



**U.S. ARMY**

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# **Progress and Next Steps For Army's Operational Range Assessments (ORAs)**



**Environment, Energy & Sustainability Symposium and  
Exhibition (E2S2)**

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# Report Documentation Page

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# Briefing Topics

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- Overview of the Army's Range Assessments
- Program Drivers
- Assessment Process
- Phase I Description and Status
- Phase II Description and Status
- Referred Cleanup Program Sites
- Next Steps



# Overview of the Army's ORAs

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- Component of Army's Sustainable Range Program
- Effort to identify and evaluate potential off-range MC impacts from operational ranges
  - To protect human health and the environment
  - To ensure continuity of the test and training mission
- Assess all 425 Army Operational Range Complexes
  - Active Army, National Guard, Reserves
  - Over 10,700 individual ranges and over 15 million acres
  - 50 states and 2 territories
  - Small arms, large caliber, testing, training, maneuver
  - Excludes ranges being assessed/monitored under existing authorities (i.e., permitted OB/OD sites, Mass Mil Reservation)



# Program Drivers

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- DoDD 4715.11, 10 May, 2004, “Environmental and Explosives Safety Management on Operational Ranges Within the United States”
  - “Enhance the ability to prevent or respond to a release or substantial threat of a release of munitions constituents from an operational range to off-range areas.”
- DoDI 4715.14, 30 Nov 2005, “Operational Range Assessments”
  - Establishes and implements procedures to assess the potential environmental impacts of military munitions use on operational ranges.
  - All operational ranges within the United States except for indoor ranges and small arms ranges that are being assessed as part of an existing environmental compliance program.
- No Federal or Regulatory Drivers



# Assessment Process

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- Evaluates off-range migration of MC through Source, Pathway, Receptor interaction
  - Common MCs are Metals (lead), RDX, TNT, Perchlorate, etc – based on type of munitions used
  - Potential Sources determined by firing records, impact areas
  - Pathways evaluated are groundwater, surface water and sediment
  - Receptors are both human and ecological
- Conducted in Two Phases
  - Phase 1, Qualitative Assessment
  - Phase 2, Quantitative Assessment



# Phase I, Qualitative Assessment (FY 05 –09)

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- Executed by Army Environmental Command
- Uses Existing Information (No sampling)
  - Firing records, environmental reports, public records, etc
  - Interviews, Site visits
- Outcome
  - **Unlikely.** Assessment shows MC migration unlikely.
    - Finalize report and reassess during the Army's periodic review.
  - **Inconclusive.** Data gaps exist, more information is needed.
    - Phase 2 assessment will be conducted
  - **Referred.** Assessment shows MC is migrating off-range at unacceptable levels.
    - Finalize report and refer the site to the Army's cleanup programs.



# Phase I Status

- The Army completed all required 425 Phase I Assessments by the end of FY09 as scheduled
- Final Report Summaries are located on DENIX
  - Full reports available by contacting installation POC
  - <https://www.denix.osd.mil/portal/page/portal/SustainableRangelInitiative/Policy/Reports/armyorap>

Phase I Completion Schedule			
	EOY07	EOFY08	EOFY09
Phase 1 (425 required)	220	418	425



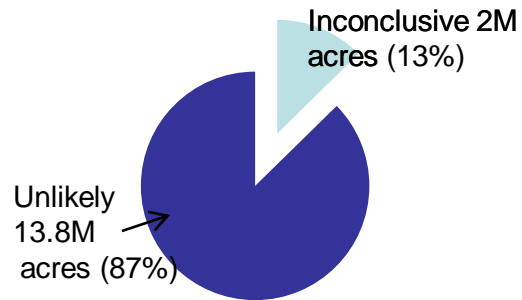


# Phase 1 Status

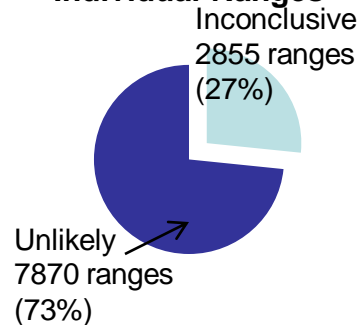
Command	Total Range Complexes	Unlikely	Inconclusive	Referred
Active (includes Special Installations)	75	34	41	0
Army Reserves	38	33*	5	0
Army National Guard	312	256**	56	0
<b>Total</b>	<b>425</b>	<b>323</b>	<b>102</b>	<b>0</b>

\* Includes dropped sites. \*\*Includes dropped sites and Munitions Use Memos

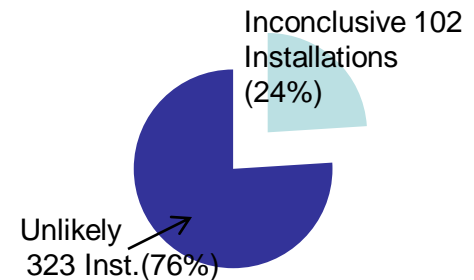
## Acreage Status



## Individual Ranges



## Installation Status





# Phase II, Quantitative Assessment (FY10-14)

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- Executed by Commands – IMCOM (Includes special installations), National Guard, Reserves
- Includes sampling to address data gaps
  - Sampling of likely migration pathways (e.g. water and sediment) is used to identify contaminants above screening levels
  - Sampling protocol established by U.S. Army Public Health Command
- Outcome
  - **Unlikely.** Assessment shows MC migration unlikely
    - Finalize report and reassess during the Army's periodic review
  - **Referred.** Assessment shows MC is migrating off-range at unacceptable levels
    - Finalize report and refer the site to the Army's cleanup programs



# Phase II Assessment

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- Sampling of likely migration pathways (e.g. water and sediment) used to identify contaminants above risk-based screening levels
  - Screening Levels agreed to Services workgroup (RMUS ).
  - Based on IRIS values if available, otherwise on best available benchmarks or applicable standards.
- If detections at or near range boundary are found above screening levels then further study is conducted to determine if there is risk to human or ecological receptors
  - BLM, AVS/SEM to determine metal bioavailability
  - BMI to determine stream health
  - CERCLA type risk assessment
- Areas with potential risk are referred to an appropriate Army Cleanup Program for further analyses



# Phase II Status

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- 102 Phase I Assessments referred to Phase II
- 9 Phase II Assessments currently underway
  - Ft Jackson, Ft McCrady, Ft AP Hill, Ft Drum, Camp Smith, Ft Riley, Ft Hood, Ft Gordon, Ft Lee
- 19 Phase 2's under contract FY10 (13 NGB, 4 USARC, 2 IMCOM)
- 102 Phase II's to be contracted by FY14



# Referral to Cleanup Program

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- Referred Sites – currently none (Cleanup at Massachusetts Military Reservation began prior to ORAs)
- Cleanup Programs authorized to perform off-range activities include:
  - Installation Restoration Programs or Military Munitions Response Program can use DERP funds for federally owned property
  - Compliance Cleanup Program will address other areas (i.e., State owned ARNG ranges)
- Immediate Mitigation Measures may be undertaken for MC that poses immediate threat to human health
- Close Coordination with the training community and installation is needed to ensure minimal disturbance to training activities



# Next Steps

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- Must continue to focus on mission at operational ranges by ensuring a sustainable range
  - Sharing Phase II findings with training community
  - Applying non-intrusive or minimally intrusive mitigation efforts that do not interfere or intrude on training mission
    - Applying topical applications that immobilize or breakdown MC (i.e., lime)
    - Seeding with grasses that take up MC
- Working with the training community and installation to develop BMPs for range management
  - Berm management
  - Firing lane adjustments
- Working with other services to share lessons learned and compare assessment practices



**QUESTIONS?**