



STATE OF WASHINGTON  
DEPARTMENT OF HEALTH  
DIVISION OF RADIATION PROTECTION  
Airdustrial Center, Bldg. 5 • P.O. Box 47827 • Olympia, Washington 98504-7827

February 4, 1997

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Heather Astwood  
M/S T-7F-27  
Low Level Waste & Decommissioning Projects Branch  
Division of Waste Management  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Dear Ms. Astwood:

The Washington Department of Health (WDOH) has reviewed the BTP Screening Methodology for Assessing Prior Land Burials of Radioactive Waste Authorized Under Former 10 CFR 20.304 and 20.302. Thank you for the opportunity to comment on the BTP. The WDOH has three current licensees and one terminated license which in the past disposed of radioactive materials using the land burial method. Letters were sent to the existing licensees in December 1996 asking for their comments and to work through the methodology. In addition our Environmental Radiation Section has reviewed the methodology.

We received comments back from two of the three current licensees and have asked them to forward their comments directly to you by fax and hardcopy. Our comments are as follows:

This BTP focuses on current licensees because of the Timeliness Rule. Little is said concerning previously terminated licensees and their burials. We know essentially nothing of the burial practices of AEC licensees in the state of Washington that were terminated prior to our becoming an Agreement State. Who will be responsible for making an assessment of those burials?

We believe there is also a dangerous precedent in changing the "ground rules" for activities that were once "legal". Your statement in the BTP "Purpose" that this "is intended to be a final evaluation for former burials. Decisions made based on this BTP are not expected to change because of the issuance of future rules or standards" is not reassuring. The very fact that you are second-guessing the legal burials that were authorized in 1959 means that the "assurances" undoubtedly made then (and now) have no credibility. "Legal" burials should be handled separately from the Decommissioning process.

We also believe the benefit of using a step process is not evident. Fifteen to twenty years from now, little information will be gained from a review of the current step 1, 2 or 3 dose estimates as to the actual dose to an individual living on the site. More benefit and information would be derived if a more detailed BTP was developed utilizing site specific information that allowed for a more accurate estimation of the potential dose to an individual. This detailed assessment would aid in providing a more certain closure to the burial site issue than alluded in the draft BTP.

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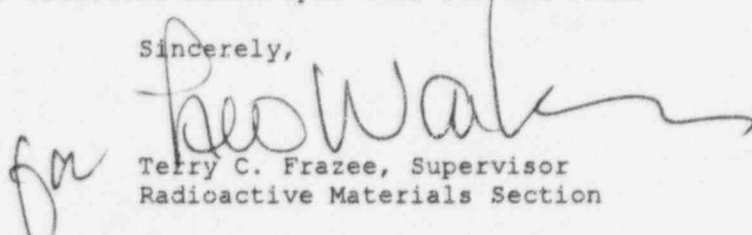
Heather Astwood  
Page Two  
February 4, 1997

Should the current methodology remain in place, WDOH suggests the following revisions:

- The Step 2 assumption that no migration from the burial location has occurred since initial waste placement and that the entire inventory leaches into the groundwater in a one-year period are incongruous and unrealistic. A more reasonable assumption may be to use a linear reduction in concentration over time. A modification should be made at least for highly mobile radionuclides such as I-129, Tc-99, C-14 and H-3. This groundwater scenario would still remain more conservative than the Step 3 scenario as actual groundwater depth, realistic groundwater usage estimates and the effects of dilution and sorption are not considered.
- The Step 3 screening methodology also falls short in complexity. An additional step prior to further characterization should be included to allow licensees to perform more realistic dose assessments without requiring a case by case review. The assessments could utilize available computer codes such as RESRAD that provide a more accurate estimate of dose while remaining conservative. Site specific information could be utilized where available and default parameters, supplied by RESRAD or the NRC, could be used for the remainder. This additional step inclusion would likely save licensees the unnecessary expense of both time and additional analytical costs while still showing that results are less than the screening limit.
- The BTP further states that if a site fails Step 3, specific characterization of the site will be required. Following the use of more realistic information, a site would be considered acceptable if the projected doses are a small fraction of 100 mrem/y and ALARA. The combination of the use of the term 'small fraction' and ALARA leaves too much uncertainty as to the final allowable dose range. As a result, a de minimis value should also be included below which no further efforts are required.
- The text states that the screening is based solely on the radiological risks associated with the burial but does not address mixed or hazardous wastes. The NRC should encourage Agreement State agencies to work with the appropriate non radiological agencies to ensure that, where possible, potential hazardous wastes are evaluated concurrently.

In summary, WDOH would strongly encourage the NRC to incorporate any necessary modifications to ensure that decisions based upon this BTP are final.

Sincerely,

  
for Terry C. Frazee, Supervisor  
Radioactive Materials Section

CC: Debra McBaugh, Supervisor, Environmental Radiation Section