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UNITED STATES
ATOMIC ENERGY COMMISSION
NEVADA OPERATIONS OFFICE
P. O. BOX 14100
LAS VEGAS, NEVADA 89114

April 14, 1969

Maj. Gen. Edward H. deSaussure, Jr.
Commander
Joint Task Force EIGHT
Sandia Base
Albuquerque, New Mexico 87115

Dear General deSaussure:

During a recent trip to Bikini Atoll, personnel of this office were requested by Col. Rawlings to furnish guidelines which would aid in determining those requirements necessary for radiological certification. It was pointed out to Col. Rawlings that definition of such guidelines was a responsibility of AEC HQ, and that these guidelines had been requested but at that time had not been received.

In a recent discussion with HQ, Division of Operational Safety personnel, we were informed that the guidelines are being formulated. In the interim, those guidelines informally presented to Col. Rawlings (see enclosure) will be in effect.

Very truly yours,


Robert E. Miller
Manager

TMOS:FDC-231

Enclosure:
Guidelines for Bikini Cleanup

cc: A. Smith, PHS, Honolulu, HI, w/encl.
Col. J. Rawlings, TG 8.8 Honolulu, HI, w/encl.
T. McCraw, DOS, Wash. D.C., w/encl.
W. A. Bonnet, HAO, Honolulu, HI, w/encl.
Maj. Gen. E. B. Giller, AGM/MA, Wash. D.C., w/encl.

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April 11, 1969

GUIDELINES

To date, no radiological criteria have been provided by AEC/HQ for the Bikini cleanup operation. Unofficially, however, the Division of Operational Safety, AEC/HQ has recommended that criteria be based on AEC Manual Chapter 5170, Appendix 5170. This chapter provides for the disposal of surplus property including radioactively contaminated equipment. Based on this chapter, the following guidelines are recommended:

- a. On all islands, every reasonable effort shall be made to reduce the levels of contamination to the lowest practicable level.
- b. For those materials where removable surface plutonium levels exceed 500 disintegrations per minute per 100 square centimeters, the material should be disposed of as radioactive debris.
- c. For those materials containing induced radioactivity showing contact readings measurably above local background, the materials shall be handled as radioactive debris.

The application of the guidelines should be tempered with judgment and common sense.

Because of the relatively large contribution of external exposure to the total exposure which will be received by the returning natives, it is most important to remove to the extent practicable all radioactive debris to which the natives might have access. This is particularly important on those islands where the natives will reside on a full time basis.

On Eneu and Bikini, a careful ground monitoring radiological survey will be conducted as each new road or planting swath is cut. Any radioactive debris found during cleanup will be disposed of by dumping in one of three designated areas in the lagoon or outside the lagoon in depths of 25 fathoms or greater. Should any anomolous "hot spots" be found, the on-site AEC Radiological Safety Advisor will recommend appropriate action to the Commander.

The specific location of the three designated disposal areas shall be left to the discretion of the Atoll Commander but must meet the following criteria:

- a. The minimum distance from the nearest islet will be one mile.
- b. The minimum water depth will be 25 fathoms.

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- c. The location of all disposal areas (inside or outside the lagoon) will be recorded on an appropriate chart for future reference.

If a plutonium contaminated area is found, the degree of contamination will be determined by the AEC Radiological Safety Advisor, and he will make appropriate recommendations to the Commander.

On Nam, where people will not be living continuously in the near future, general radiation levels are now in the 0.1 to 0.2 mR/hr range. In this case, no attempt to decontaminate the ground surface by removal of large quantities of top soil should be attempted since this would injure the island for future agricultural use. A careful search for loose radioactive scrap, however, shall be made. Scrap metal on islets adjacent to any ground zero and all campsites and work areas will also be monitored. Materials which need to be disposed of and which exceed radiological criteria established by guidelines will be disposed of in any one of the designated areas.

In some cases, bunkers or other structures near a former ground zero contain concrete with activated aggregate or reinforcing steel which have radiation levels above 0.1 mR/hr. Depending on the level of radiation and planned use for the individual structures, several recourses are available. These include cutting out of the contaminated or activated portion, complete removal of the structure, cementing over the reinforcing steel, etc. The AEC Radiological Safety Advisor will make appropriate recommendations to the Atoll Commander.

Scrap containing no induced radioactivity, such as towers and other materials on Bikini and Eneu and similar materials on other islands, requires no special consideration from a radiological viewpoint and is therefore not covered by these guidelines.

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