



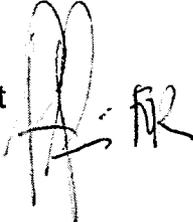
Corrected Copy

California Department of Public Health
MEMORANDUM

DATE: March 6, 2013

TO: Remedios Sunga, Project Manager
Brownfields and Environmental Restoration Program - Berkeley Office
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, California 94710-2721

FROM: Larry Morgan, Senior Health Physicist
Environmental Management Branch
1616 Capitol Avenue, MS-7405
P. O. Box 997377
Sacramento, California 95899-7377



SUBJECT: Corrected Copy of the Review of the Internal Final Historical Radiological Assessment-Supplemental Technical Memorandum dated August 6, 2012 and Responses to Agency Comments on the Draft Historical Radiological Assessment-Supplemental Technical Memorandum Naval Station Treasure Island San Francisco, California, February 20, 2013. (Corrected Copy)

At the request of the California Department of Toxic Substance Control (DTSC), the Environmental Management Branch (EMB) of the California Department of Public Health (CDPH) reviewed the *Internal Final Historical Radiological Assessment-Supplemental Technical Memorandum Naval Station Treasure Island, San Francisco, California, August 6, 2012* and the *Responses to Agency Comments on the Draft Historical Radiological Assessment-Supplemental Technical Memorandum February 20, 2013* for radiological issues. This review was performed in support of the Interagency Agreement between DTSC and CDPH. Those portions of this review which have been corrected are italicized and underlined.

If you need further assistance about this response please contact Tracy Jue and Mathew Wright of my staff at (916) 324-4804 and (916) 449-5867 respectively.

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Activity: Review of the Internal Final Historical Radiological Assessment-Supplemental Technical Memorandum Naval Station Treasure Island, San Francisco, California.

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General Comments:

1. EMB would like to thank the DON for their efforts in compiling the information and data for this document.
2. As the DON continues to characterize/remediate Treasure Island, and as more radiological contaminated information/data becomes available, EMB expects continued updating of the HRASTM.
3. Please explain DON's current soil movement activities at TI. EMB has previously and repeatedly requested summarization of past and current soil movement activities.

Specific Comments:

4. Include the appropriate dates on the title and review page and approval page i.
5. Page 1, Section 1.1, "Purpose" states, "There are certain areas within Site 12 that are not designated as radiologically impacted where additional radiological investigation will be done as is further discussed here-in". EMB considers all of Site 12 is radiologically impacted and should be shown to be so until proven otherwise.
6. Page 1, Section 1.1, "Purpose", second paragraph, last sentence state that "...certain areas within Site 12 that are not designated as radiologically impacted..." EMB's stance is that when a site is categorized as radiologically impacted and found to be impacted, it remains impacted until it has undergone full characterization, and if necessary, remediation.
7. Page 4, Section 1.3, "Technical Memorandum Preparation Methodologies", last identified item describes two "rubbish" disposal areas that are not shown on Figure 2 Identified Radiologically Impacted Areas. Please insert or identify rubbish areas on Figure 2.
8. Page 10, Photo 4, indicates a floating dry dock. What actions or services were performed while ships were located within these docks, and specifically did any of these services relate to radiological decontamination?

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9. Page 16, 2.2.4 Southwestern Community Area, second paragraph states that "... (DTSC) concurred with the unrestricted release of Buildings 343 and 344..." and CDPH has also provided a radiological unrestricted release recommendation for these two buildings.
10. Page 22, 2.2.7 AOI: Northern Housing Area of Interest, the second paragraph states that "...the likely deposition based on the average prevailing wind direction of 247..." Please indicate average or the primary wind direction in a range of direction, in a fan pattern, instead of a single degree, such as, 235 to 255 degrees for a normal year.
11. Page 22, 2.2.7 Northern housing Area of Interest, Include a description describing the data input and output from the hotspot in the report. How did the model identify the boundaries for plume deposition footprint? Also account for any wind variability? Also include in a separate figure explaining the outcome of the plume deposition footprints and describing the assumptions of the plume.
12. Page 26, 2.2.7 Northern Housing Area of Interest, first and only item states in part that while, "...no screening for radiological material was done, the excavated soil was replaced with clean soil..." This should not imply the soil below 2.5 to 4.0 feet has been radiologically characterized.
13. On figure 1, "Proposed FOST 4 Areas Naval Station Treasure Island" shows areas surrounding the shoreline, and it is identified as "Proposed FOST 4 Submerged Property. It is anticipated from historical discharge of outflows that the areas are radiological impacted from historical discharge of outflows. Include a description of the submerged properties which have resulted from radiological transport of contaminants from impacted buildings or sites that potentially have migrated offshore through sewer/storm drain lines and location of former piers that served vessel from operations crossroads.
14. Page 57, paragraph 2nd, Section 6.1.1.3, explain how the extended footprint was determined surrounding SWDA 1207/1209 and 1231/1233.

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15. Figure 11, Repair/Solid Waste Disposal Operations-Conceptual Site Model, EMB noted based on the illustration associated with operations conceptual site model, the sources were moved from one place to another using heavy machines, sources dredged from the bay, and incinerator ash dispersed over much of the entire island.
16. Figure 14, Building 233, Conceptual Site Model include in this figure showing surrounding pipes from the adjacent buildings, the boundaries should extend where the waste from B233 was stored in barrels within the adjacent parking lot.
17. Appendix C, "General Health Physics Information", since there are public residences in Site 12 within, an impacted area, this appendix should include information for the general public on the radiological safety for handling sources, contamination, exposures etc. in case the public encounters radium dials or radiological contamination.

Response to Navy's Comments Dated February 2013

18. Comment 2, Page 11 of 52: Historical Radiological Assessments must must be accessible and understandable to the broader general public, while at the same time meeting the more technical standards of regulators and the scientific community.
- 18.A Table 1, *Commodities Removed from the Solid Waste Disposal Areas, differs substantially from previously distributed Treasure Island Site 12 Commodities Discovered During Excavation Activities as of 7/8/10.* In accordance with Title 10 of the Code of Federal Regulations, Part 20, Standards for Protection against Radiation, Table 1 should list all dose rates in order to meet the obligation to inform the public.
- 18.B Include in the table the data and data reduction calculations to show how the calculations were calculated.
- 18.C Additionally, there are 159 instances where the "Highest 30 cm (mR/h)" values listed for specific item ID Number commodities do not agree with the previously distributed commodities list table. Include both 'hot' and "cool" contact dose rates and both 'hot' and "cool" dose rates 30 cm; and include

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locations of where commodities were found. The revised table should also correct the dose rate discrepancies between the two tables.

19. Comment 4, page 12 of 52: The following list of storm drain outfalls are impacted due to the storm drain lines which pass through or near impacted sites and which empty into San Francisco Bay:

- outfall from storm drains that pass down 8th Street in Area of interest #4, past the Former Supply Department Salvage Yard (Lot 69),
- outfall from storm drains along 11th Street, past Bldg. #570,
- outfall from storm drains along 13th Street, past Bldg. #570,
- outfall from storm drains along and adjacent to Bldg. #3 to the south,
- outfall from storm drains that pass between Bldg. #1325 and Bldg. #1311 with discharge to the west of Site of Former USS Pandemonium Site 1 (NW),
- outfall from storm drains that pass between Bldg. #1133 and Bldg. #1125,
- outfall from storm drains that pass between Bldg. #1227 and Bldg. #1229,
- outfalls from 3 storm drains that pass adjacent to Bldg. #461,
- outfalls from storm drains that pass adjacent to the site of Former USS Pandemonium Site II.

20. Comment 5, page 13 of 52: Change the citation, "*SWDA Bayside/North Point Post Construction Summary Report*" to "*Draft Post Construction Summary Report Installation Restoration Site 12 Solid Waste Disposal Areas 1207/1209 and 1231/1233*".

The previously issued reports cited do not include the two new "Rubbish Areas and the Historic Burn Area" identified in Figure 9, "Housing, Area of Interest 7". Please provide a table or figure which includes all previous and newly identified Solid Waste Disposal Areas and/or Rubbish Areas and Historic Burn Areas.

21. Comment 6, page 14 of 52: (EMB) prefers the Multi-Agency Radiation Survey and Site Investigation Manual, (MARSSIM), *United States*

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Nuclear Regulatory Commission, et al, for the definitions of impacted area and non-impacted areas. MARSSIM states,

Impacted Area: Any area that is not *classified as non-impacted*. Areas that have the possibility of containing *residual radioactivity* in excess of natural background fallout levels. (Italics in original) Multi-Agency Radiation Survey and Site Investigation Manual pg. GL-11

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EMB has reviewed and concluded that Site 12 is radiological impacted based from the following statements:

...the Navy has taken a number of actions to address the potential that soil movement from the Site 12 SWDAs to the soil stockpile areas may have resulted in the spread of contamination. These actions include performing surface scans of the route taken by the transport vehicle, designating the soils stockpile area for the IDW as radiologically impacted, and the commitment to conduct site-wide gamma walk over surveys of Site 12.

Additionally Site 12 is impacted from the following Navy's comment #17 from page 20 of 52:

Although the work plan called for tarped transport of soil from Site 12 to Site 6, transport of untarped soil within end loader buckets possibly occurred for a limited period of time. Since the use of this transport method clearly was not an approved method of transport, the Navy has committed to conducting a gamma walkover survey of the roadways between Sites 12 and 6 to ensure the absence of radioactive contamination along roadsides that could have resulted from such transportation practices.

Further, Page 28, section 2.2.7, Site 12, Paragraph 3, Sentence 1:

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EMB notes that the reference to "Site 12" refers to the Historical Radiological Assessment Site, IR Site 12: which is the same as the current Areas of Interest seven and eight.

Under MARSSIM guidelines, areas are either impacted or they are not. There is no gray area. The Navy has committed to conduct further investigation and site-wide gamma walk over surveys of Site 12 to address the potential that soil movement may have spread of contamination. EMB concludes Site 12 must be designated as impacted

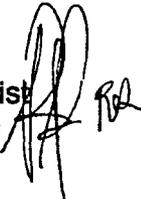
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