

***Final Minutes
Restoration Advisory Board
Former Lowry Bombing and Gunnery Range
July 16, 2003***

The July 16th, 2003, meeting of the Restoration Advisory Board (RAB) was held at the Aurora Public Library at 14949 E. Alameda Dr., Aurora, Colorado 80012. The meeting started at 6:15 p.m.

Welcome and Opening Remarks

Ms. Bonnie Rader, Community co-chair for the RAB opened the meeting at 6:15 p.m. Ms. Rader asked all in attendance to introduce themselves.

Attendance

The following RAB members were present:

Jerry Hodgson, U.S. Army Corps of Engineers, Omaha District (USACE), Co-chair
Bonnie Rader, Community Co-Chair
Mark Harding, Rangeview Metropolitan District
James Ives, City of Aurora
Dave Denton, Laing Village, LLC
Steve Ormiston, Shea Homes
Carol Maclennan, Tri-County Health Department
Joe Freund, Citizen
Mark Harding, Rangeview Metropolitan District

Other attendees:

Keith Wegner, Correlation Corp.
John Mullen, Shaw Environmental Inc.
Tracie White, Shaw Environmental Inc.
Teri Hartman, Shaw Environmental Inc.
Morey Engle, Shaw Environmental Inc.
Laura Bishard, Colorado Department of Public Health & Environment (CDPHE)
Randy Hawbaker, Cherry Creek School District
Sharon Moore, Air Education and Training Command (AETC)
Matt Benson, Blackhawk
Peggy Linn, EPA Region 8
Spencer Luft, Arapahoe County
Marie Mackenzie, Board of County Commissioners
Richard Rader, Citizen
Ed Wilson, Shaw Environmental Inc.
Barbara Wilson, Shaw Environmental Inc.
Mike Watson, U.S. Army Corps of Engineers
Ken Vogler, Colorado Department of Public Health & Environment (CDPHE)
Sue Errett, U.S. Army Bennett
Clayton Perry, Shaw Environmental Inc.
Jack Denman, ERO
Kathie Englert, U.S. Army Corps of Engineers
Bill Killip, Citizen

GENERAL RAB ITEMS

Ms. Bonnie Rader (Community Co-chair) asked if the board had an opportunity to review the minutes of the prior meeting (May 21, 2003). The minutes for the May 21, 2003 RAB meeting were approved with no comment.

TITAN MISSILE SITES

(Presentation Posted on Internet)

GENERAL PRESENTATION ON TITAN MISSILE SITES

Mr. Ed LaRock, Colorado Department of Public Health & Environment (CDPHE), gave a general presentation regarding the Titan I Missile Complex Sites located on the Former Lowry Bombing and Gunnery Range (FLBGR). Titan Complexes 1A, 1B, and 1C are Formerly Used Defense Sites (FUDS). The Bennett Army National Guard (ANG) Site (Complex 2A) is under the Base Realignment and Closure (BRAC) program. Mr. LaRock stated that the complexes were operational from 1962 through 1964, during the Cuban Missile Crisis. The complexes were abandoned in 1965 and subsequently acquired by private and public parties.

Mr. LaRock stated that the primary Contaminants of Concern (COCs) at the complexes are Trichloroethene (TCE) and Perchloroethene (PCE), petroleum compounds, and Polychlorobiphenyls (PCBs). Based on investigation results to date, there is no evidence of manmade radioactivity at the Titan I FUDS sites; however there has been no investigation for radioactivity at the Bennett ANG site.

Mr. LaRock briefly discussed the status of the investigations ongoing at the four sites on the FLBGR:

- Titan 1A – site inspection complete, beginning limited remedial action
- Titan 1B and 1C – currently in the remedial investigation phase
- Titan 2A (Bennett) – currently in remedial investigation phase
- Titan 2B and 2C – not on the FLBGR, but domestic wells have been samples for Volatile Organic Compounds (VOCs)

TITAN COMPLEX 1A

(Presentation Posted on Internet)

Mr. Mike Watson, U.S. Army Corps of Engineers (USACE), gave a more detailed presentation regarding the Titan 1A complex. Mr. Watson indicated that the site investigation efforts were completed in 2000, and a site inspection report was finalized in February 2003. Data gathering for the Time Critical Removal Action (TCRA) started in late June 2003. Findings from this field effort will help determine the appropriate actions for the site.

Sampling activities included surface sampling, subsurface sampling, and water testing. Soil samples were taken at the ground surface, between 6"-12", and between 12"-18" to ensure three levels of sampling. The laboratory has not yet released any data.

When asked whether or not zinc contamination has been found in the area, Mr. Watson replied that trace metals naturally occurring in the environment were detected. The quantity of zinc found in the water poses no health risk.

Risk management activities are scheduled to be completed by November 2003.

TITAN COMPLEX 1B

(Presentation Posted on Internet)

Ms. Kathie Englert, USACE, discussed the status of activities at the Titan 1B complex. Ms. Englert mentioned that a Draft Remedial Investigation (RI) report was completed in September 1998. The USACE is currently in the process of incorporating comments from the CDPHE and EPA, to produce a Draft-Final RI report.

According to the Draft-Final investigation findings, the extent of TCE contamination in the ground water has not yet been determined. Ms. Englert stated that the USACE plans to install at least three additional monitoring wells to determine the extent of contamination, as well as to collect subsurface soil samples to test for VOCs.

Mr. Bill Killip, private citizen, asked whether or not there are any plans to sample the missile silo after dewatering, as he feels this is a very important task to be completed. Mr. LaRock replied that the water will be sampled for VOCs and dissolved metals.

A comment was also made that findings and reports regarding the Titan Missile Complexes should be made

available to the State Land Board for review and comment.

A question was raised as to the depth of the water in Complex 1B. Water was found in all of the silos; the ground water at 1B is approximately 20 feet deep. In 1997-1998, the USACE closed the underground storage tanks dewatered under permit by the CDPHE. Zinc, lead, and metal contamination from the actual structures was found in the water. Future sampling will also include testing for VOCs.

A citizen expressed concern regarding the missiles previously stored in the silos. She expressed interest in knowing whether or not employees were exposed to plutonium contamination. Ms. Rader responded that the citizen should try to contact former employees to determine how maintenance of the missiles at the complex sites was handled. Ms. Rader also mentioned that each employee wore dosimeters to monitor radiation exposure, if any, received while working in the complexes. She also stated that, to her knowledge, the employees were not exposed to any measurable radiation. The dosimeters the employees wore were tested once a month. It was also suggested that the citizen talk with a USACE health physicist to address any concerns she may have.

TITAN COMPLEX 1C

(Presentation Posted on Internet)

Mr. LaRock provided a brief status of activities at Titan Complex 1C. Mr. LaRock indicated that the site investigation report was completed in December 1999. Remedial investigation field work at the site was completed in April 2000. The Draft-Final RI report is currently being developed.

BENNETT ANG SITE

(Presentation Posted on Internet)

Sue Errett (USACE) gave a presentation regarding the Bennett ANG Site (Titan Complex 2A). The Bennett Site was identified for disposal under BRAC in 1988. It is slated for public sale in 2003. The Bennett Site is currently undergoing field investigations to determine if additional sampling is required before remediation commences; remedial actions are slated to begin in the Fall of 2003.

WASTE MANAGEMENT, INC.

(Presentation Posted on Internet)

Dennis Bollmann, City and County of Denver, gave a presentation regarding the Denver Arapahoe Disposal Site (DADS) Section 5 and the former Titan Missile Silo Complex 1A. Mr. Bollmann mentioned that landfilling at the former Titan Complex site will not commence for another 30 – 40 years. The plan is to continue using the current DADS landfill until it reaches capacity. The new landfill will be built after demolition and removal of the existing silo. Mr. Bollmann mentioned that the construction process of the new landfill will include installing a clay liner and a leachate filtration system.

PRIVATE CLEARANCES

WHEATLANDS PROPERTY

(Presentation posted on the web)

Mr. Matthew Benson of Blackhawk UXO Services, on behalf of Shea Homes, gave a presentation regarding the private clearance activities on the Wheatlands Property, which is approximately 1.3 miles southwest of the Jeep/Demolition Range.

Mr. Benson indicated that the geophysical prove-out has been completed, and the geophysical mapping, using a Multi-Sensor Towed Array Detection System (MTADS), is anticipated to begin soon. To date, a large quantity of metal trash (such as fence posts, nails, barbed wire, etc.) has been found on the site.

SOUTHSHORE PROPERTY

(Presentation posted on the web)

Mr. Benson also presented a progress report on the Southshore property private clearances, being performed for Laing Village, LLC. Southshore is comprised of approximately 800 acres south of the Aurora Reservoir, to be used for single family and multi-family dwellings

Mr. Benson indicated that to date, 175 acres of the Southshore property have been geophysically mapped, and approximately 145 acres have been intrusively investigated. When asked how many anomalies per acre were being found, Mr. Benson replied that typically 80 anomalies per acre have been detected.

LOWRY TRAINING ANNEX

AIR FORCE REPORT

(presentation posted on web)

Ms. Sharon Moore, Headquarters Air Education Training Command (AETC), stated that there are two teams performing clearances at the Former Lowry Training Annex (FLTA). A total of 266 grids have been completed to date, with 14 grids awaiting QC/QA.

Additionally, Ms. Moore indicated that a new page is being added to the FLBGR website (www.flbgr.org) detailing the FLTA project activities and status. The new page is expected to be up and running by Friday, July 18th.

FORMER LOWRY BOMBING AND GUNNERY RANGE

TECHNICAL ASSISTANCE FOR PUBLIC PARTICIPATION (TAPP)

(presentation posted on the web)

Mr. Keith Wegner, Correlation Corp., presented a progress report concerning the Technical Advisory Services for the FLBGR. The report included a progress summary, current tasks, and a cost summary. These items are provided in the handout.

Mr. Wegner also mentioned that he gave a presentation to the Dove Hill Homeowners Association, as an information session regarding the RCWM work at the Jeep/Demolition Range.

FIELD WORK UPDATE

(presentation posted on the web)

Mr. Jerry Hodgson presented an update regarding the FLBGR project status. The presentation included a summary of activities completed to date, ongoing activities, and future efforts. There are currently five teams performing clearance work; two teams are working at the FLTA, two are working in Bombing Target 6, and one team is performing Recovered Chemical Warfare Materiel (RCWM) work in the Jeep/Demolition Range. Teams working in Bombing Target 6 are currently on the State Land Board property.

Mr. Hodgson indicated that the Pre-Operational Survey (Pre-Op) results showed that the RCWM team performed very well during the Pre-Op. Teams responded to several different field scenarios and demonstrated that they were prepared to handle the situations effectively.

Mr. Hodgson was asked whether or not work has been stopped due to heat stress. He responded that, because employees are working in Level C Personal Protective Equipment (PPE), work was stopped on one day thus far due to high temperatures. Employees performing RCWM clearances work under time limitations and are monitored for signs of heat stress.

A discussion ensued regarding the use of tents during RCWM field activities. Mr. Hodgson suggested removing the tent requirement, in order to perform the work more efficiently. Mr. Hodgson reiterated that the tents were never a technical requirement, but were used only to provide an overly conservative visual barrier for people in the vicinity. Mr. Hodgson stated that he would not suggest removing the tents from the operations if it would, in any way, endanger either the employees or the public. As this is not the case, it is his recommendation to remove the tent requirement to increase the efficiency of work activities ongoing at the Jeep/Demolition Range.

Mr. Hodgson indicated that the exclusion zone associated with the amount of agent in the RCWM item of concern at the Jeep/Demolition Range is 432 feet. The exclusion zone being implemented during clearance activities at the site is 473 feet, because this is the maximum distance fragments may travel if the explosive item of concern were accidentally detonated. As such, the agent would not leave the Range, and present any dangers to the public, even if

a release were to occur outside of a tent. The nearest homes are located in Dove Hill Estates, well over a mile from the Jeep/Demolition Range site.

Mr. Hodgson indicated that the tents, and the associated equipment, are extremely time consuming to disassemble, move to the next location, and set up over the next item to be investigated. The cost to the project is many manhours for this process; it can take up to three days to initiate and complete the disassembly, relocation, and set up process. Due to the inefficiency involved, using the tents may highly impact the schedule of the project for many months and possibly even years. There is currently no FY04 funding programmed for RCWM work at the Jeep/Demolition Range, therefore, the more RCWM activities that can be performed now, the better.

Mr. Hodgson indicated that he has proposed to the CDPHE that the tents only be used when a potential RCWM item is located. The clearance team would stop work, and resume only after a tent was placed over the item. Subsequent investigation of the item would occur under a tent. Mr. Hodgson stated that he has also requested concurrence from SHORE, the Cherry Creek School District, the homeowners at Dove Hill, and is also asking for public concurrence on this approach.

Mr. Hodgson indicated that a letter from SHORE states that they will support removing the tent requirement from the RCWM activities if the CDPHE and Cherry Creek School District concur.

Mr. Randy Hawbaker, Cherry Creek School District, apologized for not having responded sooner, but stated that the Cherry Creek School District likewise concurs with removal of the tent requirement from the RCWM operations.

Mr. Dave Denton, Laing Village LLC., asked Mr. Hodgson why a tent would be placed over a potential RCWM item, given that the items of concern would not pose a threat to anyone in the area. Mr. Denton suggested that Mr. Hodgson talk with the CDPHE regarding not using the tents at all, unless an unexpected RCWM item is found.

Mr. Steve Ormiston, Shea Homes, also gave concurrence regarding removal of the tent requirements. His comment was that the project needs to maximize the resources available using the FY03 funding. He also agreed with Mr. Denton that Mr. Hodgson should ask the CDPHE to use less stringent rules regarding the use of tents during RCWM work. If there is no health concern, he feels that the tents should not be used, as it slows down the process.

Mr. Mark Harding, Rangeview Metropolitan District, mentioned that the biggest risk is not to the public, rather to the teams performing the RCWM work. He felt that as long as the teams are safe, there is no need to use the tents.

Ms. Carol MacLennan, Tri-County Health Department, also expressed concurrence that the project should be taking full advantage of resources and funding while they are still available.

Mr. Wegner indicated that he talked with the residents of Dove Hill regarding use of the tents. There were three issues he presented to the residents that he felt were important to understand:

1. The chemicals used were typically not full strength; they contained enough agent in solution to allow the military personnel being trained to learn to recognize the different agents.
2. The items on the site are over 50 years old and have deteriorated greatly in that time frame.
3. The nearest residents are over one mile away, much farther than the 432 foot exclusion zone for a chemical item.

Mr. Wegner indicated that the residents of Dove Hill, represented at the Homeowners Association meeting, agree with removal of the tent requirement. Some of the residents are military veterans, and they do not feel any of the items present a health hazard to the citizens of Dove Hill.

Mr. Hodgson pointed out that he currently has informal concurrence from Mr. Jeff Swanson, CDPHE, to remove the tent-requirement from single-anomaly digs at the Jeep/Demolition Range. Mr. Swanson is scheduled to meet with his management the week of July 21, 2003 in order to obtain formal CDPHE approval.

Mr. Hodgson indicated that if RCWM intrusive activities continue, and no RCWM items are found, he may recommend the following:

- Clear pits and trenches using RCWM protocol
- Clear the remainder of the site using conventional clearance methods.

Regarding future funding, Mr. Hodgson stated that any portion of the \$5.3M allotted for RCWM activities in FY03 remaining at the end of the fiscal year will be rolled over into FY04. Mr. Hodgson indicated that the FLBGR is currently slated for \$8M in funding for FY04 and expressed a desire to use all of that \$8M for conventional clearances. He also indicated that the project team may, based on items found during RCWM clearances, evaluate the possibility of transitioning back to conventional clearance activities in the Jeep/Demolition Range.

Ms. Laura Bishard, CDPHE, asked how many bottles have been found during RCWM clearances to date. Mr. Hodgson replied that ten bottles were uncovered on the morning of July 16, 2003. Nine of the bottles were intact and one was broken. Small amounts of water were found in the bottles.

ANNUAL PROJECT PRIORITIZATION REVIEW

Mr. Hodgson indicated that the 2003 Area of Concern (AOC) Project Prioritization review for the FLBGR is scheduled to take place at the next RAB meeting on September 17, 2003. Mr. Keith Wegner will act as the prioritization process facilitator and will also perform the subsequent scoring of AOCs, using the RAB's agreed upon prioritization criteria and weighting factors. The FLBGR staff will be available to provide assistance to Keith, as required.

2004 RAB MEETING SCHEDULE

Mr. Hodgson indicated that the RAB meetings are tentatively scheduled for the following dates in 2004:

- January 21, 2004
- March 17, 2004
- May 19, 2004
- July 21, 2004
- September 15, 2004
- November 17, 2004

These dates will be posted on the www.flbgr.org website.

Adjournment

Arrangements were made for the next meeting to be held September 17, 2003, 6:00 p.m., at the Aurora Public Library.

Meeting notification for the next RAB meeting should be sent on or around September 8, 2003.