

**FORMER LOWRY BOMBING AND GUNNERY RANGE
ARAPAHOE COUNTY, COLORADO**

***RESTORATION ADVISORY BOARD MEETING
May 15, 2002***

***U.S. Army Corps of Engineers
Colorado Department of Public Health and
Environment***

DISCUSSION TOPICS

- **Jeep/Demolition Range**
 - ✓ **Background**
 - ✓ **Test Results**
 - ✓ **Plan Forward**
- **Development Update**
- **Next Scheduled RAB Meeting**
- **Summary**

JEEP / DEMOLITION RANGE - Clearance Activities to Date

- **34 grids completed.**
- 26 live items found.
- 29% complete
- Summary of types of items found:
 - ✓ Incendiary bombs (4#, 6#, 10#)
 - ✓ Photoflash bomb and cartridges
 - ✓ GP bombs (up to 2,000#)
 - ✓ Bomblets (BDU-28 and M139 trainer)
 - ✓ Anti-personnel mines
 - ✓ 60mm HE mortar
 - ✓ Parachute flares
 - ✓ Primer detonators
 - ✓ War head practice 2.75" rocket
 - ✓ Cartridge impulse and starter
 - ✓ M41 fragmentation bomb
 - ✓ M55 signal illumination
 - ✓ Signal illuminating, aircraft
 - ✓ 2.25" rocket
 - ✓ M125 bomb scrap
 - ✓ 20mm API
 - ✓ M44A1 aircraft flare
 - ✓ JATO
 - ✓ 2.75" rocket motor
 - ✓ Misc. fuzes
 - ✓ Small arms

JEEP/DEMOLITION RANGE

- More than 30 CWM training items found.
 - ✓ M139 bomblet - inert training aide
 - ✓ M125 bomblets - simulant filled
 - ✓ M34 cluster bomb (w/72 M125's) - simulant filled

JEEP / DEMOLITION RANGE

K941 Toxic Gas Set M1

- On March 18th, three K941 CAIS pigs found at J/D Range.
- To date, one empty pig had been recovered from J/D Range.
- On March 20th, ten CAIS bottles were found that could not be positively identified as inert.
- The find was treated as a RCWM incident.
- Work plan, SSHP and project procedures for RCWM incidents were immediately activated.
- Field test results performed by the Technical Escort Unit were inconclusive.
- The bottles were transported to Pueblo Chemical Depot (PCD) with State Patrol escort for further testing.

JEEP / DEMOLITION RANGE

K941 Toxic Gas Set M1

- CAIS consist of glass vials or bottles of mustard agent (H, HS or HD) used for odor recognition and/or decontamination training.
- Each CAIS is packaged in a metal container (pig) which is a 7-inch diameter cylinder that is 38 inches long.
- A full set would contain 24 bottles, each bottle would have 3.5 oz of mustard agent.

CAIS PIG

CAIS Bottles

JEEP / DEMOLITION RANGE

Test Results

- **Liquid residue (3 bottles):**
 - ✓ Headspace monitoring positive for a sulfur-based compound.
 - ✓ Compound is consistent with degradation and incomplete combustion products of sulfur mustard.
- **Solid residue (7 bottles)**
 - ✓ Test results indicated sulfur and chlorine compounds.
 - ✓ These compounds are consistent with the degradation and incomplete combustion products of sulfur mustard.
 - ✓ Solid residue testing was determined to be inconclusive whether it was mustard agent or simulant.
- **No live agent was detected.**

JEEP / DEMOLITION RANGE

- **Conclusions**
 - ✓ **No mustard agent was detected in any of the samples.**
 - ✓ **Sulfur mustard was most likely the fill for the bottles.**

JEEP / DEMOLITION RANGE - Plan Forward

- Meeting with Corps (Omaha and Huntsville) and CDPHE on April 25, 2002 to discuss plan forward.
- The following main factors were considered:
 - ✓ Recent CAIS finds
 - ✓ Previous CWM and BWM training aid finds
 - ✓ Stakeholder concerns
 - ✓ OE team safety
 - ✓ Risks associated with treating J/D Range as a non-RCWM site
 - ✓ Cost/schedule impacts

JEEP / DEMOLITION RANGE - Plan Forward

- The team is recommending that the Jeep/Demolition Range transition to a RCWM site.
- Phased approach with opportunities to transition to a non-RCWM site.
 - ✓ Field results
 - ✓ Team consensus
- Site maybe re-evaluated at any time.

JEEP / DEMOLITION RANGE - Plan Forward

Phased approach:

- To date, all RCWM-related items have been found in trenches/pits or have been related to large anomalous areas. Based on this, the team recommended the following:
 - ✓ Identify and quantify (approximate size) all areas to date in which RCWM related items have been identified.
 - ✓ Geophysically map the entire J/D range and identify all large anomalous areas.
 - ✓ Address the areas identified above as RCWM immediate areas of concern.

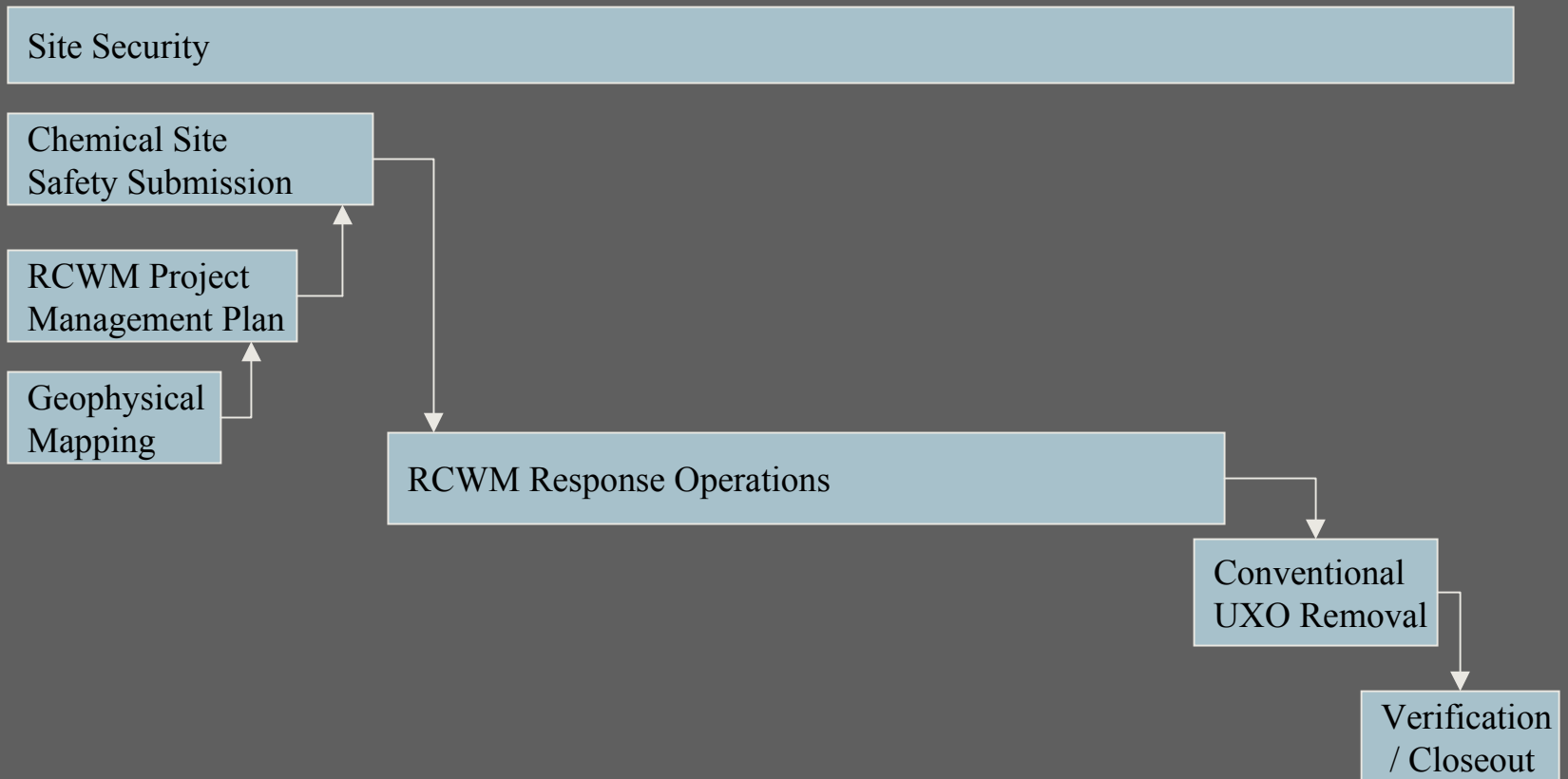
JEEP / DEMOLITION RANGE - Plan Forward

- ✓ After completion of the identified areas, review and discuss the results and make determination of continuing as RCWM or transition back to a non-RCWM site.
- ✓ Anytime prior to finishing the above areas, or after they are completed, whether we are addressing the site as RCWM or non-RCWM, the opportunity exists to stop and re-evaluate.

Jeep / Demolition Range RCWM Response Project

- Site Security
- Chemical Site Safety Submission
 - ✓ Project Management Plan
 - ✓ Geophysical Investigation
- RCWM Removal
- Conventional Ordnance Removal
- Verification & Site Closeout

Jeep / Demolition Range RCWM Process



Chemical Safety Submission Team

- Corps of Engineers (CEMWO, USAESCH, CESO)
- Colorado Department of Public Health and Environment
- US Army Technical Center - Explosive Safety
- Soldier Biological Chemical Command (TEU & ECBC)
- Project Manager for Chemical Destruction
- Department of Defense Explosive Safety Board (DHHS, CDC)

Components for a Chemical Safety Submission

- ✓ Work Plan
- ✓ Sampling Plan
- ✓ Monitoring Plan
- ✓ Interim Holding Facility Plan
- ✓ Transportation Plan
- ✓ Site Safety and Health Plan
- ✓ Protective Action Plan
- ✓ Public Affairs Plan
- ✓ TEU Operations Plan
- ✓ Material Assessment Review Board Plan

JEEP / DEMOLITION RANGE - Summary

- Transition to RCWM response project will impact schedule and costs.
- Currently assessing those impacts and developing implementation plan.
- Funding for RCWM response is uncertain.
- This will be a team effort.
- Open communication is essential.
- Meaningful, active stakeholder involvement is critical.

ENCROACHING DEVELOPMENT

The FLBGR is “...the largest developable piece of land abutting any metro area in the country.” (Denver Post, 2000)

ENCROACHING DEVELOPMENT

- Development surrounding the range continues to intensify.
- Current development activities:
 - ✓ August 2003, Cherry Creek School District to open high school, middle school, and regional sports stadium near Jeep & Demolition Range.
 - ✓ Large residential development breaking ground adjacent BT#1.
 - ✓ Residential ranchettes in and adjacent to BT#4, BT#5 and BT#6.
 - ✓ Orica Corp. opened world headquarters on half section immediately northeast of Rocket Range.

ENCROACHING DEVELOPMENT

- New development plans being announced regularly.
- Proposed development:
 - ✓ Large residential development south and west of Aurora Reservoir to include greenbelt connecting school to reservoir.
 - ✓ Large residential development west of Arapahoe Park Racetrack to break ground in near future.
 - ✓ Several additional sections divided into residential ranchettes in and adjacent to BT#4, BT#5 & BT#6.
 - ✓ Co-Generation plant sited east of Lowry Superfund Site.
 - ✓ State Land Board developing master plan for its property on the range.

Development Update

Private Landowner Clearances

- Landowners and developers on southwest corner of range are considering conducting ordnance clearances to support development.
- SHORE - Smokey Hill Owners for the Range Environment
 - ✓ Landowners and developers
 - ✓ Goal is to support range cleanup
 - ✓ Lobbying for increased and sustained cleanup funding
 - ✓ PR campaign to support “confidence” in cleanup
 - ✓ Facilitate efforts to support residential development

RAB MEETING SCHEDULE

- The next RAB meeting is scheduled for July 17, 2002.

Aurora Library

6:00-8:30pm

SUMMARY

- We are working and making progress...
- We have significant challenges ahead:
 - ✓ Jeep/Demolition Range
 - ✓ Funding
 - ✓ Development of range
- Must continue to foster our partnerships and maintain open communications.