



UTAH NATIONAL GUARD MUNITIONS REVIEW

News of the MMRP project at Camp Williams, Utah

February 2011

The detector from Down Under



The Emu is an ostrich-like, flightless bird often seen roaming the Outback of Australia. It is known for its nomadic nature, spending its life searching the barren landscape for food and water. Recently, an EMU of a different sort was seen roaming the landscape near Camp Williams. But, this EMU, unlike its feathered namesake, does not wander in search of food; instead, it is used by a technician seeking out old munitions buried in the ground. It is the detector from Down Under.

The EMU 7.1 (Electro-Magnetic Unit, model 7.1), is a hand-held, high-tech metal detector manufactured in Australia and until recently had not been used more than a handful of times in the United States. During the planning stages for the Military Munitions Response Program (MMRP) field work, the Utah National Guard (UTNG) found that traditional detection equipment would not work at the Camp Williams MMRP sites.

“The rugged terrain and existing levels of rock and metals in the soil made it necessary to find a piece of equipment that could work around those issues,” said Robert Price the MMRP technical lead for the UTNG. “It became clear that the equipment traditionally used in an investigation such as this would not work. So, we decided to look for other options. Little did we know the solution to our problem would come from Australia.”

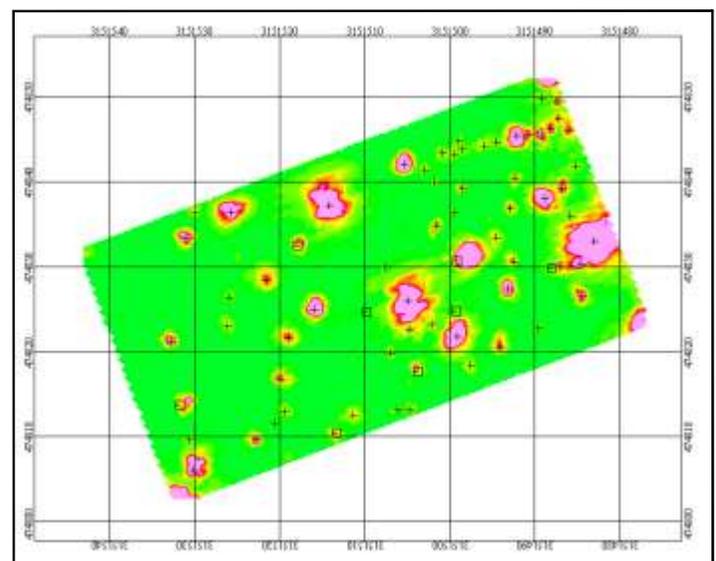
The task of finding a more suitable piece of equipment fell to Nate Harrison and Craig Murray, Project Geophysicists for Parsons, the company contracted to complete the Site Inspection and Remedial Investigation field work at the Camp Williams MMRP sites. Luckily for the UTNG, Murray had been aware of the EMU for some time and thought it would be a good option for the field work at Camp Williams.

Parsons requested information on the detector and after deliberation with the UTNG it was decided that

they would rent the EMU from Australia and test its ability against more traditional munitions-detection equipment. Traditional equipment does not perform well in areas like Camp Williams where iron-rich rocks are present because the rocks interfere with instruments searching for metal objects.

“The EMU did a great job of minimizing the interference of the existing levels of metal and rock in the soil,” said Harrison. “There is a test performed with the EMU in which the operator tells the system that it is over a metal-rich rock (hot rock) and records data for a short time. During this test, the EMU retains a memory of the response from the geology and subtracts it from the data collected. This ensures anomalies in the readings from the EMU are a result of metal items in the ground and not geologic background.”

The EMU shares another commonality with the emu, which has three clawed toes that help the bird to be agile in varying types of terrain. The EMU is also able to handle varying types of terrain and was able to navigate through the thick brush and over the rugged



An example of an anomaly map generated by the EMU. The green section represents the background conditions and the red/pink splotches represent anomalies.

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terrain near Camp Williams much more easily than other equipment, which is heavy and difficult to handle on uneven, rocky surfaces.

“We were pleased with the way that the EMU handled the terrain,” said Price. “The handheld design made it easier to take through the thick brush cover. This meant that there was less need for brush cutting, so we were better able to maintain the natural integrity of the landscape while completing the investigation.”

The field work was completed in November 2010, and the EMU has been sent back to its native land. Gap Geophysics Australia, the manufacturer of the EMU, hopes the UTNG's positive experience will be made known and many more detectors from Down Under will be seen roaming MMRP investigation sites in the United States. J

EMU 7.1

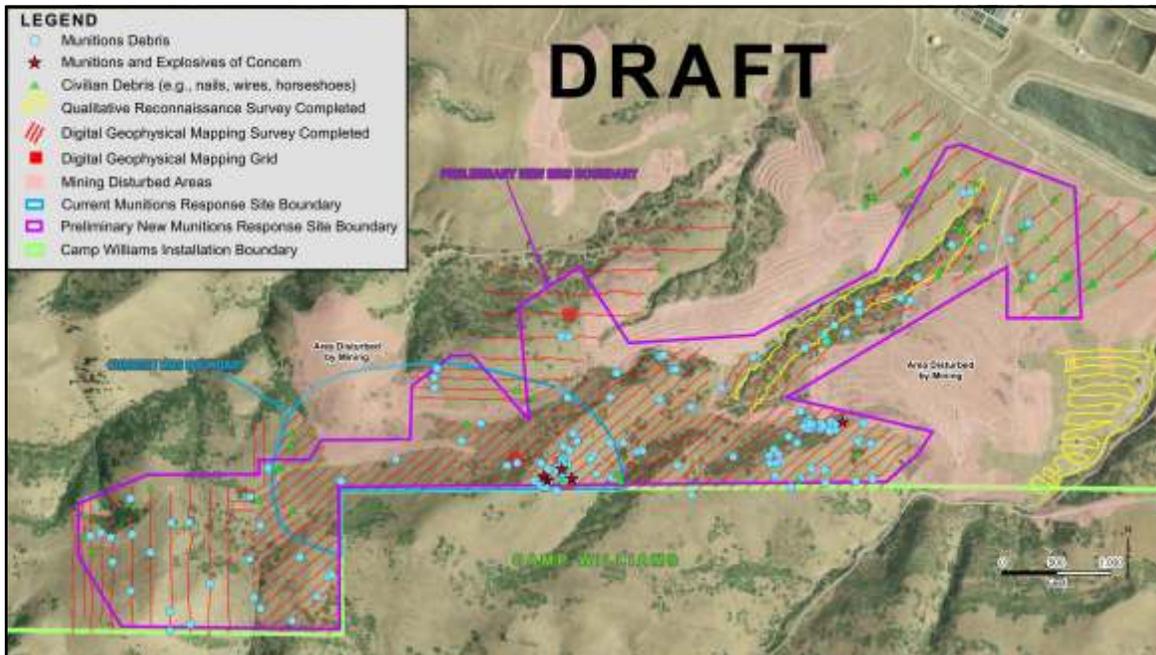


The EMU 7.1, a specialized piece of munitions-detection equipment, roams the landscape in search of buried munitions.



The EMU's handheld design makes it easy to use in the rugged terrain and thick brush cover that is present at Camp Williams.

Wood Hollow MRS



Map showing the Wood Hollow Training Area MRS and the areas where additional investigations were performed. Anomalies that were discovered during the Remedial Investigation Field Work are also shown. The purple boundary indicates a preliminary new MRS boundary, which is not yet finalized.

Dense oak brush and steep terrain characterize the conditions that field crews were working in this summer and fall at the Wood Hollow Training Area, one of six sites being addressed under the Military

Munitions Response Program (MMRP) at Camp Williams.

Before an investigation such as this begins, the Utah National Guard (UTNG) requests concurrence from the Utah Department of Environmental Quality (UDEQ) to ensure that the work plan investigates the site thoroughly enough to determine whether or not a hazard to human health or the environment exists and that it com-

plies with CERCLA and state regulatory requirements.

“When we propose our work plan we are making assumptions about the site and what could poten-

tially be present,” said Robert Price, the MMRP technical lead for the UTNG. “Sometimes our assumptions are right on target, and other times we are surprised by what is found. Wood Hollow definitely surprised us.”

Initially, this site was believed to be comprised of 78 acres of land located in an area of low-lying hills and ridges near the cities of Herriman and Bluffdale. However, once the field work for the Remedial Investigation began, the true size of the site gradually revealed itself after crews performed investigations outside the original site boundary.

“While we were investigating the outer boundaries of the site we saw enough anomalies (see sidebar for a description of an anomaly) to make us question the existing boundary,” said Price. “In that type of situation we cannot determine if the anomalies end at the boundary. Therefore, we decided to investigate further to see if anomalies were present outside of the boundary.”

The additional investigations proved to be beneficial. “The areas located outside the existing boundary did contain anomalies that turned out to be munitions debris and in some cases, munitions and explosives of concern,” said Price. “We have expanded the boundaries of the site to include the new discoveries.

Based on the information collected during field work, the UTNG suspects this site was most likely used as a firing point or target area sometime between 1920 and 1940. “In the coming months we will compile and analyze the data collected to get a better handle on the actual density of munitions, revision of the site boundary, and to determine the best action for remediating the site,” said Price.

Currently, a Remedial Investigation report that will outline the investigation results and evaluate risk is being drafted and is expected to be complete sometime in the spring of 2011. J

Did you know?

We consistently add new information to our Web site. To see recent newsletters, fact sheets, or meeting minutes visit our Web site: www.campwilliamsrab.org.

What’s an anomaly?

In terms of geophysical measurements, an anomaly is any spot where the detection instrument detects an area that is anomalous, or different, than the “background.” Background refers to the natural geophysical conditions in soils at the site. Anomalies typically represent buried metal items and they are important to the MMRP because they could potentially represent buried Munitions Debris (MD) or Munitions and Explosives of Concern (MEC). During the recent field work at Camp Williams, anomalies discovered by the munitions-detection equipment were excavated to determine if they were simply debris or MEC.

A few of the anomalies excavated during the recent field work turned out to be cultural debris such as cans, horseshoes, and wire. The majority of the anomalies were MD consisting of artillery fragments and pieces. The MD was collected and removed from the sites. A small number of anomalies were MEC, and these items were either detonated in place or removed to ensure they did not present a hazard to human health or the environment.



Civilian debris found at Wood Hollow. This anomaly was dug up to ensure it was not hazardous.



An artillery fragment discovered at Wood Hollow. This anomaly was dug up to ensure it was not hazardous.



A 75mm shrapnel round discovered at Wood Hollow. This round had lead balls intact and was detonated in place to eliminate the hazard.

Opportunities for public involvement

The Utah National Guard (UTNG) views public involvement as an important part of the cleanup and investigation process. In an effort to provide community members with opportunities to stay involved and informed with the Military Munitions Response Program (MMRP) taking place at Camp Williams, the UTNG developed a project-specific Community Relations Plan that outlines the specific measures that UTNG will take to involve the public in the munitions investigation. As described in the plan, there are several opportunities for public involvement.

Restoration Advisory Board

A Restoration Advisory Board (RAB) was established in February 2010 as a way for the UTNG to provide information and receive feedback from community members. The Camp Williams RAB has members from city and county governments, as well as community representatives from the cities affected by the MMRP. Property owners also participate on the RAB, as well as two regulators from the Utah Department of Environmental Quality.

The RAB meets quarterly to discuss the progress of the MMRP. Board members are then available to provide information to other community members or city officials who are interested in the status of the project. Meetings are open to the public and are a good opportunity for citizens to receive updated project information. Upcoming RAB meeting dates are posted on the Web site, www.campwilliamsrab.org as well as in The Salt Lake Tribune and Deseret News.

Open House

The UTNG hosts informational open houses to provide community members with updated project information. Open houses are informal meetings with poster stations and staff available to answer questions and provide information about the sites involved in the investigation. The next open house will be held this summer and will provide information about the recent field work that was completed at the six sites involved in the MMRP, as well as future actions to take place at the sites. Information about the open house will be posted at www.campwilliamsrab.org, and invitations will be mailed to citizens living near the Camp Williams boundary sometime this summer.

Web Site

The Web site, www.campwilliamsrab.org is used as a place for community members to receive information and submit questions or concerns. The site also acts as an electronic repository of information where citizens may obtain copies of quarterly newsletters, fact sheets, and reports related to the MMRP. Anyone interested in receiving the newsletter can request to be added to the mailing list by calling 801-825-3570 or by signing up on the Web site.

Proposed Plan

Following Remedial Investigations like the ones recently completed at Camp Williams, sites that require Remedial Action or a cleanup will undergo additional evaluation to determine the best approach for a remedy. Once a prospective remedy has been identified, UTNG will present the remedy to the public for consideration and comment in a document known as the Proposed Plan.

The Proposed Plan outlines the proposed method for cleaning up the site and provides a summary of the alternative cleanup options considered for the site. The Proposed Plan is designed to involve the public in any cleanup decisions to be made.

A 30-day, public-comment period begins at the release of the Proposed Plan. During this comment period, a public meeting is held to present the plan to the public and allow people to ask questions and submit formal comments into the public record. Comments may also be submitted via E-mail, mail or fax at any time during the comment period.

The UTNG relies on public input during the comment period to ensure that the concerns of community members are considered in the selection of a remedy for the site. At the conclusion of the comment period, the UTNG evaluates and responds to all comments received. If the UTNG and the Utah Department of Environmental Quality determine that the public accepts the proposal, a Record of Decision is signed, which sets the cleanup in motion.

Proposed Plans for the sites that require cleanup action will be coming in 2011. The public will be notified of any opportunity to participate in the process, including public meetings and public-comment periods. J