



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

N00217.003395
HUNTERS POINT
SSIC NO. 5090.3

September 9, 1996

Richard Powell, Code 1832
Engineering Field Activities, West
900 Commodore Drive
San Bruno, CA 94066-5006

RE: **Draft Final Report for Results of Subsurface Radiation
Investigation in Parcels B and E**

Dear Mr. Powell:

EPA has reviewed the above referenced document prepared by PRC Environmental Management Inc. and submitted on July 12, 1996. Steve Dean, EPA's representative for the Office of Radiation and Indoor Air, offers the following comments on the report:

1. **Page 29, Section 4.1.1:** During one of my visits to the IR-1 site, I saw evidence that radium devices and device remnants were actually imbedded in some of the slag. Using a gamma meter I was able to detect elevated gamma readings on some of the slag debris, suggesting that radium contamination was present in the slag materials.
2. **Page 30, Section 4.1.3:** The National Air and Radiation Environmental Laboratory (NAREL) is EPA's air and radiation laboratory. The staff and management of that facility are U.S. EPA employees.
3. **Page 33, Section 4.4:** Using radon flux measurements to detect buried radium devices would prove unsuccessful. This technique can be used only in very limited situation to detect buried radium deposits left by uranium mining operations. The quantities of buried radium have to be much higher than are present in IR-1 for radon flux to be effective.
4. **Page 34, Section 4.5:** I am pleased to find the inclusion of bioturbation and its effects on the landfill. It is this phenomenon that adds weight to the recommendation for complete removal of radium devices in this area.
5. **Page 35, Section 5.0:** "EPA petrographic analysis has established that all radioactivity in soils at the sites is due to naturally occurring minerals and is not the result of former HPA disposal activities". The actual statement in

the report is "petrographic examination of minerals in the three soil samples indicates that the radioactivity is from naturally occurring monazite and zircon." In other words, the EPA report merely states that analysis on a limited number of samples showed no evidence of radium contamination at Parcel B. The validity of generalizing the results of the EPA report for all soils at the sites is dubious.

If you have any questions, please call me at (415) 744-2367 or Steve Dean at (415) 744-1045.

Sincerely,



Anna-Marie Cook
Remedial Project Manager

cc: Cyrus Shabahari, DTSC
Mike McClelland, EFAWEST
Luann Tetirick, EFAWEST
Steve Dean, EPA