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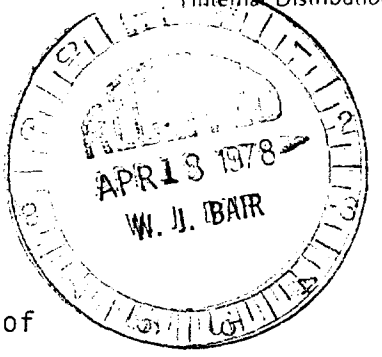

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April 18, 1978

To Bill Bair

From Dick Gilbert Dick Gilbert

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Subject Suggested Recommendations to DOE on the Basis of the April 13-14, 1978 Meeting of the Advisory Group on Cleanup of Enewetak Atoll in Las Vegas.

Based on my observations during the subject meeting and my phone conversation with Madaline Barnes (statistician for cleanup effort) on April 17, the following items seem to be important to point out to DOE.

Averaging

I see no compelling reason to alter the previously agreed upon plan to consider each 1/4 or 1/2 hectare area separately for cleanup. I see no advantage to using an "average island" soil concentration for making cleanup decisions. Apparently, the concept of an average island concentration arose during the April 13-14 meeting since Bill Robison, et al had used the term in obtaining dose estimates for the Enewetak Atoll. The term was perhaps inappropriate because these authors did not use actual soil concentration data for their computations. Instead dose estimates were obtained for a series of hypothetical "average island" soil concentrations. There are a number of methods that could be used for using actual soil data to make dose assessments.

1. Compute the dose on the basis of highest estimated soil concentration for any unit (of 1/4 or 1/2 hectare size) on the island. This method could result in a very conservative dose estimate if most units on the island had much lower concentrations than the highest unit.

2. Average all the unit (1/4 or 1/2 hectare) average soil concentrations on an island and use this grand average to estimate potential dose. This method weights all units equally, even though some units would undoubtedly have greater utilization by inhabitants than other units.

3. A conservative approach would be to use the cleanup criteria designation for the island (40, 100, or 400 pCi/g, for village, agricultural, or picnic islands, respectively). Dose estimates for this option were obtained by Robison, et al. in their dose assessment paper presented to us at the meetings. Conservative dose estimates are likely since most units have average soil concentrations much below these cleanup criteria.

4.) Perhaps the best method would be to estimate the dose separately for each 1/4 or 1/2 hectare unit on the island using the estimated average soil concentration for the unit. These unit dose estimates could then be weighted depending on projected utilization by the inhabitants.

Plowing

I feel it is very important that Madaline Barnes, Jo Jane Giacomini, and/or Burt Friesen (the statistics group) be actively involved in planning the upcoming plowing experiment at Enewetak Atoll. The pre and post plowing sampling design must be carefully planned for an efficient evaluation of the effects of plowing. The above individuals will be analyzing and interpreting the data and hence should be involved from the very beginning.

DNA Military Command

I feel we should communicate to DOE the problems outlined to us by Roger Ray on April 14, 1978 regarding the lack of authority of the local military commander to make decisions. It is perhaps doubtful whether the military would be willing to change their present mode of operation, but we should point out problems as they exist.

Quality Control, IMP Calibration and Statistical Methods

I have not had sufficient time to gather the necessary information for an adequate evaluation of quality control, IMP calibration, and statistical design aspects. I am arranging to obtain information (assuming Roger Ray's concurrence) that will make such an evaluation possible. I will be contacting John Tipton (EG&G) concerning the "calibration" of the IMP, and Mike Ortiz (Eberline) who makes periodic audits on the Enewetak Analytical Laboratory. The information could be sent to all members of the Advisory group if you think it appropriate.