



Photo 5: Drilling test pit borings at RHS baseball field

Site Assessment

The Navy is evaluating the current surface cover thickness at the RHS athletic complex and MES playground based on the assumption that subsurface debris may be similar to the type of debris encountered at the RHS track. The results of this assessment is being discussed with DOE, **Environmental Protection Agency Region 9 (EPA)** and the **State of Hawaii Department of Health (DOH)** to determine if additional actions are needed.

COMMUNITY INVOLVEMENT

The Navy encourages the public to gain a comprehensive understanding of the site and the activities that have been conducted there. The Navy will continue to provide information to the community by conducting Restoration Advisory Board and public meetings; posting site reports/related reports in the information repositories; and publishing announcements in the local newspaper.

WHAT'S NEXT?

The Navy will continue to coordinate remaining work at the RHS track and football field with DOE. The Draft Removal Verification Report for the Navy's RHS TCRA actions will be prepared after DOE completes the utility work on the football field, and the Navy installs the grass sod. Future management or actions for the former Navy property areas of RHS and MES is being discussed with the appropriate stakeholders, including DOE, EPA, and DOH.

For More Information/Comments

Contact:
Ms. Denise Emsley, Public Affairs Officer,
Naval Facilities Engineering Command, Hawaii

Address:
COMMANDING OFFICER
NAVFAC HAWAII
ATTN: D. EMSLEY CODE 09PAO
400 MARSHALL ROAD
JBPHH HI 96860-3139

Phone: 808-471-7300
Fax: 808-474-5479
Email: denise.emsley@navy.mil

For More Information:

All site-related documents are available for review at the Navy information repositories established at the Pearl City Public Library and University of Hawaii's Hamilton Library.



Time Critical Removal Action

**Radford High School Track and Football Field
Portion of Makalapa Crater Geographic Study Area
Oahu, Hawaii**

INTRODUCTION

This Fact Sheet presents an update on the Navy's cleanup actions at the **Radford High School (RHS)** track and football field. The Radford High School athletic complex is on former Navy property and adjacent to the Makalapa Crater **Geographic Study Area (GSA)** environmental restoration site at **Joint Base Pearl Harbor-Hickam (JBPHH)** Oahu, Hawaii (Figure 1).

The Navy's cleanup work is being performed as a **Time Critical Removal Action (TCRA)** under the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** because the Makalapa Crater site is part of the Pearl Harbor Naval Complex National Priorities List site. The TCRA addressed subsurface soil contamination and debris that were encountered by the **State of Hawaii Department of Education (DOE)** in December 2013 to January 2014 during excavation work to replace the old cinder running track with an all-weather synthetic track. Samples collected by DOE found elevated levels of arsenic, lead, mercury, and dioxins in the excavated soil. The debris encountered at the RHS track area is most likely from past Navy disposal actions (e.g. salvage operations conducted in the area during World War II).



Figure 1: Current and Former Navy Property Lines

SCOPE OF TCRA

The following actions were performed to allow DOE to safely resume the construction work at the track and football field:

- **RHS Stockpiles**—Removed soil and debris stockpiles generated during DOE's excavation work at the RHS track.
- **Track**— Excavated to 1 foot deeper than DOE planned to excavate for the new track. An orange geotextile fabric liner was placed, followed by 1 foot of clean fill.

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- **Football Field**—DOE sampling in 2014 found that the surface soil on the football field was safe. However, as a preventative measure for future maintenance or renovations, the Navy also included the football field in this TCRA. Work included removing the top 1 foot of clean soil and an additional 1-3 feet of contaminated soil and debris. The depth of excavation

Restoration Advisory Board Meeting

July 14, 2015, 7 p.m., Aiea Elementary School Cafeteria
99-370 Moanalua Road, Aiea, Hawaii

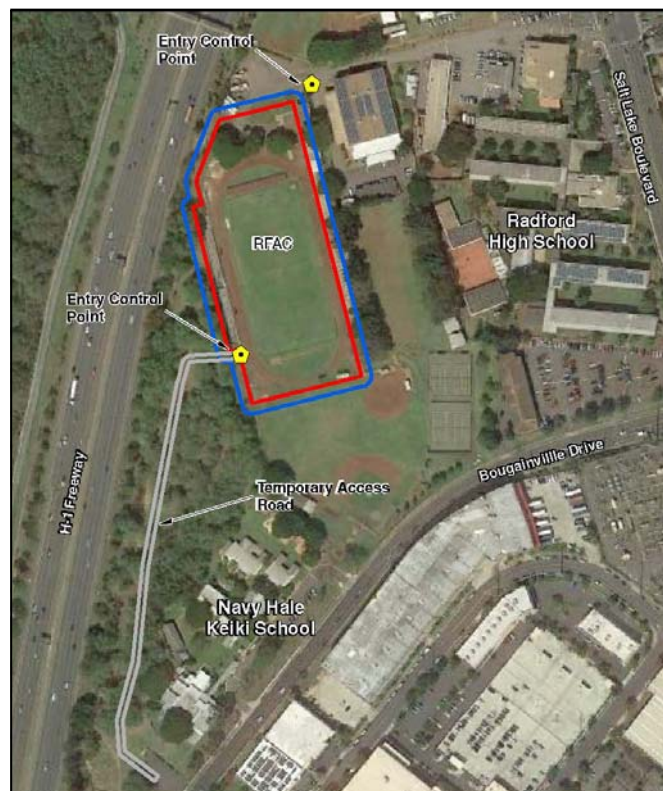


Figure 2: Radford High School TCRA location and Navy access road

varied depending on the depth of utility trenches in the football field. An orange geotextile fabric liner was placed, followed by a minimum 1 foot clean fill.

- **Private Property**—Removed RHS excavated material that was taken to two other locations during DOE’s construction work in December 2013 to January 2014.
- **Debris Screening**—Screened all debris in stockpiles and excavated material. All metal debris was inspected by certified unexploded ordnance (UXO) personnel.
- **Disposal**—Following debris screening, excavated soil and debris were transported to an appropriate permitted disposal facility.

COMPLETED ACTIONS

Mobilization and Temporary Access Road

Field and equipment mobilization was initiated on Aug. 25, 2014 and completed on Sept. 8, 2014. A temporary access road was built on Navy property via Bougainville Drive, to reduce truck traffic through the main RHS entrance off Salt Lake Boulevard (Figure 2).

Temporary fencing and dust screens were also erected along the perimeter of the track area.

RHS Excavation and Debris Screening

Approximately 18,690 tons (14,370 cubic yards [CY]) of stockpiled and excavated soil and debris were screened for potential munitions related items from Sept. 8 to March 4, 2015. During the initial phase of the work (though Nov. 7, 2014), a mechanical screener was used to sift debris larger than 3/4-inches (largest size of an item with an explosive hazard) (Photo 1). All debris was inspected by certified UXO personnel to remove any suspected munitions related items. All munitions related items found during the TCRA were inspected and confirmed safe (no explosive hazard).

RHS Liner Placement

Following excavation and debris screening, excavated areas of the track and football field were covered with an orange geotextile fabric liner prior to placement of 1 foot of compacted clean fill (Photos 2 & 3). The liner and fill placement and compaction was completed on March 6, 2015. This liner provides a visual indicator of the depth of contaminated soil and debris, for future construction and maintenance workers. The final elevations of the clean fill layer is at a depth that allows DOE to resume construction of the track safely, without excavation of contaminated soil or debris.

Private Property

- 79 tons (55 CY) of RHS soil and debris were removed from a Kaneohe residence. No munitions related items were found during the removal work at this site. Actions were initiated on Sept. 8, 2014 and completed on Nov.14, 2014.



Photo 1: Excavation and mechanical screening at RHS track



Photo 2: Geofabric liner installed prior to placing clean fill



Photo 3: Select borrow (clean fill) placed on top of geofabric liner

- 2,380 tons (1,830 CY) of RHS soil and debris was removed from a Kapolei construction site. Munitions related items found during the removal work were all inspected and confirmed to be safe (no explosive hazard). Removal work at the Kapolei site was conducted from Oct. 30, 2014 to Nov. 12, 2014.

Soil and Debris Disposal

All screened soil and debris that was removed from the RHS track, Kaneohe residence, and Kapolei site were transported to an on-island disposal facility approved to receive CERCLA wastes. All munitions related debris items (certified as safe during the screening process) were de-militarized/disfigured onsite and transported to a certified recycler on the mainland for smelting.

AREAS ADJACENT TO TRACK

During the TCRA actions at the RHS track, the Navy collected incremental surface soil samples from areas adjacent to the track construction area. Based on the soil sample results, the following additional actions were performed in January to March 2015:

Visitor Bleachers

Surface and shallow subsurface samples for the area beneath and behind the bleachers were similar to contamination found at the track. The visitor bleachers were in poor condition. Therefore, the Navy consulted with DOE to determine the long-term use of the area. DOE determined that the existing bleachers required demolition and replacement. To eliminate exposure to the contaminated soil during future renovations, the

Navy demolished the bleachers, stabilized the existing slope, and placed a concrete cap to remove exposure to the contaminated soil (Photo 4).

Home Bleachers

Chemical concentrations in soil were lower than the track and visitor bleacher areas. However, as a precaution, soil and grassed areas surrounding and beneath the bleachers were covered with a layer of gravel and gunite (shotcrete).

Area North of Track

Soil contamination similar to the track area was found in a soil sample collected from the unpaved areas immediately north of the track. To prevent future exposure, the area was graded, covered with geotextile liner, six inches of top soil and grass.



Photo 4: Slope stabilization and concrete cap