



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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SENT VIA EMAIL AS PDF

August 18, 2020

Derek Robinson
BRAC Environmental Coordinator
BRAC Program Management Office West
Department of the Navy
33000 Nixie Way, Building 50
San Diego, CA 92147

Subject: EPA Approval to Begin Parcel G Soil Radiological Retesting

Dear Mr. Robinson:

The Navy has announced that it is prepared to begin radiological retesting at the Hunters Point Naval Shipyard Superfund site (HPNS) in San Francisco, California. The retesting will start at Parcel G and be directed at soils previously tested by Tetra Tech EC Inc. (TTEC), a former Navy contractor. The test results will be used to determine if any contaminated soils remain at Parcel G and additional remediation is required before the property can be transferred to the City and County of San Francisco for redevelopment. The purpose of this letter is to outline the planning and other supporting documents that provide the basis for EPA's decision to approve Navy plans to proceed with the soil radiological retesting at Parcel G.

TTEC is one of several Navy contractors to conduct investigation or remediation work at Parcel G over the last 30 years. From 1991 to 2011, TTEC and others removed thousands of cubic yards of contaminated soil from Parcel G. After TTEC completed work, the Navy, EPA, and the State found evidence that TTEC workers had falsified data and engaged in questionable field and laboratory practices. Based on a thorough review of the TTEC data, the agencies concluded that the radiological data were unreliable and that previously tested soils should be retested to determine if remediation is complete.

The radiological retesting will include scanning and analysis of soils in areas previously tested by TTEC. We understand that the Navy has hired Battelle, an independent contractor, to provide third-party quality assurance over the work. In addition, EPA and its State regulatory partners will oversee the Navy's sampling activities as described further below.

We understand that the Navy and its contractor have implemented a number of measures to protect their employees and control the spread of COVID-19 during the retesting, including increased employee health screening, added sanitation measures, social distancing, and use of face masks.

Parcel G Removal Site Evaluation Work Plan (June 2019) and Work Plan Addendum (February 2020)

The Navy began planning for the radiological retesting more than three years ago. The planning effort led to the preparation of a detailed workplan for the Parcel G retesting (*Parcel G Removal Site Evaluation Work Plan*, June 2019) supplemented with the *Parcel G Removal Site Evaluation Work Plan Addendum* (July 2020).

As described in the Work Plan, most of the soils to be retested are beneath or adjacent to sanitary sewer and storm drains removed in an earlier cleanup. Initially, 21 of 63 “trench units” will be fully excavated and the excavated soil scanned and sampled above ground. These 21 trench units are where the sanitary sewers and storm drains were historically located. As described in the Parcel G Work Plan, the other 42 trench units will be sampled one of two ways, depending on the sampling results from the initial 21 trench units. They may be excavated and sampled like the initial 21, or sampled in place.

Soil at one former building site and in a building crawl space will also be retested.

As part of the radiological retesting, the Navy plans to collect and analyze more than 7,000 soil samples. All samples will be analyzed for the radionuclides radium-226 (Ra-226) and cesium-137 (Cs-137). In accordance with the Parcel G Work Plan, selected samples will also be analyzed for strontium-90 (Sr-90), plutonium-239 (Pu-239), uranium-235 (U-235), and thorium-232 (Th-232).

The Work Plan includes provisions for the Navy and regulatory agencies to determine whether radionuclides detected during retesting reflect site-related contamination or background levels of radionuclides in soil. Soils with site-related contamination will be excavated and disposed offsite.

Appendix E in the Work Plan Addendum describes provisions for controlling dust and monitoring air quality to ensure that workers at the site and those in the greater community are protected during retesting. Air monitoring stations at the perimeter of Parcel G will measure radiological and non-radiological pollutants whenever intrusive construction is underway or soil stockpiles are present. We understand the Navy will post air monitoring reports to its HPNS website, regularly communicate results with the community, and retain air monitoring data in keeping with Federal Facility Agreement record retention requirements.

Soil Background Report (June 2020) and Memo-to-the-File

The Navy has prepared two additional reports that will guide the Parcel G radiological retesting. One of the two reports is the *Final Background Soil Study Report* (June 2020).

In the background report, the Navy provides the results of testing completed in 2019 with EPA and State oversight. EPA’s oversight efforts are described in a recent EPA report titled *Final Reference Background Area Split Sampling Summary Report*, July 2020. The testing occurred at four onsite areas and at one offsite area at San Bruno Mountain State Park. The results indicate that four radionuclides (Ra-226, Cs-137, Th-232, and U-235) are naturally-occurring or appear to be present in

site soils at low concentrations as a result of human activities not related to Navy operations. These four radionuclides are commonly found in soils worldwide. Two additional radionuclides were tested for as part of the background study but not detected (Pu-239 and Sr-90).

In the background report, the Navy presents several sets of “background threshold values” (BTVs) for the six radionuclides based on different subsets of the 2019 data. EPA and its State regulatory partners have agreed to the Navy’s use of BTVs calculated for four of the radionuclides using data from the offsite background area (Ra-226, Th-232, Cs-137, and U-235). The calculated BTV for Cs-137 is slightly higher than the remediation goal adopted in the Parcel G Record of Decision (0.141 picoCuries per gram [pCi/g]) vs. 0.113 pCi/g). Consistent with EPA guidance, the Cs-137 BTV may be used as a new cleanup level.

Background conditions vary across the Site and the BTVs calculated using the offsite background data may not be representative of the full range of background concentrations. The Navy may, on a case-by-case basis, propose that a sample result exceeding a remediation goal or the Cs-137 BTV represents background conditions rather than site-related contamination. In such a secondary evaluation, the Navy may choose to use the onsite background data and/or other supporting information. All sample results exceeding a remediation goal or the Cs-137 BTV will be interpreted as site-related contamination unless EPA and its State regulatory partners agree that a sample represents background.

The Cs-137 BTV and the secondary evaluation process represent non-significant changes to the Parcel G Record of Decision and will be documented in a memo-to-the-file. A memo-to-the-file is an appropriate approach to document these post-ROD changes as outlined in EPA Superfund guidance.

Addendum to the Five-Year Review, Evaluation of Soil Remediation Goals (June 2020)

The second report which will guide the retesting is the June 2020 *Addendum to the Five-Year Review, Evaluation of Radiological Remedial Goals for Soil* (FYR Addendum). The Navy prepared this report to evaluate the long-term protectiveness of the soil radiological remediation goals. In the FYR Addendum, the Navy estimates the cancer risk to a future resident if all soil radiological remediation goals are met and compares the risk estimates to the EPA cancer risk management range of 10^{-6} to 10^{-4} . This cancer risk range is applied at Superfund cleanup sites nationally consistent with EPA regulations.

The FYR Addendum does not complete the long-term protectiveness evaluation of the soil radiological remediation goals. Instead, the FYR Addendum describes Navy plans to further evaluate cancer risk after the radiological retesting data are available. In this planned future evaluation, the Navy will evaluate the retesting data to ensure that the additive risk from multiple radiological and chemical contaminants, if present, is within the EPA cancer risk management range. We expect the Navy to examine site-related health risks and risks inclusive of background. Consistent with EPA guidance, we expect the Navy to provide a clear justification for any cancer risks above 1×10^{-4} .

EPA Oversight of Radiological Retesting

EPA, DTSC, and CDPH will provide independent field oversight of the Navy's radiological retesting to monitor Navy compliance with its Work Plan. The agencies also plan to independently analyze soil samples for comparison with Navy results. EPA will analyze most of its samples at its National Analytical Radiation Environmental Laboratory (NAREL) in Montgomery, Alabama and use a private laboratory to test for Sr-90, which requires a specialized analysis. The agencies will investigate any significant differences between the EPA and Navy results. EPA will document its oversight activities in a report similar to the July 2020 EPA report prepared for the background sampling effort.

Additionally, EPA expects the Navy to report regularly to EPA and its State regulatory partners on the status of the retesting and specifically on measures implemented to control dust generated during the retesting effort. We understand that the Navy has committed to make air monitoring reports available to the public by posting the reports on its webpage. EPA will pay close attention to the Navy's implementation of its dust management and air monitoring plan, including reviewing perimeter data, and will request modifications if needed to protect public health.

EPA Approval

This letter provides EPA approval of Navy plans to proceed with the soil radiological retesting at Parcel G. This approval is the second of three planned partial approvals of the Parcel G Work Plan. In June 2019, EPA approved a portion of the Work Plan (Appendix C) which describes the soil background testing discussed above. EPA is working with the Navy on the third and final part of the Parcel G Work Plan which provides plans for retesting of impacted buildings.

EPA will continue to work with the Navy and EPA's State regulatory partners to ensure that cleanup of the Hunters Point Naval Shipyard Superfund site will be protective of human health. We are committed to public transparency throughout the retesting effort. The Parcel G Work Plan estimates that the Navy will produce a final soil report in 2022. Considering the duration of the project, we strongly encourage the Navy to provide periodic updates to the public on the status and results of the retesting while the work is in progress. Please contact me at 415-972-3005 or Chesnutt.John@epa.gov if you would like to discuss this letter.

Sincerely,

JOHN
CHESNUTT

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John Chesnutt
Manager, Pacific Islands and Federal Facility Section
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