



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

February 16, 2022

Mr. David J. Clark  
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Former Naval Station Treasure Island  
Naval Facilities Engineering Command  
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SUBJECT: COMMENTS REGARDING U.S. NAVY DRAFT REVISION 01 RADIOLOGICAL  
SITE INVESTIGATION REPORT, 1400 SERIES HOUSING AREA  
INSTALLATION RESTORATION SITE 12 FORMER NAVAL STATION  
TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA

Dear Mr. Clark:

I am writing to provide you with the U.S. Nuclear Regulatory Commission (NRC) staff's technical evaluation regarding the U.S. Navy's *Draft Revision 01 Radiological Site Investigation Report, 1400 Series Housing Area Installation Restoration Site 12 Former Naval Station Treasure Island, San Francisco, CA* (hereafter, the Draft Site Investigation [SI] Report; non-publicly available in NRC's Agencywide Documents Access and Management System [ADAMS] at Accession No. [ML21342A004](#)). The results of the NRC staff's evaluation are summarized below.

The NRC's role at Installation Restoration Site 12 is consistent with the NRC's monitoring approach defined within the Memorandum of Understanding (MOU) between the NRC and the U.S. Department of Defense (DoD), entered into on April 28, 2016 (hereafter the NRC/DoD MOU; ADAMS Accession No. [ML16092A294](#)). Under this approach, the NRC staff prepares monitoring reports with the results of its review and provides DoD with these reports and any written comments. The purpose of the NRC's monitoring is to ensure that DoD's remedy meets the NRC dose criterion for unrestricted use, 25 millirem per year (mrem/yr) (0.25 millisieverts per year [mSv/yr]), set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), Part 20, Section 1402. The Navy's responsibility for meeting any other relevant federal and/or State regulatory requirements is independent of this NRC review. The NRC staff and its contractor, Oak Ridge Associated Universities, reviewed the Draft SI Report and concurs with the Navy that there is reasonable assurance that residual radioactivity in Areas 1 and 2 of the Site 12 1400-Series Housing would conform to the 25-mrem/yr (0.25-mSv/yr) dose criterion for unrestricted use. Therefore, the NRC staff concurs with the Navy that no further action is necessary in these two areas. This determination is based on:



- The NRC's previous technical evaluation (ADAMS Accession No. [ML19277G286](#)) of the Navy's *Draft Technical Memorandum Request for Unrestricted Radiological Release of Select Open Spaces Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California* (hereafter, the Draft Technical Memorandum; ADAMS Accession No. [ML18277A072](#))<sup>1</sup>. The selected open areas evaluated by the Draft Technical Memorandum included Areas 1 and 2 of the 1400-Series Housing, the subject of the Draft SI Report. During the previous technical evaluation, NRC staff determined the Navy established an investigation level that would readily identify near-surface Low-Level Radioactive Objects (LLROs) that may have remained up to a depth of 3 feet [0.9 meters] below the ground surface. In addition, given the detection sensitivity, the NRC staff determined that the Navy provided reasonable assurance that residual radioactivity in the Site 12 selected open areas would conform to the 25-mrem/yr (0.25-mSv/yr) dose criterion for unrestricted use. Specifically, the Navy calculated and NRC staff independently assessed doses from possible undiscovered LLROs and determined that doses would meet NRC's unrestricted dose criterion. However, NRC staff recommended as an as-low-as-reasonably-achievable (ALARA) best practice due to the isolated occurrence of LLROs that have been found to date at Site 12 and the lack of investigation sensitivity inside the footprint of the housing units, that the Navy consider performing additional scans of the accessible areas after significant soil disturbance or housing unit slab removal as development (e.g., excavation activities) of the site occurs.
- The Navy's demonstration in the Draft SI report is based on the following:
  - Historical records do not identify evidence of waste or rubbish disposal areas associated with historical Navy operations within the Areas 1 or 2 footprints.
  - Limited or no net import of fill (generally less than 1 foot [0.3 meter]) was used during the development of Areas 1 or 2. Note, that this amount of fill, which would likely be the source of LLROs from the grading operations that likely spread LLROs from the Solid Waste Disposal Areas to other housing areas, is bounded by the conceptual site model assumptions (i.e., sensitivity to detect LLROs within upper 3 feet [0.9 meter] below ground surface) evaluated in the Draft Technical Memorandum that NRC previously evaluated.
  - Investigations within Areas 1 and 2 did not identify elevated radioactivity, and no LLROs were encountered.

The bases for the determination enable the NRC staff to find that there is reasonable assurance that potential doses, documented in the Draft SI Report, would be less than the NRC's unrestricted use dose criterion in 10 CFR Section 20.1402 and are consistent with the NRC/DoD MOU. The staff has no further comments on the Draft SI Report. However, NRC staff continues to recommend, as an ALARA best practice due to the isolated occurrence of LLROs that have

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<sup>1</sup> On December 14, 2020, as a result of issues regarding the site conceptual model with the State of California the Navy formally retracted all but Appendices A and B of the *Draft Technical Memorandum Request for Unrestricted Radiological Release of Select Open Spaces Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California* (ADAMS Accession No. [ML22025A021](#)). However, NRC staff's evaluation of the Navy's instrument sensitivity remains relevant to the Navy's demonstration of its ability to detect low-level radioactive objects in the upper 3 feet (0.9 meter) of the subsurface in the 1400-series housing Areas 1 and 2 under consideration in the review that is the subject of this letter.



been found in other areas of Site 12 to date and the inability to perform in-situ surveys beneath housing foundations, etc., that the Navy consider performing additional scans of the accessible areas after significant soil disturbance as development (e.g., excavation activities) of the site occurs. Performing additional scans as development occurs will enhance confidence that any LLROs brought to the surface during development activities will be identified and properly addressed.

In accordance with 10 CFR Section 2.390, "Public inspections, exemptions, requests for withholding," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of ADAMS. ADAMS is accessible from the NRC Web site at <https://www.nrc.gov/reading-rm/adams.html>.

If you have questions regarding these comments, please contact Mr. Christopher Grossman of my staff at (301) 415-0140 by telephone or at [Christopher.Grossman@nrc.gov](mailto:Christopher.Grossman@nrc.gov) by e-mail.

Sincerely,



Signed by Marshall, Jane  
on 02/16/22

Jane E. Marshall, Director  
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Draft Revision 1, Radiological Site Investigation Report, 1400 Series Housing Area, Former Naval Station  
Treasure Island DATE February 16, 2022

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