

# Area of Interest North of Castner Range Remedial Investigation/Feasibility Study

## Technical Project Planning Meeting 1

19 January 2017  
2:00 PM – 6:00 PM



Expended 75 mm Shrapnel Projectile (Munitions Debris)



Area of Interest Conditions

# Meeting Agenda

- Munitions and Explosives of Concern Awareness
- Project Team
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)  
Process Flow
- Project Overview
- Project Objectives
- Community Relations
- Historical Records Search
- Overview of Remedial Investigation (RI) Process
- General Approach to the MEC investigation during the RI
- Explosive Siting Plan
- General Approach to the MC investigation during the RI
- Feasibility Study
- Proposed Plan
- Decision Document
- Discussion
- Fencing and Signage
- Schedule
- Next Steps

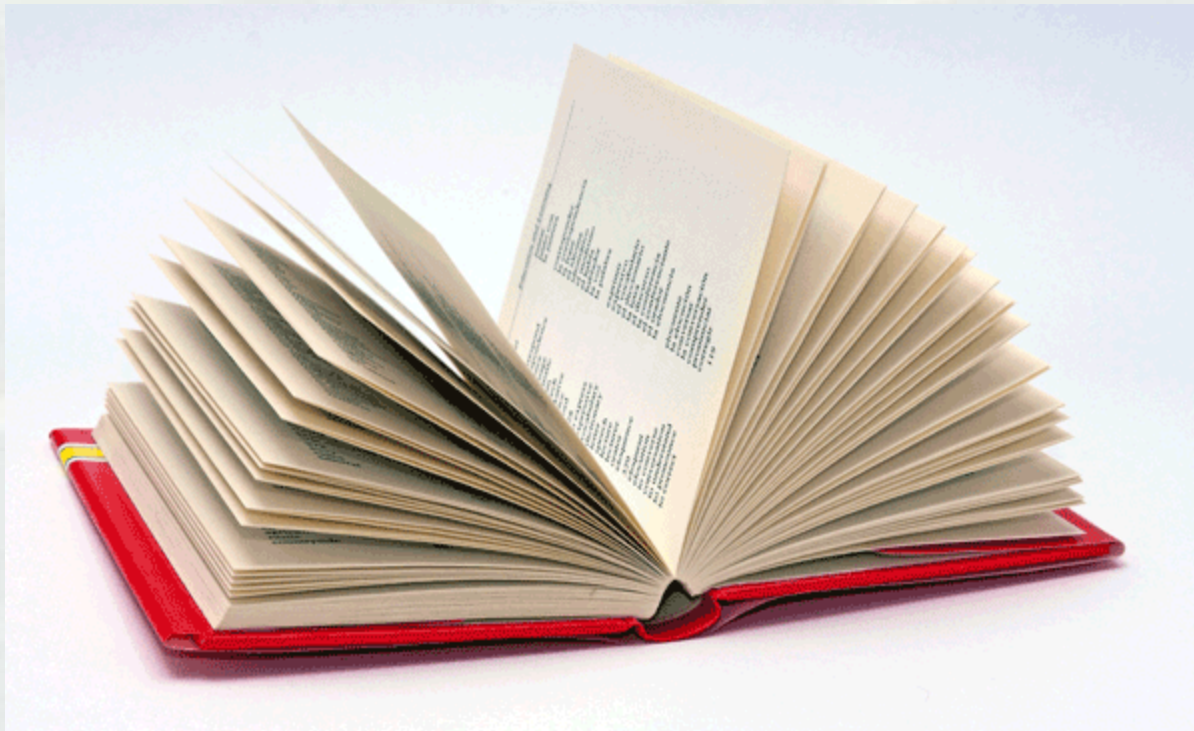
# 3 Rs of MEC Awareness



- **RECOGNIZE** – Identify object
  - Is it MEC?
  - Is it a rock, pipe, pine cone or an oil filter?
- **RETREAT** – Go back the way you came
  - Do not approach, touch, move, or disturb a suspect munition
- **REPORT** – Notify property owner and call **911**
  - Describe MEC size, shape, color without approaching or disturbing object
  - Note MEC location and condition

# Military Munitions Terms

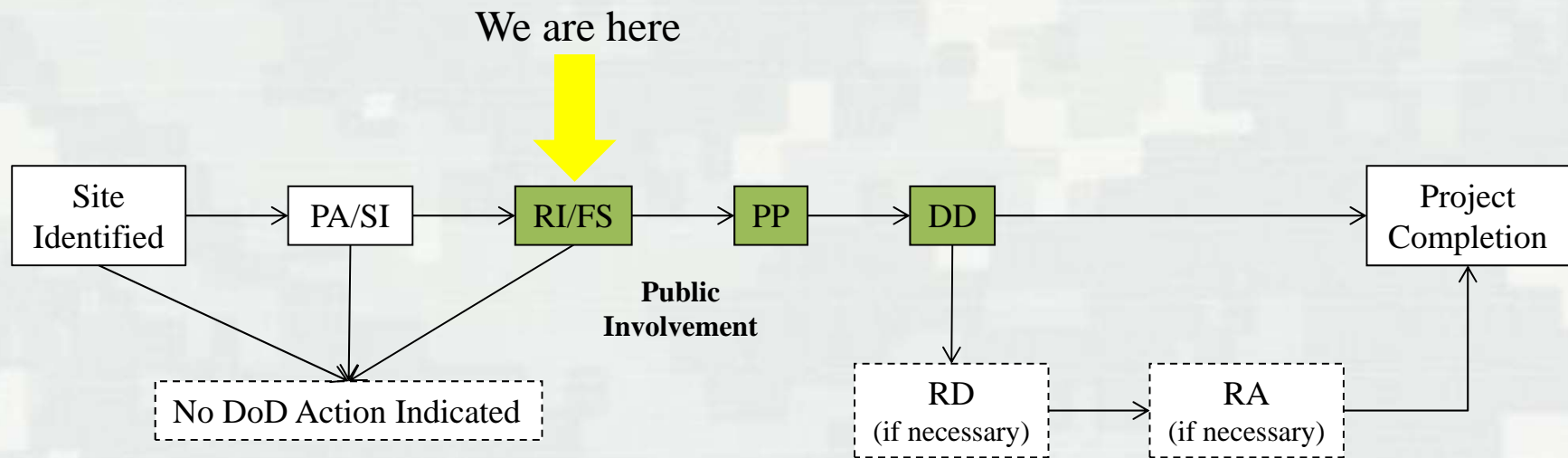
- Refer to attached handout for definitions of common military munitions terms.



# What is the MMRP?

- The Department of Defense (DoD) established the Military Munitions Response Program (MMRP) under the Defense Environmental Restoration Program (DERP) in 2001.
- The MMRP addresses non-operational lands that are suspected or known to contain munitions and explosives of concern (MEC) and munitions constituents (MC).
- Provides for the investigation and response at sites with MEC and/or MC.
- Follows the CERCLA process

# MMRP/CERCLA Process Flow



*A removal action may be initiated at any time during the process if human health or the environment are in immediate danger*

|    |                        |
|----|------------------------|
| DD | Decision Document      |
| FS | Feasibility Study      |
| PA | Preliminary Assessment |
| PP | Proposed Plan          |
| RA | Remedial Action        |
| RD | Remedial Design        |
| RI | Remedial Investigation |
| SI | Site Inspection        |

# Project Overview

The Area of Interest (AOI) North of Castner Range is located in El Paso County, Texas, north of the closed Castner Range.

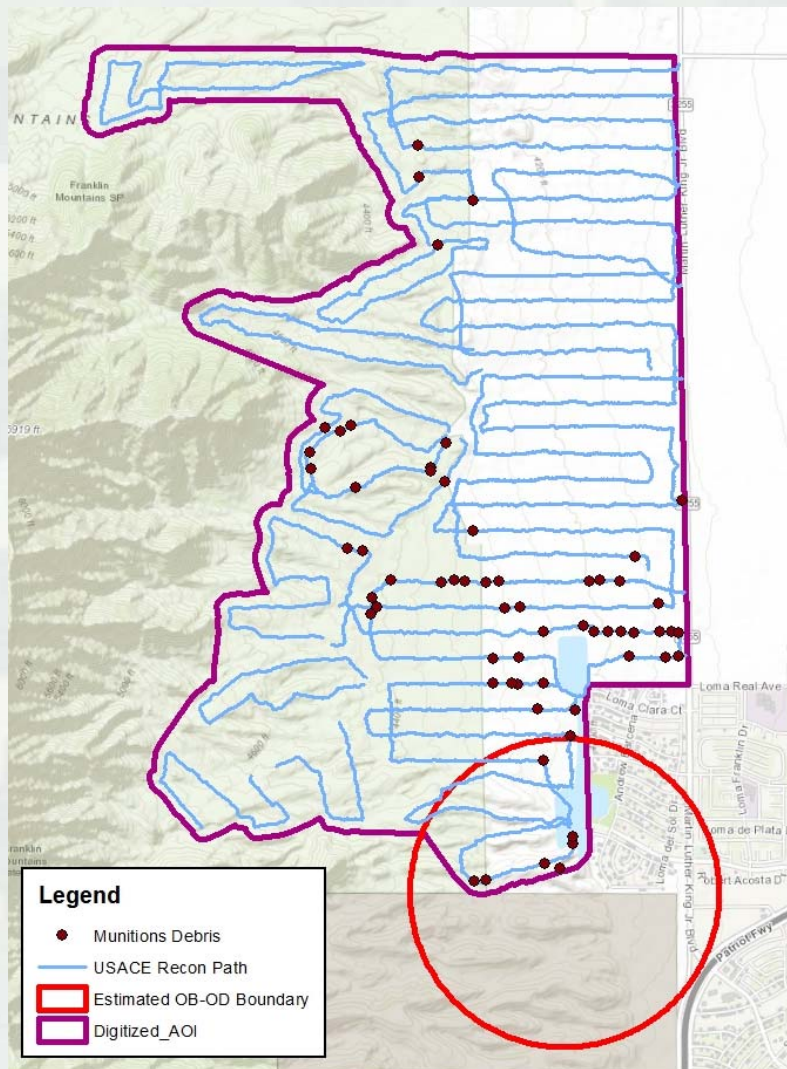
AOI North of Castner Range was never owned nor actively used by Fort Bliss.

Western portion of the AOI is owned by Franklin Mountains State Park and eastern portion owned by the City of El Paso.

Housing developments exist to the southeast and a quarry is in operation just north of the northern boundary.



# MEC Reconnaissance Survey



Munitions debris (MD) items were identified during background sampling for Castner Range.

A MEC reconnaissance survey completed by the USACE in 2015 to focus the RI. The survey was conducted to focus future RI efforts.

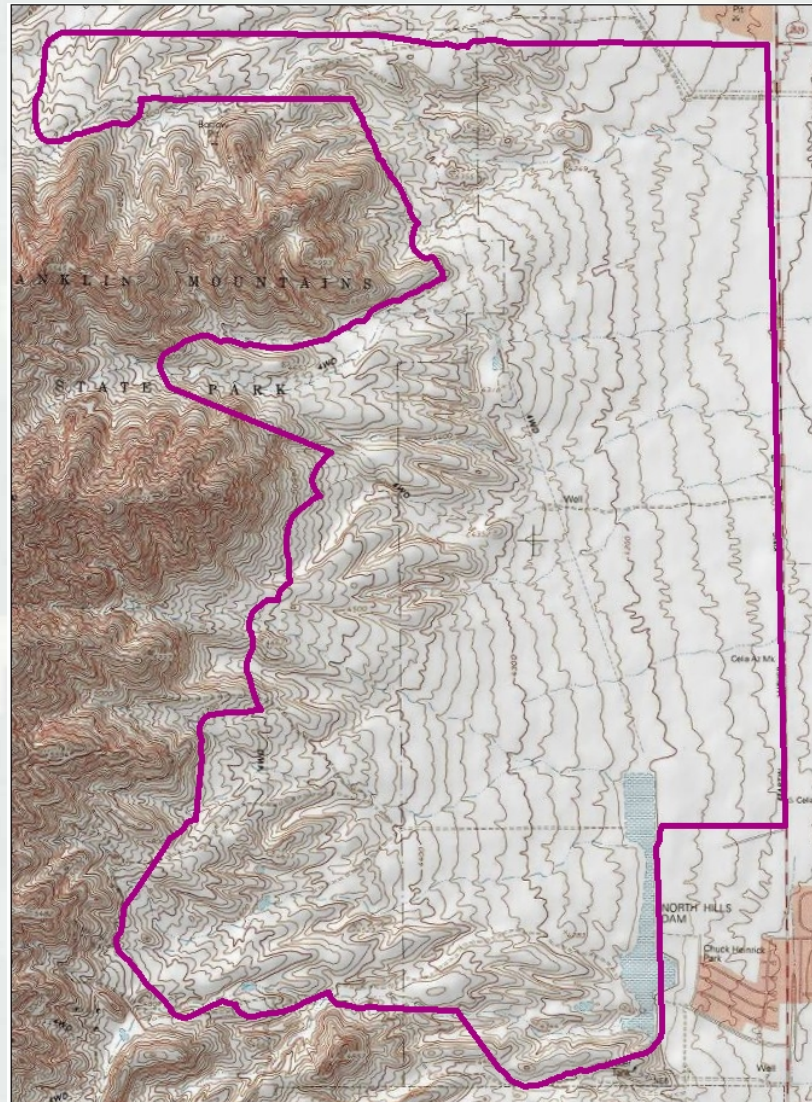
MD items were found during the survey including expended 75mm Shrapnel projectiles and fragments.

4,909 acres were selected for RI.

Possible kick-out debris from the nearby open burn/open detonation (OB/OD) area or from overshoot during training exercises conducted on areas of the Fort Bliss Closed Castner Range that borders the AOI.



# Topographic Map



# Project Objectives

- Characterize the nature and extent of MEC and MC at the AOI.
- Evaluate the risks posed by MEC and MC to human health and the environment at the AOI.
- Develop a decision document to mitigate risks, if present, to human health and the environment posed by the presence of MEC and MC.

# Community Relations Plan

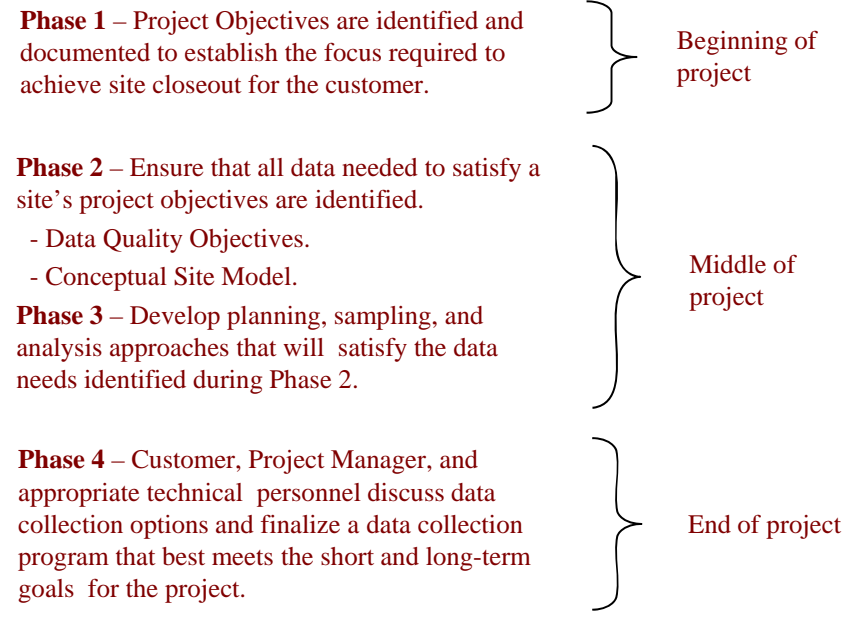
- CRP to address impacts to the public (evacuations and temporary closure of roads, trails, and camping areas).
- Provide the public with accurate, timely, and understandable information and/or access to the information needed to understand the project as it moves forward.
- KEMRON will host two public meetings.
- KEMRON will attend and, as appropriate, present at three RAB meetings.
- Outreach materials will be developed in English and Spanish versions to better serve the local community.

# Historical Records Search

- A historical records search of the residential area in the southern portion of the AOI will be conducted to determine if MEC or related items were reported in that area.
- The purpose of the historical records search is to:
  - Identify any range fans that could overlap the AOI
  - Determine the types of munitions used during these activities
- A summary of the information learned as well as references to cited source documents will be provided in a separate Historical Records Review Report.
- The results of the historical records search will be used in the development of the Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP) including refining the CSM and adjusting MEC and MC investigation activities.

# Overview of RI Process

- RI approach is based on the AOI-specific Conceptual Site Model (CSM) and agreed-upon data quality objectives
- Planning uses the TPP process to solicit stakeholder input
  - Facilitates review and approval of planning documents



- The CSM describes the AOI and its environment based on existing data.
- Uses profiles to describe the AOI, the source of MEC or MC, and potential receptors that may be affected.
- Provide an organized approach to identifying data needs.
- CSMs are living documents.

# Overview of RI Process

- Conduct Historical Records Search
- Work Plan
  - UFP-QAPP format
  - Includes RI objectives, background information, rationale and approach.
  - MEC and MC processes and procedures will be addressed separately in the UFP-QAPP
- Fieldwork
  - Follows QAPP review and approval
  - Incorporates industry-standard methods and technologies to detect and delineate nature and extent of MEC and MC
  - Changes to the approved approach must be approved and documented
  - Undergoes rigorous QC inspection and monitoring
  - Data obtained is evaluated to ensure objectives have been met



Depiction of Digital Geophysical Mapping Equipment

# Overview of RI Process

- Intrusive Investigations
  - Hand-tool excavations of prioritized digital geophysical mapping or analog anomalies that best represent buried MEC
  - Exclusion zones will be established/maintained
  - Surface-located MEC/MD and subsurface-located MEC/MD and scrap metal will be managed
  - MEC will be treated by blow-in-place (BIP) or consolidated shot
  - All scrap will be inspected, certified/verified and transported for proper final disposition/recycle
- Soil Sampling for munitions constituents (MC)
  - Collected using incremental and composite sampling methods
  - Will be presented in RI QAPP
- RI Report – summarizes fieldwork results

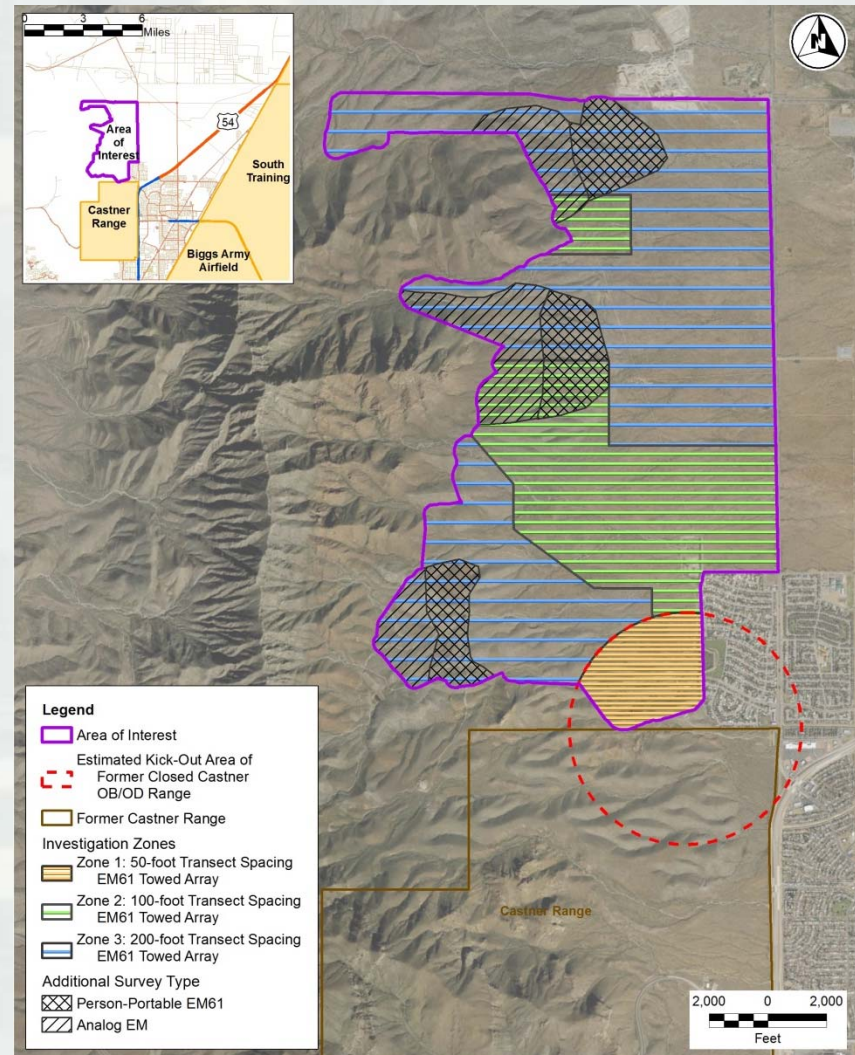
# General Approach – MEC Investigation

For the RI, the AOI will be divided into three distinct transect sampling zones based on the likely distribution of MEC and related subsurface geophysical anomalies.

(Zone 1) 285 acres within the estimated kick-out area of the former OB/OD range, which is the area of the AOI most likely to contain MEC items.

(Zone 2) 1,362 acres in the portions of the AOI that USACE recommended for RI activities based on earlier investigation findings.

(Zone 3) 3,262 acres in remaining portion of AOI.





# General Approach – MEC Investigation Geophysics

- Geophysical System Verification
  - The GSV is a physics-based approach to verify geophysical system functionality prior to the onset of digital geophysical mapping (DGM) activities and throughout the geophysical investigation work.
    - Instrument verification strip
    - Blind seeding program
- Transect-based electromagnetic (EM) surveys will be conducted in each investigation zone.
  - 80% vehicle-towed EM61-MK2 DGM
  - 10% person-portable EM61-MK2 DGM
  - 10% analog survey utilizing handheld EM detectors
- An additional ten acres of transects will be surveyed in the highest density areas, if necessary.
- Subsurface anomalies potentially related to MEC items will be identified and selected for intrusive investigation.

# General Approach – MEC Investigation Anomaly Investigation

- Subsurface anomalies identified in geophysical surveys will be intrusively investigated and anomaly sources will be removed.
  - DGM anomalies will be reacquired with real time kinematic-global positioning system (RTK-GPS) after data processing and analysis and intrusively investigated.
  - Anomalies identified during analog transect surveys will be investigated in real-time and their locations recorded by RTK-GPS.
- Intrusive investigations will be conducted with hand tools utilizing analog EM detectors to assist in anomaly source location.
- Investigation results will be digitally recorded in GPS-enabled handheld tablets with pull-down menus to reduce data entry errors.
- Locations of recovered MEC items will be recorded with RTK-GPS.
- Anomaly resolution will be verified with the instrument initially used to identify the anomaly.

# General Approach – MEC Investigation MEC Management

- Recovered MEC will be destroyed as soon as possible.
  - Recovered MEC deemed by the SUXOS and the UXOSO jointly as “acceptable-to-move” may be relocated within the AOI, away from buildings and public transportation routes as necessary for disposal.
  - Items determined as not “acceptable-to-move” will be BIP.
  - In the event that MEC items cannot be disposed of on the same day, guards (local security firm) will be posted and the items will be left in their field locations until disposal operations can be conducted.

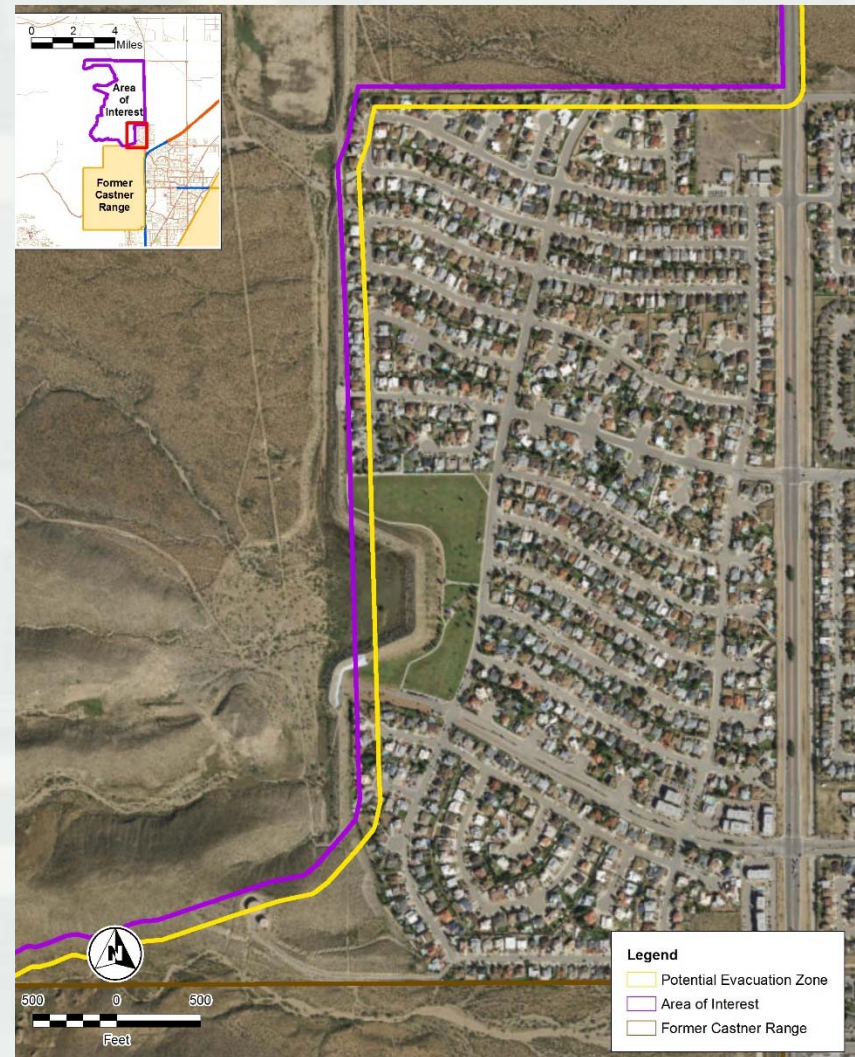
# General Approach – MEC Investigation MEC Management

- Demolition explosive materials will be delivered to the AOI by a licensed explosive dealer on an as-needed basis. No storage of demolition explosives is planned for the AOI.
- In the event that demolition and disposal activities are required within proximity to the adjacent residential community or publicly used facilities, evacuations and temporary closures may be required. These precautions will be detailed in the Community Relations Plan (CRP).
- All material potentially presenting an explosive hazard (MPPEH) will be assessed and its explosives safety status determined and documented as safe before release from DoD control for off-site disposal.
  - MPPEH will be documented by authorized and technically qualified personnel as material documented as safe after a 100% inspection and an independent 100% re-inspection.

# Explosive Siting Plan

In the event that demolition and disposal activities are required that affect the local community:

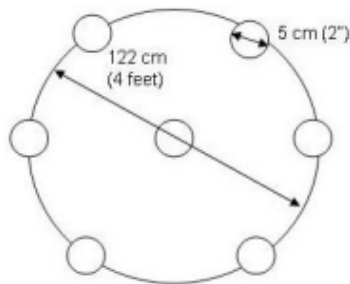
- It is expected that notifications in the form of fliers, social media, emails and/or text messages as well as door hangers will be used to inform affected residents of planned operations. Affected residents will be notified 24 hours before demolition activities.
- Immediately before demolition activities, KEMRON personnel will verify that the area is clear except for essential personnel and will post guards at strategic areas to prevent ingress until said activities are complete.
- Residents will be provided with a pet-friendly rallying point and will be notified again once it is safe to return to their homes.



Neighborhood Adjacent to AOI

# General Approach – MC Investigation

- Only soil samples will be collected. The depth to groundwater in the investigation area (approximately 300-500 feet) precludes migration of MC and no perennial surface water was identified.
- Use a combination of biased composite sampling and incremental sampling (IS) to collect representative soil samples.

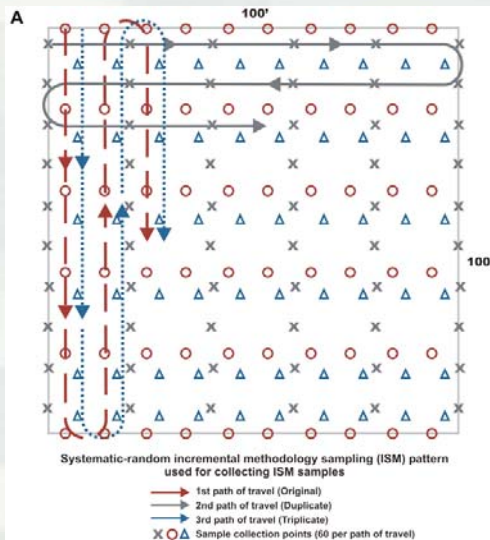


–7-Sample Spoke-and-Hub composite samples will be collected from locations:

- If/where the presence of cracked or leaking MEC items is identified or where detonation activities occur in support of the RI;
- Of each BIP;
- Consolidated shot location (will only be conducted after the last detonation).

# General Approach – MC Investigation

–IS will be collected in known sampling locations such as in proximity to the residential neighborhood adjacent to the AOI or designated camping and picnic areas as well as “worst-case scenarios;” that is, locations most likely to exhibit elevated concentrations of MC.



–A decision unit (DU) size of one acre, comprised of 50 increments, was selected. It is expected that the IS method will be used to collect 30 soil samples, plus applicable QA/QC samples.

–Locations of MEC finds, visual observations, results of the geophysical surveys, and ecological habitat and potential receptors will be considered when selecting DU locations.

# General Approach – MC Investigation

- MC-related metals (antimony, arsenic, copper, lead, and zinc) by Environmental Protection Agency (EPA) Method 6010C and explosives (HMX, RDX, TNT, DNT, NG, PETN, and Tetryl) by EPA Method 8330B. Sampling for perchlorate, associated with propellants, boosters, and flares, is not anticipated.
- The Tier 1 protective concentration levels are the default cleanup standards for the Texas Risk Reduction Program and it is anticipated that the residential soil table will be used for the comparison values of explosives. The background values presented in the 2013 Field Demonstration Report of Incremental Sampling Methodology will be used for the comparison values of metals.
- If elevated concentrations of MC are detected, a vertical and horizontal step-out system will be used to determine the extent of the contamination.



# Feasibility Study

- The FS will develop remedial action alternatives based on the results of the RI.
  - The alternatives considered will include a no action alternative, implementation of institutional controls, surface clearance of the entire AOI, surface and subsurface clearance on those sections of the AOI with a high density of MD/MEC and have a high level of public access.
  - If MC contamination is encountered, the FS will also develop and evaluate alternatives for treatment of the impacted soil.
- The FS will then compare the remedial action alternatives for the AOI North of Castner Range and identify a preferred alternative.
  - The nine CERCLA evaluation criteria will be used in the detailed analysis of alternatives, with an emphasis on implementation ability, short-term and long-term effectiveness in protecting human health and the environment, and feasibility as it relates to the cost of each candidate alternative.

# Proposed Plan

- A PP will be prepared to summarize the results of the FS and to present the preferred remedial alternative for stakeholder and public review and comment.
  - Notices in English and Spanish inviting public review and comment will be placed in local El Paso newspapers to initiate the 30-day public comment period.
  - During the comment period, a public meeting will be held to inform the local community of the proposed actions and to provide the public a forum for participation.

# Decision Document

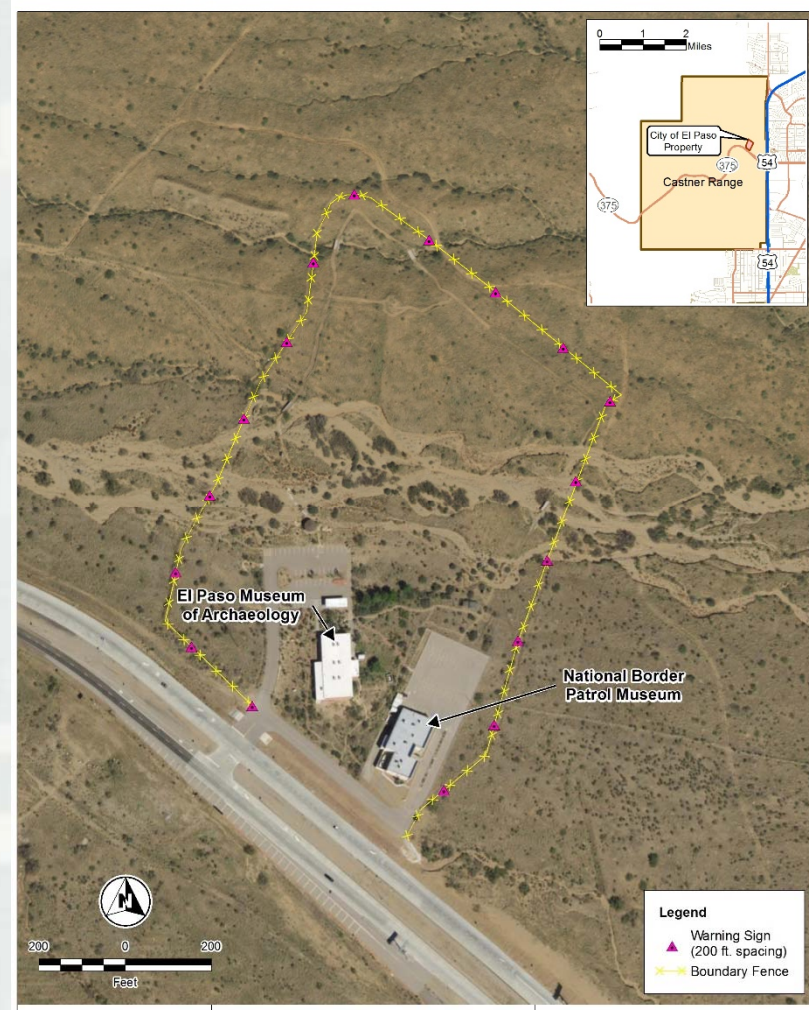
- Once the PP is approved, the DD will be prepared.
  - The Responsiveness Summary compiled from comments received during the PP process will be included as an appendix to the DD.

# Discussion

- **Vegetation Clearing/Grubbing**
  - It is anticipated that minimal vegetation removal will be required to conduct RI field activities.
  - Concerns related to vegetation clearance?
- **Cultural resources**
  - Known historic/pre-historic sites within AOI?
  - Other concerns related to cultural resources?
- **Threatened and Endangered Species**
  - 58 plant/animal species listed in El Paso County. Any present on the AOI?
- **Other constraints to fieldwork**
  - Activities in State Park disrupted by fieldwork (hunting, events, etc.)?

# Fencing and Signage

- Archeology Museum and the Border Patrol Museum located in the Closed Castner Range
  - Boundary Survey
  - Three strands of 12.5 gauge smooth high tension wire
  - Signage will be posted at 200 foot intervals in English and Spanish.



# Estimated Schedule

- ✓ Kick-Off Meeting – *7 December 2016*
- ✓ TPP Meeting – *19 January 2017*
- ✓ Project Management Plan
  - ✓ Final – *17 January 2017*
- ✓ Quality Assurance Surveillance Plan
  - ✓ Final – *17 January 2017*
- Explosives Site Plan
  - ✓ Draft – *3 January 2017*
- Community Relations Plan
  - Draft – *February 2017*
- Historical Records Search
  - Draft – *February 2017*
- UFP-QAPP with APP/SSHP
  - Draft – *February 2017*
- Progress Meeting – *April 2017*
- RAB Meeting – *April 2017*
- Public Meeting – *May 2017*
- **TPP #2 Meeting** – *May 2017*
- Field Kick-off Meeting – *June 2017*
- Conduct RI Field Work and install fencing/signage – *June 2017-September 2017*
- RI Report – *March 2018*
- Progress Meeting – *July 2018*
- FS Report – *August 2018*
- PP – *February 2019*
- DD – *June 2019*
- Prepare and provide access to Administrative Record – *September 2019*

# Next Steps

| Next Step                              | Due Date        |
|--|-----------------|
| Submit TPP1 meeting minutes            | 3 February 2017 |
| Submit Draft Community Relations Plan  | February 2017   |
| Submit Draft Historical Records Review | February 2017   |
| Submit Draft RI Work Plan              | February 2017   |

# Questions/Comments





# Acronyms and Abbreviations

|        |  |         |  |
|--------|--|---------|--|
| AOI    | Area of Interest   | OB/OD   | Open Burn/Open Detonation                          |
| APP    | Accident Prevention Plan   | PA      | Preliminary Assessment                             |
| BIP    | Blow-in-Place  | PMP     | Project Management Professional                    |
| CERCLA | Comprehensive Environmental Response,<br>Compensation, and Liability Act | POC     | Point of Contact                                   |
| CIH    | Certified Industrial Hygienist   | PP      | Proposed Plan                                      |
| CSM    | Conceptual Site Model  | QA      | Quality Assurance                                  |
| CRP    | Community Relations Plan   | QAPP    | Quality Assurance Project Plan                     |
| CSP    | Certified Safety Professional  | QC      | Quality Control                                    |
| DD     | Decision Document  | RA      | Remedial Action                                    |
| DERP   | Defense Environmental Restoration Program                                | RAB     | Restoration Advisory Board                         |
| DGM    | Digital Geophysical Mapping  | RD      | Remedial Design                                    |
| DMM    | Discarded Military Munitions   | RI      | Remedial Investigation                             |
| DoD    | Department of Defense  | RTK-GPS | Real-Time Kinematic - Global Positioning<br>System |
| DU     | Decision Unit  | SI      | Site Inspection                                    |
| EM     | Electromagnetic  | SSHP    | Site Safety and Health Plan                        |
| EPA    | Environmental Protection Agency  | SUXOS   | Senior Unexploded Ordnance Supervisor              |
| FS     | Feasibility Study  | TCEQ    | Texas Commission on Environmental Quality          |
| GSV    | Geophysical System Verification  | TPP     | Technical Project Planning                         |
| IS     | Incremental Sample/Sampling  | UFP     | Uniform Federal Policy                             |
| MC     | Munitions Constituent  | USACE   | United States Army Corps of Engineers              |
| MD     | Munitions Debris   | USAEC   | United States Army Environmental Command           |
| MEC    | Munitions and Explosives of Concern                                      | UXO     | Unexploded Ordnance                                |
| MMRP   | Military Munitions Response Program                                      | UXOQCS  | Unexploded Ordnance Quality Control Specialist     |
| MPPEH  | Material Potentially Presenting an Explosive<br>Hazard                   | UXOSO   | Unexploded Ordnance Safety Officer                 |