



Subject: [Fwd: WIPP RH-TRU proposals]
From: James Bearzi <james_bearzi@nmenv.state.nm.us>
Date: Mon, 28 Apr 2003 13:41:25 -0600
To: Steve Zappe <steve_zappe@nmenv.state.nm.us>

--
 James P. Bearzi
 Chief
 Hazardous Waste Bureau
 New Mexico Environment Department
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, New Mexico 87505
 Post Office Box 26110; Santa Fe, NM 87502
 (505) 428-2512 phone
 (505) 428-2567 fax

james_bearzi@nmenv.state.nm.us

Subject: WIPP RH-TRU proposals
From: BWalker@eeg.org
Date: Mon, 28 Apr 2003 13:11:52 -0600
To: ben00@netscape.net
CC: joglekar.rajani@epa.gov, james_bearzi@nmenv.state.nm.us

It's a Friday afternoon, and while working on, or avoiding working on, a (boring) project the last few weeks I keep coming up with negative aspects related to the WIPP RH-TRU proposals submitted to the EPA & NMED. These have bothered me; the following are the items that have bothered me enough that I've written them down or remembered them.

Math Consideration.

The DOE and SNL have been using a "4%" argument in advocating bounding conditions for RH-TRU, as in the following:

"...because the RH-TRU waste disposal inventory is only a small fraction of the total WIPP disposal inventory (about 4% by volume), allowable uncertainty of RH-TRU waste characterization data is much greater than that for CH-TRU waste." (September 2001 Revision 0 of the *Class 3 Permit Modification Request for Remote Handled Transuranic Mixed Waste* presented to the RSI peer review; p. 5; I've read similar statements--or the same statement--in several other RH-TRU documents, and it's probably in the PMR submission to the NMED, though it seems to have been dropped from the March '03 submission to the EPA).

The "about 4%" value for disposal volume is wrong--or at least was wrong at the time it was stated. The National TRU Waste Management Plan, Revision 2 (December '02), states that the RH-TRU disposal volume would be 1,816.2 cubic meters after repackaging and processing of 4,027 meters (p. xix). This would put the RH-TRU at less than 1.7% of the disposal volume (which would be the listed 107,562 cubic meters of CH-TRU plus the 1,816 of RH-TRU). While this figure would seem to be even more in support of the DOE's argument, it points out that the value was not properly calculated in the first place--and that no one checked the value, either. If this simple calculation, on which a major part of the submission's argument is based, was not performed properly, and was not checked, how much



confidence should the EPA and NMED have in the rest of the submittal?

The Revision 0 EPA document, *Notification of Proposed Change to the EPA 40 CFR Part 194 Certification of the Waste Isolation Pilot Plant* that was prepared for the RSI Peer Review indicated a RH-TRU disposal volume of 1964.3 (Table F-1; Attachment F, p. 17. No CH-TRU disposal volume is included). This would be 1.8% of the disposal volume, using 107,000 cubic meters for CH TRU. I've also heard (but haven't seen documentation) that the RH-TRU inventory to be reported in the TWBIR currently in draft (Revision 4) is about 14,000 cubic meters. That would make it 11.5% of the disposal volume. The draft TWBIR estimate may or may not include the approximated shipping inventory of 7500 cubic meters of RH- TRU waste a July, 2002 Hanford document, *Recommendation for Supplemental Technologies for Potential Mission Acceleration*(Rev. 0; RPP-11261) advocates processing from 12 Hanford tanks and shipping to the WIPP.

Whatever numbers are used, the *philosophy* is flawed. The EEG has showed for 20 years that the inventory of both RH-TRU and CH-TRU bounces up and down as managers throughout the complex plan and revise plans for getting rid of wastes. Margaret Carde wrote in an editorial shortly before the EPA approved of the opening of the WIPP that the DOE would see a big hole in southeastern New Mexico to get rid of all of their problem wastes at. Nearly every problem waste stream in the complex is considered for the WIPP; a recent article in a Tennessee paper had a DOE official stating that the fuel from the ORNL Molten Salt Reactor would be disposed "...elsewhere--probably at the Waste Isolation Pilot Plant in New Mexico". (WIPP as a fuel repository! Why didn't DOE think of that before embarking on YMP?)

Worker Doses.

The March '03 submission to the EPA finally provided some "data" concerning dosage to workers characterizing RH-TRU. There were several problems with this data. It was based solely on a CH-TRU analysis; the CH-TRU analysis was for a site (the CCF, as proposed at the WIPP site) which never handled CH-TRU waste characterization; and the CCF was never been expected to characterize RH-TRU wastes. The study clearly did not consider the lessening of dose that could occur even with use of rudimentary RH-TRU waste handling techniques--it simply took a CH-TRU analysis, and recalculated using only the single parameter of the higher drum surface dosages for RH-TRU. This is inherently bad data, if it should be considered to be "data" at all. Is bad data better than no data?

In this case, it appears to be deliberately bad data. The DOE had better sources that could have been used--the ORNL RH-TRU processing plant is far enough along that it would be incredible if data on the expected worker dosages for the characterization part of that process had not been assessed. For NDA, the DOE's late 1980s characterization of the 17 RH-TRU cannisters at LANL could have been used--but weren't, perhaps because there was apparently no dose measured (Jim Channell pointed out to the RSI Peer Review that he had been told that there was none, but that the panel should confirm it).

Visual Examination.

Section 2.1, Overview, of the March 10, 2003 RH-TRU Waste Characterization Plan submittal to the EPA states (pp. 6-7).

"Standard confirmatory methods, as described in the WCPIP, are:

- Visual examination of 100% of waste requiring packaging or repackaging.
- Visual examination or radiography of 10% of waste already packaged in payload containers."

Multiple entries in this same document note that "...over 95 percent of the RH TRU waste inventory will undergo packaging or repackaging..." (from p. 2). Thus, it would appear that well over 95% of RH-TRU waste is expected undergo visual examination.

This extensive use of visual examination is contrary to the following statement in the CCA, Appendix WAC (from the CD-ROM version of the CCA--probably p. WAC-1; the same statement is in Chapter C of the Request for Permit, Revision 6, submitted to the NMED):

"Most RH TRU waste will be inspected using radiographic examination, but the DOE decided that visual examination will not be used to verify radiographic examination for RH TRU waste due to the added radiological exposure, cost, and waste generation associated with visual examination."

It seems clear that the DOE uses radiation exposure (and perhaps cost) simply to support whichever version of waste characterization is currently in vogue. The "data" are changed to fit the argument, rather than performing competent science/engineering practice of developing good data and basing conclusions on the data.

What confidence should regulatory agencies, oversight agencies, the public, or anyone else place in the rest of the submittals when these examples are in the same document?