Feasibility Study for the Ricochet Area
Munitions Response Site in State Game Lands 211, Pennsylvania
Military Munitions Response Program

Alternative 5 – Surface and Subsurface Removal of Munitions with Containment and Controls

- Explosive risk is mitigated by removal of munitions in both surface and subsurface throughout the site.
  - Search entire area – 3,262 acres.
  - Conduct search with analog instrumentation – metal detectors.
  - Conduct search at wild game food plots with digital geophysical mapping instrumentation.
  - Clear brush as needed to access site.
- Remove and dispose of all munitions and other metal debris.
- Public awareness outreach and training consistent with Alternative 2 provided.

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Evaluation Criteria Rating

Evaluation Criteria	Rating	
Overall protectiveness of human health and the environment	●	Would be most protective because it would remove all detectable munitions. However, Alternatives 3 and 4 would be similarly effective in that the immediate exposure risks of surface munitions would be reduced relative to the current land use and low contact hours by the public and maintenance personnel.
Compliance with applicable or relevant and appropriate requirement	●	Alternative 5 would be implemented to comply with all requirements.
Long-term effectiveness and permanence	●	Would be most effective and permanent because all detectable munitions on the surface and in the subsurface would be removed permanently.
Reduction of toxicity, mobility, or volume of contaminants through treatment	●	Would most reduce the toxicity, mobility, or volume of munitions because all detectable munitions would be removed.
Short-term effectiveness	◑	Would increase risk to the community and to workers at the site during removal of munitions compared to Alternatives 3 and 4. Risk to the community during removal of munitions would be reduced by the use of engineering controls and/or evacuations to maintain required minimum safe distances. Alternative 5 would cause more damage to environmental and cultural resources because more clearing, grubbing, and excavation during removal activities would be required than in Alternatives 3 and 4.
Implementability	◑	Removal of munitions on the surface and to various depths, similar to the activities proposed in Alternatives 3, 4, and 5, was implemented effectively at the Ricochet Area during the remedial investigation. Specific activities including plant survey, awareness training and mitigation activities will be required to protect natural resources and cultural resources, and it would be easier to meet the requirements with Alternatives 3 and 4 than with Alternative 5.
Cost	$24,315,156	
Regulatory agency acceptance	The criteria for regulatory agency acceptance cannot be fully evaluated and assessed until comments of the feasibility study are received.	
Community acceptance	The criteria for community acceptance cannot be fully evaluated and assessed until comments of the proposed plan are received.	

Favorable ● Moderately Favorable ◑ Not Favorable ●

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