



DEPARTMENT OF THE NAVY

PACIFIC DIVISION
 NAVAL FACILITIES ENGINEERING COMMAND
 (MAKALAPA, HI)
 PEARL HARBOR, HAWAII 96860-7300

5090.C9
 Ser 1143/ 117

08 JA.: 133p

From: Commander, Pacific Division, Naval Facilities Engineering Command
 To: Commanding General, U.S. Marine Corps Base, Camp Smedley D. Butler

Subj: ENVIRONMENTAL STUDY AT CAMP KINSER SHORELINE

Ref: (a) MCB Camp Smedley D. Butler Engineering Service Request (ESR)
 No. 038-90
 (b) NAVHOSP Okinawa Itr 6280 640 of 21 Dec 84

Encl: (1) Attachments to Reference (a)

1. Reference (a) requested that PACNAVFACENCOM perform an environmental study to determine whether the Camp Kinser shoreline can be developed into a recreational beach area. The subject shoreline area was reported to have been used to store hazardous materials in the past, and previous sampling conducted in the 1970's indicates that the area may still be contaminated with hazardous substances.

2. We concur with reference (b) that additional sampling of the lumber yard and chemical storage and cleanup area at Camp Kinser be conducted. However, a study to determine the suitability of the area for recreational purposes would be a significant tasking based on the following factors:

a. The size of the suspected area of contamination is approximately 500,000 sq. ft. The wide range of pesticide values found in the previous sampling effort in 1970's indicates that hot spots may exist within the suspected area. According to the data, polychlorinated biphenyls may also be present in the soil. Detection of these hot spots would be extremely difficult and require extensive sampling.

b. Even after undertaking a major sampling and analysis effort, it would be difficult to conclude that the area is safe to use as a recreational beach because of the concern that all hot spots may not have been detected. The use of a former hazardous material storage site where past release is known to have occurred is not recommended because of the large potential liability in the event a user developed adverse health problems.

3. The estimated costs for a study would probably be in excess of \$500,000. The potential cleanup costs cannot be estimated at this time.

4. We will be able to assist you with the requested study if:

a. Funds are made available for the investigation. Under current DOD guidance, centrally managed Defense Environmental Restoration Account (DERA) funds which are normally used in the United States and its territories for

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these types of investigations cannot be used to perform work in foreign countries. Investigations of former hazardous waste spill or disposal sites in foreign countries must be funded by the activity or major claimant.

b. Our in-house environmental staff is increased to enable us to respond to environmental requirements in foreign countries. Currently, our existing in-house resources are committed to meeting the regulatory requirements in Hawaii and Guam. We have requested authority to increase our staff, and will notify you of any changes in our staffing which would allow us to respond to your request in a timely manner.

5. Should you be able to procure the necessary funding and desire to proceed with the investigations, please contact Mr. Clyde Yokota of our Environmental Branch at DSN 474-4510 or commercial (808) 471-3948.



E. TORNGREN
By direction

Copy to:
CMC
FMFPAC

ENGINEERING SERVICE REQUEST (ESR)
 NAVFAC 11000/7 (4-78)
 Supersedes NAVDOCKS 2038
 S/N 0105-1F-016-0235

PWO

Instructions on Reverse

Copy No.

SECTION A FOR USE BY REQUESTER	1. FROM (Activity and location) Commanding General, Marine Corps Base, Camp Smedley D. Butler, Okinawa, Japan		
	2. TO Pacific Division, Naval Facilities Engineering Command		
	3. REFERENCE(S)		4. ESR IDENTIFICATION NUMBER (if applicable) 038-90
	5. ENCLOSURE(S) (check) <input type="checkbox"/> NAVCOMPT 140 <input type="checkbox"/> NAVCOMPT 2038 <input type="checkbox"/> NAVCOMPT 372 <input checked="" type="checkbox"/> OTHER (specify) <u>File on Chemical Storage</u> <u>Area cleanup at Camp Kinser</u>		6. TYPE OF FUNDING (check) <input type="checkbox"/> O&M <input type="checkbox"/> TRF <input type="checkbox"/> NAF <input checked="" type="checkbox"/> OTHER (specify) <u>O&M, MC</u>
SECTION B FOR USE BY EED	7. TYPE OF SERVICES REQUESTED Perform soil and water sampling and analysis at Camp Kinser shoreline to determine suitability of shoreline for development of recreational beach area.		
	8. DESIRED COMPLETION DATE ASAP		
	9. DESCRIPTION OF WORK a. Using the enclosed file as a guide, conduct soil and water sampling and analysis along Camp Kinser shoreline. b. Interpret analysis results and provide recommendations on whether the shoreline area can be developed as a recreational beach area and will not pose a threat to human health. c. If the analysis results show findings of environmental contamination, investigate means for cleanup of contaminated area. Determine most effective measures for control of contaminant migration and site restoration. Provide cost estimate for measures to be taken.		
	10. FOR INFORMATION CONSULT (Name and phone) B. J. Almario, 635-7587	11. OFFICIAL REPRESENTATIVE (Signature) <i>J. Magle</i>	12. DATE 13 Nov 89
SECTION C INTERIM ENDORSEMENT	1. SCOPE OF SERVICES		
	2. DATE RECEIVED		
	3. ESR NUMBER		
	1. REMARKS		
SECTION D FINAL ENDORSEMENT	2. EST. COMPLETION DATE		
	3. AUTHORIZED REPRESENTATIVE (Signature)		4. DATE
	1. ENCLOSURE(S) <input type="checkbox"/> DRAWINGS AND MAPS <input type="checkbox"/> OTHER (specify) <input type="checkbox"/> SPECIFICATIONS <input type="checkbox"/> REPORT		
	2. EST. COST (if applicable) \$	3. AUTHORIZED REPRESENTATIVE (Signature)	4. DATE OF COMPLETION

5000/2
14/64/460
9 May 90

POINT PAPER

Subj: Environmental Assessment of Camp Kinser Shoreline

BACKGROUND

1. The U.S. Army openly stored large amounts of hazardous materials and hazardous waste along the shoreline of Camp Kinser through the 1950's and 1960's. In December 1974, there was an unusual fish-kill off the Camp Kinser shoreline. The U.S. Army Environmental Health Engineering Agency (EHEA) was tasked to collect and analyze samples of water, soil, sediment, fish and other aquatic fauna to determine the cause. The EHEA study indicated high concentration of chlordane, DDT, malathion, dioxin, and polychlorinated biphenyl. Remedial action taken by the U.S. Army included repackaging leaking containers and disposing of waste materials. The EHEA report was not conclusive since it was not stated whether the soil was tested to determine the depth that the contaminants penetrated nor how the contaminated soil was disposed of.
2. Additional soil and water sampling and analyses were conducted by EHEA in February 1976. The levels of chlordane found approached those found in soil samples collected in December 1974. In November 1977, a joint study was conducted by the Okinawa Prefectural Government and the EHEA. Results showed high concentrations of heavy metals but low concentrations of pesticides.
3. In September 1984, the U.S. Naval Hospital, Okinawa (NAVHOSP) reviewed the results in past reports to determine if a recreational beach area could be established at Camp Kinser. NAVHOSP recommended that further sampling be conducted. In February 1985, additional soil samples were analyzed for dioxin. All samples tested negative; however, the shoreline remained closed to recreational activities as a precaution.

DISCUSSION

1. To certify that the former U.S. Army Storage site is cleaned of all hazardous materials would require an extensive survey to be conducted followed by a clean up of any residue found. All surveys to date have been cursory. In January 1990, a preliminary cost estimate of \$500,000 to conduct the survey was provided by Pacific Division, Naval Facilities Engineering Command (PACNAVFACENGCOM). The high cost is due to the large size (500,000 SF) of the potentially contaminated area and the technical difficulty of detecting all hot spots in the soil. Extensive sampling would be required.
2. Defense Environmental Restoration Account (DERA) funds cannot be used to perform investigations in foreign countries. Surveys or follow on clean up efforts must be supported by O&M funds. The additional cost to clean up any hot spots found could be very high.

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Subj: Environmental Assessment of Camp Kinser Shoreline

3. PACNAVFACENGCOM can not currently support the administration of a contract for an Environmental study in Japan. Their Environmental staff is currently committed to work in Hawaii and Guam. PWC Yokosuka or the U.S. Army Corps of Engineers could be asked to administer the contract. Both have the technical expertise; however, neither are currently staffed to support a large scale study on Okinawa. MCB Camp Butler does not have the technical expertise.

4. It is not prudent to use the area as a recreational beach even if no pollutants were found because of the known past use of the area as a hazardous materials storage site.

RECOMMENDATION: None, for information only.

ACTION OFFICER: CDR D. W. Peck, Public Works Officer, 635-7676/7677.

23 January 1991

HAZARDOUS WASTE SITE CAMP KINSER

I. BACKGROUND

The initial identification of the existence of a problem was a fish kill of 19-20 December 1974. The fish kill took place offshore of the Army's MSA lumber yard. The source of the contamination was determined to be chemicals stored at the open yard.

1. Chemicals included insecticides, rodenticides, herbicides, inorganic and organic acids, alkalis, inorganic salts and organic solvents, and vapor degreasers.
2. The incident was studied by the U.S. Army Environmental Health Engineering Agency, Pacific. Interim report No. 90-011-75 of 9 January 1976 documents the investigation and initial cleanup.
3. The lumber yard covered the area west of the perimeter road from just south of the gym to the south gate.
4. The storage area covered approximately 500,000 sqft.
5. Cleanup actions were undertaken by the U.S. Army Garrison Okinawa, with technical guidance from U.S. Army Environmental Health Engineering Agency Pacific (EHEAP).
6. Chemicals primarily came from retrograde shipments from Viet-Nam and those declared excess as a result of phase down activities with Depot operations.
7. CINCUSARPAC directed reporting of all Okinawa excess chemicals to U.S. Army General Material Parts Center (AMC) in Dec. 1972.
8. U.S. Army Base Command Okinawa (USARBCO) was directed to package the chemicals for shipment to disposal sites in CONUS. Bids for the work of repackaging exceeded the funds available and inhouse labor undertook the action with limited success.
9. Sale of excess hazardous materials locally through Property Disposal had limited success. Many containers were in such poor condition that bidder refused to pick them up.
10. Through 1974 no deposition instructions were given USARBCO and the containers continued to deteriorate.
11. After the fish kill of 19-20 December 1974, soil and water samples were taken and indicated contamination had occurred involving the following pesticides in decreasing volume of release: malathion,

13. Analysis of samples taken in December 1974 indicated "High concentrations of PCB's, particularly aroclor 1260, have complicated the analysis of most samples". Their was no indication that tests were run for PCB's. (This needs to be examined)

II. CLEANUP OPERATIONS

1. Local disposal included the following:

a. Cyanide Compounds were neutralized. The solution was flushed into the sanitary sewer system. The sludge was disposed of by burial at the "lime pit" located at the vacant lot across from the MSA theater. The old MSA theater, building 1300, was located just north of the Gym building 1303.

b. Ferric Chloride- was disposed of by land burial. 27,800 pounds of ferric chloride were buried across from the MSA theater in a 30 feet long x 10 feet wide x 5 feet deep trench.

c. Inorganic Acids and Alkalis- were neutralized and flushed over the lumber-yard grounds.

d. Organic Solvents and PGL related Substances were transferred to a 15,000 gallon tanker located in the MSA 540 yard. (Need to determine ultimate disposal)

2. Repackaging Operations of pesticides were conducted. Chemicals were drained from existing drums and placed in new containers. Land burial was utilized for some items. These are listed in appendix V of the report. The site of the landfill is at "Camp Hansen coordinates 96572993 or 96423035 U.S. Army Topographic Map, Kin". (Coordinates match the existing Kin Dump site)

3. Empty pesticide containers were to be disposed of by smelting. Containers were transferred to Defense Property Disposal Office, Okinawa to contract for the service.

III. FOLLOW-UP

1. Sampling by the Army continued through 1978 with test results showing a decreasing trend. The 1978 Army Pacific Environmental Health Engineering Agency, Sagami letter summarized that "necessity for continued sampling and analyses of the shore line area, with respect to pesticide levels in the soil and water, appears to be non-productive in view of these already documented facts."

2. In 1984 the Naval Hospital, Okinawa was asked to determine the acceptability of the offshore area at Kinser for recreational swimming. The Hospital reviewed the Army report and received additional information that no final report was conducted and that the Army's

3. Soil samples were taken by MCB Butler environmental engineer in 1985 and tested for dioxin (agent orange component). The test results were negative.

4. In October 1986 another fish kill took place offshore of Camp Kinser. It resulted from excavations associated with Urasoe city port facility construction. Drainage and road work took place in the area of the former Army lumber yard. Analysis of soil, water and fish contained elevated levels of pesticides chlordane and dieldrin, PCB contaminated oil and heavy metals. These are similar contaminants as found during the 1974 incident.

5. The use of the Kinser beach area was again investigated in November 1989. A request was made to Naval Facilities Engineering Command, Pacific Division to evaluate the past documentation and to make a recommendation as to the suitability of the area for recreational use. Their response indicated a detailed study is needed to make that determination. The estimated cost of that study is \$500,000.

IV. PRESENT CONDITIONS

1. The present issue is not the suitability of the area for swimming, but of the long term environmental concerns. Is a cleanup of the area necessary? What is the US Government's long term liability in the area?

2. A new cost estimate on a study to answer the environmental questions asked above is necessary.

DRAEIED BY

This summary was made by CDR Dale Peck the PWD, MCB Butler upon review of the existing Environmental Engineering files.