



DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD  
2461 EISENHOWER AVENUE  
ALEXANDRIA, VIRGINIA 22331-0600

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MEMORANDUM FOR COMMANDING OFFICER, NAVAL ORDNANCE SAFETY AND  
SECURITY ACTIVITY (ATTENTION: CODE N71)

SUBJECT: Explosives Safety Submission (Amendment 1) Review for the Kaho'olawe Clean-up  
Project, Contract No. N62742-95-D-1369 Kaho'olawe, Hawaii

Reference: COMNAVREG Hawaii 11000 Ser N00K/00833 letter of 26 November 2001 with  
one endorsement

1. The DDESB Secretariat has reviewed the subject clean-up plan, submitted by the reference, with respect to explosives safety criteria. The reference submits an entirely new proposal for the Kaho'olawe Island clean-up effort. It is now understood the following different levels of remediation will occur on the island:

- a. Tier I or surface clearance.
- b. Tier II or surface clearance plus removal of ammunition and explosives based upon a metal detection survey to depths of 1 ft or 4 ft depending on public access, erosion potential, intrusive activities and land end use.
- c. "Exception areas" – surface cleared or uncleared.
- d. Uncleared areas.

2. We take no exception with the proposals for 1.a and 1.b, above, with respect to the levels of clearance and the allowed use as specified in Table 2 of Amendment 1. We also believe the restrictions for surface cleared exception areas as explained in paragraph 11.c(4)(g) are appropriate. However, for uncleared "exception areas" or uncleared areas, we believe no access is warranted.

3. The success of this clearance effort and the transfer of access control of Kaho'olawe to the State of Hawaii are ultimately dependent on the control to be exercised over visitors to the island. Training of travel and access limitations, likely hazards to be encountered and potential consequences is mandatory.

4. After access control is transferred to the state on 11 November 2003 (or earlier), procedures must be established which address future UXO discoveries – i.e., what will cause EOD personnel to respond and when. Guidelines must be defined to address what the state will do with these

discoveries (by limiting access and personnel exposure) until EOD can/does respond to handle the discoveries.

5. After the Navy ceases clearance activities and when access control is transferred to the state, the Navy must accurately map and mark with appropriate signage those remediation levels identified as a-d, above. The responsibility for maintenance of signs (knocked or blown over, illegible due to weathering, etc.) should be established in a Memorandum of Understanding between the Navy and the state.

6. The section of the road passing through the southwest portion of the island which has not received surface clearance, should be surface cleared within 750 ft of both sides of the road.

7. Based on the information submitted and with incorporation of the comments above, Amendment 1 is approved provided:

a. The land use remains consistent with clearance depths. Changes must be approved by the DDESB.

b. Uncleared areas are clearly marked to prevent access.

8. The following comments are keyed to the paragraphs noted in Amendment 1:

a. Paragraph 2.b.(4)(b). It is acceptable to use the fragment distances for the case diameters identified or munitions listed in DoD 6055.9-STD, Tables C5.T2 or Table C5.T3, respectively. However, these distances apply only to individual items and will probably not lend themselves for large demolition shots for which approval already exists (up to 1,000 lbs). The required distances will then be those expressed in paragraph 8.d, below. We also recommend the incorporation of the use of a minimum of 2-3 ft of tamped earth to further minimize fragment travel.

b. Paragraph 2.c, "All personnel on the island of Kaho'olawe are part of the clearance operation and therefore essential to the OE removal process." There is no doubt that the people employed for the clean-up process are on the island for that purpose only. However, the question of "essential to the OE removal process" is not the same answer for all. Everyone does not detect UXO, everyone does not pick up UXO for consolidation, everyone does not blow-in-place UXO, everyone does not inspect scrap, etc. DoD policy limits exposure to the minimum amount of people to the minimum amount of explosives for the minimum amount of time. For instance, for disposal by demolition operations there are people who are not required for the operation and they are to be as far away as possible. The only people allowed within the exclusion area are those directly involved in the final preparation and initiation of the shot.

c. Paragraph 8.a. (1). The designation of a "most probable munition" and its fragmentation distance is acceptable unless the item under consideration is known to require larger distances. Then the larger distance must obviously be used.

d. Paragraph 8.d. (1). We have no objection to the use of a K-factor of 500 for heavy cased munitions. However, the minimum allowed for light cased munitions is K328 – not K300 – but not less than 1,250 ft. Distances may not be less than the mandatory 1,250, 2,500 or 4,000 ft requirements. The only exception is for detonation of individual items. The argument concerning exposures on the island for all employees is not accepted as discussed in 8.b, above.

e. Paragraph 11.c. (4)(c). We recommend these signs be within visual sight of one another.

9. It is our understanding that the island is divided into several parcels and each parcel will be treated separately from the others. Information will be generated for each parcel detailing levels of contamination encountered, types and numbers of UXO found and assessment depths. It is also our understanding this type information will be included in the filing of the final deed for each parcel of the island. We believe the Navy/NAVFACENGCOM is the appropriate place for long term filing of such a large volume of information. For information purposes, we would appreciate notification when each parcel has been completed.

10. POC is Mr. Robert G. Newbern, Jr. at DSN 221-2555 or 703-325-2555 or Robert.Newbern@ddesb.osd.mil.

/s/ CAPT William E. Wright, USN

WILLIAM E. WRIGHT  
Captain, US Navy  
Chairman