



**Yana Garcia**  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

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**Gavin Newsom**  
Governor

August 1, 2024  
Michael Pound  
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DTSC REVIEW OF THE REVISED DRAFT TECHNICAL MEMORANDUM:  
STRONTIUM ANALYSIS FOR THE HUNTERS POINT NAVAL SHIPYARD IN SAN  
FRANCISCO, CALIFORNIA (SITE CODE: 200050)

Dear Michael Pound:

The Department of Toxic Substances Control (DTSC) has completed our review of the *Revised Draft Technical Memorandum: Strontium Analysis*, dated July 2024 (draft Tech Memo). The draft Tech Memo reports the results of a verification study of Strontium analytical methods. The verification study was designed with input from state and federal regulatory agencies to determine which analytical method(s) would be appropriate for measuring Strontium in soil at Parcel G of the Hunters Point Naval Shipyard. The United States Environmental Protection Agency (USEPA) reviewed a previous draft of the draft Tech Memo and has provided comments, dated July 15, 2024.

The California Department of Public Health, Environmental Management Branch (CDPH-EMB) has reviewed the draft Tech Memo and USEPA's comments. CDPH-EMB concurs with USEPA's comments and has no additional comments. CDPH-EMB agrees that the Navy should use the Eichrom Total Beta Strontium method at Parcel G for soil sample analysis. DTSC defers to CDPH-EMB for technical review of radiological documents. Due to the high public interest in the Strontium analysis at Parcel G, DTSC has reviewed the draft Tech Memo for clarity and accessibility to the public. DTSC's comments are provided below.

**DTSC Comments:**

1. Executive Summary, page vii: In comparing the cancer risk of the Strontium-90 remedial goal (RG) to the regulatory risk management range, DTSC recommends also acknowledging that cancer risks are cumulative in nature, and including a comparison of the total risk of all radiological RGs to the regulatory point of departure, then noting that the Strontium-90 RG is a portion of that total.
2. Executive Summary, Project Timeline Overview: DTSC recommends modifying language in the timeline to say “potential exceedances” or “unverified exceedances” to avoid confusion, as the Tech Memo concludes that the results from the related analytical methods were unsound.
3. Section 2.4: This section and its subsections are intended to introduce terminology used throughout the Tech Memo, but they do not consistently define introduced terms. DTSC suggests adding definitions of Type II error, clarifying the definition of Minimum Detectable Concentration, and adding a definition of “sigma” as it relates to uncertainty.
4. Section 3.1.1, Results: Given the nature of the radiological rework program and ongoing litigation, DTSC recommends removing or caveating references to results reported by Tetra Tech EC. DTSC also recommends clarifying the last sentence of this section, which states “Under this Parcel G project, there are 16 sample results exceeding the Parcel G Sr-90 RG,” to state that these reported exceedances were from an unreliable analytical method.
5. Tables: Members of the public have requested that the Navy provide the raw data of Strontium samples results, which is included in these tables. DTSC strongly encourages the Navy to make these tables available in spreadsheet form for the benefit of the public.

If you have any questions, please contact me at (510)-540-3840 or via email at [Michael.Howley@dtsc.ca.gov](mailto:Michael.Howley@dtsc.ca.gov).

Sincerely,



Michael Howley

Project Manager

Site Mitigation and Restoration Program – Berkeley Office

Department of Toxic Substances Control

(CC next page)

Erica Schmandt

July 28, 2023

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