



Military Munitions Response Program

(Part 1)

December 2007



Discussion Topics

- **Program Overview**
- **Site Inspections**
- **Common MMRP Misconceptions**
- **Transition to Beyond SI Phase Projects**



MMRP Program Overview

MMRP Program Manager



Program Overview

-- MMRP Creation --

- In the FY02 Defense Authorization Act, Congress modified DERP by creating the MMRP to address UXO, DMM & MC contamination on “Other than Operational Ranges”
- Congress Required:
 1. Inventory of Defense Sites known or suspected to contain UXO, DMM or MC
 2. Development of a new prioritization tool for the sites in the inventory
 3. Establishment of a new program element in DERP



Program Overview

- **MMRP is part of DERP**
 - **MMRP + IRP + BD/DR (FUDS only) = DERP**
- **Why did Congress do this? Because:**

UXO detection & removal has become a National priority in recent years due to urban sprawl, public safety issues, public health issues & changed perceptions

MMRP is relatively new to Active Installations (ER,A), but munitions responses at BRAC & FUDS have occurred for years



What is a munitions response?

An action, including investigation, removal and remedial actions to address the explosive safety, human health or environmental risks presented by UXO, discarded military munitions (DMM) or munitions constituents (MC).

Could be as:

- ✓ Simple as a notification to the community with an education program about the hazards posed by military munitions and how to avoid them
- ✓ Complicated as a long-term response action involving sophisticated technology, specialized expertise, and significant resources.



MMRP 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

UXO
A Military Munition that has been:

- Primed, fused, armed or prepared for action;
- Has been fired, dropped, launched and;
- Remains unexploded





MMRP

Definitions

- A Military **DMM** Munition that has been abandoned without proper disposal. Does not include UXO.
- Generally less sensitive than UXO, but still potentially explosive.
- Any material **MC** originating from UXO, DMM . Includes explosive and non-explosive materials, emissions, and degradation or breakdown products.

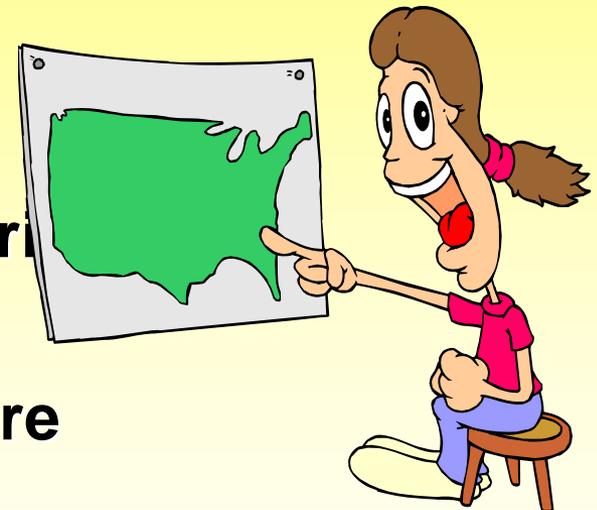


Examples: RDX, HMX, TNT, Lead, Antimony, Perchlorate



MMRP Definitions

- Locations that are or were owned by, **Defense Site** leased to, or otherwise possessed or used by DoD.
- Excludes:
 - Operational ranges
 - Operating storage or manufacturing facilities
 - Facilities that are used for or were permitted for the treatment or disposal of military munitions





MMRP Challenges

- Anticipated or known end use of land – drives clean-up requirements
- Answering the question “How clean is clean?”
- Determining funding requirements / obtaining adequate \$\$
- Overcoming technology limitations
- Developing protocols:
 - A consistent process and collaborative decision-making process for munitions responses acceptable across states, EPA and DoD
 - An acceptable Risk/Hazard Methodology
- Property Ownership – Majority of sites not owned or controlled by the Army



Origin of the MR Sites

- **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 (operational) 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 (“CTT”)
 - Oct 2001 – Dec 2003
 - **183 ER,A Installations / 937 sites / 2,905,650 acres**



ER, A MMRP Eligibility DERP Guide, Sep 01

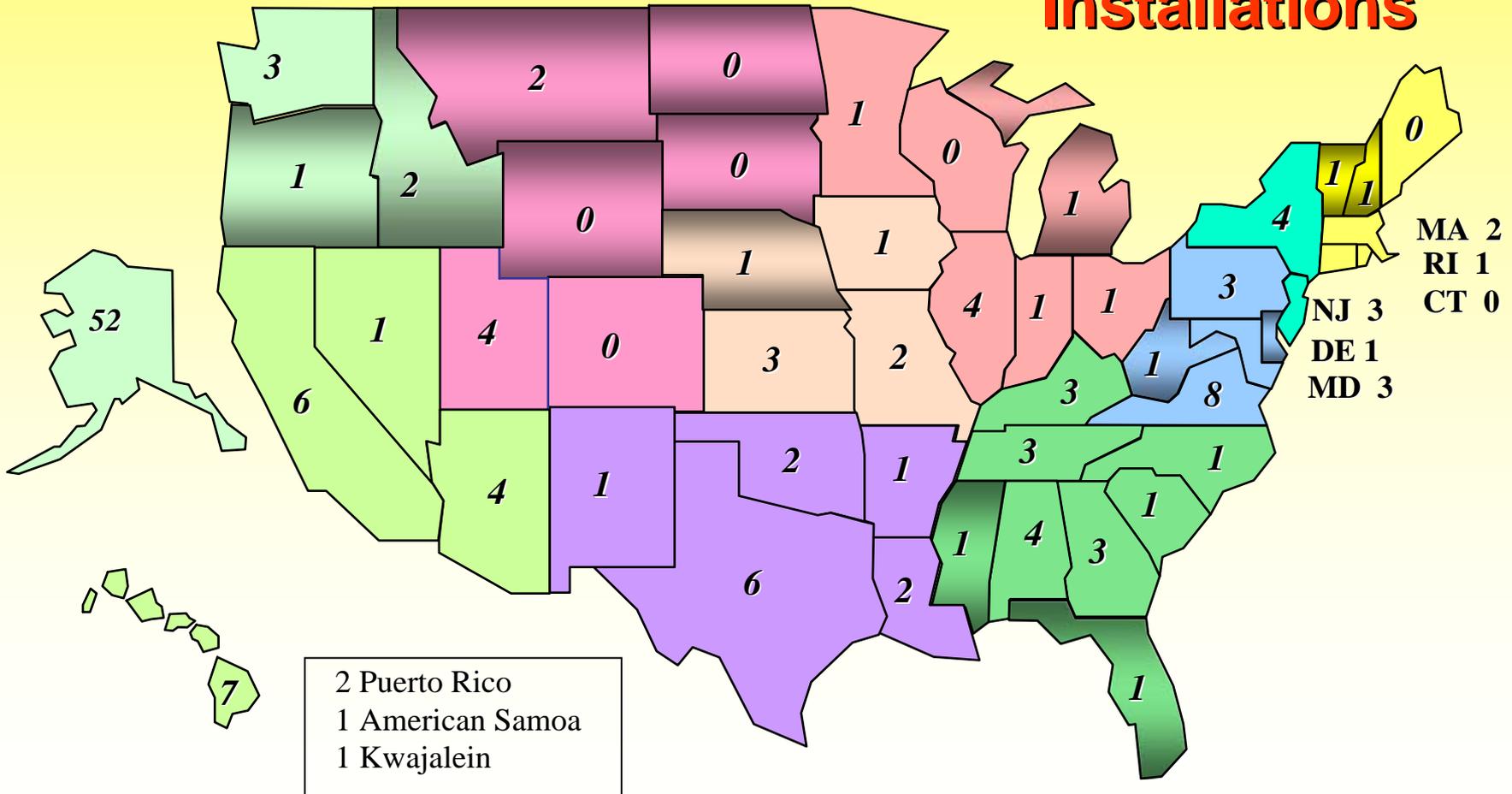
- The release* (UXO, DMM or MC) occurred prior to 30 Sep 02
 - Release for munitions means shooting, firing or placement
- The site is not on an operational range
- The site is not on a permitted munitions disposal facility
- The site is not being fully addressed under the IRP

- Sites in CTT Inventory went through MR eligibility:
 - 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



ER,A Installations with MR Sites as of Sep 07

**158
Installations**





Status of MR Program

(As of 30 Sep 07)

- **Total Installations w/MRS: 158**
 - We have gained 1 installation since Sep 06 (due to the addition of Dugway PG)
 - Number of MR Installations at RC: **19**
 - Number of MR installations with “open” MRS: **139**
- **Total MR Sites: 826**
 - We have gained **41** MRSs since Sep 06 (up due to SI findings)
 - Number of sites at RIP/RC: **195**
 - Number of sites with ongoing or future work: **631**



Central Program Management for MMRP Sites

- **What does this mean to the installation?**
 - AEC updates the non-cost AEDB-R data annually
 - AEC develops CTC estimates annually
 - AEC pulls together the CTC supporting documentation and uploads to AEDB-R annually
 - AEC conducts supervisory reviews on all MMRP sites with future costs

This is scheduled to continue through the end of FY10 when all the SIs will be completed



Central Program Management

- Follows the IAP schedule, just like IRP
- Bechtel-S will provide CTC and AEDB-R support
- **Data Gathering** – Bechtel-S will discuss MR sites with installation and AEC MR team to develop appropriate cleanup strategies and revise the non-cost data elements
- Installation & stakeholder input is **DESIRED** and **REQUIRED**
- **Data Validation** – MR sites will be reviewed simultaneously with IR sites
- AEC MR team will very involved at “MR only” installations



- **MMRP follows same rules as IRP for CTCs**
- **Very few MR sites have a completed FS, thus must use RACER**
- **Due to immaturity of program (i.e., most at PA or SI phase), a standardized cleanup strategy developed, based on 4 site types:**
 - **Small arms only**
 - **Multi-use ranges**
 - **Multi-use ranges with potential for GW contamination**
 - **CWM sites**
- **Deviations are allowed. Capture changes in MFR.**



Program Goals

- **Existing**
 1. **Complete PAs by 2007 (already met)**
 2. **Complete SIs by 2010 (on track)**

- **Draft**
 1. **All sites at RIP/RC by 2024 – will re-evaluate following completion of all SIs**



Program Funding for FY08

- **Funding Priorities:**

- 1) **Site Inspections**
- 2) **Imminent threats to human health**
- 3) **Facilitate property transfer at excess Installations**
- 4) **Restoration construction support (BRAC05 or RCI)**
- 5) **RI/FS projects by MRSPP priority**



MMRP Funding

- Funding from FY01 to FY05 was only \$10M/yr
 - FY06 - \$17M, most on SIs & Program Mgt
 - FY07 - \$30.1M, 66% went towards non-SIs
 - FY08 - \$41.5M
 - Program Mgt – 9.6%
 - SIs – 17.7%
 - Beyond SI – 72.7%





Questions / Comments



Site Inspections

Laura Paugh

AEC MMRP Project Manager



CERCLA SI Goal: 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
- 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: 30	FY07: 44	FY08: 26+
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SI Execution:

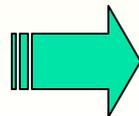
- AEC - Program Manager & Program oversight
- Corps Districts (Baltimore, Omaha & Sacramento) - Award & monitor contracts, Off-post rights of entry
- Installation - Stakeholder contact & coordination, site access, historical information.
- Contractor – Conducts research, performs field work & prepares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



Components of MMRP SI

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

SI DURATION



Kickoff to final HRR = 12 months
Kickoff to final SI Report = 24 months



FY08 SI Planned Awards

- 25 AK NGBs
- Dugway Proving Ground
- 3 Follow-on SIs
 - Joliet AAP
 - Ft. Bliss
 - Ft. Stewart





SI Results To Date (as of Oct 07)

- **Installations needing an SI:**

- Completed: 56
 - Ongoing: 76
 - Planned: 26
- } 158 installations

- **Final SI Recommendations:**

- NFA: 49% of sites
- RI/FS: 46% of sites
- Other: 5% of sites

- **Acreage Reductions (SI acres to acres needing RI/FS):**

- SIs completed in FY06 – 53% decrease (5,933 to 2,811)
- SIs completed in FY07 - 93% decrease (157,160 to 9,610)





FY08

SI Goals

- **Complete 31 SIs (78/158)**
 - 9 Completed to date

FY09

- **Complete 39 Site Inspections (117/158)**

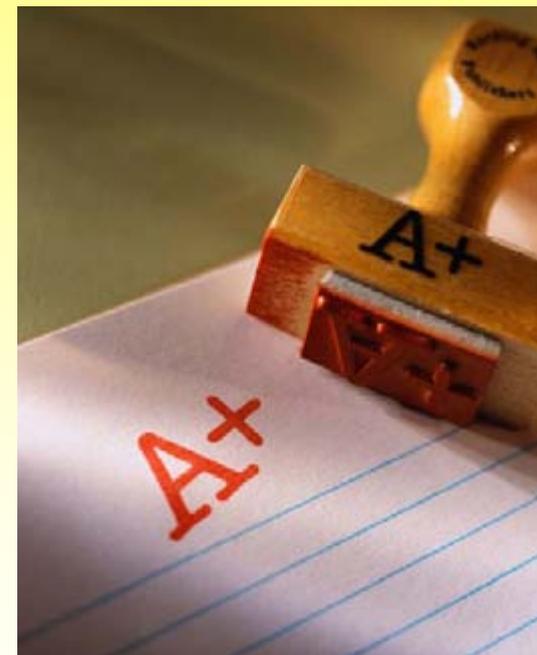
FY10

- **Complete 41 Site Inspections (158/158)**



31 Lessons Learned

- The HRR document is key to the success of the project
- Stakeholders (regulators, land owners) are best brought in at the beginning
- Installations with lots of overlap between IR and MR sites are most complicated
- No further action recommendations are hard to get, but not impossible
- No further action sites tend to cost more than other sites, more field effort needed





MRA vs. MRS Concepts

Munitions Response Area (MRA)

- An area on a “defense site” comprised of one or more munitions response sites
- Every MRS must be located within an MRA
- Examples: Munitions Burial Area

Munition Response Site (MRS)

- A discrete location within an MRA that is known to require a munitions response.
- All acres inside an MRA must be identified as an MRS
- MRS can equal the MRA or
- Multiple MRSs can exist on an MRA
- Examples: CWM Burial Area; Non-CWM Burial Area

**Information on both MRAs and MRSs is captured in AEDB-R
& reported to DoD annually**

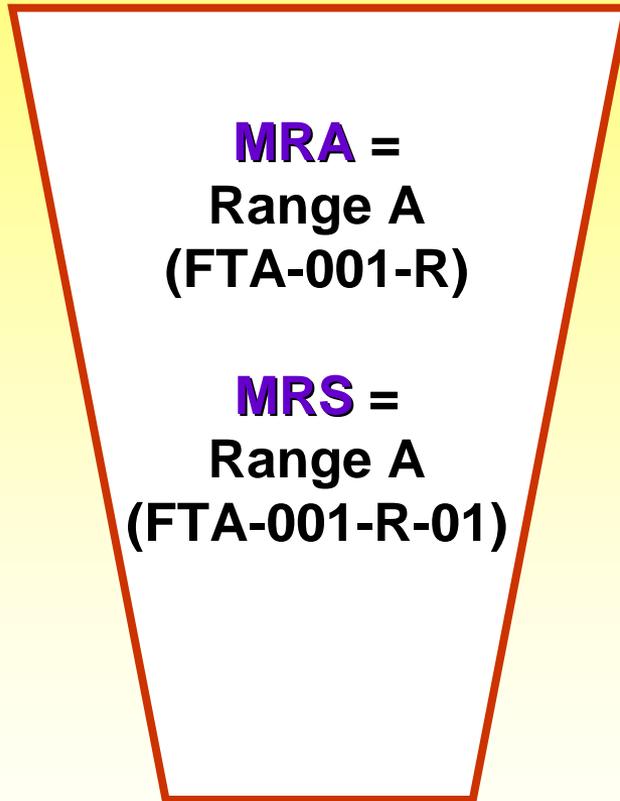


MRA vs. MRS Concepts (cont)

- In many cases, the MRA is the MRS and doesn't warrant further break out based on your knowledge of the range's historical use or potential further investigation or remedy, i.e., **Small Arms Range**
- Very large ranges (bombing ranges, OB/OD areas) lend themselves to having multiple MRSs on the MRA
- MRA and MRS are not independent of each other
- Acreage of MRSs in an MRA must equal that of the MRA
- AEDB-R Nomenclature (examples)
 - MRA - **FTDX-001-R** (MRA #1 on Fort Dix)
 - **TEAD-005-R** (MRA #5 on Tooele AD)
 - MRS - **FTDX-001-R-01** (Site #1 on MRA #1 at Fort Dix)
 - **TEAD-005-R-03** (Site #3 on MRA #5 at Tooele AD)



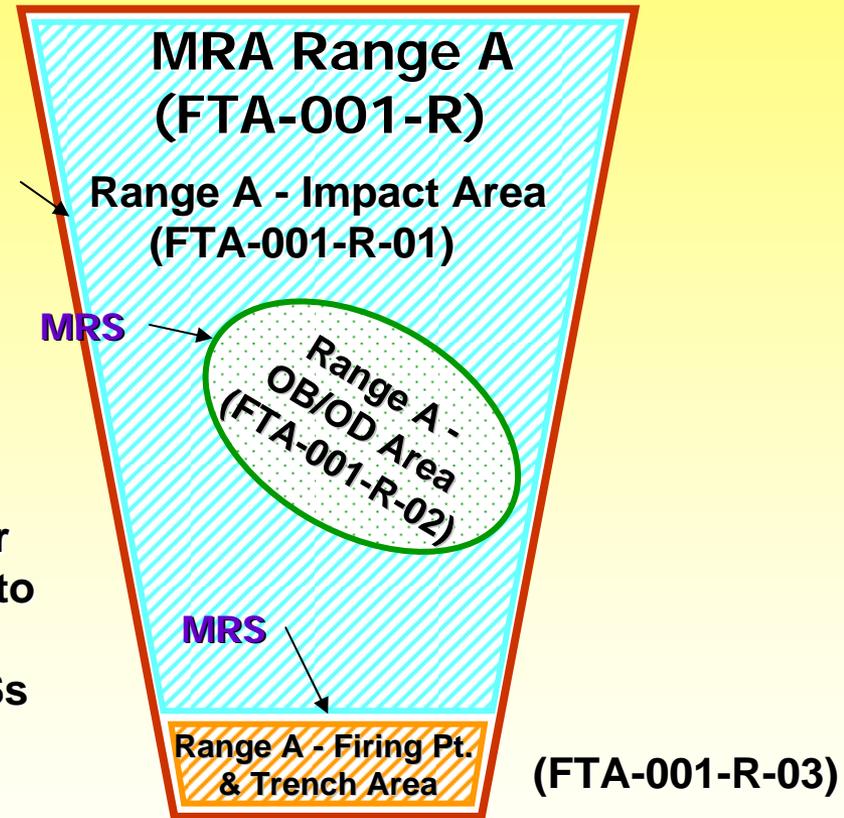
MRA vs. MRS Concepts (cont)



Site in PA/SI Phase
MRA = MRS

➔

MRA further broken up into 2 or more distinct MRSs



Site in RA Phase
MRA = 3 MRSs



ORIS Discrepancies

(Operational Range Inventory Survey)

- **During SIs, SI contractors obtain installation GIS data (ORIS or other) from the OACSIM, IGI&S Program Office.**
- **GIS data also collected from other sources including the installation Range Ops or JFHQ/State ARNG**
- **During the GIS data collection effort, data may be obtained which is inconsistent with the operational range or installation boundaries in ORIS.**
- **Examples-**
 - **Installation boundary discrepancy**
 - **ORIS data does not match what the range control folks use**



ORIS Discrepancies

- If discrepancy(ies) are confirmed, SI Contractors will prepare a letter to the AEC TSD to document discrepancies in ORIS.
- AEC TSD to work with the installations to correct issues with ORIS or other GIS data.
- SIs to continue with agreed upon GIS data.



Water Ranges



- During the Inventory, a site was designated as a Water Range if more than half its acreage was water (rivers, lakes, oceans)
- Underwater detection technology is developing
- Site Inspection - Water Ranges moving directly to RI/FS phase (no SI fieldwork)
- DoD DERP Guidance for FUDS excludes areas 100 yds seaward of mean high tide point – This might change
- Active Army - No specific exclusions, although CTC assumptions are modified
- DoD & Army are aware of inconsistent guidance and are evaluating



- **Army has authority to conduct response actions outside the installation boundaries where Army is the sole or major source of the release (EO 12580)**
 - Garrison Commander has authority to approve off-site data collection
 - DASA(ESOH) must be notified if there is a high potential threat to human health or safety
 - DASA(ESOH) approves off-post response actions
- **Need to Obtain Right of Entry Agreement**



Right of Entry

- Right of Entry - Agreement between Army & landowner **MUST** be obtained prior to off-post work
 - Corps of Engineer District is responsible
 - Can involve lengthy process (3-5 months)
 - Not all landowners will agree
- Cost - \$5K - \$7.5K each



Questions / Comments



Common MMRP Misconceptions

Mary Ellen Maly

AEC MMRP Program Manager



Misconception # 1

My SI is done and recommended further action for MEC. I can go immediately to a UXO clearance, right?

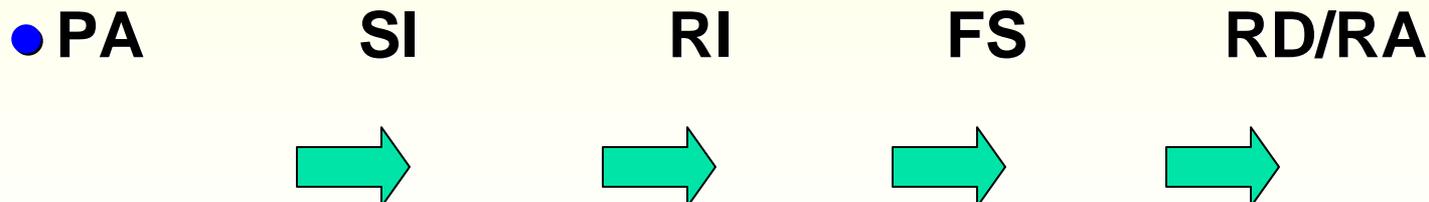


Misconception # 1

My SI is done and recommended further action for MEC. I can go immediately to a UXO clearance, right?

NO:

- **MMRP is being conducted under CERCLA or RCRA CA**
- **Follow the usual process:**





Misconception # 2

My MRS has been built up since it was used as a range and we have no reports of finding UXO during construction. Thus, there's nothing more that needs to be done, right?



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NO:

- **Prior construction does not mean that all MEC were removed or that none are present**
- **Buildings make it harder to do an investigation, but it is still required, just as it would be if the site were an IRP site.**



Misconception # 3

My MRS has UXO on it & we just awarded the RI/FS. This should be simple since the only MEC cleanup option available is clearance of all UXO, right?



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NO:

- **Other options are available & need to be fully evaluated, such as:**
 - **LUCs, surface clearances, partial clearances, or capping**



Misconception # 4

**The only media contamination that
can be addressed under the
MMRP is MC, right?**



Misconception # 4

**The only media contamination that
can be addressed under the
MMRP is MC, right?**

NO:

- **HTRW can and does get addressed under the MR Program if it is incidental to the MEC/MC cleanup, just like MEC can be addressed under the IRP.**



Misconception # 5

**My SI is done and characterized the site.
I don't need to worry about that during
follow-on projects, right?**



Misconception # 5

My SI is done and characterized the site. I don't need to worry about that during follow-on projects, right?

NO:

- **SI was based on the best data at the time**
- **Conditions change, new information is discovered**
- **The SI is your starting point – its purpose was presence / absence, not full characterization**



Transition to Beyond SI Phases (RI/FS or Removals)

Mary Ellen Maly

AEC MMRP Program Manager



Transition to Beyond SI

During SI phase:

- **AEC's MR team**: Worked with Corps and obtained contractor, performed technical oversight and was the primary manager of the project, also performed AEDB-R updates and developed CTCs
- **AEC's ERM**: Was in a learning mode, but attended some meetings & reviewed some documents, but most were not really active
- **Installation**: Provided the conduit to the regulators and other stakeholders and assisted the contractor with site access and data collection



Transition to Beyond SI phase project begins?:

- **AEC's ERM**: Picks up their normal oversight responsibilities, just like they have for the IRP
- **AEC's MR Team**: Switches to a “back seat” role, providing guidance on an as needed basis, but not active management.
- **Installation**: Becomes the Army's primary RPM and is the Army lead for the project



Transition to Beyond SI

- **What happens when an MRS gets approval for starting a “beyond SI” phase project?:**
 - AEC notifies the installation (Ob Plan or e-mail/phone)
 - Installation RPM and AEC ERM discuss contracting options (PBC? Fixed Price? Just do the RI or RI/FS to RIP/RC?)
 - Installation & ERM work on contracting action & execution
 - The MR Team is available as a resource with historical knowledge and MMRP guidance, but generally won't be actively involved in either the contracting or execution phases

Exception – When Installation is “MR-Only”, the MR team POC may pickup the normal ERM duties for that installation – They become your ERM.



Questions / Comments