POLICY AND BACKGROUND OF CRATER AS A TEMPORARY REPOSITORY AND RELATED ENGINEERING

In exploring options in the Environmental Impact Statement (EIS) for the disposal of plutonium contaminated soil, several methods were selected for study. To insure that adequate consideration was given to a wide number of options, a range was selected for consideration. Two of the most promising - ocean dumping and crater containment - were investigated with the Environmental Protection Agency (EPA) to determine the realm of possibility. At the time the project was in the planning stage, the news media was full of court cases where worthwhile projects had been stopped through legal actions, principally on the basis of non compliance with procedural and administrative regulations of the National Environmental Protection Act (NEPA). Further, at about this time the U.S. became a party to "The Ocean Dumping Convention"[1/] and the Congress had passed the "Marine Protection, Research and Sanctuaries Act of 1972.[2/] These were implemented in Federal Regulations.[3,4/] Based on the EPA implementation and the interpretation at that time, the dumping of all material into ocean waters is regulated through a permit system administered by EPA. Dumping of high level radioactive wastes into the ocean was prohibited. To dump low-level radioactive wastes the materials must be containerized and meet the following conditions:

(1) The materials must decay to environmentally innocuous materials within the life expectancy of the containers (EPA considered that radionuclides must decay over a period of 5 half lives to be innocuous).

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(2) Materials must be of such a nature that only short term localized effects would occur sOould the containers rupture.

(3) Containers must pose no threat to navigation or fishing.

In discussions with EPA, 8 August 1974,[5/] it quickly became apparent that to dump low-level contaminated soil in the ocean, DNA would be required to give assurances that the containers would have a life equal to 5 half lives for Plutonium 239 - or 125,000 years, clearly an impossibility. To meet the remainder of EPA criteria, extensive oceanographic studies would also be required that would add significant costs and time to the project. This position was confirmed by an EPA letter Dr. Rowe to DOE, Dr. Biles, 17 May 1974,[6/] in which the general reluctance to initiate any ocean dumping by EPA was expressed. In discussions of various potential disposal techniques the EPA favored the notion that contaminated material should be placed where it could be observed and retrieved if necessary, rather than buried in an irretrievable location. Based on the expressed philosophy, a method using the crater for disposal was proposed in the DEIS.[7/] Comments received from Region IX EPA in their letter of 12 December 1974[8/] stated "The choice of crater entombment for disposal of contaminated soil appears to be the most feasible alternative and provide some degree of retrievability. The fact that this is only a semi-permanent solution should be recognized. Several other ..... option." (Emphasis added). In the EIS a full discussion is contained in para 5.4.3.2.3. which also provides some of the engineering details.[8/] By implication in the EIS, the entire volume of

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debris, scrap, and contaminated soil was intended to be contained entirely within the crater or craters with no part of the concrete cap extending above the reef. In February 1975, as a result of a meeting at Pacific Ocean Division, Corps of Engineers in Honolulu, the question of crater entombment vs. ocean dumping was reopened, principally by ERDA and others who felt that ocean dumping was the only practical solution for disposal. of low level radiative material from the cleanup. DNA representatives again consulted with EPA. At this time EPA reiterated the position on ocean dumping published in the CFR's and also reaffirmed their position on crater containment stated in their 12 December 1974 letter.[8/] Because of the apparent divergence of views, the Director, DNA called a meeting of all participating agencies to lay the problem on the line.[10/] As a result of this meeting, general agreement among the principal agencies concerned with cleanup was achieved on the crater containment disposal concept. After publication of the EIS, EPA indicated radiological considerations were responsive to EPA concerns.[11/] The specific design as implemented in the cleanup operation was developed in detail by FC DNA and the U.S. Army Engineer Division, Pacific Ocean during the development of the CONPLAN.[12,13/]

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References

1. "Convention on the Prevention of Marine Pollution by Dumping of Wastes an Other Matter." Published in The Environmental Reporter by the Bureau of National Affairs, Inc. 1973.

2. P.L. 92-532, Marine Protection, Research, and Sanctuaries Act of 1972.

3. 40 CFR 220 thru 226, EPA Regulations on Transportation for Dumping, and Dumping of Materials in Ocean Waters (38 FR 28610, 15 October 1973).

4. 40 CFR 227, EPA Criteria for Evaluation of Permit Applications for Ocean Dumping (38 FR 28618, 15 October 1973).

5. LGLS Memo for Record, subject: Meeting on Disposal Criteria for Enewetak at EPA, dated 9 August 1974.

6. Letter from Dr. Rowe, Deputy Assistant Administrator for Radiation Programs, EPA, to Dr. Biles, AEC, dated 17 May 1974.

7. Draft Environmental Impact Statement (DEIS), Rehabilitation, Resettlement of Enewetak Atoll, September 1974.

8. Environmental Impact Statement (EIS) Cleanup, Rehabilitation, Resettlement of Enewetak Atoll, April 1975 (See Tab 6, Volume IV).

9. LGLS Memo for Record, subject: "Meeting to Discuss Disposal Methods for Radiological Contaminated and Non Contaminated Materials - Enewetak Atoll Cleanup - EPA - 24 February 75," dated 25 February 1975.

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10. LGLS Memo for Record, subject: "Interagency Policy Meeting - Enewetak Atoll - DNA - 25 Feb 1975," dated 4 March 1975.

11. Letter Region IX EPA to Director, DNA, re: Final EIS, dated 30 May 1975.

12. Pacific Ocean Division (POD) Design Analysis, Crater Containment of Contaminated Material at Enewetak dated 29 November 1976 with four revisions.

13. Pacific Ocean Division Drawings 7759 40-05-01, dated 15 April 1977.

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