Why are “absorbed” liquids still mentioned in the BTP? Does any site still dispose of sorbed (onto an approved agent) liquids? I believe the disposal facilities require solidification or stabilization of liquids.

Comment #5:

In Section 3.2.1, page 10, last paragraph, hotspot detection is discussed. How is detection done? “If” seems to be a key assumption in the phrase, “If it is detected in a container ...” Also, how would you know if it is less than or greater than 10 times the class limit?

Comment #6:

It is not uncommon to find a hotspot on the outside of a disposal package. What additional measurements (page 11, last paragraph of Section 3.2.1) should be made on the disposal package to confirm its waste class? Perhaps an example and further explanation would be helpful. At the Washington LLRW disposal facility, the state’s inspector could perform a internal package inspection to identify the reason for any “hot spot” if health physics calculations indicated high activity levels.

Comment #7:

In Section 3.2.2 (page 11), the BTP says approval to blend dissimilar flowable waste streams should be handled on a case-by-case basis. In this vein, I suspect generators will blend Class B ion exchange resins and slightly contaminated Class A soil-like material to maximize the load/minimize voids and reduce disposal expense. Will this layer blending increase the risk to the inadvertent intruder?

Comment #9:

The BTP mentions several timeframes: 100 year (DAW to achieve ‘soil-like’ properties), 300 years (stable waste forms to maintain gross physical properties and identity) and 500 years (when inadvertent intrusion is hypothesized). When do these timeframes start? Upon waste disposal, trench closure, site closure or some other time?

Comment #10:

Claiming statistics exist for waste in a package can be difficult. A sum of fractions minus the standard error is very difficult even for packages containing only one waste stream as these streams are typically only sampled annually. Most waste streams are only small fractions (e.g., 1 – 5%) of the Class A limit thus sample error is not critical. Gamma-controlling waste can easily approach waste class limits, but can be difficult to sample sufficiently to achieve adequate statistics.

Comment #11:

In Section 3.9, under the *Likelihood of Intrusion* section, discussion allows a probability of intrusion less than one. With Washington’s LLRW disposal site on federal government land, what documentation is needed to use a probability of intrusion less than one in a site-specific performance assessment?

Comment #12:

On page 5, 3<sup>rd</sup> paragraph, the BTP mentions “number of well-publicized accidents”. Can these accidents either be footnoted or briefly mentioned in the paragraph as to how they influenced this BTP?

Again, if you have any questions, please give me a call or send me an email.

Earl Fordham  
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