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NOTE: Sandra Wastler, Project Leader
Special Issue Section
Uranium Recovery Branch
Division of Low Level Waste and
Decommissioning, NMSS

FROM: Boby Eid, Environmental Scientist
Regulatory Issue Section
Decommissioning and Regulatory Issue Branch
Division of Low Level Waste and
Decommissioning Branch

COPY TO: John Surmeier, Myron Fliegel, Michael Weber

SUBJECT: ENVIROCARE NEWLY TRANSMITTED PRELIMINARY
INFORMATION ON DOSE ASSESSMENT

Please find attached a copy of recently transmitted preliminary information in connection with the Envirocare dose assessment issue. The preliminary information was received (by FAX from Envirocare of Utah, Inc.) on October 20, 1992.

The preliminary information provided by Envirocare included a summary report of some input/output dose assessment data using AIRDOSE and PATHRAE codes. It should be noted that Mr. Vernon Andrews, of Envirocare, made a phone call (on October 20, 1992) to inform of Envirocare intention to submit such preliminary information. I have discussed this matter with John Surmeier, Myron Fliegel and Michael Weber; there was no objection for receiving such information. I have informed Mr. Andrews that I would merely look at this information submitted by Envirocare. He was also informed that I would not run any of such codes at this stage.

After a brief look at the preliminary information, and after brief discussions with Michael Weber, Myron Fliegel, and Christine Daily (RES/RPHEP), there appear to be some concerns on the output results and the assumptions made by Envirocare. These concerns are:

1. The AIRDOSE output data (on pages 3 and 4) show that the effective dose equivalent for a maximally exposed individual at 300 m from the site is 950 mrem/y. This value is much higher than the standard dose limits of 10 CFR Part 20.
2. The above mentioned derived dose (i.e. 950 mrem/yr) appears to be high enough to justify reviewing input data and assumptions made by Envirocare.
3. The PATHRAE output dose data (around 277 mrem/yr) for maximally exposed individual at the fence line (page 16) is

also much higher than the standard dose limits of 10 CFR part 20.

4. From the telephone conversation with Vernon Andrews (made yesterday on October 20, 1992) and the preliminary dose data, it seems to me that Envirocare approach tends to assume that maximally exposed individuals are located at 3000 m away from the site (i.e. maximally exposed receptor is a worker at the USCI facility). In this regard, Envirocare is assuming no population to exist around the site within a radius of less than 3000 m.

I believe that Envirocare is currently on the right track, in terms of performing dose assessment using site-specific input parameters rather than using old dose assessment data for LLW disposal facility. However, the above concerns are serious and may require reassessment and revision (by the applicant) of the code input data and assumptions. On the NRC part, there may be a need for explanation of 10 CFR Part 20 dose limit application in connection with maximally exposed members of the public. In this context, does the limit applies to individuals assumed to be at the site boundary ? or at wherever population currently exist around the site ?.

Another remaining issue is running the codes to be used by Envirocare. Assuming all input parameters are to be provided by the applicant, there is a need for having such codes and for expert staff who are quite familiar with these codes. Running the codes may be necessary to examine the output data and to verify the assumptions in the dose assessment methodology.

I would like to meet with you and the concerned management to discuss these issues and concerns. I would appreciate your prompt action on this matter. Thanks.


Bobby Eid

Environmental Scientist