



**US Army Corps
of Engineers®**
Honolulu District



MAKALAPA CRATER NAVY SALVAGE YARD

FORMERLY USED DEFENSE SITE

March 2024

FACT SHEET

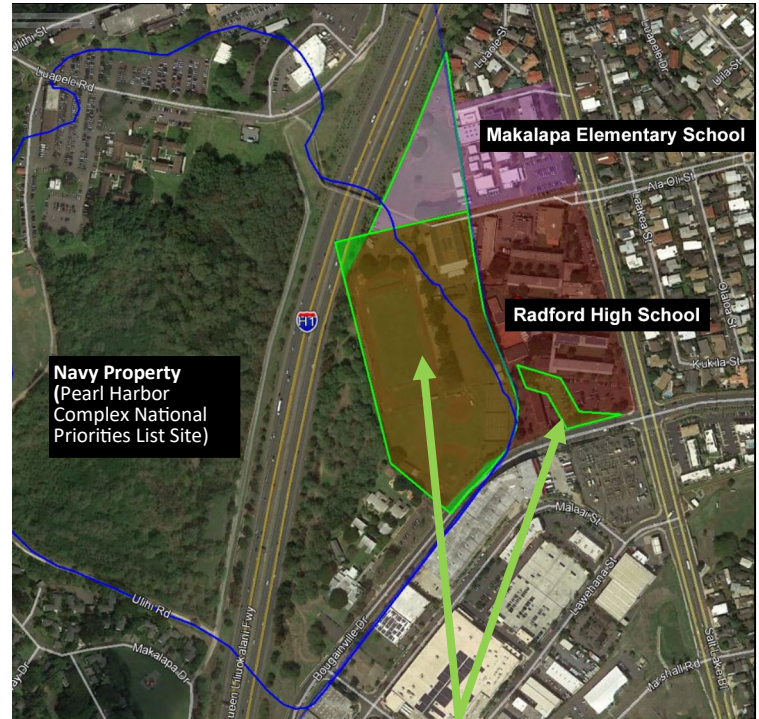
INTRODUCTION

This fact sheet presents an update on the U.S. Army Corps of Engineers remediation of the Makalapa Crater Navy Salvage Yard, a Formerly Used Defense Site, or FUDS located on the island of Oahu, Hawaii.

The 19.3-acre site is occupied by portions of two public schools: Admiral Arthur W. Radford High School and Makalapa Elementary School as well as a portion of the H-1 Interstate Freeway adjacent to the northwest corner of RHS and a portion of Bougainville Drive adjacent to the south RHS boundary (See map).

The school properties are owned by the State of Hawaii Department of Land and Natural Resources (MES) and the city and county of Honolulu (RHS).

Only the RHS athletic complex (football, baseball and softball fields, tennis courts, gymnasium, and small basketball court) and the MES playground (two school trailers and a playground) are located within the FUDS project boundary for the Makalapa Crater NSY and are the only areas of the two schools that are being studied.



Former Makalapa Crater
Boundary

Makalapa Crater Navy Salvage Yard USACE
FUDS Project Boundary (19.3 acres)

Classrooms and administrative facilities are not within the FUDS project boundary and are not a FUDS. The two campuses continue to be deemed safe by USACE and state health officials for school operations.

PROJECT STATUS

USACE is planning field work at the site in spring 2024 as part of the current remedial investigation which began in 2017.

Sampling activities:

- Consist of collecting data to investigate any contaminants of potential concern in soil vapor/gas, given the historic waste disposal activities at the site.
- Will be conducted when school is not in session and will not impact school operations.
- Are expected to take two weeks.
- Will not take place in classrooms, at the football field, or outside the FUDS project boundary (See map).

Work will include collecting vapor samples from beneath existing concrete or asphalt and from soil at the RHS gymnasium, soccer field, tennis court, baseball field, basketball court areas, near the MES school trailers and the field/playground.

Soil samples will also be taken at the northernmost portion of MES, which was inaccessible during the 2017 sampling.

A work plan, sample locations and methods for sampling were reviewed and approved by the Hawaii Department of Health and the DOE. Sampling will entail the use of a drill rig. (Photo 1)

These activities are being conducted in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The data will be used to prepare a revised remedial investigation report and shared with the Hawaii Department of Health to determine next steps.



Photo 1: Sample collection using direct push drill rig at Radford High School

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MAKALAPA CRATER NAVY SALVAGE YARD

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SITE HISTORY

The Navy acquired the majority of the Makalapa Crater Navy Salvage Yard as part of the 1939 expansion of Naval Yard Pearl Harbor, which included Makalapa Crater. Prior to the attack on Pearl Harbor, the area was used for dredge spoil disposal.

During World War II, Makalapa Crater NSY was used as a salvage yard, burning dump and solid waste landfill for disposal of materials from cleanup operations and damaged equipment, such as metal scrap, engine parts, empty ammunition casings, airplane parts and ship parts (*Photo 2*). The property lies immediately east of Interstate H-1 and Naval Station Pearl Harbor, which is now part of the active Joint Base Pearl Harbor Hickam.

In the 1950s, the property was subsequently conveyed to the city and county of Honolulu and the state of Hawaii for use as public schools.

In 2013, the Hawaii Department of Education encountered buried debris, including munitions debris (i.e., cartridges, cartridge cases, fuses, igniter/flash tubes, practice bombs, practice grenades, small arms projectiles, and munitions packaging) during excavation work to replace the RHS running track and field.

NAVY ACTIONS

In 2014, the Navy conducted an expedited cleanup action (Time Critical Removal Action or TCRA) to address potential explosive hazards at the site and ensure the safety of the students and public.

The items found were all determined to be primarily expended, empty, or inert. All recovered items found during the Navy's TCRA efforts were deemed to have no explosive hazard. The Navy also tested for chemical contaminants of potential concern and found actionable levels of petroleum, metals, and dioxins across the site.

As part of the TCRA, the Navy cleared the top foot of soil, placed a geotextile demarcation fabric to serve as a warning in the event of future excavation, and filled and graded 1 foot of clean soil. A fact sheet with details on the Navy's TCRA can be found at www.poh.usace.army.mil/Missions/Environmental/FUDS/Makalapa/

After completing the TCRA, remediation was transferred from the Navy to the U.S. Army Corps of Engineers in 2015 to assess any remaining risk and determine future cleanup actions under the Formerly Used Defense Sites (FUDS) program.

USACE ACTIONS

In 2016, USACE completed a preliminary assessment of the site, followed by a remedial investigation in 2017 which included sampling soils for contaminants of potential concern.

Initial sampling determined that there is no unacceptable risk to students or school operations; however, given the historical waste disposal activities at the site, soil vapor and soil gas samples are also being collected.



Photo 2: Handling scrap steel at Berth 23 headed for Makalapa Salvage — Jan. 18, 1943

NEXT STEPS

Following the sampling, USACE will draft the supplemental RI report and submit it to the HDOH for review. The conclusions from the remedial investigation report will feed into a feasibility study to explore methods of mitigating the risks.

The USACE project team will then develop a proposed plan which will be made available for HDOH and public input. Upon finalization of a proposed plan, USACE will document the selected future actions, known as the preferred remedy, in a decision document for the administrative record.

COMMUNITY INVOLVEMENT

USACE is committed to remediating FUDS-eligible properties like the Makalapa Crater Navy Salvage Yard on behalf of the Department of Defense and in accordance with mandated processes and requirements and encourages the public to gain a comprehensive understanding of the site and the activities that have been conducted there.

USACE will coordinate project updates through the Hawaii State Department of Education and make them available on the project webpage.

A schedule of any future on-site activities and estimated timeline for completion will be available once the scope of work and planning documents have been approved.

A solicitation for community interest in establishing a Restoration Advisory Board, or RAB, for this FUDS project site will be made available through stakeholder organizations, local media and the project webpage.

If you have questions regarding the Makalapa Crater Navy Salvage Yard FUDS project, contact the U.S. Army Corps of Engineers at MakalapaCraterFUDS@usace.army.mil.



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ESTIMATED PROJECT TIMELINE

End of 2024	Remedial Investigation Report / Human Health Risk Assessment scheduled to be complete. (The remedial investigation determines nature and extent of contamination.)
Mid-2025	Feasibility Study Updates (The feasibility study analyzes alternative remedial actions.)
2025/2026	Proposed Plan (The proposed plan presents evaluation of alternatives for site cleanup and recommends remedy selection.)
End of 2026	Decision Document will be approved. (Documents the final remedy for the site.)
2027/2028	Remedial Design
2028/2029	Remedial Action-Construction to begin

QUESTIONS AND ANSWERS

1) What is a formerly used defense site (FUDS)?

FUDS are properties that were formerly owned by, leased to or otherwise possessed by the Department of Defense and transferred outside DoD control prior to October 17, 1986. The U.S. Army Corps of Engineers conducts the environmental cleanup of these properties on behalf of the Army and DoD.

2) How did two schools get built on a FUDS?

The Makalapa NSY site became eligible under the FUDS program in 2015. The schools were built on land that was conveyed from the DOD to the city and county of Honolulu (RHS) and to the State of Hawaii in the 1950s. For more information about FUDS go to: www.fuds.mil.

3) Why is USACE studying areas of Radford High School and Makalapa Elementary School?

Portions of Radford High School and Makalapa Elementary School are located within a 19.3-acre boundary of a Formerly Used Defense Site - the Makalapa Crater Navy Salvage Yard. During the 1940s, the site was used by the Navy as a salvage yard, burning dump and solid waste landfill for disposal of materials from clean-up operations and damaged equipment, such as metal scrap, engine parts, empty ammunition casings, airplane parts, and ship parts.

Since 2015, USACE has been conducting the process for remediation as prescribed by the Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA.

4) Will USACE remediation address the impacts from potential landfill settling?

The USACE scope of work for the Makalapa Crater NSY FUDS project is defined by the CERCLA process and does not address the impacts of landfill settling. The project's purpose is to assess remaining contaminant levels to determine future remedial actions.

5) What areas of the school campus are being studied?

Only the RHS athletic complex (football, baseball and softball fields, tennis courts, gymnasium, and small basketball court) and the MES playground (two school trailers and a playground) are within the Makalapa Crater NSY FUDS project boundary. **Classrooms and administrative facilities are not within the FUDS project boundary and are not a FUDS.**

6) What work will be done on school property?

USACE and contract personnel will sample sub-slab soil vapor and soil gas to test for contaminants of potential concern (COPCs).

Small monitoring devices called vapor pins will be installed at several locations to collect vapors from beneath existing concrete or asphalt. Soil vapor probes will be used to collect soil gas. A drill rig, will be used to install the soil vapor probes. In addition, soil sampling will be taken at the northernmost portion of Makalapa Elementary School.

7) When is sampling expected to begin? When is it expected to end?

Site sampling is planned for Spring 2024 and will not impact school activities. Sampling activities will not be conducted while school is in session and are expected to take two weeks.

8) Where is sampling going to take place?

Sub-slab (beneath concrete or asphalt) vapors will be collected at the RHS gymnasium, tennis court, and batting cage building. Soil gas samples will be collected near the RHS baseball field, soccer field, the MES playground and two portable school trailers.

Additionally, soil samples will be taken at the northernmost portion of MES, which was inaccessible during the 2017 sampling. The sampling will support the preparation of the revised Remedial Investigation (RI) Report that documents the environmental conditions of the site.

9) What are Contaminants of Potential Concern (COPCs)?

COPCs are potential contaminants at a given site that are based on historical site use and previous investigations.

10) Is there a current health concern?

Initial sampling determined that there is no unacceptable risk to students or school operations; however, given the historical waste disposal activities at the site, soil vapor and soil gas samples are also being collected.

Known areas of contamination are currently fenced off and access is restricted. The two campuses continue to be deemed safe by state health officials for school operations.

