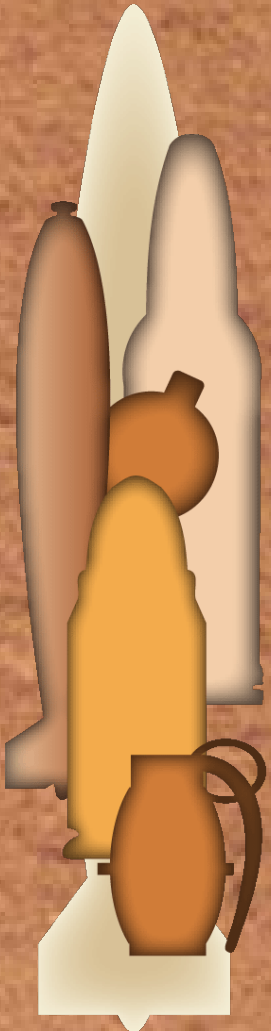
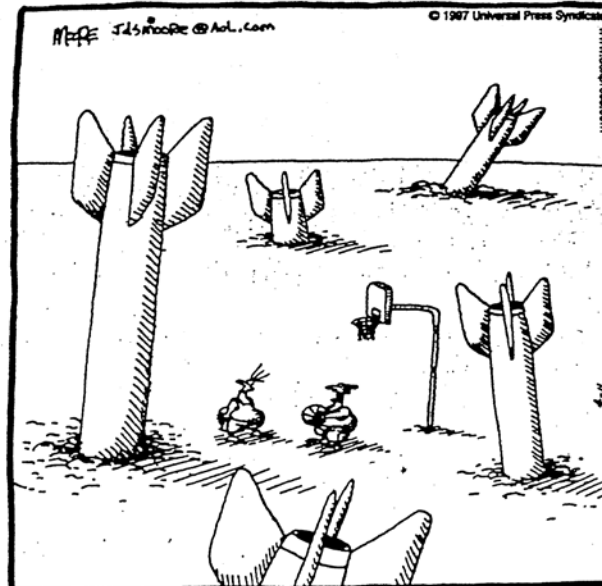


What is the Issue?

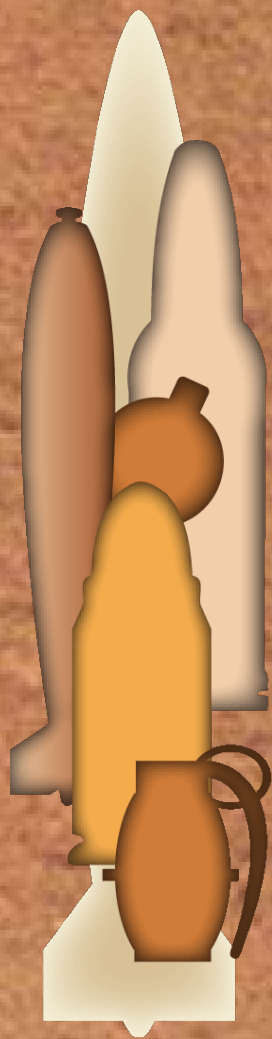


IN THE BLEACHERS



"Maybe we shouldn't play here."

Munitions Response



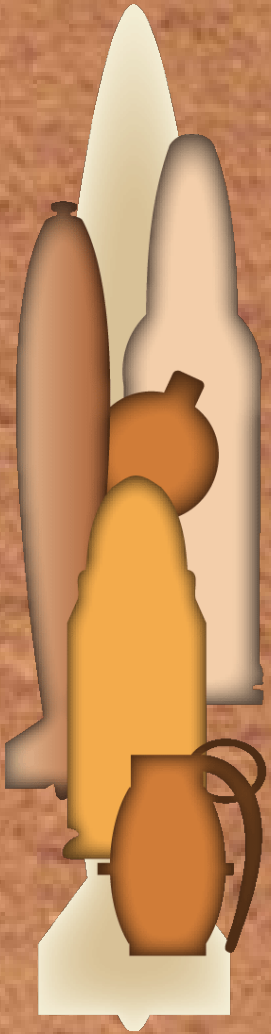
- **Could be as:**
 - **Simple as a notification to the community with an education program about the potential dangers posed by munitions and the actions to take if one knows or suspects they have encountered a munition**
 - **Complicated as a long-term response action involving sophisticated technology, specialized expertise, and significant resources**

DoD Responsibility for Military Munitions

- **DoD responds to military munitions, including UXO, regardless of location**
- **The Department of Defense Explosives Safety Board (DDESB) is responsible for promulgating explosives safety policy under 10 USC 172**

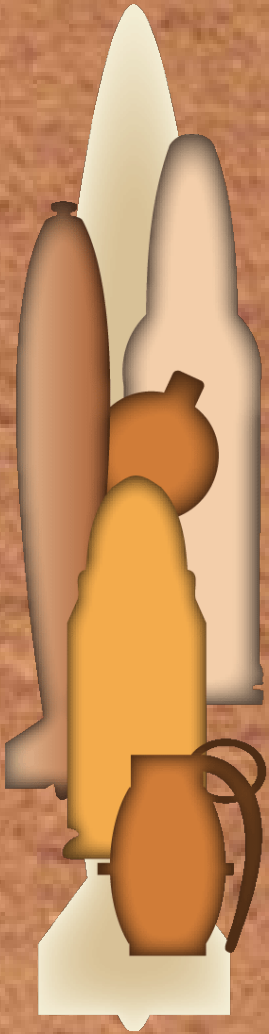
An Emerging National Priority

- **Munitions responses are where HTRW responses were 15 years ago**
- **DoD and environmental regulators and safety officials are attempting to understand:**
 - **The significance of munitions response requirements**
 - **Regulatory and technical approaches for:**
 - **Managing munitions responses**
 - **Conducting munitions responses**
 - **Addressing munitions-specific issues**



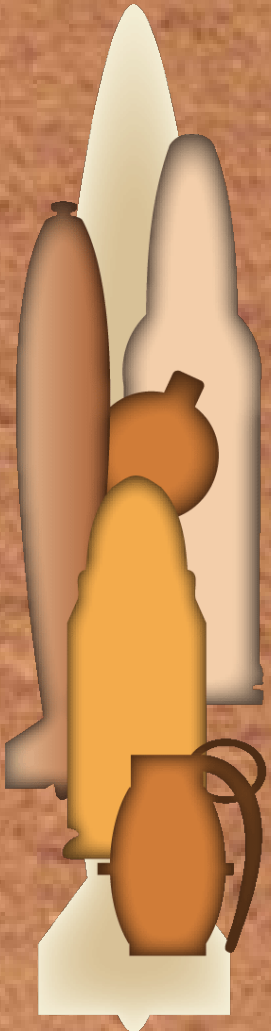
Complex Problem

- **Significant challenges**
 - Site-specific nature
 - Explosives and/or CA hazards
 - Different perspectives of risk
 - Lack of agreement on the level of response required
 - Technology limitations
 - Unclear authorities
 - Scientific gaps, particularly with regard MC
 - Funding
- **Estimated financial liability for required munitions response actions initially reported at \$14B; expected to rise**



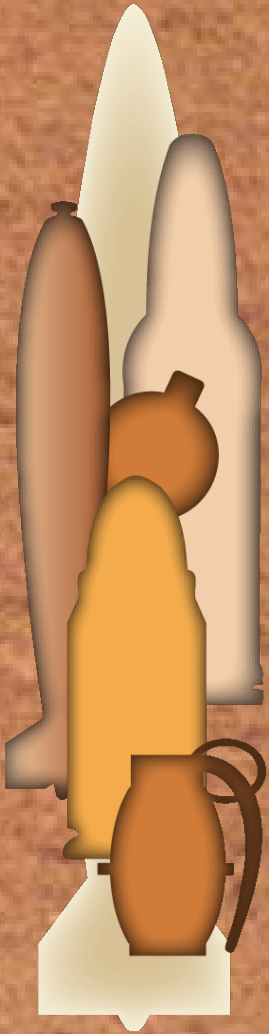
Impacts on Munitions Responses

- **Current, determined, or reasonably anticipated end use of land drives the munitions response's design**
- **Lack of agreement on the sufficiency of the response**
- **Technology limitations**
- **Disagreement over decision-making authorities:**
 - **DoD uses CERCLA**
 - **States prefer RCRA**
- **Gaps in Knowledge:**
 - **Inventory of MRSs**
 - **Science: Fate, Transport and Effects**
- **Property ownership**
- **Funding constraints; external, competing factors**



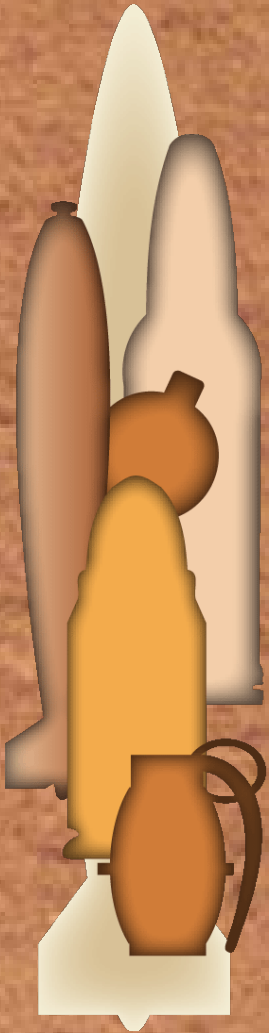
Impacts on Technology Effectiveness

- **Site-specific conditions (site characterization)**
 - Acreage
 - Types of munitions used
 - Location (surface or subsurface) and orientation of munitions
 - Geology
 - Topography
- **Application of best available, appropriate technology**
 - Selection
 - Use (individual skills)
 - Data interpretation
- **Desire to integrate response activities**



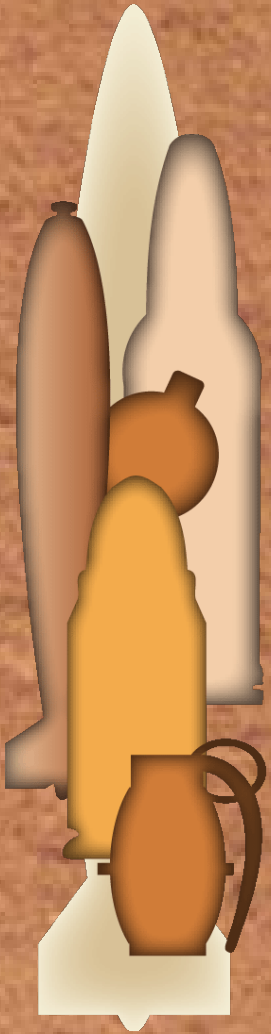
Implications to Land Transfers

- **Difficult to get to “done”**
 - **Difficult to quantify acceptable risk**
 - **No agreement on:**
 - The sufficiency of selected munitions responses
 - Effectiveness of land use controls
 - **Technological limitations**
- **Unknowns often drive costs**
 - **Perceptions**
 - **Risk acceptance**
 - **Site conditions**
 - **Regulatory framework**



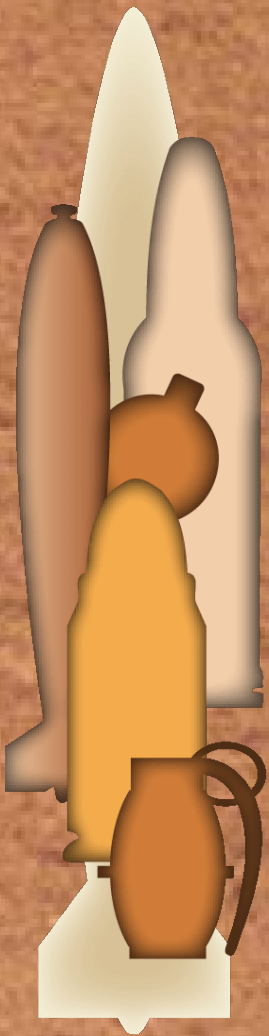
MRC ~ Desired Outcomes

- **Collaborative Decision Making (CDM) Process**
 - Consensus-based decisions
 - Meaningful role for all parties
- **Accomplish common goal--ensure protectiveness of munitions responses**
- **Promote consistency of policies**
 - Within DoD and across Services - DoD MRC
 - Within agencies that participate on MRC
- **Develop consistent process for munitions response actions throughout United States**
- **Address complexity and scope of challenges**
- **Provide lessons learned to others**



Applying Lessons Learned in the Future

- There is a need to acknowledge:
 - Funding constraints
 - Technological limitations
 - A need for a consistent process
- Determine a land's end use as early in process as possible, recognizing a possible need to restrict some uses
- Accept:
 - Some form of land use controls - dig restrictions, education program
 - Some residual risk
- Provide construction support, when required
- Implement an aggressive, effective UXO Safety Education Program



Technology Application

