PALI TRAINING CAMP
RESTORATION ADVISORY BOARD (RAB) MINUTES
WEDNESDAY, JULY 30, 2014
KAILUA HIGH SCHOOL CAFETERIA
451 ULUMANU DR
KAILUA, ISLAND OF OAHU, HAWAII

1. Kevin Pien called the meeting to order at 6:40 p.m. and welcomed everyone.

2. Those in attendance included Government Co-Chair Kevin Pien of U.S. Army Corps of Engineers (USACE); Community Co-Chair Leslie R. Kahihikolo, RAB members Dr. Paul Brennan, Marti McCracken, Steven Mow (State of Hawaii Department of Health), Francis A. Ritchey III, Donna Wong, and Shannon Wood.

   Others in attendance included Mike Mullen and Kanalei Shun of U.S. Army Corps of Engineers (USACE), Robert Harter of Department of Emergency Management, Jane Carlile, Kahu Ricky Bermudez, Azure Skellington, Matt Horn, Erik Horn, and Matt Kahoopii.

   Contractors present included Cynthia Liu and Cariann Ah Loo of Huikala, and Clayton Sugimoto of WCP Inc. (WCP).

   RAB members absent were Dr. Charles Burrows, Dawn Chang, Victoria Creed, Kimberly Kalama, Maya L.K. Saffery, Kelly Tomioka, and Bert K. Wong,

The agenda of the meeting was:

I. Welcome and Introductions
II. Approval of Minutes/Action Items from Previous Meeting
III. Project Status Update – Remedial Investigation
IV. Next Meeting
V. Open Discussion

Name	Action Items from 30 July 2014	Suspense Date	Completed
K. Pien	Provide RAB members with link to Pali Training Camp website	8 August 2014	31 July 2014
K. Pien	Accept comments to the Draft Final Remedial Investigation Report	8 August 2014	8 August 2014
K. Pien	Discuss findings with DLNR DOFAW	31 August 2014	15 August 2014

I. Welcome and Introductions
- K. Pien introduced himself and welcomed everyone to the RAB meeting
- L. Kahihikolo introduced herself

II. Approval of Minutes/Action Items from Previous Meeting
- Action Item from Previous Meeting
  a. K. Pien forgot to provide RAB members with the link to Corps' Pali Training Camp website, but promised to provide the link, which has been updated with all project documents, no later than 6 August 2014

- December 2013 Draft Meeting Minutes

a. Passing of minutes deferred until after presentation

b. Minutes passed for approval subject to K. Pien providing link to Corps' Pali Training Camp website

III. Project Status Update – Remedial Investigation

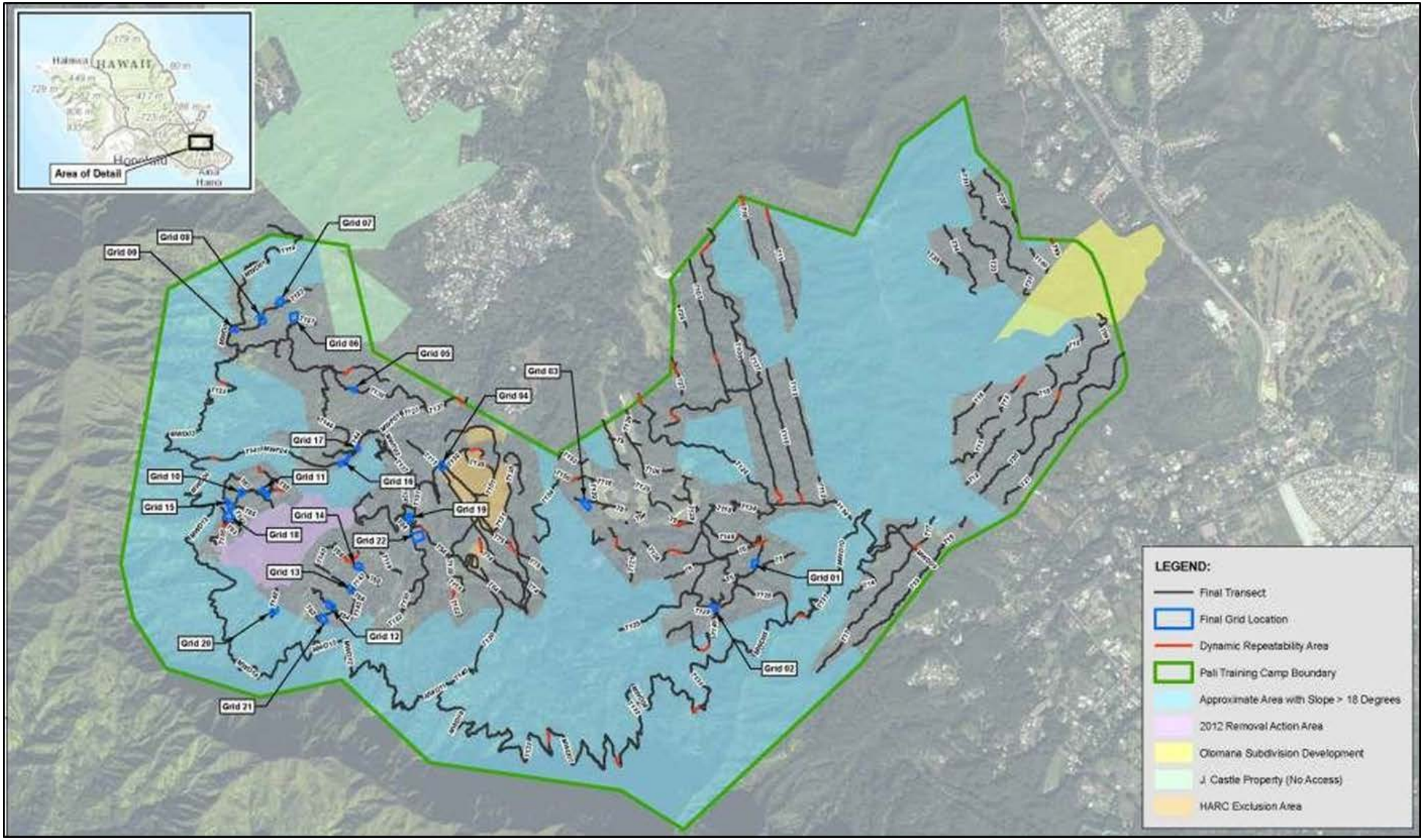
- Cindy Loo of Huikala LLC provided the project status update
- Project Background – Site Description
  a. Approximately 4,378 acres located in Kailua, Oahu at the foot of the Koolau Mountain range
  b. Consists of four noncontiguous parcels situated in portions of the Makalii and Maunawili Valleys
  c. 3,432 acres – Maunawili Valley Impact Area (MVIA)
  d. 400 acres – Maunawili Training Course (MTC)
  e. 46 acres – Makalii Valley Training Course (MVTC)
  f. 500 acres – Ulumawao Training Course (UTC)
- Project Information – Previous Uses
  a. Established in 1943 as a regimental combat training center
  b. Emphasized the use of modern arms and field weapons
  c. Used for jungle and Ranger training
  d. Housed 3,000 to 5,000 troops in sprawling tent city
  e. Camp abandoned in 1945
  f. Approximately 1,500-acre area believed to have been used as an artillery impact area
- Project Information – Training Camp Facilities
  a. Personnel Support
     – Latrines/showers
     – Mess halls
     – Administration buildings
     – Motor pools
     – Ice plant
     – Bakery
     – Gun pits
     – Field hospital
  b. Training Areas
     – 200- and 300-yard rifle ranges
     – 1,000-inch range
     – Four obstacle courses
     – Infiltration course
     – Combat in cities course
     – Close combat course
     – 400-yard jungle firing course
     – Artillery impact area
- Project Information – Previous Investigations
  a. 1994 Inventory Project Report
     – Established the site as a Formerly Used Defense Site (FUDS) and the preliminary site boundary
     – Identified preliminary list of potential munitions and explosives of concern (MEC) items
  b. 2008 Engineering Evaluation/Cost Analysis
     – Conducted digital geophysical mapping and qualitative reconnaissance in MVIA, MTC, and MVTC
     – Found munitions debris (MD) in the MVIA Munitions Response Site (MRS)
     – No MEC items were found

c. 2009 Site Investigation
   - Identified aluminum, arsenic, chromium, iron, and vanadium as contaminants of potential concern in surface soil; cobalt, mercury, and RDX in surface water; and iron in sediment

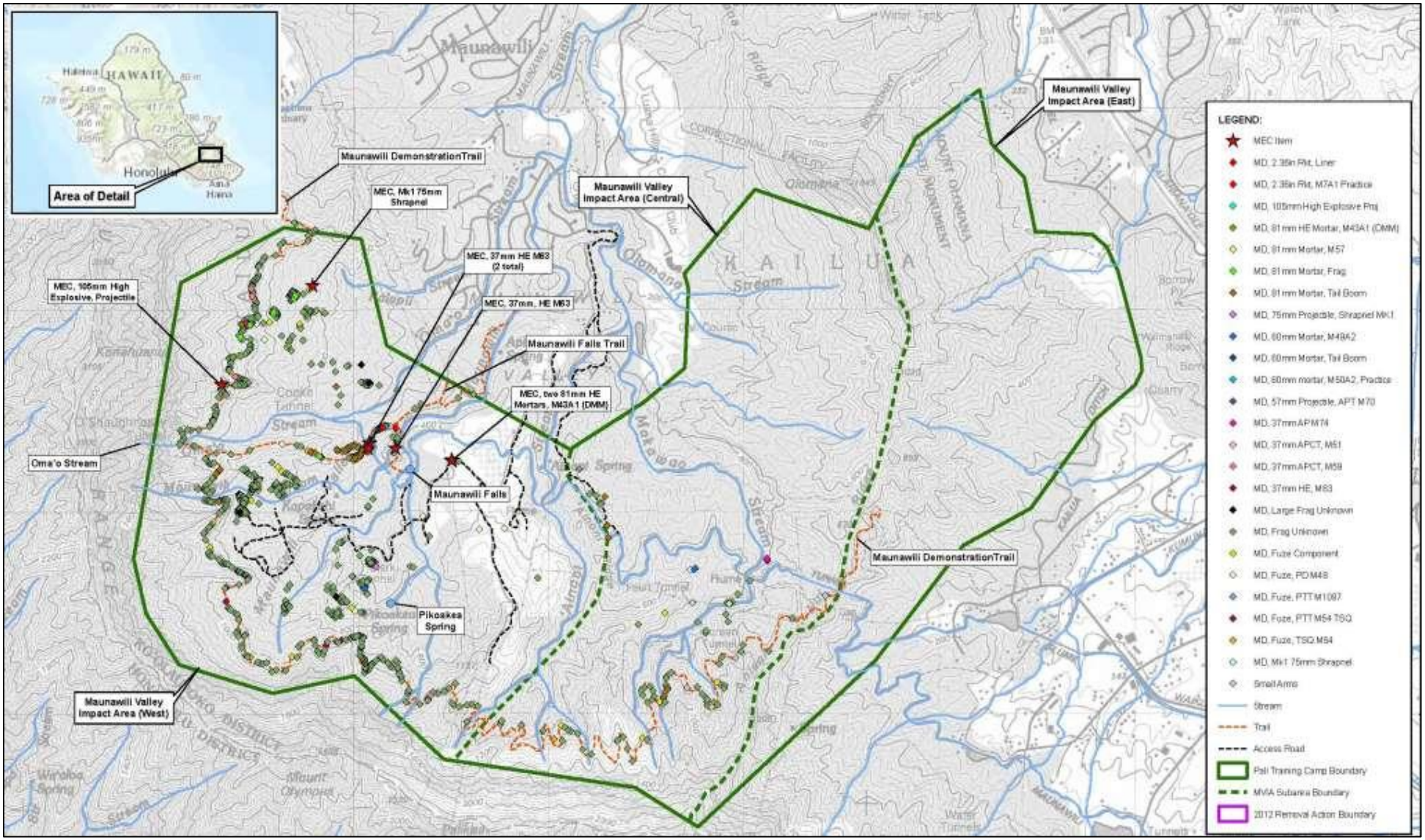
d. 2012 Removal Action
   - Removed 1,067 pounds of MD and 26 MEC items from the MVIA

- Remedial Investigation
  a. Preliminary field investigation conducted between July and October 2103
  b. Public trails field investigation conducted between February and March 2014
- Remedial Investigation – MEC Technical Approach
  a. Conducted surface and subsurface geophysical surveys with handheld all-metals detectors along transects and in grids
  b. Investigated 5,649 anomalies
  c. Identified high anomaly density areas
  d. Conducted grid investigations outside of high-density areas
  e. Demolished MEC items
  f. Disposed of Material Potentially Presenting An Explosive Hazard (MPPEH)
- Remedial Investigation – Data Collection (refer to map on next page)
  a. Completed 36.11 miles of parallel and meandering transects and 10.30 miles of public trails transects
  b. Identified areas of elevated and high anomaly density
  c. Completed 4.57 acres of grids in or around high anomaly density or MEC-contaminated areas to determine nature and extent of contamination
  d. Investigated 20.54 acres of transects and grids outside of MEC-contaminated and high density areas
- Remedial Investigation – Summary of Findings (refer to map on page after next page)
  a. Located and demolished seven MEC items:
     - One 105millimeter (mm) high explosive (HE) projectile
     - Three 37mm HE projectiles
     - One 75mm shrapnel projectile
     - Two 81mm HE mortars (Discarded Military Munitions [DMM])
  b. Removed 1,346 MD items:
     - 2.36-inch rockets
     - 37mm, 57mm, 75mm, and 105mm projectiles
     - 60mm and 8-mm mortars
     - Fuzes and fuze components
     - Large fragmentation
  c. Removed 646 pounds of debris not related to munitions

- Remedial Investigation – Transects and Grids

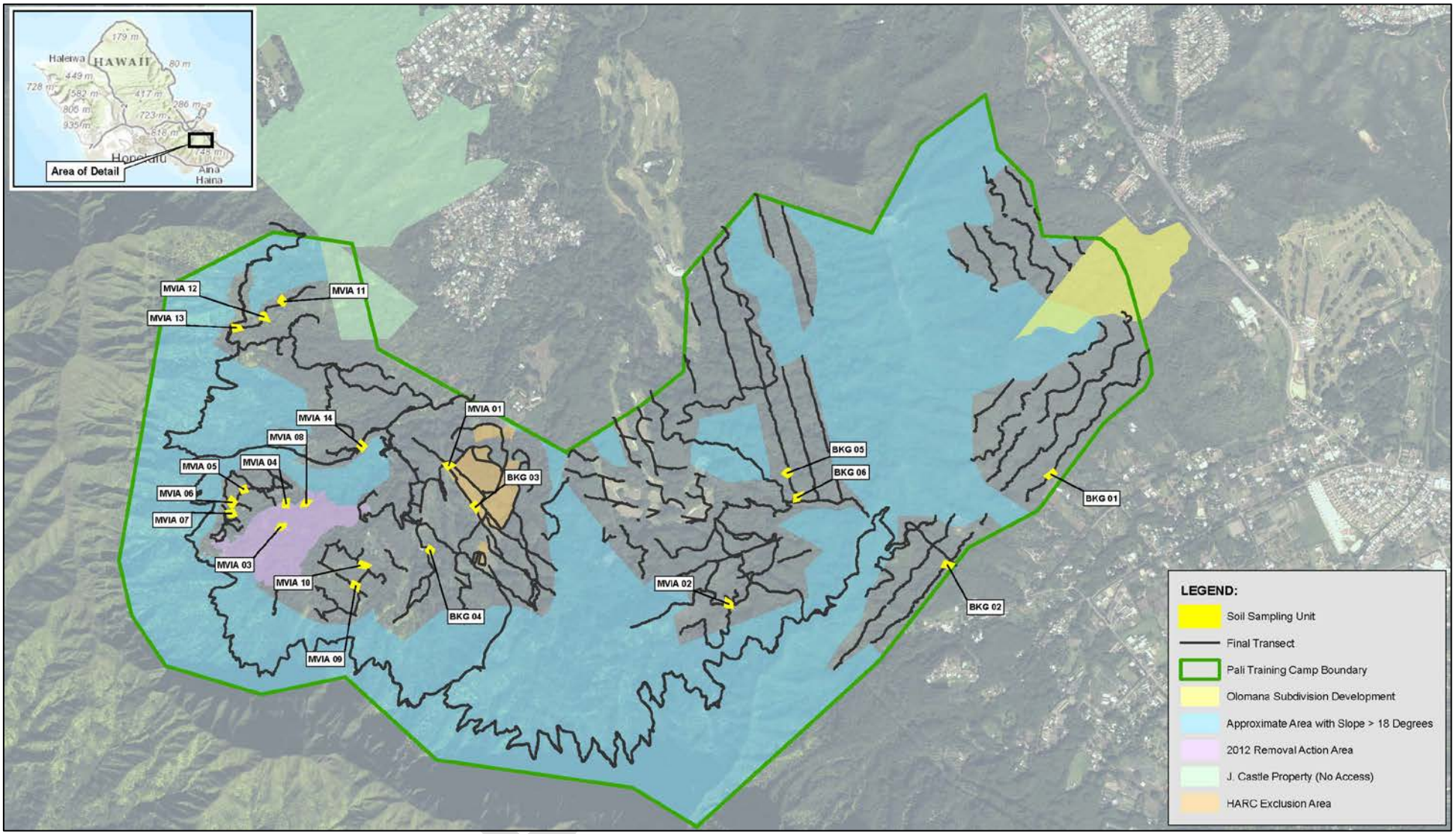


- Remedial Investigation – MEC and MD Locations

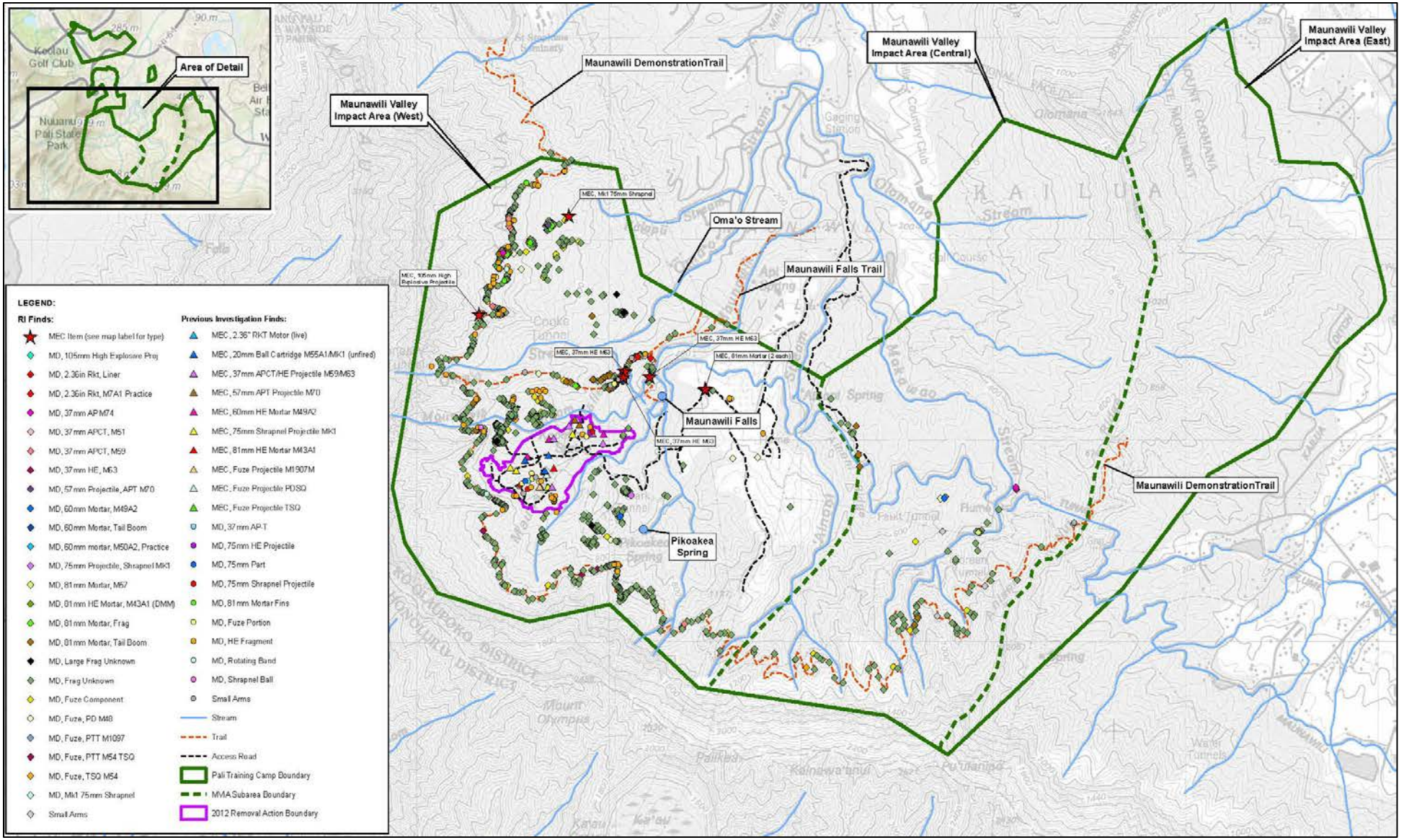


- Remedial Investigation – Munitions Constituents (MC) Technical Approach (refer to map on next page)
  a. Collected 42 surface soil samples from 14 sample units placed in areas of high MEC/MD concentrations
  b. Collected 18 background surface soil samples from areas minimally impacted by military use
  c. Analyzed samples for antimony, chromium, copper, lead, zinc, and explosive compounds
  d. Compared laboratory results to the HDOH Tier 1 Environmental Action Levels (EALs)
- Remedial Investigation –MC Data Analysis
  a. Four or more metals were detected in all samples but below their respective HDOH Tier 1 EALs
  b. Explosives were detected in several samples but below their respective HDOH Tier 1 EALs
  c. Risks to human health associated with MCs in surface soil do not exceed risk thresholds
- Remedial Investigation – Results
  a. Divided the MVIA MRS into three sections:
     – MVIA – West
     – MVIA – Central
     – MVIA – East
  b. Developed revised conceptual site models for each section
  c. Completed a MEC Hazard Assessment for each section
- Remedial Investigation – Results for MVIA – West
  a. Seven MEC items found during the RI and 26 MEC items found during the 2012 Removal Action.
  b. Four MEC items found on or near public hiking trails.
  c. Exposure pathway to human receptors is complete through direct contact with surface and subsurface MEC.
  d. The MEC Hazard Analysis (HA) yielded a baseline condition score of 925, corresponding to a Hazard Level 1.
     – MEC Hazard Assessment – Hazard Level 1
        - High-explosive-filled UXO, usually “Sensitive UXO” on the surface.
        - A former target area or OB/OD area.
        - An MRS with full or moderate accessibility.
        - Has the presence of additional human receptors inside the MRS or ESQD.
        - May include subsurface MEC with intrusive activities to the depth of subsurface MEC.
        - An MRS that has not undergone a cleanup.

- Remedial Investigation – Soil Sample Locations



- Remedial Investigation – Cumulative MEC/MD Findings



- Remedial Investigation – Results for MVIA – Central
  a. No MEC items have been found
  b. The types of MD found, such as the 60-mm HE mortar, indicate that HE munitions could be present in the southern portion of this section
  c. Exposure pathway to human receptors is potentially complete through direct contact with surface MEC
  d. A MEC HA was not completed since no MEC items have been found or reported
- Remedial Investigation – Results for MVIA – East
  a. No MEC or MD items have been found
  b. No source of an explosive hazard
  c. No complete exposure pathway to human receptors
  d. A MEC HA was not performed
- Remedial Investigation – Results for MTC MRS
  a. Previous investigations identified only small arms debris and evidence of troop maneuvering
  b. Remedial investigation data could not be collected because the landowner did not grant right-of-entry
  c. Southern boundary of the MRS is adjacent to the northwestern boundary of the MVIA MRS which had a high density of MD and one MEC item
  d. Further investigation is recommended
- Remedial Investigation – Results for MVTC and TUC MRSs
  a. MEC/MD have not been found in either MRS
  b. There are no sources of explosive hazards
  c. There are no complete pathways to human receptors
  d. No known MEC hazards or MC risks are suspected
- Next Steps
  a. **Remedial Investigation Report (Summer 2014)** – Documents field investigation results, finalizes conceptual site model, and performs hazard assessment
  b. **Feasibility Study (Winter 2014)** – Develops, screens, and evaluates remedial alternatives
  c. **Proposed Plan (Summer 2015)** – Provides a brief summary of all alternatives presented in the Feasibility Study and presents the preferred alternative
  d. The public will have an opportunity to provide comments to the Proposed Plan during a 30-day public review period
  e. **Decision Document (Winter 2015)** – Documents the selected site remedial alternative
- Public Safety

  Follow the 3Rs of Explosives Safety
  - RECOGNIZE – Military items can be DANGEROUS!
  - RETREAT – DO NOT TOUCH IT! Move away from the area.
  - REPORT – Call 911

IV. Next Meeting
- L. Kahihikolo: Tentatively October/November when the Feasibility Study is available.

V. Question/Open Discussion

Q S. Wood: Was anyone living and/or farming in this area? What happened to people who were farming in the area?

A K. Pien: The Army leased the area from Harold Castle from 1943 through 1945. I suspect that the military would not be doing military training in inhabited areas.

Q D. Wong: Did the investigation cover Ulumawao?

A K. Pien: Ulumawao, currently near the Pali Golf Course and HPU, was used as a tent city used to house the soldiers and since it was used to house the soldiers, we do not suspect munitions use in that area. They probably went into the back of Maunawili Valley to do the munitions training and for that reason, UTC and MVTC were ruled out for munitions use. Previous investigations did not find any signs of munitions contamination in those two areas.

Q R. Bermudez: Can you guarantee that there were no ammunitions dropped or buried in those two areas?

A K. Pien: We cannot guarantee that there are no munitions in those areas. The purpose of this investigation was to identify target areas and areas of high munitions concentration. We cannot eliminate the possibility of munitions being present and have a public outreach program to address any potential residual risk in the area. Part of the program is to speak to students at school assemblies about the hazards of UXO and what to do should you come across a UXO. We also try to get out to community events to speak to adults and kids and disseminate the safety message (i.e., the 3Rs of UXO).

Q S. Wood: Was there any record that the Japanese, Italians, or Germans attacked this area?

A C. Liu: No.

Q D. Wong: You say in 2008 that no MEC items were found, but 26 were removed in 2012. When were these identified?

A K. Pien: Based on the 2008 EE/CA, concentrations of MD were identified. The 2012 Removal Action went back to the area of high concentration of MD and found the 26 MEC items.

Q Dr. Brennan: I'm surprised you don't refer to all the archaeological reports that were done with the building of the golf course.

A K Pien: As part of our archaeological monitoring plan, we did research the historical/cultural resource inventory and surveys that were done in Maunawili so that we can avoid any impacts to the cultural sites during this investigation. This summary is referring to the munitions investigations and does not include archaeological reports that were previously done, but we did take the past archaeological reports into account in preparing for this investigation. Let me talk to the golf course/HRT to see if they can share any additional information.

Q L. Kahihikolo: Were those four MEC items removed?

A C. Liu: Yes. Everything, including MD and tin cans were removed.

A K Pien: Part of the reason we found MEC on the hiking trail is because those were the places we looked at. These are the accessible areas. Since December, the team went out to do the full width of the hiking trails, as opposed to the normal 3-foot wide transect that was done initially.

Q Donna Wong: Did they find anything during the expanded survey?

A K. Pien: They found three 37mm projectiles during the additional work. On your map, the munitions are usually red stars.

A C. Liu: They were found on the Maunawili Falls Connector Trail.

Q Donna Wong: Were they removed or disposed of?

A K. Pien: They were disposed of on-site, because we are not allowed to take them off-site.

Q L. Kahihikolo: Does the Hazard Level 1 apply to all of the west portion, or a segment within it?

A C. Liu: It applies to all of the west area.

A K. Pien: Conceptually we see munitions debris tapering off as you move to the east within the MRS.

Q S. Wood: Are there any reports than show that this (removal) was done in 1945?

A K. Pien: Historical records indicate that they did some type of clearance, but the extent and quality of the job that they did is unknown.

Q S. Wood: I've found munitions in Kawainui Marsh because it was used as a training ground from 1938 to the Vietnam War and the stuff is still alive.

A K. Pien: Right, we did find explosives that are viable explosives.

Q L. Kahihikolo: In the central area, you said there was no munition debris found.

A C. Liu: No. There were some found.

Q L. Kahihikolo: Did you not sample for explosives in the area?

A C. Liu: We did sample. There were three sample units in the central area.

Q L. Kahihikolo: Did the results come back with no explosives?

A C. Liu: Yes, it came back with no concentrations above environmental action levels (EALs).

Q S. Wood: How many acres?

A K. Pien: Approximately 400 acres.

Q S. Wood: There was no access to the property.

A K Pien: The landowner did not grant us right of entry to the property that comprises the majority of the Maunawili Training Course (MTC) MRS to conduct an investigation. We operate inclusively on right of entry agreements. We need permission from the landowner to go onto the property. The landowner did not grant right of entry onto the property. No investigation results are available for that property.

Q S. Wood: The big blank area is because you couldn't go on the property not that you didn't want to.

A C. Liu: Yes. Given the proximity of the MTC MRS to the MVIA MRS, we recommend further investigation if right of entry is given.

Q S. Wood: Is that some place you would consider in the future?

A K. Pien: Yes, if we are able to get his permission. We could go out with a new contract and get the data.

Q Unknown: Is the area accessible (hiking, golfing)? Is it fenced off? Can you wonder into?

A K. Pien: To my knowledge it is not fenced off. It is the area behind St. Stephens. I believe there are horse trails, as well as HECO power lines. They have expressed some concern.

A C. Liu: It is private. Part of the property does come down into the MVIA.

A K. Pien: Due to a safety buffer, in order to do our investigation we would have needed to get onto the right of entry refusal property. It did not allow us to sweep certain areas of the property that we did have right of entry on. In case we found something that we needed to detonate we would not be able to go onto the right of entry refusal property and ensure that the property is properly evacuated.

A C. Liu: We took our transects right up to the edge. The area is hard to get to and not heavily travelled.

Q Unknown: Do you have information on roads used by FAA and travelled by the military? Have you done interviews with people that were there?

A C. Liu: Before there was an archive records search that will answer some of those questions. That is how it gets on the formerly used defense site list.

A C. Loo: As far as knowing where the trails are, we would suspect that the trails that we are using now are the ones they were using back then.

A K. Pien: The Maunawili Demonstration Trail is an interesting situation because it didn't exist until the 80's or 90's. We haven't received any reports of finding any munitions during the construction of the trail. It doesn't mean that they didn't find anything. We have no documentation of any finds.

Q D. Wong: Did you contact the trail and mountain club & DLNR?

A K. Pien: Yes, we are in contact with DLNR. In discussions with DLNR they did not mention any previous finds. We are in ongoing discussions with DLNR because they are the landowner.

Q L. Kahihikolo: Can you explain what the feasibility study is?

A C. Liu: The feasibility study develops and evaluates the remedial alternatives, general response actions to be considered for the site.

A K. Pien: Basically, the feasibility study is weighing the options that are available. We will be looking at educational programs, institutional controls, possibly further removal and clearance work. The feasibility study will present the options and weigh the pros and cons of each. The proposed plan will get into the preferred alternative. We will present that and open a 30 day comment period to the public and also have a RAB meeting. The decision document will present the selected remedial alternative.

Q D. Wong: You mentioned contamination, were you thinking about removing contamination from the site or because of the danger?

A C. Liu: It's the explosive hazard not the chemical contamination.

Q D. Wong: Not the contamination of the metals into the ground.

A K. Pien: Right, unexploded munitions. The soil sampling and follow on risk assessment did not indicate any unacceptable risks from munitions (chemical) constituents.

Q D. Wong: Where do all the reports go to? Who reviews them?

A K. Pien: Our regulator at Hawaii Department of Health review our documents. We are giving landowners an opportunity to review them to. They are all public documents.

Q D. Wong: Are they on the website?

A K. Pien: They will be. Hard copies in the repositories at the Kailua and Kaneohe Public Libraries and I emailed them to the RAB members.

Q Unknown: Is there a chance that any of the metals could be put into the Kawainui Marsh in the early days? There are still dumps sites. Is there any kind of investigation?

A K. Pien: We are not aware of any and such dumping would be outside the scope of this investigation for munitions.

Q R. Bermudez: Could we have a list of cultural sites?

A K. Pien: Known identified sites are publicly available through SHPD. The State Historic Preservation Division database has the sites.

There being no further business, the meeting was adjourned at 8:40 p.m.