



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

N00236.001499
ALAMEDA POINT
SSIC NO. 5090.3

April 8, 1998

George Kikugawa, Code 1831.2
Engineering Field Activity, West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, CA 94066-2402

RE: IR Sites 1, 2, 5 and 10 Radiological Removal Action, Alameda Point, Alameda

Dear Mr. Kikugawa:

EPA has reviewed the above referenced document and provides the attached comments for your consideration. In particular, EPA would like to emphasize that for the storm sewer removal action (Site 5) to be considered a final remedial action, radium contamination in soils must be cleaned up to levels that are indistinguishable from background. In addition, the removal actions elected for Sites 1 and 2 will mean that the final dispensation of the radium devices at these sites must be decided in the Record of Decision taking into account the designated reuse of these sites.

If you have any questions regarding these comments, please call me at (415) 744-2367 or Steve Dean at (415) 744-2391.

Sincerely,

A handwritten signature in cursive script that reads "Anna-Marie Cook".

Anna-Marie Cook
Remedial Project Manager

cc: Steve Dean, EPA
Mary Rose Cassa, DTSC
Steve Edde, Alameda Point

EPA COMMENTS ON ALAMEDA POINT RADIOLOGICAL REMOVAL ACTION TECHNICAL WORK DOCUMENT

General Comment: EPA agrees that Alternative 3 - Removal is the most appropriate remedial action for Sites 1, 2, 5, and 10. EPA disagrees with the proposed radium-226 (Ra²²⁶) cleanup levels for all four sites.

Specific Comments:

1. **Pages 19 & 20, Section 4.1.2:** The Uranium Mill Tailing Remedial Compliance Act 40 CFR 192 (UMTRA) is not an Applicable nor Relevant and Appropriate Regulation. The UMTRA was written for DOE's mill tailing sites. The Navy has yet to provide any evidence that uranium milling operations took place at Alameda Point. UMTRA is not an ARAR for radium paint facilities unless uranium milling was an aspect of the facility's operation. The entire document, especially Tables 4-1 and A-1, needs revision to reflect this fact.

Using the UMTRA's soil cleanup level of 5 pCi/gm is not the appropriate cleanup level if the Navy is expects to transfer this property. The storm sewer removals should achieve radium concentrations that are indistinguishable from background to depth with special attention to the surface (first 15 centimeters) areas. This is the appropriate level required for this removal action to be considered the final remedial action.

As a note of interest, US EPA policy states that when UMTRA is used as an ARAR the 15pCi/gm below 15 cm is only appropriate at DoE milling tailing sites.

2. **Page 5, Section 2.0, Paragraph 2:** The references to commercial uses for radium seem to trivialize the radium issue as a public health hazard at Alameda Point. There are radium contaminated sites on the NPL from commercial uses and manufacture as well. As examples, the Luminescent Dial Company in Ottawa, Illinois, and the Radium Dial Company facility in New York, are sites that made radium dials for commercial watches and clocks and have severe radium contamination issues. Civilian use of radium has also created serious environmental issues throughout the US.
3. **Page 2, Section 1.1 Paragraph 1 & Page 3, Section 1.3.1, Paragraph 1:** While Executive Order #12580 delegates authority to DOD to undertake CERCLA response actions it also requires that DOD comply with CERCLA requirements. The Navy's implementation must be consistent with the health protective intent of the statute.
4. **Page 14, Section 5.3.2.1, Paragraph 2:** "The discreet articles present... are considered to contain very small quantities of radium...". This statement is wholly

misleading. These articles usually contain levels of radium over one million times higher than typical environmental levels, ie., background levels in soils.

5. **Page 14, Last Sentence & Page 15, Paragraph 1:** The US EPA recognizes that radium contamination poses a serious threat to public health and the environment. If the Navy opts to leave radium devices in place now then the final dispensation of these devices must be addressed in the Record of Decision. It is probably inappropriate to say that "leaving in place devices which are not detectable from the surface is not incompatible with the protection of human health." Reuse issues will have to factor in the remaining radium contamination at Sites 1 & 2.
6. **Page 15, Section 3.2:** The Navy has failed to provide any data from benthic studies in Seaplane Lagoon that would indicate that bioaccumulation of radium is a "remote possibility." Judging from the amount of radium in the storm sewer lines it is highly likely that considerable radium contamination was discharged into the Seaplane Lagoon. EPA strongly recommends that benthic analysis for radium be conducted beyond the riprap at the storm sewer outfall in Seaplane Lagoon.
7. **Page 7, Section 2.1.6:** Preliminary Remediation Goals (PRGs) based on human lifetime health risk from cancers induced by radioactive contaminants are the appropriate standards for evaluating this area. The PRG for radium is indistinguishable from background.
8. **Page 20, Section 4.1, Paragraph 3:** The Navy and its contractors have grossly misinterpreted EPA's radiation cleanup policy. Radionuclides are treated the same as every other hazardous substance listed in the NCP. The cleanup levels are based on PRGs derived from a lifetime cancer risk of one in one million excess cancers. The 15 mrem/yr level commonly quoted in this document gives an excess lifetime cancer risk of three in ten thousand people which is unacceptable to EPA Superfund Region 9. If the Navy really wishes to use a less health protective standard for its radioactive contamination then that standard must be addressed during the Record of Decision (ROD) process.
9. **Page 23, Section 6.1.3, Paragraph 1:** Further remedial actions for the radioactive contamination remaining at Sites 1 and 2 must be addressed during the ROD process.
10. **Page A-4, Table A-1:** It is inappropriate to use 10 CFR 20's level of 60 pCi/milliliter as the ARAR for discharging radium contaminated water into the Bay. The MCL of 5.0 pCi/liter for combined radiums 226 and 228 is the correct standard for discharges to the Bay. The discharge water must also be evaluated for other contaminants, such as VOCs and metals, known to be present at Site 5. Surface water discharge limits as required by the RQWCB and/or pretreatment standards required for discharge to a waste water treatment plant must be met prior to disposing of fluids generated during this removal action.