



MMRP Implementation & Operational Range Inventory

1 Feb 2006





Presentation Topics



- **Program Overview**
- **Difference from IRP**
- **MR Site Inspections**
- **MRS Prioritization Protocol**
- **Operational Range Inventory & Updates**



Program Overview



- Response actions (identification, investigation and removal or remedial actions) to address unexploded ordnance (UXO), discarded military munitions (DMM) or the chemical residue of munitions (MC).
- FY02 Defense Authorization Act modified DERP, 10 USC 2701
- Sep 2001 DoD DERP Guide – provides information & guidance on implementation

At FUDS & BRAC sites, munitions have historically been addressed, but this is a very new area for Active Installations



Definitions

- Military Munitions -

- All ammunition products & components including:
 - Confined gaseous, liquid & solid propellants
 - Explosives, pyrotechnics, smokes, incendiaries
 - Chemical & riot control agents
 - Small arms ammunition
 - Rockets, bombs, mortars, artillery, etc.
- Does not include wholly inert items, improvised explosive devices and nuclear weapons



Definitions

- UXO -

- **A Military Munition that has been:**
 - Primed, fused, armed or prepared for action;
 - Has been fired, dropped, launched and;
 - Remains unexploded



Definitions

- DMM -

- **A Military Munition that has been abandoned without proper disposal. Does not include UXO.**





Definitions

- MC -

- Any materials originating from UXO, DMM or other military munitions. Includes explosive and non-explosive materials, emissions, and degradation or breakdown products

Examples: RDX, HMX, TNT, Lead, Antimony, Perchlorate



Origins of the MMRP



- **Range Rule** – Unsuccessful rule-making effort by DoD in 1990s, set ‘CTT’ range inventory in motion
- **Army Range Inventory** - Identified & documented the Army’s current and historic military range lands and munition sites located off operational ranges
 - Initial Operational Range Inventory
 - Oct 2000 – Jan 2003
 - 479 installations / 10,520 ranges / 15,142,989 acres
 - Non-Operational Ranges & UXO Sites Inventory
 - Oct 2001 – Dec 2003
 - 183 ER,A Installations / 937 sites / 2,905,650 acres
- **FY02 Defense Authorization Act** – Modified DERP



ER,A MMRP Eligibility



- The release* occurred prior to 30 Sep 02
 - The site is not on an operational range
 - The site is not on a permitted munitions disposal facility
 - The site is not being fully addressed under the IRP
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- Phase 3 Range Inventory Eligibility Results (ER,A):
 - IRP: 30 installations / 98 sites / 4,683 acres
 - **MMRP: 166 installations / 819 sites / 2,899,437 acres**
 - Non-DERP: 18 installations / 34 sites / 1,530 acres

* Release = For munitions, means shooting, firing or placement



Status of MR Program

(as of 30 Sep 05)



- **Total Installations w/MRS: 166**
 - Number of MR Installations at Response Complete: 9
 - Number of MR installations with “open” MRS: 157
- **Total MR Sites: 821**
 - Number of sites at Response Complete: 82
 - Number of sites with ongoing or future work: 739
- **Past Funding: FY01-05 - \$10 Million per year**
- **Current Funding: \$19.8 Million**
- **Future Funding (planned):**
 - **FY07 - \$30M** - **FY08 - \$50M** - **FY09 - \$85M**



Program Goals



- In 2004, DoD established 2 MMRP program goals for the Services:
 1. Complete all PAs by 2007
 2. Complete all SIs by 2010
- Army met PA goal in Dec 03 when it completed the Range Inventory
- Army began funding SIs in FY03 and will continue through FY08, completing in FY10
- Funding Strategy/Priorities: (1) Complete SIs, (2) Address imminent threats to human health & (3) assist in property transfer at Excess Property Installations



Similarities/Difference Between IR & MR



Similar	Different
Follows CERCLA or RCRA	Centrally Managed by AEC through the SI Phase <ul style="list-style-type: none"> • AEDB-R • CTCs
Same Funding Source (ER,A)	
IAPs	
RODs/DDs	Risk Assessment for MEC
Regulatory Participation	Explosive Safety Submittals
Community Participation	MRS Prioritization Protocol
DSMOA	Funding Priorities
Admin Record, 5 Yr. Reviews	Program Goals



MMRP SI



- **Goal of SI Phase:** Collect appropriate amount of data to be able to determine next step (further investigation, interim action or no further action)
 - Presence or absence of contaminants (hot spot sampling)
 - Identification of imminent threats to human health
- **Goal of MMRP SI:** Same as above, plus:
 - Complete MRS Prioritization Protocol for each site (draft)
 - Collect data to assist in fine-tuning the CTC estimate for site
- **MMRP SI Addresses:**
 - Explosive hazards (UXO & DMM, i.e. MEC)
 - MC contamination



MMRP SI Facts



SI Schedule (Installations awarded/fiscal year):

FY03: 11	FY04: 18	FY05: 25	FY06: 42	FY07: 35	FY08: 26
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SI Execution:

- AEC - Program Mgr & Program oversight
- Corps Districts (Baltimore, Omaha & Sacramento) - Award & monitor contracts, Off-post rights of entry
- Installation - Stakeholder contact & coordination, site access
- Contractor – Conducts research, performs field work & prepares documentation



Components of an MMRP SI

<p>Stakeholder Involvement</p>	<ul style="list-style-type: none"> • Kick-off meeting • Identification & inclusion of stakeholders
<p>Historical Records Review (HRR)</p>	<ul style="list-style-type: none"> • Archives/records searches • Personnel interviews • HRR Report
<p>Field Effort</p>	<ul style="list-style-type: none"> • Work Plans • Geophysical Work (MEC related) • Media sampling (MC)
<p>Documentation</p>	<ul style="list-style-type: none"> • Analysis of results • SI Report w/recommendations



SI Results To Date

- 54 Installation SIs complete or underway (309 MRSs)
- 22 SIs are complete
- # MRS start = 51, at end = 65
 - No Further Action – 24 sites
 - Further Characterization – 41 sites
 - Immediate Action – 1 site
- 5 Installations – All sites are No Further Action



NFA Installations: Camp Navajo, Ft. Pickett, Volkstone, Ernie Pyle & Perrine LTA



SI Results To Date (cont)

- Example -



Start of SI

- Sites = 7
- Acreage = 2,835

End of SI

- Sites = 8
- Acreage = 3,833
- 2 sites = NFA (520 acres)
- 6 sites = RI/FS (3,313 acres)
- Total acreage increased by 1,000 acres, but acreage requiring further investigation only increased by 478.



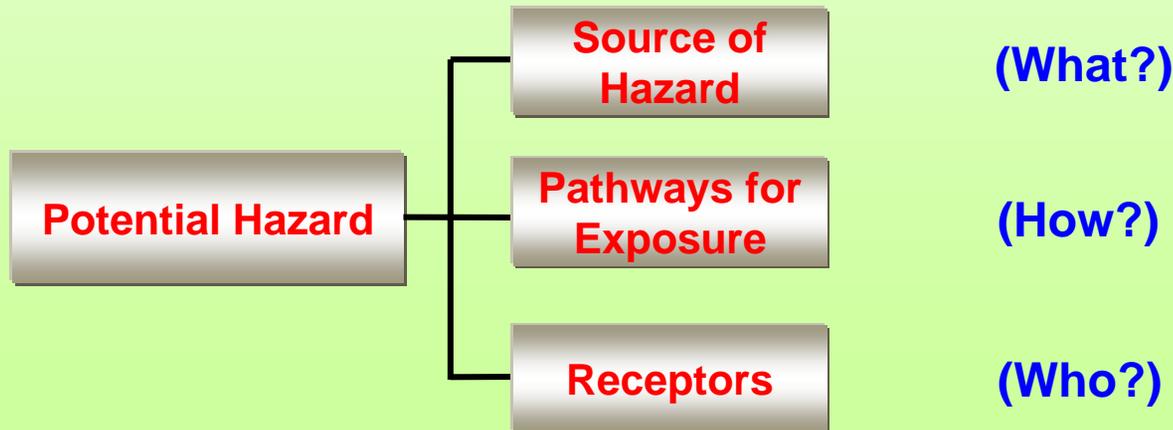
MRS Prioritization Protocol



- **When Congress modified DERP (FY02), they directed DoD to work with stakeholders to develop a new tool to prioritize MR Sites**
- **The “Protocol” will replace RAC**
- **OSD work group created; interviews conducted; draft rule published; 100’s of comments received and final rule published on 4 Oct 05**
- **The Protocol was designed to maximize use of MRS-specific data and be applied early in the MMRP process**
- **The Protocol is composed of 3 modules that separately evaluate each of the unique hazards that may be present**

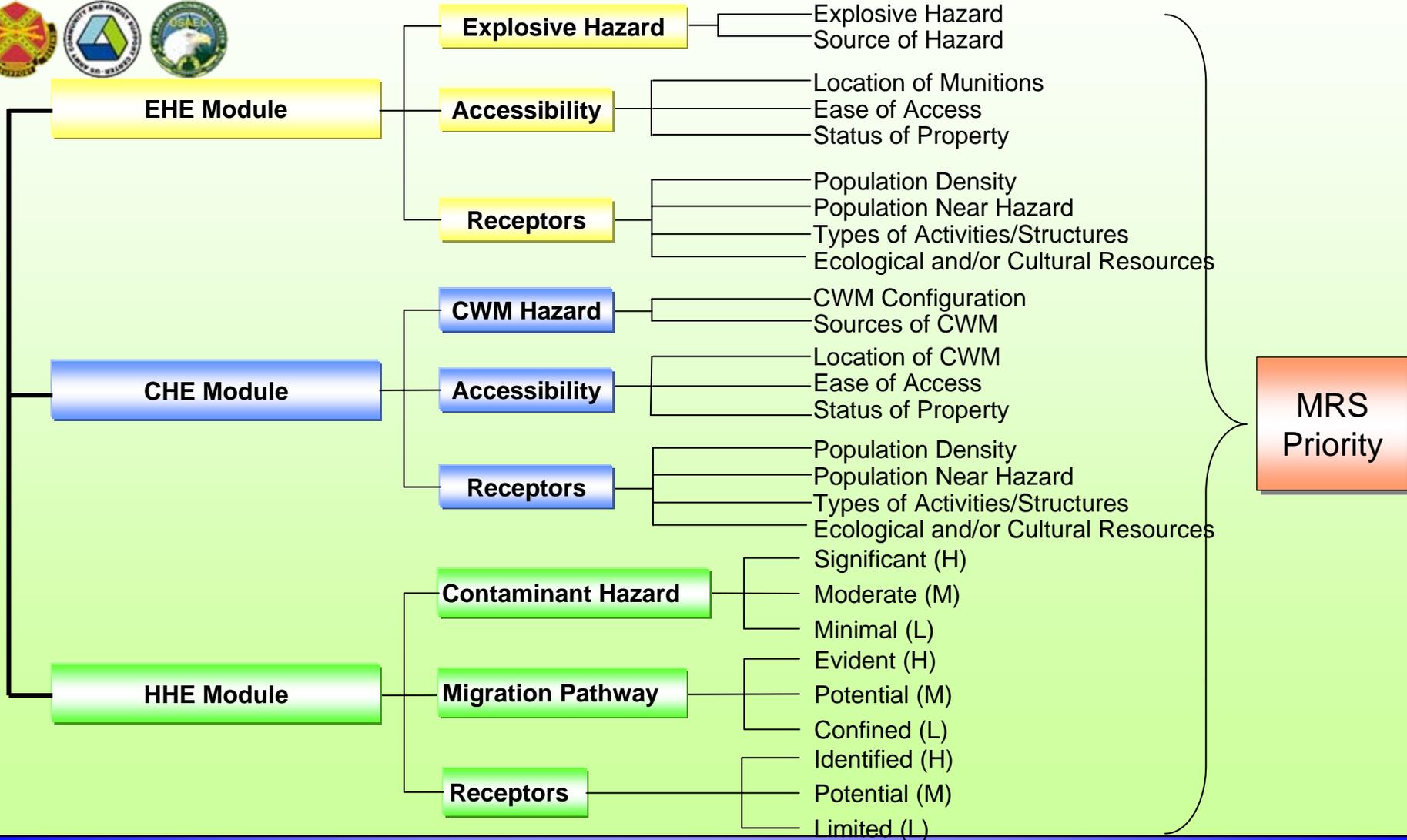
The Protocol (cont.)

- Each hazard evaluation module (EHE, CHE, HHE) has a three-axis structure (*three factors*) used to derive each module's outcome
 - *Hazard/Contaminant* – What are the potential hazards?
 - *Accessibility or Migration Pathway* – How might the hazard be encountered?
 - *Receptors* – Who may be affected by the hazard?
- The three-axis structure is important as it limits the influence of any one of the three factors on the outcome





The Protocol (cont.)





Explosive Hazard Evaluation (EHE)



- Used to evaluate the explosive hazards associated with MEC:
 - UXO
 - DMM
 - MC at high enough concentrations to pose an explosive hazard
- Only used when an explosive hazard is known or suspected (to include small arms)
 - Seven EHE final scores (A – G)



Chemical Hazard Evaluation (CHE)



- Used to evaluate the chemical hazards associated with the physiological effects of CWM
- Only used when CWM is known or suspected
- CWM can be UXO, DMM & agent in other than munitions configuration
- 7 CHE final scores (A-G)

Examples of Chemical Agent Identification Sets (CAIS)



Health Hazard Evaluation (HHE)



- The HHE module addresses potential health and environmental effects of MC & other chemicals
- This module is based on RRSE
- 4 media (GW, SW, Soil & Sediment)
- 3 Factors: Hazard, Migration Pathway & Receptors
- Element scores are 3 letter combos (HHM, MLL, HML, etc)
- Ten possible letter combos, 7 HHE final scores (A – G)

The scoring is where the HHE differs from the RRSE



Prioritization Determination Table



		CHE Rating	Priority		
EHE Rating	Priority	A	1	HHE Rating	Priority
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Hazard		No Known or Suspected Hazard		No Known or Suspected Hazard	



Determining a Site's Priority



- One, two or all three modules can be used to score a site
- MRS priority is based on the module with the highest hazard score
- MR Sites are assigned one of 8 PP scores or one of 3 non-numerical outputs

		CHE			
EHE		A	1	HHE	
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Hazard		No Known or Suspected Hazard		No Known or Suspected Hazard	



Operational Range Inventory

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- **Topics:**
 - **Original Inventory**
 - **Updates**



Operational Range Inventory

DoD Directive 4715.11/12



- Dated JUL 99
- SUBJECT: Environmental and Explosives Safety Management on Department of Defense Active and Inactive Ranges with the US and Outside of the US
 - Prescribes policy, assigns responsibilities, and defines procedures for sustainable use and management of all DoD operational ranges
 - Ensures the protection of military personnel and public from explosive hazards and adverse environmental impact on said ranges
 - **Requires all DoD components to establish and maintain an inventory of their ranges**



Phases of Initial Range Inventory



- Phase 1 – Advance Range Survey (ARS)
 - Provided a rough estimate for Senate Report 106-50
 - Needed more detail
- **Phase 2 – Active/Inactive (A/I) Range Inventory**
 - **Conducted JUL 00 – DEC 02**
 - **Over 10,500 ranges inventoried on almost 500 sites**
- Phase 3 – Closed, Transferring, and Transferred (CTT) Range/Site Inventory
 - Over 3700 closed, transferring or transferred ranges inventoried



US Army Active/Inactive Range Inventory



- Ranges are defined as designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas (40 CFR 260.1.0).
- **Active** - currently in service and is being regularly used for range activities
- **Inactive** - currently being used, but that is still under military control and considered by the military to be a potential range area, and that has not been put to a new use that is incompatible with range activities



Reasons for Maintaining the Range Inventory



- **DoDD 3200.15**
 - Published NOV 03
 - Requires a GIS-based inventory of ranges be established and updated at least every five years
- **DoDD 4715.11 and 4715.12**
 - Re-released MAY 04 and JULY 04, respectively
 - Requires establishment and maintenance of range inventory



Operational Range Inventory Sustainment (ORIS)



- Name change - Active and inactive = operational
- Updating all sites over the course of four fiscal years (FY04 – FY07)
- Contractor performs updates to database based on POC input
- Workbook Modules are used where possible, otherwise a site visit is performed
- Upgrades:
 - Overlapping ranges are allowed
 - Data is stored and provided to installation in an SDSFIE-compliant geodatabase
 - INSNO and FACNO enable link with Real Property



Coordination Between MMRP and ORIS



- During ORIS, compare MR sites from Phase 3 Inventory or Final SI with range layer during QA/QC of draft data to evaluate overlaps and/or changes – Important because:
 - MR sites can't be located on an operational range
 - If operational range acreage has decreased, property should be assessed for MR eligible sites
- Provide MMRP contractors with updated data ASAP
- Installations that request to close a range must submit a memorandum to G-3 through their MACOM



QUESTIONS?

