



DEPARTMENT OF THE ARMY
 HEADQUARTERS, US ARMY COMMUNICATIONS-ELECTRONICS COMMAND
 AND FORT MONMOUTH
 FORT MONMOUTH, NEW JERSEY 07703-5000



REPLY TO
ATTENTION OF

AMSEL-SF-RER

11 December 1991

MEMORANDUM FOR Commander, U.S. Army Material Command, ATTN: AMCSF-P, 5001
 Eisenhower Avenue, Alexandria, VA 22333-0001

SUBJECT: Assistance Visit - Schofield Barracks, HI

1. References:

- a. FONECONS between Mr. John Manfre, your command, and the undersigned, 25 Nov 91, SAB.
- b. Letter, U.S. Nuclear Regulatory Commission (NRC) Region V, 22 Nov 91 (encl 1).
- c. AR 385-11, Ionizing Radiation Safety, 1 May 80.
- d. AR 40-14, Control and Recording Procedures for Exposure to Ionizing Radiation and Radioactive Materials, 15 Mar 82.

2. As requested in reference 1a and in response to reference 1b, we are providing you with information concerning activities involving radioactive materials at the East Range, Schofield Barracks, HI.

3. Subject visit was performed by Mr. Joseph Santarsiero, Supervisory, Health Physicist, during the period 3-4 Dec 91.

4. Personnel Contacted:

Mr. William Sweat, Safety Director, United States Army Pacific (USARPAC), Fort Shafter

Mr. Douglas M. Mullins, Safety Specialist, United States Army Support Command-Hawaii (USASC-H), Fort Shafter

Mr. Jerry Cooper, Warehouse Worker Leader, Bldg 6017, East Range, Schofield Barracks

Mr. Clarence E. Freeman, Warehouse Worker, Bldg 6017, East Range, Schofield Barracks

Mr. Roger Olsen, Material Classifier, Schofield Barracks

CPT Brent Murphy, Health Physics Office, ~~Tripler Army Medical Center~~ (TAMC)

Mr. Rick Waffird, Health Physics Office, TAMC

DD/24

OFFICE	NAME	INITIALS	DATE	TIME
	<i>WNS</i>	<i>WNS</i>	<i>11</i>	<i>91</i>
	<i>S</i>			

of Red

AMSEL-SF-RER

SUBJECT: Assistance Visit - Schofield Barracks, HI

5. Discussion:

a. Upon arrival at Fort Shafter on 3 Dec 91, I received an in-brief from Mr. Sweat and Mr. Mullins involving the storage of radioactive materials at the East Range facility of Schofield Barracks as alleged, and identified, at reference 1b letter.

b. The site of concern was referred to as the warehouse storage branch, East Range, building 6017. This building is used as a storage and holding warehouse for various commodities, items and equipment awaiting issue and/or disposition. Located in a remote portion of the warehouse was the area used for the storage of radioactive materials.

c. A physical survey of the storage location identified the presence of a number of radioactive commodities consisting primarily of compasses, watches, and leveling devices containing tritium (H-3). These items are managed by the U.S. Army Armament, Munitions, and Chemical Command, Rock Island, IL and/or the U.S. Army Troop Support Command, St. Louis, MO. All these devices and items were undamaged, with no apparent breach of source containment. In addition, there were approximately 10 each CECOM managed MX-7338/PDR-27() Radioactive Test Samples incorporating Krypton 85 gas. As with the H-3 commodities, these also showed no visible signs of damage or source breach.

d. Utilizing an Eberline ESP-2 survey meter (S/N 1222, calibration due date 27 Jan 92) with SPA-3, AC3-7, and HP 270 probes, I surveyed the storage location and surrounding areas for contamination. No levels above normal background readings were obtained. To evaluate for H-3 contamination, I took a total of 10 wipes utilizing meticel filters. Areas checked for contamination included the storage shelves which originally were used to store the above commodities; the shelves on which the above commodities were stored during my visit, i.e., the current storage area; and the surrounding floor areas. The wipes were analyzed by the Health Physics Office, TAMC using liquid scintillation analysis. Results of the analysis (encl 2) identified all areas to be less than the 200 disintegrations per minute, beta, as stipulated in Table 4-3, Radioactive Contamination Guides for removeable contamination in controlled areas, reference 1c.

e. Regarding the specific concerns addressed at reference 1b, the following information is provided:

(a) The storage areas for radioactive materials were not marked or labeled pursuant to Army instruction APZV-DLS-S 385-1.

At the time of the evaluation, the storage area was posted with the following:

- (1) Caution Radioactive Material
- (2) No eating, drinking, or smoking
- (3) NRC Form 3, Notice to Employees
- (4) Department of Transportation (DOT) placards

AMSEL-SF-RER

SUBJECT: Assistance Visit - Schofield Barracks, HI

Indication was made that these were also the signs that were posted during the time of the allegations. During my visit: (1) DOT signs were removed; (2) Caution Radioactive Material signs were placed in closer proximity to the storage location in order to limit the radiation control area; (3) additional posting requirements were identified. These included Title 10, Code of Federal Regulations, Parts 19, 20, and 21; and Section 206 of the Energy Reorganization Act. We have provided ARPAC Safety with these postings in addition to a revision of NRC Form 3.

(b) Regular personnel monitoring of employees was not done.

The type of radioactive material in the storage location, specifically H-3, does not require the use of personnel dosimetry or a medical surveillance program. The presence of gamma emitting Krypton 85 does not warrant the use of personnel dosimetry due to the: (1) limited amount of time personnel spend in the storage area; (2) distance from the radiation control area to unrestricted areas; (3) the remote possibility that personnel will receive exposures in excess of the requirements of reference 1d.

(c) Contamination surveys were not performed.

(And not reg'd by Fort Marshall license)

The only recorded evaluation of the storage area was performed by Mr. Mullins on 31 Oct 91. This evaluation was an overall assessment of the storage area to include a radiation survey. The evaluation is provided at enclosure 3. I indicated to Mr. Mullins that due to the presence of H-3, wiper tests of the area should be performed and analyzed through an agreement with TAMC. During my visit, I laid the groundwork for this support to be provided by TAMC. I recommended that a wipe test of the area be performed on at least a quarterly interval, however since H-3 commodities are not managed by CECOM, direction for the wipe testing should come from the appropriate AMC MSC. Regardless of this fact, Mr. Mullins agreed that the H-3 monitoring would be performed as recommended and results documented.

not licensed by F.M.

Fort Marshall

(d) Employees were not trained or informed regarding the hazards.

It is noteworthy to mention that prior to this incident occurring, arrangements had been made with ARPAC Safety and the CECOM Radiological Engineering Branch to present an on-site 40 hour Radiation Protection Officer Course to worker and user personnel during the Jan-Feb 92 timeframe. However, during my visit, I provided supervisory and warehouse personnel, approximately 24 individuals, with a 2.5 hour informal training session. Discussions during this training included, as a minimum: (1) the type and quantity of radioactive materials present in their storage location and other radioactive materials found within the Army supply system; (2) the radiation characteristics of these materials and potential hazards; (3) basic radiation protection practices to include the concepts of time, distance and shielding; (4) establishment and maintenance of a radiation protection program at a warehouse location, to include the shipment and receipt of radioactive materials and associated monitoring/survey requirements; (5) why radioactive materials are used and the functions of the items they are used in; (6) topics

AMSEL-SF-RER

SUBJECT: Assistance Visit - Schofield Barracks, HI

covered in 10 CFR 19, 20, and 21; (7) identification of radioactive commodities. In addition to the above, I individually addressed each of the allegations.

6. Our POC in this regard is Mr. Joseph Santarsiero, Milnet (AMSEL-SF@MONMOUTH-EMH3.ARMY.MIL): Message (CDR CECOM FT MONMOUTH NJ //AMSEL-SF-RER//); Facsimile on DSN 995-2667 or (908) 542-7161: or Voice on DSN 995-4427 or (908) 544-4427.

7. CECOM Bottom Line: THE SOLDIER.

Prepared by:

JOSEPH M. SANTARSIERO
Chief, Radiological
Engineering Branch

Approved by:

STEVEN A. HORNE
Chief, Safety Office

3 Encls