

Memorandum

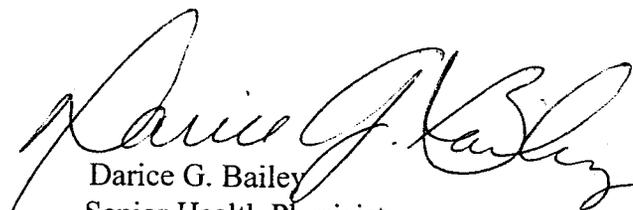
Date: November 13, 1998

To: Mr. Chein Kao
Office of Military Facilities
Department of Toxic Substances Control (DTSC), Region 2
700 Heinz Avenue, Suite 200
Berkeley, California 94710

From: Environmental Management Branch
P.O. Box 942732
601 North 7th Street, MS 396
Sacramento, California 94234-7320
(916) 445-0498

Subject: Review of the Navy's Responses to the Department of Health Services' (DHS)
March 6, 1998 comments on the Draft Final Parcel E Remedial Investigation and
Determination Discussion of Acceptable Concentrations of Residual Radioactivity
Contamination at Hunters Point Shipyard

Attached are DHS' comments on the subject document. This review was performed by Ms. Deirdre Dement, Associate Health Physicist in support of the Interagency Agreement between DTSC and DHS. If you have any questions concerning this report, or if you need additional information, please contact Ms. Dement (916) 324-1378.


Darice G. Bailey
Senior Health Physicist

Attachment

cc: Mr. Richard Powell, Code 6221
Engineering Field Activity, West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-5008

Ms. Luann Tetirick, Code 62210 ✓
Engineering Field Activity, West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-5008

Department of Health Services

Review of the Navy's Responses (Attachment S1-C) to DHS' March 6, 1998 Comments from Review of the *Draft Final Parcel E Remedial Investigation and Determination Discussion of Acceptable Concentrations of Residual Radioactivity Contamination at Hunters Point Shipyard*

November 13, 1998
DTSC Resource Planning Form # 408

The following comments are in response to the request from Mr. Chein Kao of Department of Toxic Substances Control to review Attachment S1-C containing the Navy's responses to DHS' March 6, 1998 comments from the review of the documents listed above.

General Comments:

1. The main problem DHS has with the submittal of the reports from running the RESRAD models and the tables showing dose rates per area for specific radionuclides is that it appears that the Navy is asking DHS to agree to leaving "hot spots" far-exceeding levels considered "as low as is reasonably achievable" (ALARA) by DHS. As you know DHS cannot give final approval until the final report is presented. The concentrations shown in units of picocuries per gram and disintegrations per 100 square centimeters (pCi/g and dpm/100 cm²) of the various isotopes equivalent to 25 millirem per year (mrem/year) previously presented in draft NUREG 1549 have been deleted from the new revised draft dated July 1998. For the determination of a "derived concentration guideline level" (DCGL) to use for MARSSIM and for determining dose per RESRAD modeling, DHS will accept the use of the default parameters contained in the RESRAD program unless specific justification can be demonstrated why alternatives to the default parameters are appropriate. (For example, the Cs-137 concentration equivalent to 25 mrem/year DHS derived from running "RESRAD 5.781" using default values was 10 pCi/g.)

Specific Comments:

1. Attachment S1-C, Page S1-C-2, Response to Comment 2. DHS is only using the 5 pCi/g (considered a health-based standard) value from 40 CFR 192 as a maximum level of Ra-226 residual contamination above background in soil after cleanup to ALARA levels. The State of California does not consider the other values presented in 40 CFR 192 applicable to this site. DHS is still using Radiological Health Branch (RHB) Policy No. IPM-88-2, dated December 1, 1997 with Attachment A as a guide to determine that cleanup to ALARA levels in buildings have been met.

Page 2. DHS' November 12, 1998 review of the Navy's Responses (Attachment S1-C) to DHS' March 6, 1998 Comments from Review of the *Draft Final Parcel E Remedial Investigation and Determination Discussion of Acceptable Concentrations of Residual Radioactivity Contamination at Hunters Point Shipyard*.

Specific Comments: (Continued.)

2. Attachment S1-C, Page S1-C-2, Response to Comment 3. DHS' has "generally accepted" compliance with the RHB Policy No. IPM-88-2 to demonstrate that residual radioactivity requirements have been met at commercial sites licensed under DHS license rather than the proposed 5 microrem per hour ($\mu\text{rem}/\text{hour}$). DHS cannot agree that 9,000 counts per minute (cpm) are equivalent to 10 $\mu\text{rem}/\text{hour}$ or that 10 $\mu\text{rem}/\text{hour}$ above background would be acceptable for releasing the site. If the Navy chooses to use data calculated to 5 $\mu\text{rem}/\text{hour}$ or readings given in cpm for guidance in removal of contaminated asphalt or concrete it may not be acceptable for DHS approval unless substantiated with analytical data. The following lists some of the information needed to substantiate this data for the final report:
 - a. Analytical results given in picocuries per gram for asphalt samples taken at background locations with comparison data from the 2 x 2 scintillation detector readings taken at 1 meter above the ground surface.
 - b. Analytical results given in picocuries per gram for concrete samples taken at background locations with comparison data from the 2 x 2 scintillation detector readings taken at 1 meter above the ground surface.
 - c. The concentrations of the isotopes that relate to 9,000 cpm in concrete and asphalt.
 - d. The cpm readings taken at the surface versus readings taken at 1 meter above the ground surface, and how counts per minute relate to dpm or pCi/g for the different isotopes.
 - e. A survey made at a distance of one meter above ground surface may not provide adequate detection limits or the capability of finding small areas of elevated activity. The Navy needs to specify how they selected this survey distance, the detection limits of the method, and how the detection limits were determined.

Chein Kao
November 13, 1998
Page 2

cc: Ms. Deirdre Dement
PO Box 942732
601 N. 7th Street MS 396
Sacramento, CA 94234-7320