

## DEPARTMENT OF HEALTH SERVICES

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MCAS EL TORO  
SSIC NO. 5090.3



May 14, 1998

Mr. Joseph Joyce  
BRAC Environmental Coordinator  
U.S. Marine Corps Air Station – El Toro  
P.O. Box 95001  
Santa Ana, California 92709-5001

Commander:

Attached please find the California Department of Health Services' (DHS) comments on the review of the Final Radiological Status Survey, El Toro Marine Corps Air Station, California, dated April 23, 1998. As an Agreement State with U.S. Nuclear Regulatory Commission, DHS has the charge of protecting the citizens of California from undue exposure to radiation. DHS provides consultative guidance to the California Department of Toxic Substances Control on radiological matters and reviewed this document at their request.

If you have any questions or need further information regarding this review, please contact Ms Deirdre Dement at (916) 324-1378.

Sincerely,

A handwritten signature in cursive script that reads "Darice G. Bailey".

Darice G. Bailey  
Senior Health Physicist  
Division of Drinking Water and Environmental Management

Enclosure

cc: Mr. Tayseer Mahmoud  
DTSC  
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received  
5/18/98

Mr. Joseph Joyce

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Department of Health Services

Review of Revised Draft Document, *Final Radiological Status Survey, El Toro Marine Corps Air Station, California, April 23, 1998*

May 14, 1998

DTSC Resource Planning Form # 384

The following comments and questions are in response to the request from Mr. Tayseer Mahmoud of the Department of Toxic Substances Control to review the revised draft document *Final Radiological Status Survey, El Toro Marine Corps Air Station, California*, dated April 23, 1998.

General Comment:

1. The use of gamma scintillation detectors and gamma/beta probes to define "elevated" areas may not be sensitive enough to show that the areas requiring a one hundred percent scan have only the acceptable levels of Ra-226 (the radionuclide of concern) contamination. The minimum detectable activities (MDA) for these instruments shown as 775 dpm/100 cm<sup>2</sup> and 3600 dpm/100 cm<sup>2</sup> already exceed the maximum acceptable surface contamination level of 300 dpm/100 cm<sup>2</sup> for radium-226. (See Specific Comment 2.) The alpha detector appears to be the only instrument listed that could be used to show that the release criteria were met and is the only instrument referenced to demonstrate that a 100% scan was properly performed.

Specific Comments:

1. Page 11, Section 5.11. It should also be stated that any areas that are classified as Class 2 or 3 may need to be reclassified as requiring a Class 1 survey (100% scan for the radionuclide of concern) if contamination is found or if a Class 2 or 3 area requires remediation.
2. Page 15, Section 5.4.3.1 and Appendix B, "Typical Instrument Detection Sensitivity." The sensitivities of the NaI gamma scintillation detectors and the gamma/beta probes, with the elevated readings determined by 1 ½ times background and 100 cpm above average background respectively, appear to exceed the release limits for Ra-226 shown in Section 5.4.2 and taken from the NRC Regulatory Guide 1.86 for acceptable surface contamination levels. It is unclear how the Marines propose to present a one hundred percent scan of the Class I areas to ensure that no discrete area exceeds these acceptable surface contamination levels using the gamma instrumentation referenced.

Specific Comments: (Continued.)

3. Page 18, Section 5.6.3.2. In this section, the value of the relative shift,  $\Delta/\sigma$ , is stated as having an established value of 3 for the reference area. This value is stated as being based on "available site knowledge and past experience." NUREG-1575 specifies that the method for determining the  $\Delta/\sigma$  is determined by several factors, none that have been provided for DHS' review. Without showing how this value was derived, DHS cannot concur that this value for  $\Delta/\sigma$  is correct.