



US Army Corps
of Engineers
Los Angeles District



Corps Facts

Mojave Gunnery Range "C"
California City, CA
Fall 2013

Overview

The Department of Defense (DoD) is responsible for environmental restoration of properties formerly owned by, leased to, or otherwise possessed by the U.S. government and under the jurisdiction of the Secretary of Defense. Such properties are known as Formerly Used Defense Sites (FUDS). The Army is the executive agent for the FUDS Program and the U.S. Army Corps of Engineers (USACE) manages and directs the program's administration.

This fact sheet describes the activities that USACE has and will

be conducting at the former Mojave Gunnery Range "C" (MGRC), which is designated as a FUDS Program property. The site is located in the northern portion of Antelope Valley (approximately four miles east of Mojave, CA), and overlaps the southwestern corner of California City, CA. MGRC consists of 20,908 acres that were used for military training from 1944 to 1959. Today, the northeast portion of the site has been used for residential development; however, most of the site remains undeveloped with dirt roads crossing the land.

Safety Counts!

If you suspect that you have encountered any military munitions, be sure to follow the 3Rs of explosives safety.



Recognize you may have encountered a munition.

Retreat from the munition. Do not touch or disturb it; instead move away carefully, walking out the same way you entered the area.

Report what you saw and where you saw it, by calling 911.

Site History

In August 1944, the U.S. Marine Corps acquired approximately 20,683 acres of desert land near Mojave, CA, to be used as an aerial bombing and strafing (firing of automatic weapons from aircraft onto ground targets) range. Manned by approximately 850 officers and men providing support to the Gunnery Range, the Marine Corps Auxiliary Air Station-Mojave was one of the largest air stations on the West Coast.

The Third Marine Aircraft Wing used the range for bombing, rocket and strafing practice five to seven days a week from dawn until sunset. On the outskirts of the bombing range, crews would observe pilot performance and record hits as they were made. During flight training, pilots would check in with the main tower as they flew into the area and tower crews would direct the plane to its target zone.

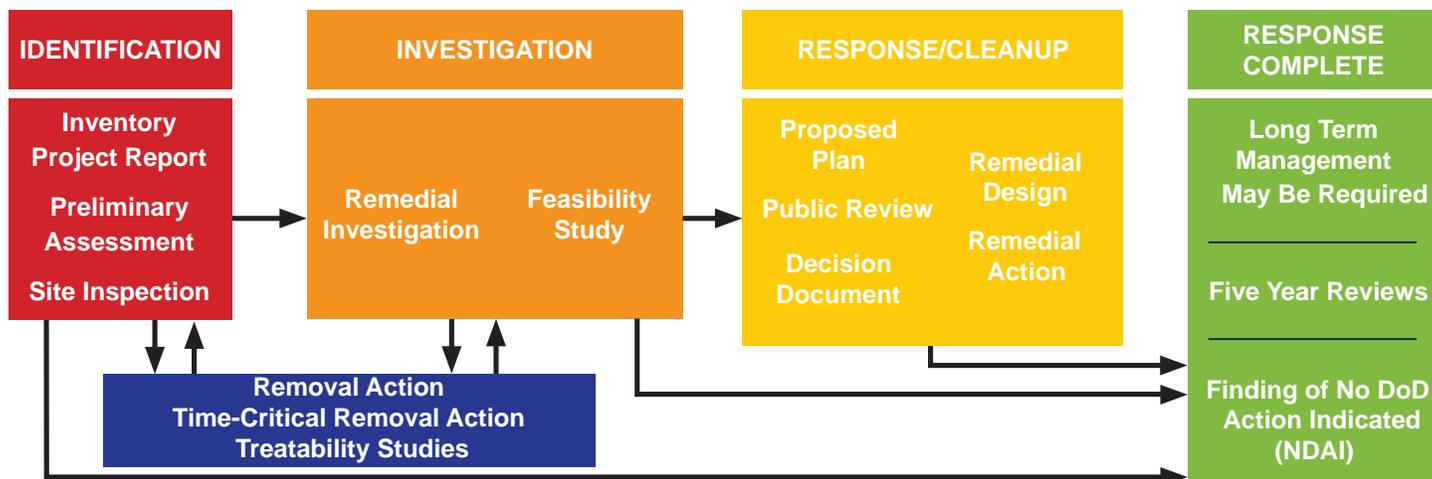


The exact date of closure for MGRC was not disclosed in historical documents; however, the 2003 USACE Archives Search Report estimated that MGRC closed in January 1959.

U.S. Marine Corps flight and ground crew in front of an F4U Corsair airplane. c. 1943.

Source: Land-Sea Discovery Group collection via Mojave Virtual Museum, www.mojave.ca.us.

FUDS Military Munitions Response Program



(U.S. Army Corps of Engineers Environmental Regulation 200-3-1, FUDS Program Policy, May 2004)

As the executing agent for the FUDS Military Munitions Response Program (MMRP), USACE addresses munitions and explosives of concern (MEC), discarded military munitions, and munitions constituents (MC) located on FUDS. The FUDS MMRP follows the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process and involves the following four phases:

1. Identification: USACE identifies properties as FUDS and gathers information about the history and current conditions of each property. To accomplish this, USACE completes an Inventory Project Report (INPR), to verify that the property is eligible for the FUDS Program and to evaluate potential issues or concerns at the site.

A Preliminary Assessment (PA) is performed to collect readily available property and historical information about the site. USACE visits the property to gather information from local residents and government officials, and conducts a limited visual inspection of the property. In addition, USACE identifies potential projects, known as munitions response sites, within the FUDS property and determines whether they require further evaluation.

USACE also performs an MMRP Site Inspection (SI) to collect additional site-specific data and conducts limited environmental

investigations to confirm the presence of military munitions and assess whether the site requires further investigation in the MMRP process.

2. Investigation: USACE conducts a Remedial Investigation (RI) to characterize the nature and threat posed by the military munitions identified during the SI and gathers data necessary to assess the extent to which they pose a threat to human health, safety, or the environment. Next, USACE conducts a Feasibility Study (FS) to ensure appropriate remedial alternatives are developed and evaluated, and an appropriate remedy is selected.

3. Response/Cleanup: USACE uses the information gathered in the previous phases to select an appropriate environmental remedy that is cost effective; protects human health and the environment; meets all state and federal applicable or relevant laws; and uses practical, permanent solutions.

Based on previous inspections, USACE determines if a Removal Action (RA) is warranted. If warranted, USACE follows the RA process, then the project continues to a remedial action response. If an RA is not warranted, the property will automatically move to a remedial action response. USACE's preferred remedy as well as remedial alternatives are presented in a Proposed Plan that is made available for public review and comment. Following this review, a remedy is selected and recorded in a Decision Document. USACE then implements the preferred remedy at the site.

4. Response Complete: Response Complete signifies the remedy is in place and all response objectives identified in the Decision Document have been achieved. The Decision Document also indicates whether long-term management and five-year reviews are required.

Historical Investigations by USACE

Previous Investigations

USACE began work on MGRC with an INPR in 1999, which recommended an ordnance and explosives (OE) investigation.

The 2000 PA determined that the site had been used for military activities that included OE.

The 2003 Archives Search Report (ASR) presented the findings of the historical records search and visual site inspection. Five Munitions Response Sites (MRS) were identified that require a response: MRS-01, -02, -03, -04 and -05.

The 2007 ASR Supplement documented an Aerial Photograph Analysis of the site. Five Areas of Interest (AOI) that may require a munitions response were identified. A field assessment confirmed the findings and AOI-01, -02, -03, -04 and -05 were added to the project.

2011 Remedial Investigation/ Feasibility Study

During the RI, USACE performed surface visual surveys for MEC, subsurface digital geophysical mapping, intrusive investigations, and collected and analyzed soil samples for MC. USACE identified an additional AOI (AOI-06). The following summarizes the RI results.

- *MRS-01, -02, -05, and AOI-03 and -05:* USACE confirmed use as military training targets. In the FS, USACE defined five remedial action alternatives for these locations.
- *MRS-03, MRS-04 and AOI-04:* USACE requires additional information and recommended performing an additional RI/FS at these sites.
- *AOI-01 and -02:* USACE designated a No DoD Action Indicated status.

- *AOI-06:* USACE determined AOI-06 had been used by private munitions contractors after the closure of MGRC; therefore, a recommendation of subsequent inspection activities at AOI-06 occur as a Potentially Responsible Party project.

2013 Proposed Plan and MRS Realignment

The Proposed Plan was created to summarize the remedial alternatives provided by USACE and to present its Preferred Alternative for each MRS to the public for review. A 30-day public comment period was held in conjunction with the Proposed Plan.

After the Proposed Plan, USACE realigned the MRS/AOI numbers for the ten MGRC project areas under the FUDS program. The updated MRSs are depicted in Figure 1.

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Figure 1: Site Map of MGRC

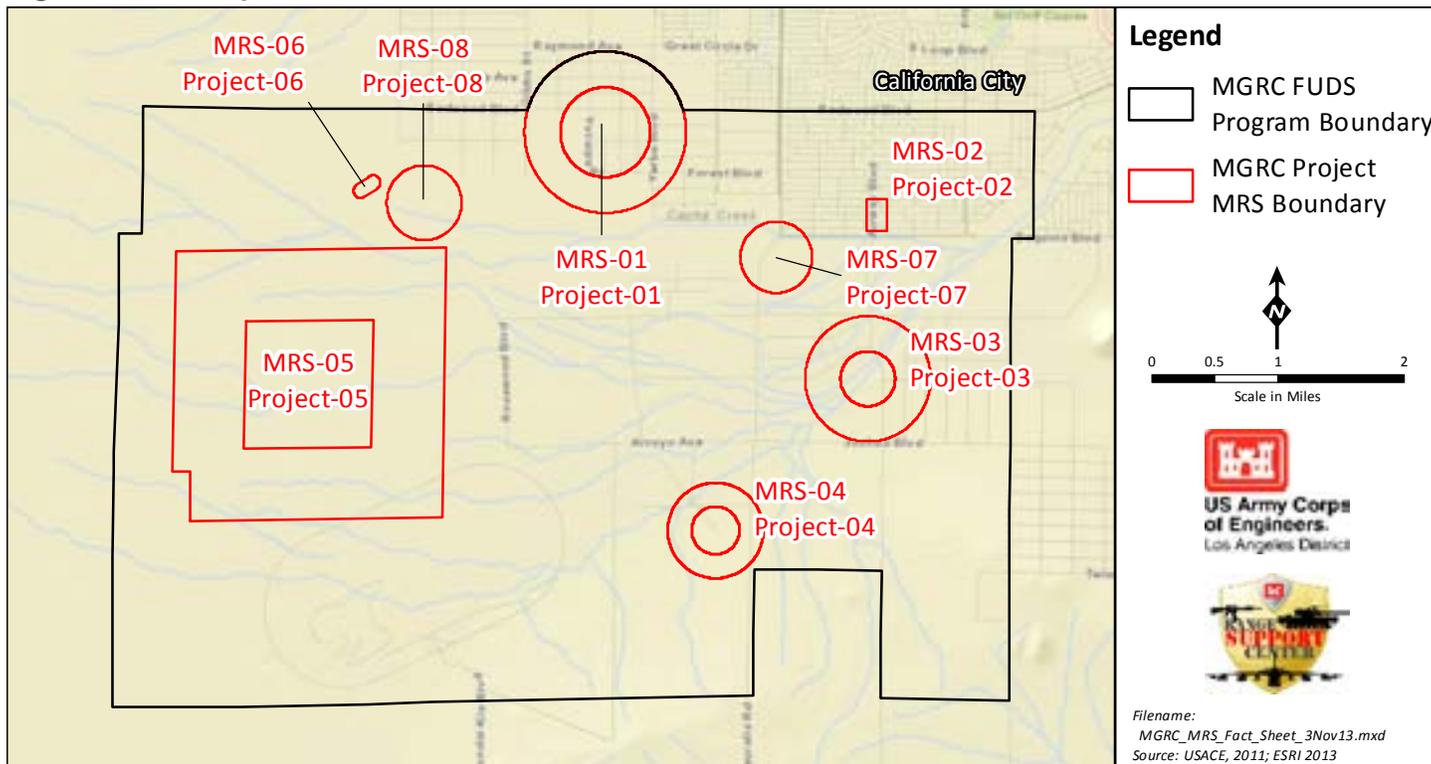


Table 1: Preferred Alternatives Based on the Findings of the RI

Previous Designation	Revised Designation	Preferred Alternative/Recommendation
MRS-01	MRS-05, Project-05	Alternative 3
MRS-02	MRS-01, Project-01	Alternative 4
MRS-03	MRS-02, Project-02	Recommended for new RI/FS
MRS-04	MRS-03, Project-03	Recommended for new RI/FS
MRS-05	MRS-04, Project-04	Alternative 3
AOI-01	Not applicable	Alternative 1
AOI-02	Not applicable	Alternative 1
AOI-03	MRS-06, Project-06	Alternative 3
AOI-04	MRS-08, Project-08	Recommended for new RI/FS
AOI-05	MRS-07, Project-07	Alternative 3

Historical Investigations continued

USACE evaluated the following five possible alternatives for each MRS/AOI.

- Alternative 1 - No Action
- Alternative 2 - Institutional Controls (IC) to Further Protect Current and Future Site Users
- Alternative 3 - Munitions and Explosives of Concern Removal from the Surface with ICs to Further Protect Current and Future Site Users
- Alternative 4 - Digital Geophysical Mapping and Surface/Subsurface Removal of Munitions and Explosives of Concern with ICs to Further Protect Current and Future Site Users
- Alternative 5 - Excavation, Sifting, and Restoration with ICs.

USACE's recommendations for each MRS are displayed in Table 1. The final remedial alternatives will be presented in a Decision Document that will be made available to the public in the MGRC Administrative Record located at the Kern County Library - California City Branch, 9507 California City Blvd., California City, CA.

Follow the 3Rs of Explosives Safety

If you observe any suspected munitions or explosive items, USACE encourages you to follow the 3Rs of Explosives Safety. Please keep in mind, if you didn't drop it don't pick it up.



you may have encountered a munition.



from the munition. Do not touch or disturb it; instead move away carefully, walking out the same way you entered the area.



what you saw and where you saw it to local law enforcement by calling **911**.



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For more information about the MGRC project and USACE's activities, contact:

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