

Utah National Guard

Restoration Advisory Board

Meeting Minutes

February 25, 2010

Members	Organization:	Telephone:	E-Mail:
Present:			
Dave Bennett	Utah County	801-851-4132	dbennett@campwilliamsrab.org
Richard Brown	Hi-Country 2 Community	801-446-9132	rbrown@campwilliamsrab.org
Rod Flanigan	Bluffdale City	801-755-2200	rflanigan@campwilliamsrab.org
Lynn Jorgenson	Lehi City	801-768-7100	ljorgenson@campwilliamsrab.org
Ken Leetham	City of Saratoga Springs	801-766-9793	kleetham@campwilliamsrab.org
Steve Mumford	Eagle Mountain City-Alt.	801-789-6603	smumford@campwilliamsrab.org
Rik Ombach	Utah Department of Environmental Quality	801-536-4164	rombach@campwilliamsrab.org
Patrick Osmond	Herriman Community	801-716-9082	posmond@campwilliamsrab.org
Robert Price	Utah National Guard	801-432-4454	rprice@campwilliamsrab.org
John Roberts	Bluffdale Community	801-254-2200	jroberts@campwilliamsrab.org
Gaylord Scott	Salt Lake County	801-824-3704	gscott@campwilliamsrab.org
Sandra Steele	Saratoga Springs Community	801-653-2434	ssteele@campwilliamsrab.org
John Waldrip	Utah Department of Environmental Quality	801-536-0238	jwaldrip@campwilliamsrab.org
Will Weaver	Lehi Community	801-520-8760	wweaver@campwilliamsrab.org
Tom Williams	Hi-Country Estates 2 HOA	801-253-1024	twilliams@campwilliamsrab.org
Facilitator:			
Michele Straube	CommUnity Resolution Inc.	801-583-6362	mstraube@campwilliamsrab.org
Members			
Absent:			
Brett Wood	Herriman City	801-446-5323	bwood@campwilliamsrab.org
Marion Bingham	Wasatch Wing and Clay	801-592-1155	mbingham@campwilliamsrab.org
John Roberts	Bluffdale Community	801-254-2200	jroberts@campwilliamsrab.org
John Hendrickson	Eagle Mountain City	801-789-6603	jhendrickson@campwilliamsrab.org
Other			
Attendees:			
Dave Allison	Utah Department of Environmental Quality	801-536-4479	dallison@utah.gov
Lenell Chace	West Jordan City		

Tom Chace	West Jordan City		
Carol Cise	Hi-Country Estates II	801-254-7827	david.cise@crbord.com
David Cise	Hi-Country Estates II	801-254-7827	david.cise@crbord.com
Boyd Dansie	Unincorporated Salt Lake County	801-254-0428	
Jeff Fitzmayer	Parsons	801-572-5999	jeffrey.fitzmayer@parsons.com
David Harris	Concordia Communications	801-825-3570	dharris@campwilliamsrab.org
Phillip Kennedy	Salt Lake City	801-707-7419	electro@yahoo.com
Melissa Porter	Concordia Communications	801-825-3570	mporter@campwilliamsrab.org
Ed Staes	Parsons	801-572-5999	ed.staes@parsons.com
Caitlin Wall	Concordia Communications	801-825-.570	caitlin.wall.ctr@hill.af.mil
Marc Weinreily	Draper City		mw@9-Etg.com

Handouts Distributed at Meeting:

Handouts: *October 22, 2009 Open House Packet*

Agenda Item #1. Welcome

Restoration Advisory Board Installation (RAB) co-chair, Robert Price, Utah National Guard (UTNG), opened the meeting and thanked everyone for their attendance, and welcomed all RAB members and members of the public. Mr. Price introduced Michele Straube, the RAB facilitator. Meeting agenda is attached (**Attachment 1**).

Agenda Item #2. RAB Business

Ms. Straube introduced herself and explained that she will be serving as the RAB facilitator to ensure that this first meeting runs smoothly.

Introduction of RAB Members

All RAB members introduced themselves. Ms. Straube explained that a community co-chair will be selected before the end of this first meeting and explained that nominations would be accepted throughout the meeting, including self-nominations. She asked if anyone was interested in nominating themselves for the co-chair position. Mr. Will Weaver, Lehi Community and Ms. Sandra Steele, Saratoga Springs Community, indicated that they would be interested.

Petition by Boyd Dansie for Position on RAB

Ms. Straube explained that Mr. Boyd Dansie would like to petition for a position on the RAB. Mr. Boyd Dansie, Unincorporated Salt Lake County, explained that he owns a farm located southeast of the Rose Canyon area and has lived in the area for a long time. He is most concerned that the area be safe for residents, and would like to have representation on the board. Ms. Straube explained that RAB members could vote and decide if they would like to add Mr. Dansie to the RAB. She explained that Mr. Dansie lives in unincorporated Salt Lake County, a position that is not currently on the RAB.

Mr. Weaver asked Mr. Dansie if munitions had been found on his property. Mr. Dansie said there had not. Mr. Ken Leetham, City of Saratoga Springs, asked if in the future any person would be able to petition for membership. Ms. Straube explained that the RAB will make that decision and will be able to make a policy for

future requests in the operating procedures. Ms. Steele said Mr. Dansie should be included on the RAB because he is a stakeholder. Mr. Tom Williams, Hi-Country II Estates Home Owner's Association said that he is aware that Mr. Dansie's property is located near the Rose Canyon area and felt it would be appropriate to add a position to the RAB. RAB members voted unanimously to add Mr. Dansie to the RAB.

Agenda Item #3 Introduction and Overview of MMRP

Mr. Price explained that the Military Munitions Response Program (MMRP) was mandated by Congress in 2001 to take an inventory of previous military ranges that are no longer in operation. In order to be eligible for participation in the MMRP, sites needed to have evidence of Unexploded Ordnance (UXO), Discarded Military Munitions (DMM) or Munitions Constituents (MC). He said that Camp Williams meets all of the criteria.

Mr. Rod Flanigan, Bluffdale City, asked why an investigation is being done when Operation Clean Sweep (a munitions investigation conducted by the Army in 1991) should have identified the munitions. Mr. Price explained that Operation Clean Sweep was only a visual reconnaissance and used standards that are 20 years out-of-date.

Mr. Price explained that they will be looking for Munitions and Explosives of Concern (MEC), which include the following: unexploded ordnance, discarded military munitions, and munitions constituents. He said that they will also be looking for Munitions Debris (MD). Munitions debris is not hazardous, but it can be an indicator of areas where munitions and explosives of concern may potentially be located. Mr. Dansie asked if chemical munitions have ever been found at Camp Williams. Mr. Price said that to his knowledge, chemical munitions have never been found at Camp Williams. Mr. Price explained that the MMRP is a National program and that the Camp Williams MMRP is one of the most advanced National Guard projects in the program. Ms. Steele asked whether funding for the MMRP was already in place or if they would need to request funding. Mr. Price said funding is in place for the current phase.

A map of the Army National Guard MMRP sites is included on slide 6 of **Attachment 2**. Mr. Price pointed out that the MMRP program will follow the Comprehensive Environmental Response Compensation and Liability Act, or CERCLA process, which provides step-by-step procedures to guide an investigation (detailed on slide 7 of **Attachment 2**). Mr. Price said the project is currently in the Remedial Investigation (RI) phase. The Site Inspection (SI) was completed in 2008, and identified four sites, known as Munitions Response Sites (MRS), where sufficient evidence was found that warranted further investigation. Those sites were moved into the remedial investigation phase.

Mr. Dansie asked if the budget is sufficient to handle the possibility of large quantities of munitions being discovered. Mr. Price explained that this MMRP program is a high priority for Congress. He said that there is money in the budget for this program and there is money for years to come. Mr. Price explained that if something significant is discovered during the remedial investigation, they may need to move into the Remedial Action (RA) phase to address the issue. He said that once the project is complete, the UTNG maintains responsibility for the site and any future discoveries.

Mr. Price explained that the Camp Williams installation was officially created in 1914, but there has been military activity in the area since the 1800's. The UTNG is uncertain of exactly what types of training were conducted in the Rose Canyon area, if any, and it is this uncertainty that is driving the MMRP investigation. Mr. Price explained that the munitions response sites were determined based upon the difference in current and previous

boundaries. Changes in the boundaries indicated that training may have occurred outside the area that is currently designated as the Camp Williams boundary. The munitions response sites are now private land and the UTNG is working to ensure that they are free of munitions. The current boundary is shown in green, and the previous boundary in red on slide 9 of **Attachment 2**.

Slide 10 of **Attachment 2**, shows a map outlining a land exchange that transferred parcels of UTNG lands to public and private entities in the 1990's. Operation Clean Sweep '91 was conducted prior to the land exchange. Mr. Price explained they have an inventory of some items that were discovered, but they don't have accurate documentation of where the items were discovered. He said that the information they do have from Operation Clean Sweep suggests that there will not be high concentrations of munitions in the munitions response sites.

Parsons, the contractor performing the remedial investigation, has submitted a draft work plan to the regulatory agencies for review. Slide 13 of **Attachment 2** lists actions taken by Parsons to inform landowners and community members about the investigation. Mr. Price said that they are working to obtain Right of Entry (ROE) agreements from about 300 landowners and he hopes that the RAB may be able to assist them in obtaining the right of entry. Mr. Williams said that he knew of three landowners who objected to the right of entry agreements. He wanted to know who the point of contact for right of entry would be. Mr. Price said that some of the statements in the right of entry letters are too broad and landowners could strike two of the statements included in the right of entry letters, specifically those about temporary structures and storing equipment and supplies. He said that landowners can contact him with questions, but that letters need to be mailed back to the Army Corps of Engineers. Mr. Williams stated that those were two of the statements that many landowners were objecting to. He asked if landowners could simply strike out any statements in the letter with which they were uncomfortable. Mr. Price explained that only the aforementioned statements could be stricken, but landowners should contact him if they had problems with any additional statements. Ms. Steele asked what would happen if the property was sold after a right of entry was obtained. Mr. Price explained that the UTNG would have to obtain a new right of entry from the current property owner. Mr. Dansie asked if they were aware how this investigation will affect land values. Mr. John Waldrup, UDEQ, said that the reason for the investigation is to ensure that the process is done right so that landowners can have confidence that their property is clean, which would help land value. Mr. Price said that if the process is followed, it will give a very high probability that the site is okay.

Mr. Flanigan asked if the RAB would be informed about the technology that will be used during the investigation. Mr. Price said that Parsons would provide the RAB with information about the instruments they plan to use. Mr. Dansie asked if the guard will issue a statement at the end of the cleanup that states that the site is clean to the best of the UTNG's ability. Mr. Price said that once the UTNG goes through all of the CERCLA steps the record will say essentially that. Mr. Rik Ombach, UDEQ, said that if a resident has concerns about the MMRP project, he can talk with them and give them a perspective of how the MMRP program has worked in other areas. He said that if the cleanup is done correctly residents should see that their property values are as good as they were before. Mr. Ombach said that the State of Utah will sign a certificate at the conclusion of the remedial investigation that will state that the process was followed well. He also said that the UTNG will always have a liability to ensure the site is clean. Slide 14 of **Attachment 2** outlines the MMRP project team.

Agenda Item #4 RAB Orientation Briefing

Mr. Dave Harris, Concordia Communications, explained that CERCLA was established to find and clean up old hazardous waste sites. Mr. Harris said that CERCLA provides a framework, and a set of procedures for a clear

and thorough clean-up. Mr. Harris pointed out a CERCLA process diagram that outlines all of the steps in the CERCLA process, found on slide four of **Attachment 3**.

Mr. Leetham asked if the Record of Decision (ROD) will be issued by the UTNG. Mr. Harris explained that the record of decision will be issued by the UTNG and will be signed by the Utah Department of Environmental Quality. Mr. Harris explained that the money for this project comes from the defense budget and is allocated from the Pentagon to the National Guard Bureau (NGB). The National Guard Bureau then allocates money based upon requirement and priority. Mr. Harris said that the money for munitions cleanups is specifically allocated for that purpose and can't be used for anything else.

Ms. Steele said that in her experience on a different RAB they had to request funds and wait to find out how much money would be received for cleanup projects. Mr. Harris explained that money is in place for the next two years to complete the Remedial Investigation (RI). Ms. Steele asked if money would need to be requested if the investigation goes beyond the remedial investigation. Mr. Price said the funds are already budgeted and set aside by Congress. He said that all MMRP sites are identified and the Army Environmental Center puts cost estimates in place many years in advance.

Mr. Dansie expressed concern that if more munitions are found than they are expecting, they may not have the money needed and landowners may not be able to have their properties cleaned up. Ms. Straube said that budgetary information seems to be a big concern for RAB members. She suggested that budget updates be given in future meetings to provide RAB members with a better understanding of budget issues. Mr. Price said that he would make some budget documents available on the Web site. [NOTE: budget documents have been posted to the RAB website at www.campwilliamsrab.org]

Mr. Harris explained the history of public involvement in environmental clean-up projects, and said that initially the public input into the cleanup process was not adequate. The Keystone Group was formed in the early 1990's to suggest ideas for more meaningful public involvement. The RAB concept evolved from that suggestion. In 1994, the Department of Defense mandated that all military installations undergoing environmental cleanup form a RAB. Mr. Harris explained that there are two types of RAB representatives on this board: organizational representatives, and community representatives. The main difference between the two positions is they represent and report back to different constituencies.

Mr. Harris outlined RAB responsibilities on slide 12 of **Attachment 3**. Mr. Harris explained that the RAB is unable to make cleanup decisions, set policy or enter into binding agreements; legally this is left up to the National Guard. Mr. Harris explained the RAB does not have a budget of its own, and because of this, RAB members cannot be compensated for time and travel. He gave RAB members some ideas of ways to be involved on slide 13 of **Attachment 3**, which include: participating on work groups, speaking with city councils and informing community members of the investigation.

Mr. Harris explained that RAB members are valuable to the UTNG because they can offer different perspectives, and act as a partner with the UTNG. Mr. Harris explained that the Web site and the information repository can provide additional information for RAB members. He explained that there are currently three documents in the information repository located at the Riverton library and that those documents are also available on the Web site.

Mr. Leetham asked if the information from this RAB meeting would be posted on the Web site. Mr. Harris confirmed that it would be. Mr. Flanigan asked if cities could post a link to the Camp Williams RAB Web site

from their city Web site. Mr. Harris said that this would be a good idea. Mr. Harris explained that RAB members should select an alternate. He said that alternate RAB members will receive the same information as RAB members, and will be welcome to participate in all RAB activities.

Selection of Community Co-Chair

Ms. Straube announced that two RAB members, Mr. Weaver and Ms. Steele, wanted to be considered for the community co-chair position. RAB members submitted their vote on slips of paper and, after receiving a majority of the votes, it was determined that Mr. Weaver would serve as the community co-chair.

Agenda Item #5 Break/Breakouts

RAB members were able to break into small groups to receive information about the Munitions Response Sites involved in the MMRP investigation or to receive a demonstration of the Web site.

Agenda Item # 6 Presentation of Work Plan

Mr. Jeff Fitzmayer, Parsons, explained that Parsons has been doing environmental projects in Utah for nearly 20 years, including projects at Dugway Proving Ground, Hill Air Force Base, and Tooele Army Depot. Mr. Fitzmayer pointed out common MMRP acronyms on slide 3 of **Attachment 4**. Mr. Fitzmayer explained the MMRP program will follow the CERCLA process outlined on slide 4 of **Attachment 4**. He explained they are currently in the remedial investigation phase, and that if a cleanup is needed then they would then move into the remedial action phase. Mr. Williams asked if the MMRP deals with small arms rounds. Mr. Fitzmayer said that munitions of .50 caliber and larger are part of the investigation, and that small arms rounds are not included in this investigation.

Mr. Fitzmayer pointed out the six Munitions Response Sites (MRS) on slide 5 of **Attachment 4**. The Southeast Area and Southwest Area munitions response sites are in the Site Inspection phase of the CERCLA process and will have field work completed this spring. Mr. Fitzmayer pointed out the remaining four munitions response sites are in the remedial investigation phase of the CERCLA process and are the focus of his presentation. Mr. Richard Brown, Hi Country Estates II Community, asked if the Artillery Impact Area Buffer Zone is within the installation boundary. Mr. Fitzmayer explained that it is located outside of the installation boundary, but it is not the active buffer zone.

Mr. Fitzmayer explained that the Southeast Simulated Attack Area munitions response site is located on the eastern side of the installation along the Jordan River. This is a nine-acre site with good historical documentation, and is known to have been used as a training area for simulated attacks. Mr. Fitzmayer explained that munitions expected at this site would be simulated munitions and not projectiles, and that during the site inspection two 5.56 mm small arms blanks were discovered.

Mr. Fitzmayer explained that the Wood Hollow Training Area munitions response site is a 78-acre site most likely used between 1920 and 1940. He said that portions of this site were cleared during Operation Clean Sweep '91. Mr. Fitzmayer pointed out a map on slide 9 of **Attachment 4** which shows locations where old artillery shells were found. These rounds were actually the empty shells of antipersonnel artillery rounds and would be classified as munitions debris and not munitions and explosives of concern.

Slide 11 of **Attachment 4** shows that the Artillery Impact Area Buffer Zone is not the current buffer zone utilized by the UTNG. Mr. Fitzmayer explained that the Artillery Impact Area Buffer Zone became a munitions response site because of maps from the 1980's that indicated the buffer zone was shifted to the north of its previous location. He explained that maps created in the 1990's showed the buffer zone back in the current position. Personnel from Camp Williams have no recollection of the buffer zone ever being outside the Camp Williams boundary. Mr. Fitzmayer explained that the inconsistency in the maps is why the Artillery Impact Area Buffer Zone munitions response site was included in the MMRP investigation. He said that buffer zones are not directly targeted, but are used as a safe area for mis-targeted munitions. There have been two artillery rounds found at this site. Mr. Flanigan asked if this site is privately owned. Mr. Fitzmayer said it is.

Mr. Fitzmayer explained the Rose Canyon Training Area is the largest of the munitions response sites, and may have been used for infantry or paratrooper training prior to World War II. The southern portion of this site may have been subject to accidental overshoots of artillery rounds. Mr. Fitzmayer explained that the 1914 executive order given by President Woodrow Wilson only pertained to parcels that were titled by the U.S. Government. This resulted in the UTNG owning a patchwork of parcels within the Rose Canyon area. These parcels were searched for munitions as part of Operation Clean Sweep '91 and no ordnance of significance was found. Mr. Fitzmayer explained that one 155mm artillery shell was discovered in the Rose Canyon Training Area in High Country Estates II on an undeveloped parcel following the site inspection.

Mr. Fitzmayer outlined the purpose of the remedial investigation, found on slide 14 of **Attachment 4**. He said that during the remedial investigation, the goal is to collect enough data to be able to develop a remedial action plan if necessary. Mr. Fitzmayer explained that Conceptual Site Models (CSM) are important in developing an investigation, and that conceptual site models tell the story of how a munition came to be at a particular site. He explained that each site will have its own conceptual site model and that conceptual site models are used to plan each investigation. He said conceptual site models are easier to develop if historical information exists. Conceptual site models are updated as new data or information is collected.

Mr. Fitzmayer pointed out slide 16 of **Attachment 4**, which shows an example of what a conceptual site model may look like and how it could be used to tell why an artillery round may be present in the Rose Canyon Training Area. He explained how shells could potentially overshoot and inadvertently land outside the installation boundary. Mr. Flanigan asked if the illustration was an accurate depiction of the firing range. Mr. Fitzmayer explained that the slide doesn't show the real range of the weapons, it is just being used to demonstrate how a conceptual site model would be used. Mr. Fitzmayer said that the actual firing range of the weapons is several miles. He said that it is possible that over the history of Camp Williams, artillery shells have been accidentally overshoot and could have gone beyond the boundary of the Rose Canyon munitions response site, but the investigation is being conducted on lands that were formerly part of Camp Williams and therefore, potentially subject to past military use, and the boundaries of the munitions response site would not change. Mr. Fitzmayer stated that it is also expected that more mis-targeted or overshoot artillery shells will land closer to the Operational Impact Area, and the number of such munitions would decrease the farther you moved away from the Impact Area. Mr. Dave Bennett, Utah County, said that human error could cause overshoot and may cause the boundaries to be much larger. Mr. Fitzmayer agreed and stated that a relatively recent example involved an overshoot artillery shell fired for avalanche control at one of the local ski resorts. He said that it would be very difficult to try and find a single round that may have overshoot due to human error. For this reason the investigation is focused on the areas where the likelihood of discovering munitions is the greatest.

Mr. Williams asked if the boundary shouldn't at least be extended to the boundary of the Rose Canyon Training Area. Mr. Fitzmayer said the actual boundary of the Rose Canyon Training Area munitions response site will be shown on slide 24 of **Attachment 4**. Mr. Fitzmayer explained they are not able to cover every square inch of ground, nor do they need to because they are able to focus on areas where the potential for munitions is the greatest, based on the conceptual site model. He said that the conceptual site model will help them to plan a smart and effective survey.

Mr. Fitzmayer explained that artillery detonations will create a circular shaped debris field of metal fragments. The radius of the circle is based upon the fragmentation distance and each type of artillery munition has a specific fragmentation distance. Mr. Fitzmayer explained that multiple detonations in an area will result in multiple fragment circles. He said the fragments can tell them when they might be in an area where artillery has detonated and duds, or munitions and explosives of concern, may be present. He said fragments can be detected by geophysical instruments even if they are buried. Pictorial examples of his explanation can be found on slides 17-19 of **Attachment 4**.

Mr. Fitzmayer explained that statistics were used to plan a survey most likely to intersect and detect the fragment circles. He said they will use geophysical equipment, and straight line transects to identify any metal fragments that could indicate an artillery target area. The distance between the survey transect lines is based upon the fragmentation distance of the artillery that is most likely to be present in the area. Mr. Fitzmayer explained the approach and instrumentation are based upon industry standards and have had a high level of success at other sites. He also stated that although the term "target area" was being used to describe the investigation, it is emphasized that the Rose Canyon area was never intentionally used as an artillery target area, and that the use of "target area" was really to describe a location where multiple artillery rounds may have impacted, either from being overshoot, or from skipping out of the formal Camp Williams Impact Area.

Mr. Patrick Osmond, Herriman Community, asked if they will be looking only for fragment circles. Mr. Fitzmayer explained that they will use transects to look for any fragments. If fragments are discovered, this will indicate that a target area has been found. They will then go back over the area where the fragment was discovered with the geophysical equipment in tighter transects to determine if any munitions and explosives of concern are present. He said that there will be 100 percent coverage of any identified target areas.

Mr. Flanigan asked how target areas are identified. Mr. Fitzmayer explained that the geophysical data is used to discover fragments and other Munitions Debris (MD), which can indicate target areas. He said metal anomalies detected during geophysical investigations will be addressed by digging them up. Mr. Flanigan asked if the geophysical equipment only detects surface items. Mr. Fitzmayer explained that the geophysical equipment can also detect subsurface items. Mr. Waldrip said that in addition to fragments, you can also look for craters and stressed vegetation to help identify target areas.

Mr. Brown asked if they are assuming that artillery has detonated the same distance off the ground. Mr. Fitzmayer explained they are using the hazardous fragmentation distance of the rounds, which is a smaller-diameter circle than the total fragmentation distance. Mr. Brown asked how they define that distance. Mr. Ed Staes, Parsons, said that Hazardous Fragmentation distance is a standard that is determined for all munitions. He said that the hazardous fragmentation distance for a 155mm artillery round is about 300 feet, and transects were based upon that distance. Mr. Bennett asked if transects based on 155mm rounds would be able to detect 105mm rounds. Mr. Fitzmayer explained they have to plan the investigation based around the most likely munitions for the area. He explained that an 8-inch or a 155mm artillery round is the most likely type to be present in the Rose Canyon area,

based on the history of artillery use at Camp Williams, and that use of the 155mm was conservative, as it has a smaller hazardous fragmentation distance than an 8-inch artillery shell, so the investigation was designed around the 155mm.

Mr. Staes took over the presentation from slide 20 of **Attachment 4** and outlined the tools they will be using to complete the remedial investigation. He said they will be using qualified and experienced personnel comprised of former Explosive Ordnance Disposal (EOD)-trained personnel from the various military branches, and trained geophysicists to conduct the investigation. He stated that the geophysical instruments they will use have been proven to effectively find munitions and explosives of concern and provide digitally recorded data that will be available for future use. Mr. Dansie asked if the data from Operation Clean Sweep is available. Mr. Price said that he would put a stand-alone copy of the After Action Report, the documentation from Operation Clean Sweep, on the Web site for viewing. [NOTE: the Operation Clean Sweep After Action Report has been placed on the RAB website at: www.campwilliamsrab.org]

Mr. Dansie asked if all the reconnaissance surveys will detect only surface data. Mr. Staes explained that some of the equipment can detect anomalies at the surface and down to two inches under the surface. Other more sophisticated equipment can collect GPS points while detecting anomalies buried deeper in the ground. Mr. Staes explained that data obtained from the geophysical instruments allows them to identify where there may be buried munitions. Anomalies that are indicative of munitions will be dug-up.

Mr. Staes explained that slide 24 of **Attachment 4** shows an example of the type of survey that will be conducted, showing the boundary and survey patterns that will be used in the Rose Canyon Training Area munitions response site and the Artillery Impact Area Buffer Zone munitions response site. He explained that from interviews, discussions, and the conceptual site model, they have determined that the northern portion of the Rose Canyon Training Area will not likely have artillery type munitions. He said that they will be looking for evidence of troop training activities during the surveys of northern Rose Canyon.

Mr. Staes explained that the digital geophysical mapping will be conducted in the areas where subsurface munitions are likely to be discovered. He pointed out a shadow area on the map found on slide 24 of **Attachment 4**. This shadowed area represents the northwest-facing slopes that are very steep and rocky. Mr. Staes said that it is very unlikely for munitions to be present on those slopes because of the terrain and the northwest trajectory an artillery round would have to follow to land in the Rose Canyon area. Mr. Williams asked if each of the lines shown on the map would be walked by personnel. Mr. Staes said that each of the lines will be walked, and some of the lines are not straight due to heavy brush cover.

Mr. David Cise, Hi-Country Estates II, asked what would be done if heavy brush were encountered. Mr. Staes explained that they would cut the brush, if necessary, but limit cutting to branches that were 3 inches in diameter or less. Mr. Cise asked if linear paths of cut brush could exist on people's property and if that physical defect would remain. Mr. Staes said that is possible, but they are trying to complete the investigation before the leaves come on and obstruct view, eliminating the need for some brush cutting.

Mr. Phillip Kennedy, Salt Lake, asked why a prescribed burn couldn't be done. Mr. Staes said that they would need to see more indication of munitions and explosives of concern before they would do a prescribed burn. Mr. Price said that the UTNG doesn't own the property, so they don't have the ability to take an action like that. He said that the southeast facing slopes that are the most likely impact points, based on a northwest trajectory, have less vegetation, and should be easier to traverse.

Mr. Price pointed out that the northwest corner of the Rose Canyon Area has had geophysical surveys conducted by Kennecott and they haven't seen anything that would indicate that military training took place. Mr. Williams asked if the investigation could be conducted by helicopter. Mr. Price said that it would be difficult because of the terrain and they could miss other types of training and impact indicators. Mr. Ombach said aerial investigations have been conducted in areas like the Utah West Desert, but that investigation method would not be practical here due to the mountainous terrain.

Mr. Price said that the aforementioned remedial investigation approach is currently at the State for review but there is still time for revision and comment. Mr. Staes said that a lot of the investigation is resting on whether they are able to obtain right of entry agreements from landowners. Mr. Staes said they should be able to complete the fieldwork in five months. Mr. Ombach asked how far apart the transect lines will be. Mr. Fitzmayer said transect lines will be 310 feet apart in Rose Canyon, and are based upon the fragmentation distance of a 155mm artillery shell. Mr. Dansie asked which organization is approving the Work Plan. Mr. Staes explained that UDEQ is approving the Work Plan.

Mr. Bennett asked if the sites in Utah County will be included in the fieldwork. Mr. Staes said that the Southeast and Southwest Area munitions response sites will have their site inspection fieldwork completed at the same time as the remedial investigation fieldwork. Mr. Leetham asked if those site inspection sites can be moved to the remedial investigation phase after the fieldwork is complete. Mr. Ed Staes said that they could be moved to the remedial investigation phase, depending on what is found during the site inspection, or they could be recommended for no further action.

Mr. Price explained that landowners will receive seven to 10 days of notice before fieldwork begins. Mr. Staes said that the investigation will include walking over the property with the geophysical instruments and should last a day or two for most landowners. Mr. Staes explained that they will notify landowners if anomalies are discovered that require further investigation. Any identified anomalies will be dug up during intrusive investigations. He said that evacuation of some homes may be necessary, and some roads or trails may be closed during intrusive investigations because they have to plan for an unintentional detonation of munitions and explosives of concern during the intrusive investigations.

Mr. Staes said that if munitions are discovered they will most likely be detonated in place because typically they are unsafe to move. He said that they will use engineering controls such as sandbags to ensure the fragmentation is controlled. Mr. Staes explained that before a detonation would take place they would obtain an emergency destruct permit from the State. He explained that following a detonation, soil samples will be taken to make sure the soil in the area isn't contaminated. Then the hole would be backfilled and debris removed. Mr. Staes stated that as with intrusive investigations, the demolition of any munitions and explosives of concern would also involve temporary evacuations and road or trail closures. He stated that the timeframe for evacuations would be on the scale of several hours and not days.

Mr. Staes said that once the remedial investigation is complete they will be able to determine if further action is necessary. Extensive contamination would be addressed in the remedial action phase. Mr. Staes explained that they would like residents to practice the 3 Rs, found on slide 27 of **Attachment 4** if they discover munitions. The three Rs encourage residents to "Recognize" when they have encountered munitions, "Retreat" from the area the same way they came, and "Report" munitions sightings to emergency personnel. Mr. Steve Mumford, Eagle Mountain City, asked if the munitions response sites that are in the SI phase would be moved into the remedial

investigation phase if something is discovered. Mr. Staes said that the sites wouldn't be immediately moved into the remedial investigation because Parsons would need to complete a site inspection report. Mr. Mumford asked if they would be able to move into the remedial investigation by the end of the year. Mr. Price said it was probable that they could do that.

Mr. Williams asked what would happen if a large area contaminated with munitions were discovered near a residence. Mr. Fitzmayer said that they would coordinate extensively with the landowner and the investigation plan would be changed to incorporate new information and keep residents safe until the area is remediated. He said that such remediation would most likely involve evacuation of the residence. Mr. Kennedy asked what would happen if someone were to find an item after the project is complete. Mr. Staes explained the Sheriff would be notified and would deal with the munitions and explosives of concern immediately. He said that the investigation could be re-opened to investigate the new finding. Mr. Mumford asked if the bomb squad would take care of any discovered artillery rounds. Mr. Bennett said that they could respond and identify the item, but would not detonate the item. Mr. Price said that Parsons should be able to address artillery rounds discovered during the remedial investigation.

Agenda Item #7 Drafting of Mission Statement and Operating Procedures

Ms. Straube indicated that this agenda item would be tabled due to time constraints, and would be discussed through email, and at the next meeting.

Agenda Item #8 Public Comment Opportunity

Ms. Straube asked if there were any additional questions or comments from the audience. No one responded.

Agenda Item #9 Adjourn

The meeting was adjourned at 9:22 p.m.

Attachments:

1. Meeting Agenda
2. Presentation Slides – Introduction and Overview of MMRP
3. Presentation Slides – RAB Orientation Briefing
4. Presentation Slides – Presentation of Work Plan