

awaiting comments from staff of the Lawrence Livermore Laboratory, the laboratory performing such dose estimates for DOE.

VADM R. R. Monroe, USN

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Please accept our thanks for the courtesies extended to the Advisory Group in their visit to Enewetak, which by all reports was highly successful.



Hal Hollister, Acting Director
Division of Operational and
Environmental Safety

Enclosure:
As stated

cc w/enclosure:
W. Bair, BNL
B. Wachholz, DOE
R. Ray, NV

The Marshall Islands Advisory Group provide the following comments and recommendations to issues and questions raised by DNA and DOE during the Advisory Group's visit to Enewetak in August 1978.

1. Aomon Crypt - The 40-80-160 pCi/g guidance was not intended to apply to special or unique situation such as the Aomon Crypt. Information about the contents of the crypt is inadequate for the Advisory Group to offer any useful guidance. It might have been better to have left the crypt undisturbed. However, since the decision has been made to remove the buried contaminated material, it is probably better for Col. Bauchspies to deal with the problem than to seek advice from other less-informed sources.
2. Preciseness of 40-80-160 - The 40-80-160 guidance can and should be met by DNA. However, DOE should be "reasonable" in its evaluation of the cleanup relative to certification since both soil removal and measurement methods are subject to errors of at least a few percent.
3. Surface Hot Spots - Minimum Area Levels - The opinion of the Advisory Group is that the minimum area requiring cleanup is that caused by an IMP reading (90% of a 25 meter square area) that exceeds the 40-80-160 guidance. However, if removal of a "hot spot" brings the IMP reading down to the appropriate limit, then it should not be necessary to remove soil from the whole 25 meter square area.
4. Plowing Advisability - The Advisory Group is awaiting the results of the plowing experiment before considering any guidance regarding plowing.
5. Island Average vs Maximum Values - Remedial action is based upon maximum contamination levels. Radiological dose assessment and decisions regarding repopulation should be based on average values for larger environmental units such as an entire island or group of islands.
6. Contaminated Bunker Guidance - Precise adherence to the ANSI standard is not appropriate to the bunker situation. Since strenuous efforts have been made to remove loose contamination and because of its location and quantity the fixed contamination does not appear to represent a health hazard. The preservation of a bunker as a storm refuge for island residents is a worthwhile alternative to disposition of these structures. Although of no apparent benefit to subsequent residents, the off-shore Kickapoo tower anchor blocks do not appear to be a radiation hazard and need not be removed.
7. Subsurface Contamination - Subsurface contamination is defined as radioactivity more than about 2 cm under the ground surface, or at a depth not detectable by the IMP. The Advisory Group is not yet prepared to offer guidance. In fact some members of the Advisory Group do not believe we should recommend criteria for subsurface contaminations because of the uncertainty of the extent of subsurface contamination on the atoll. Subsurface contamination in small "hot spots" is apt to

...require a complex
sampling scheme, an inordinate compliance effort, or that would
lead to removal of far more soil than is necessary to accomplish
the desired reduction of the potential radiation dose to inhabitants.
The Advisory Group will give further consideration to this question
at its next meeting.

REPOSITORY PNNL
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BOX No. 5686
FOLDER Eniwetok Oct-Sep 1978

DOCUMENT DOES NOT CONTAIN ECI

Reviewed by R. Schuetz Date 4/30/97