



**Formerly Used Defense Site (FUDS)
Waikoloa Maneuver Area, South Kohala, Hawaii**

The Department of Defense established the Formerly Used Defense Site (FUDS) under the Defense Environmental Restoration Program (DERP) in 1986 to address munitions and explosives of concern (MEC) and munitions constituents (MC) located on closed or transferred military training areas. Munitions that did not properly function are considered a safety hazard that present a serious danger to human health. MC refers to contaminants associated with munitions items that may have been released into the environment.

The FUDS property formerly known as the Waikoloa Maneuver Area, demarcated in the red crosshatch below, is located on the western side of the Big Island of Hawaii. The U.S. Navy through a licensing agreement with Richard Smart of Parker Ranch acquired approximately 137,000 acres in Waikoloa in December 1943. Portions were used as an artillery firing range on which live ammunition and other explosives were employed, with the remaining acreage utilized for troop maneuvers, and the largest encampment on the island of Hawaii. In September 1946, the property was surrendered to the Parker Ranch.



Two munitions clearance efforts were conducted, one in 1946 just prior to the departure of the 5th Marine Division and the other in 1954 following an accidental detonation of a dud fuze or shell killing two civilians and seriously injuring three others. The 1954 effort detected as many as 400 dud items including hand grenades, 60 and 81mm mortars, 75mm shells, 105 and 155mm shell fuzes, 31mm anti-tank cannon shells, and 4.2-inch mortars.

Previous Investigations

A Preliminary Assessment conducted by the U.S. Army Corps of Engineers (Corps) in 1993 confirmed that the property was used by the Department of Defense and qualified as a FUDS.

As part of the FUDS Program, a Phase I Engineering Evaluation/Cost Analysis, known as an EE/CA was conducted from 1997 to 1999 at the request of Parker Ranch on small, restricted areas west of the Waimea-Kohala Airport. The goals of the EE/CA were to identify the extent of the hazard, to identify the objectives of the removal action, and to analyze various alternatives that may be used to satisfy these objectives for cost, effectiveness, and implementability. Results of the Phase I EE/CA indicated that the problem was larger than anticipated and resulted in the second EE/CA.

The Phase II EE/CA was conducted from 1999 to 2002 and covered 113,000 acres. Risk evaluations were completed for the entire area and the areas with the highest risks were Ouli, Waikoloa, and Waimea. The Phase II EE/CA recommended institutional controls, pre-coordinated construction support, surface clearance of MEC of approximately 28,000 acres, and subsurface clearance of MEC of approximately 19,000 acres.

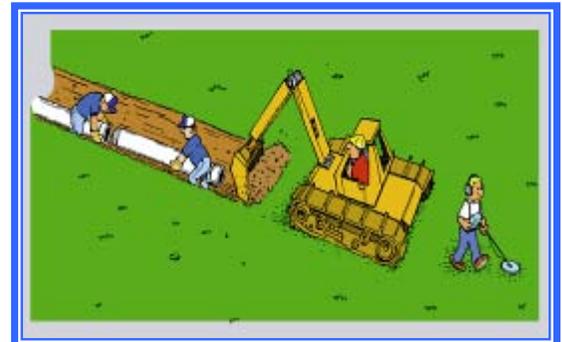
The Corps conducted a Time Critical Removal Action (TCRA) in 2001 after children of the Ouli area discovered hand grenades on the ground. Approximately 300 acres in the Ouli area were cleared of ordnance and explosive hazards located on the surface.

During the Phase III EE/CA conducted from 2003 to 2005, the Corps investigated the presence and extent of munitions and explosives on property along the perimeter of the former Waikoloa Maneuver Area. As a result of the Phase III EE/CA, the boundary of the former Waikoloa Maneuver Area was expanded to include property makai (west) of Queen Kaahumanu Highway and north of Kawaihae Road.

Construction Support

Construction support is a service provided by the Corps during construction activities at potential MEC sites to ensure the safety of construction personnel from the harmful effects of MEC. MEC teams either conduct a subsurface MEC clearance for the known construction footprint or provide support during construction activities depending on the construction being done.

Numerous construction support projects which began in 2002 have been completed. These include Waimea Middle School, Parker Ranch/Schuler Homes, Waikoloa Village Emergency Access Road, Department of Hawaiian Homelands – Lalamilo, U.S. Department of Agriculture, State Department of Transportation, and State Department of Education. Construction support continues to be a part of the former Waikoloa Maneuver Area project, and if you are planning construction in the project area, contact the Project Manager shown below.



Removal Action

Removal Action (RA) is the cleanup or removal of MEC from the environment. The daily operations involve boundary and grid surveys, sweep team operations (anomaly detection), geophysical reacquisition and mapping (anomaly identification), excavation of MEC, and disposal of MEC.

The first RA at the former Waikoloa Maneuver Area was conducted from 2002 to 2007. Approximately 8,000 acres were cleared and over 2,000 MEC items were removed from areas around Ouli, Waikoloa Village, and Waimea. Types of MEC removed included 60mm and 80mm high explosive mortars, 75mm, 105mm, and 155mm projectiles, 2.36-inch rocket propelled anti-tank rounds, U.S. Mk II hand grenades, M1 anti-tank mines, and Japanese ordnance.

The second RA was conducted in 2008 and 2009 and resulted in approximately 2,695 acres being cleared and disposal of 110 MEC items.

The current removal action, which started in 2010, continues in the Ouli, Waikoloa Village, and Waimea areas and focuses on areas that were identified in the EE/CA, are easily accessible to the public, were evaluated as medium to high risk areas, and are slated for future development.



Cultural Resources

During all activities at the former Waikoloa Maneuver Area, including the RA, an archaeologist was or will be on site with the contractor(s) to identify historic properties potentially affected by the RA and to seek ways to avoid, minimize or mitigate any adverse effects of historic properties.

Institutional Controls

A Restoration Advisory Board (RAB) was established in 1999 to act as a focal point for the exchange of information between the Corps and the local community regarding environmental restoration activities at the former Waikoloa Maneuver Area. RAB and informational meetings are regularly held in Waikoloa and Waimea. Updates, progress reports, and upcoming projects are presented at these meetings.

School assemblies were conducted at the three public schools (Waikoloa Elementary, Waimea Elementary, and Waimea Middle) in the Waikoloa/Waimea area reinforcing the 3Rs (Recognize, Retreat, and Report) Program. Safety education will continue with the schools, communities, and the public to get the safety message to everyone.

Numerous items reinforcing the 3Rs Program have been distributed to nine schools and sports organizations in the Waikoloa/Waimea area. The Corps regularly attend fairs and festivals in the Waikoloa/Waimea area notifying attendees of the presence of MEC in the area that they live and play in.

MEC continues to be discovered as the former Waikoloa Maneuver Area is developed. While encountering old shells, grenades, and munitions is not common, you should be wary of any type of old metal objects you may find in the area. Regardless of age, ordnance retains its explosive potential. Over time, some of these items can become more sensitive and detonation can occur with the slightest touch. Always remember the 3Rs of Explosive Safety:

Recognize — Recognizing when you may have encountered a munition is key to reducing the risk of injury or death. If you encounter or suspect you may have encountered a munition, consider it extremely dangerous. Remember, munitions are sometimes hard to identify.

Retreat — If you encounter or suspect you may have encountered a munition, do not touch, move or disturb it, but immediately and carefully - do not run - leave the area following the same path on which you entered. If you can, mark the general area, not the munition, in some manner (e.g., with a hat, piece of cloth, or tying a piece of plastic to a tree branch).

Report — When you think you may have encountered a munition, notify your local law enforcement - call 911.

DON'T FORGET

Munitions are dangerous and may not be easily recognizable. Never touch, move or disturb a munition or suspect munition.

REMEMBER THE 3Rs

If you have any further questions, please contact:

Project Manager, Former Waikoloa Maneuver Area
U.S. Army Corps of Engineers, Honolulu District
808-438-1232

