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Headquarters
Defense Nuclear Agency
Logistics Directorate
Washington, D.C. 20305

25 Oct 79

TO: FCDNA, ATTN: LTC Burke, FCZ

SUBJECT: Enewetak History - Decision to Clean
Lujor Island to 80 pCi/gm

Enclosed is a paper on above subject to be
included in the Enewetak History.

A handwritten signature in black ink, appearing to read 'Thomas P. Jeffers', with a long horizontal line extending to the right.

THOMAS P. JEFFERS
Director for Logistics

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25 October 1979

SUBJECT: Enewetak History - Decision to Clean Lujor Island to 80 pCi/gm

1. During the 3-4 May Enewetak Cleanup Conference it was thought the Lujor soil contamination (of greater than 500 pCi/gm) could not be significantly reduced because of its distribution. Yet it was undesirable to quarantine the island of Lujor since it did not fit into a category of the new DOE guidelines of 40/80/160 pCi/gm for living/agricultural/food gathering islands. A decision was made to obtain a definition from DOE of an island that is classified as having surface contamination between 160 and 400 pCi/gm. It should be noted that Lujor was planned for use as an agricultural island and to obtain that planned use 24,700 cubic yards of contaminated soil would need to be removed. The Bair Committee in their Report of April 28, 1978 made the following statement:

"A third priority should be the cleanup of picnic island half-hectare areas exceeding (with 70% confidence) 160 pCi/g. If resources are exhausted, some islands may not be cleaned up; final dose assessment may indicate that these islands will have to be permanently quarantined. We note that the soil profile on Pearl is anomalous since the concentration of transuranics appears to be uniform with depth. We believe that the possibility of effective cleanup for use as a village or agriculture island is remote. However, the possibility of covering Pearl with the less contaminated soil from the village islands and, perhaps, from the agricultural islands should be considered for lowering the average surface contamination levels and reducing the logistics problem of transporting the soil from the other islands to Runit."

2. After the Lujor debris removal it was noticed that the surface concentration decreased considerably from previous levels. In SITREP No. 56 for the week of August 14-20, 1978, it was stated that the existing condition of Lujor meets Condition A (160 pCi/gm). The movement of heavy engineering equipment on Lujor required to remove the contaminated debris appears to have churned up the surface of the soil and mixed it with subsurface. The decrease in surface level reading indicates that information available to the Bair Committee Report was probably in error and the transuranic contamination was not uniform with depth.

3. During the February 12, 1979 Northern Island Fission Product Survey Conference at FCDNA, Kirtland Air Force Base, it was learned that a large estimating error was made in the quantity of contaminated soil stockpiled on Runit awaiting placement in the Cactus Crater. Since the project was ahead of schedule and space was available in the Cactus Crater a decision was made to clean Lujor down to agricultural level (80 pCi/gm) if possible.

4. The decision to clean Lujor was significant since originally Lujor was considered too contaminated to clean without dedicating a great effort which would have impacted the ability to clean up other higher priority islands. The cleanup of Lujor to an agricultural island was successfully completed with the removal of 15,000 cubic yards.

Mr. Thomas P. Jeffers/OALG 5000100

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