

**ATTACHMENT A
FACILITY DESCRIPTION**

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ATTACHMENT A

FACILITY DESCRIPTION

The following subsections provide a general description of the BMGR and the MTR facility. The following description is intended to acquaint the permit application reviewer with an overview of the facility.

A.1 General Description

A.1.1 Barry M. Goldwater Range

The BMGR consists of a wedge-shaped area in the extreme southwestern corner of Arizona and lies within southern Yuma County and extends eastward into Maricopa and Pima Counties in southwestern Arizona (Exhibit A-1). Exhibit A-2 provides additional information on the shape and location of the BMGR. The BMGR is, and has been, an important facility for training pilots in aerial and air-to-ground combat since 1941. It is highly valued for its year-round flying weather and expansive, unencumbered air and land space that can accommodate a variety of military training needs. This combination of features is unequalled elsewhere in the continental United States. As urban and other development pressures force restrictions on the operation of military aircraft at other range locations, the BMGR will become increasingly vital to the nation's defense.

Acquisition of the BMGR for military aviation training purposes began in 1941, shortly before the United States entered World War II. Congress officially set aside 2.6 million acres of the BMGR with the 1986 Military Lands Withdrawal Act (MLWA) and designated it the Barry M. Goldwater Air Force Range under management of the United State Air Force (USAF). Congress extended authorization of the BMGR once more and re-designated BMGR management responsibilities with the 1999 MLWA. The BMGR is authorized for use by the Secretaries of the Air Force and Navy for 25 years until 2024 and provides that the United States Department of Defense (DoD) may apply for an extension to that authorization should there be a continuing military need for the BMGR beyond 2024. The 1999 MLWA designates the western portion as BMGR-West (Yuma Segment), consisting of 1,017,990 acres with about 186 miles of exterior perimeter, and the eastern portion of the range as BMGR-East (Gila Bend Segment), consisting of a 1,651,235-acre parcel with approximately 280 miles of exterior perimeter. The airspace over the Gila Bend Segment belongs to, and is controlled by, the USAF, while the Yuma Segment belongs to and is controlled by the United States Department of the Navy (Navy) (Exhibit A-1 and Exhibit A-2). Ground access to these segments is also controlled by the agency controlling the overlying airspace. Control by the Navy is administered through MCAS Yuma; Luke Air Force Base (LAFB) administers USAF control.

The BMGR is divided into sub-ranges for specific purposes. There are thirteen (13) separate aerial weapons sub-ranges or target complexes and a drone maneuvering area. Four (4) of the ranges are located in the Yuma Segment and are under the operational control of MCAS Yuma. The four (4) ranges include two (2) manned ranges, and air-to-air gunnery range, and an air

combat maneuvering range. The remaining nine (9) ranges and target complexes plus the drone maneuvering area are within the Gila Bend Segment and are under the operational control of LAFB.

A.1.2 Munitions Treatment Range

Proper management of spent munitions associated with weapons delivery training at the BMGR requires Combined Explosive Ordnance Disposal Unit (CEODU) personnel to periodically clean the sub-ranges and properly dispose of munitions residue. Munitions residue is the inert remains of a munition after it has functioned as designed or has been demilitarized by being subjected to EOD demilitarization procedures. The processes used by MCAS Yuma CEODU personnel at the MTR on the BMGR include open detonation (OD) of explosive ordnance. Typical explosive ordnance items used on the BMGR during military training missions are presented in Attachment B. Neither chemical agent nor chemical or nuclear munitions are used or treated on the BMGR.

MCAS Yuma's CEODU unit is solely responsible for conducting operations on the MTR. CEODU personnel are trained emergency response specialists. An explosives or munitions emergency response specialist is defined by 40 CFR 260.10 as an individual trained in chemical or conventional munitions explosives handling, transportation, render-safe procedures, or destruction techniques. Explosives or munitions emergency response specialists include technical escort unit, and DoD-certified civilian or contractor personnel; and other federal, state, or local government, or civilian personnel similarly trained in explosives or munitions emergency responses. All CEODU personnel referenced in this application meet these requirements as specified in 40 CFR 260.10. Additionally, CEODU personnel have permit-specific training and an appointment letter from MCAS Yuma.

Ordnance disposal occurs in two ways on the BMGR. One procedure is known as target and range clearing. This activity may involve detonation-in-place of ordnance at locations throughout the BMGR with subsequent recycling of inert scrap metal. Clearing munitions from target areas is a necessary adjunct to proper management of ordnance delivery training. In the past, scrap metal collected during range clearing operations was buried on the range. These disposal locations are considered to be solid waste management units (SWMUs) by the ADEQ. Sample data from several of these burial sites including SWMU 11 in the Yuma Segment show that wastes and soil within these burial pits is non-hazardous (Corrective Measure Implementation Report for SWMU11 Dighole, GCE 2012). Currently, inert scrap metal is removed from the BMGR during clearing operations and recycled.

The second disposal activity performed on the BMGR involves OD of ordnance at the MTR. Demilitarization of unserviceable, outdated, or obsolete munitions is an adjunct to proper munitions stockpile management. In addition to treating ordnance stockpiled at MCAS Yuma, the MTR is used to treat ordnance and explosive end items from other military bases and bombing ranges, from local government-owned manufacturing facilities, and from local manufacturers under contract to the United States government located in Arizona and California. No explosives are received from private industry for disposal.

The MTR is located approximately twelve (12) miles southwest of the MCAS Yuma Main Base and two (2) miles south of the Auxiliary Airfield II (Exhibit A-1 and A-2). The MTR, accessed by an unimproved road approximately one-mile long, consists of a reserved area, 1000 meters on each side, located approximately three (3) miles inside the western boundary of BMGR. Three-strand barbed wire and razor wire coils surround the perimeter of the MTR. The access road divides the MTR into east and west portions (Exhibit A-2). Since 1998, no MTR treatment activities have been conducted in the west portion of the MTR.

The former open burn (OB) area is located in the northwest corner of the MTR and consists of clean-closed OB trenches formerly used for small caliber munitions. The trenches were clean closed during 1998 in accordance with federal and state regulations (CDM 2001). A former munition wash area (for pink water treatment) was located just south of the former OB area. The munitions wash area operations ceased and the area was disassembled when the OB area was closed. A RCRA Facility Investigation (RFI) was conducted at the Munitions Wash Area in 2006. The RFI resulted in No Further Action (NFA) findings. ADEQ approved the NFA on November 4, 2011. A proposed munition wash area (for pink water treatment) in the southwest corner of the MTR was assembled, but never used. This area will remain closed and will not be used for munitions treatment.

The OD area encompasses the east portion of the MTR (east of the access road). Currently, there are two (2) main OD areas, the Class A and B detonation area (fragment, non-fragment) and the White Phosphorous detonation area (Exhibit A-3). Each OD area includes several shot-holes or pits. The shot-holes are created by the detonation of unexploded ordnance. The detonation of a bomb creates a pit and subsequent detonation of bombs increases the pit radius and depth. The detonation pits are inspected weekly, after each detonation, and after storm events or high winds. The pits are inspected for integrity, depth and metal fragments (kickouts). If an inspection indicates a detonation pit is unusable, it is abandoned, not repaired. When the pit becomes too deep (i.e., it is unsafe to roll a bomb into, 10 feet or deeper) the pit is backfilled and a new detonation pit/shot-hole is developed. Exhibit A-5 includes the MCAS Yuma CEODU's Standard Operating Procedures (SOP) for the MTR, which provide further detail on the OD operations.

The MTR is located sufficiently within the boundaries of the BMGR to meet the minimum protective distance standard required by AAC R18-8-264.A, and DoD Explosive Safety Board (DDESB) and 40 CFR 264 Subpart EE Standards (Exhibit A-3 and Exhibit A-4). These standards require that OD of waste explosives ranging from 1,000 – 10,000 pounds must be conducted at least 530 meters (1,730 feet) away from the property of others. Additional details concerning the MTR operations are presented in Section 4.

A.2 Topographic and Physiographic Setting

A.2.1 Access Control

The majority of the perimeter boundary of the BMGR is posted with signs noting restricted military property.

Access to the MCAS Yuma MTR is further controlled. The MTR is located off an improved range road (i.e., gravel/asphalt) south of Auxiliary Airfield II. The MTR is accessed via an unimproved road through the loose desert sand. Off-road equipped vehicles are necessary to access the MTR from either direction. The access road is approximately 1-mile long from the north and 1.5 miles long from the south.

The MTR is surrounded by three-strand barbed wire fence. Multiple warning signs in English and Spanish are posted on all four sides of the MTR. In addition, five-foot coils of razor wire surround the exterior of the MTR to further deter unauthorized access. The only access to the MTR is through the gates on the north and south sides of the MTR that are secured with locks. Finally, 50-feet of eight-foot tall chain-link fence is located across the south access road approximately 500-yards south of the MTR with warning signs.

Within the MTR there are no additional security devices. Because of the remoteness of the site and the lack of utility services to the MTR there are no alarms or security lighting. However, nothing remains from the open detonation process that is harmful to human health or the environment. Additional information pertaining to site security is provided in Attachment E.

A.2.2 Structures and Roads

There are two structures located on the MTR. The structures are the emergency safety bunkers consisting of reinforced concrete pipe approximately three feet in diameter and six feet long. The pipe shelters are located on the MTR with the long axis of the pipe perpendicular to the staged detonations. The emergency safety bunkers are accessible from either end for emergency-protection from blasts.

The majority of the 2,029 miles of roads on the BMGR is less than 45 years old, and has generally been established without comprehensive planning. The Lower Gila South Management Plan (Goldwater Amendment) (BLM 1989) presents a six-level road classification scheme for the BMGR. Definitions for these different classes are paraphrased below. The first four road classes are the same as those employed by the American Association of State Highway and Transportation Officials (adopted by the USAF). The latter two classes have been devised for use by the military and have been tentatively accepted as applicable to Cabeza Prieta National Wildlife Refuge by local officials of the United States Fish and Wildlife Service (U of A 1986).

- a. **PRIMARY.** Primary roads include all installation highways serving as main distribution arteries for traffic originating within and outside an installation and that provide access to, throughout, and between various functional areas. Primary roads are paved.
- b. **SECONDARY.** Secondary roads include all installation roads supplementing the primary highway system by providing access to, between, and within the various functional areas. Secondary roads may have a paved or graded soil surface.

- c. TERTIARY. Tertiary roads include all installation roads providing access from other roads to individual units or locations within the various functional areas. Tertiary roads have a graded soils surface.
- d. PATROL. Patrol roads normally include all installations roads planned and designed for use in surveillance or in patrolling areas for security purposes and may be paved or graded soil.
- e. UNIMPROVED. Unimproved roads are dirt roadways that are never maintained, but that are periodically traveled and easily followed.
- f. PRIMITIVE TRACKS. These are dirt roadways that are never maintained and have been rarely or never traveled in recent years. They are in various stages of re-vegetation and soil recovery.

The classification system is based on the design and the intended primary function of the road.

A.2.3 Fire Control Facilities

Because of the sparse vegetation on the BMGR, the fire potential has been rated extremely low. In addition, the Bureau of Land Management believes that the potential for resource damage from fires is minimal, because of the sparseness of fuel for fires that would limit the ability of fire to migrate over a substantial area (BLM 1989).

There are no fire suppression or control facilities at the MTR with the exception of portable fire extinguishers that are standard equipment on the CEODU personnel vehicles.

A.2.4 Loading and Unloading Areas

Loading of munitions for treatment is not conducted on the MTR. No specific facility exists for the unloading operations; these activities are conducted on the MTR in the immediate vicinity of the specific treatment unit to be used (e.g., adjacent to the detonation pit).

A.3 Traffic Considerations

This section addresses traffic patterns, traffic control, access road surfacing, and load-bearing capacities.

A.3.1 Traffic Patterns

Traffic patterns related to MCAS Yuma MTR operations are elementary and can be followed on Exhibit A-2. From the MCAS Yuma Main Base, EOD transports travel south on Avenue 3E to County 19th Street. Traffic enters the BMGR on County 19th Street traveling east and proceeds to the Auxiliary Airfield II, where the road turns south. Just south of Auxiliary Airfield II, traffic leaves the secondary toad to the unimproved MTR access road. Vehicles proceed south to the

MTR (approximately one mile), offload explosive material at the respective treatment area, and withdraw to the designated control point. Ordnance is typically transported using EOD's one-ton pickup trucks; however, on occasion five-ton tactical trucks may be used. Because items are separated by compatibility, the number of transport trucks or trips required depends upon how many incompatible groups of explosives are scheduled for treatment (40 CFR 177.848). The gross weight of the items transported does not exceed the payload capacity of the transport vehicle.

A.3.2 Traffic Control

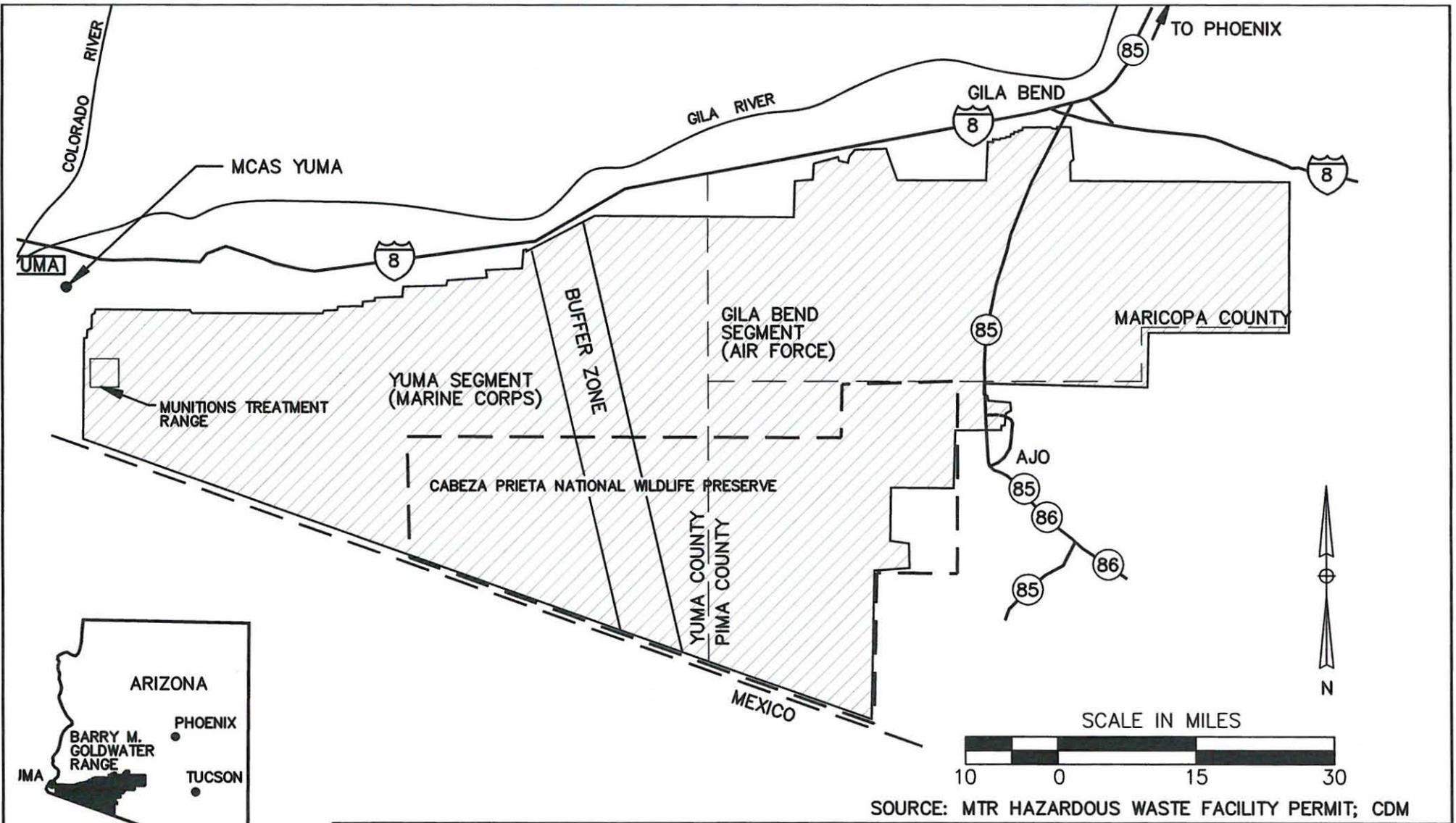
Traffic control at the MTR is maintained by blocking access (north end) to the operations area and maintaining locked gates on the south end. A red flag is raised at both the north and south ends of the MTR during OD operations until EOD personnel determine that the detonation is completed and no hazards remain. EOD personnel may require that red flags be raised for longer periods of time or at other times, at their discretion, based on judgment of health and safety concerns.

A.3.3 Access Road Surfacing

Access to the MTR is by secondary roads from the surrounding agricultural properties on County 19th Street through a posted fence line and then by an unimproved road to the designated area. Elsewhere on the BMGR, CEODU vehicles also primarily use tertiary roads for travel to various functional areas. For target and range clearing operations, vehicles will routinely operate on lesser categories of road surface, including unimproved roads and primitive tracks.

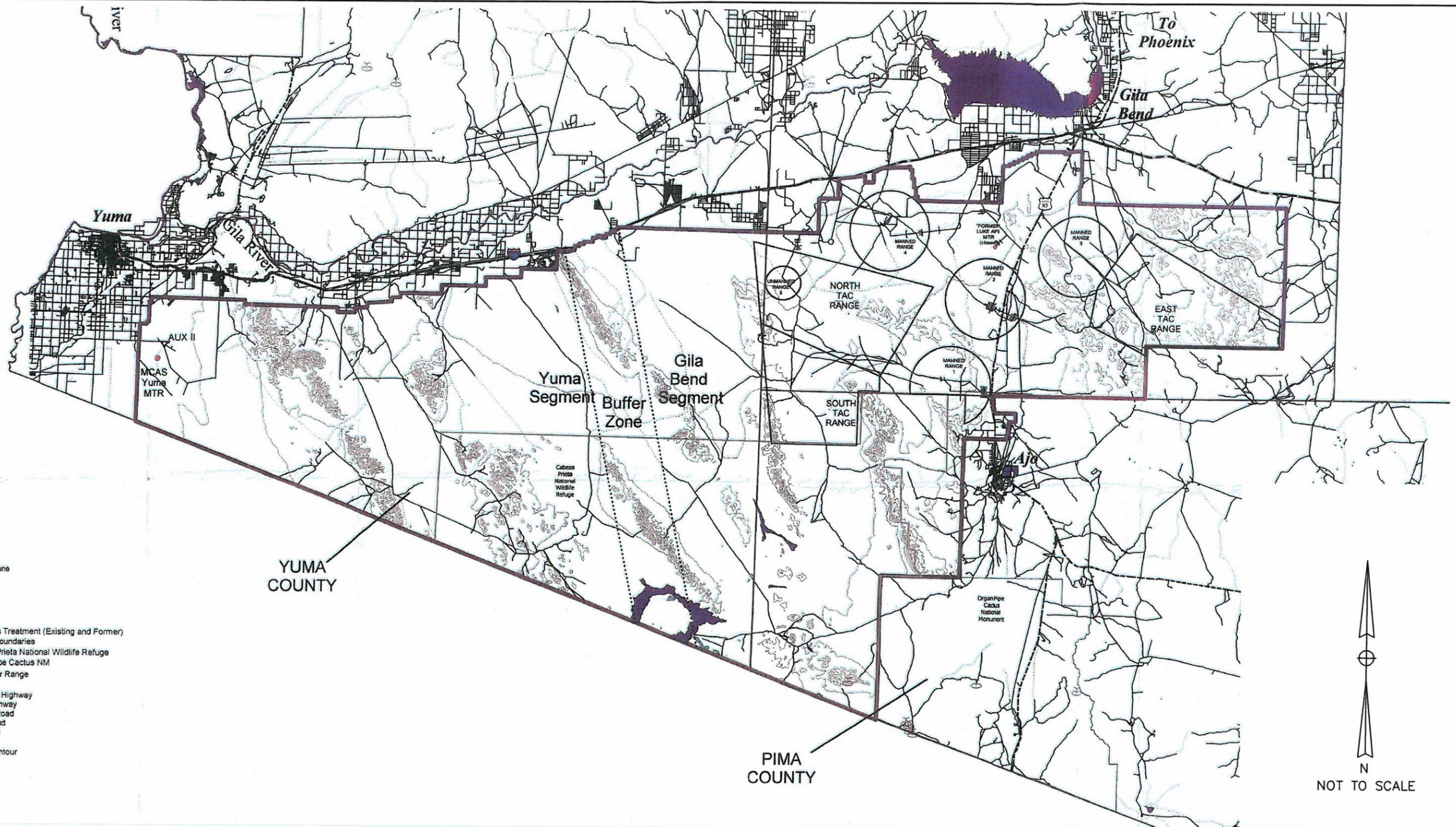
A.3.4 Load-Bearing Capacity

The military vehicles used in the various operations on the BMGR are matched to the terrain to be covered and, consequently, the load-bearing capacity of the various surfaces is sufficient.



LOCATION PLAN

PREPARED BY		AREA LOCATION MAP			
 1851 W. 24th Street YUMA, ARIZONA 85364 (928) 317-1401 Email: gce@gcepc.com		MUNITIONS TREATMENT RANGE BARRY M. GOLDWATER RANGE MCAS YUMA, YUMA, ARIZONA			
SIZE	PROJECT NO.	PROJECT MANAGER		REV	
-	10GC007	STACY GUTIERREZ		0	
GCE PROJECT NO:	10GC007	SCALE	DATE	DWG	EXHIBIT A-1
	NTS	DECEMBER 2013	DWG		

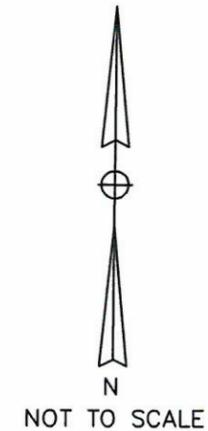


Legend

- Buffer Zone
- Ranges
- Streams
- Playas
- Lakes
- Springs
- Munitions Treatment (Existing and Former)
- County Boundaries
- Cabeza Prieta National Wildlife Refuge
- Organ Pipe Cactus NM
- Goldwater Range
- Roads**
- Interstate Highway
- State Highway
- County Road
- Local Road
- Jeep Trail
- Vague
- 100 m Contour

YUMA COUNTY

PIMA COUNTY



RANGE LAYOUT MAP

MUNITIONS TREATMENT RANGE
BARRY M. GOLDWATER RANGE
MCAS YUMA, YUMA, ARIZONA

SIZE	PROJECT NO.	PROJECT MANAGER		REV
-	10GC007	STACY GUTIERREZ		0
SCALE	NTS	DATE	DECEMBER 2013	DWG
				EXHIBIT A-2

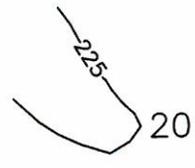
PREPARED BY:



THE USE OF THESE PLANS AND SPECIFICATIONS SHALL BE RESTRICTED TO THE ORIGINAL USE AND MODIFICATIONS HERETO AS SPECIFICALLY LAINED BY THIS USER. THESE SPECIFICATIONS, AS PREPARED BY GCE, ARE THE PROPERTY OF GCE AND SHALL REMAIN THE PROPERTY OF GCE. NO PART OF THESE PLANS AND SPECIFICATIONS SHALL BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF GCE.

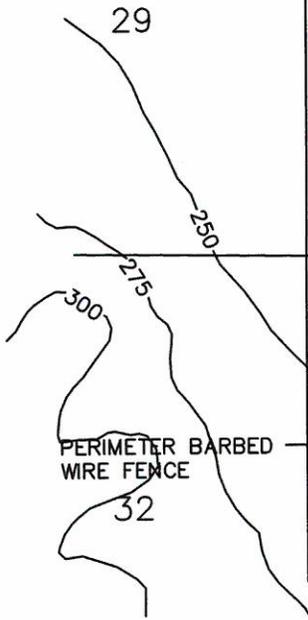
COUNTY 19th STREET

← TO AVENUE 3E
← TO WESTERN RANGE BOUNDARY



TOWNSHIP 10 S

29



PERIMETER BARBED WIRE FENCE

21

AUXILLARY AIRFIELD II
(AUX II)

22

28

MTR ACCESS ROAD (UNIMPROVED)

RANGE ROAD (ASPHALT)

27

SECURED ACCESS GATE

ACCESS ROAD WITHIN MTR BOUNDARY

MUNITIONS TREATMENT RANGE

33

SECURED ACCESS GATES

RANGE 22 W

34



NOT TO SCALE

SOURCE: MTR HAZARDOUS WASTE FACILITY PERMIT; CDM

PREPARED BY



1851 W. 24th Street
YUMA, ARIZONA 85364 (928) 317-1401
Email: gce@gcepc.com

SITE LOCATION MAP

MUNITIONS TREATMENT RANGE
BARRY M. GOLDWATER RANGE
MCAS YUMA, YUMA, ARIZONA

SIZE	PROJECT NO.	PROJECT MANAGER	REV
-	10GC007	STACY GUTIERREZ	0

GCE PROJECT NO: 10GC007

SCALE	DATE	DWG	EXHIBIT A-3
NTS	DECEMBER 2013		



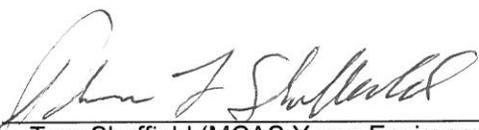
Exhibit A-5

Combined Explosive Ordnance Disposal Unit Standard Operating Procedures

(2013)

MTR STANDARD OPERATING PROCEDURES
COMBINED EXPLOSIVE ORDNANCE DISPOSAL UNIT (CEODU)
MUNITIONS TREATMENT RANGE (MTR)

Marine Corps Air Station Yuma

Approved by: 
Tom Sheffield (MCAS Yuma Environmental)

Approved by: 
MSgt David Gravley (MCAS Yuma EOD)

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LISTING OF REFERENCES

- a. AEODPS 60-series publications
- b. NAVSEA OP 3565 (HERO Manual)
- c. NAVSEA SW020-AG-SAF-010 (Transportation Safety Handbook)
- d. NAVSEA SW020-AF-HBK-010 (Drivers and Inspectors Manual) Glove Box Edition
- e. NAVSEAINST 8020.14 Shore Station Explosives Safety Inspections
- f. MCO 3571.2G Explosive Ordnance Disposal Program
- g. DoDDIR 4715.11 Explosive Safety CONUS (Ranges)

1.0 Overview

This document has been prepared to present the Standard Operating Procedures (SOPs) to be employed specifically at the Marine Corps Air Station (MCAS) Yuma- Munitions Treatment Range (MTR). All hazardous waste treatment operations completed at the MTR will be conducted in accordance with this SOP, in conjunction with approved Operation Orders, Lesson Plans, and Disassembly and Inerting Procedures for non-emergency explosive operation and training involving live ordnance conducted at the MTR.

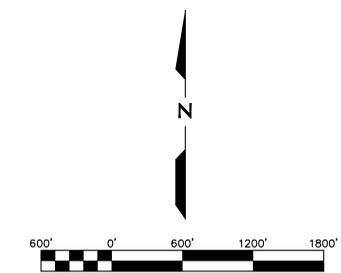
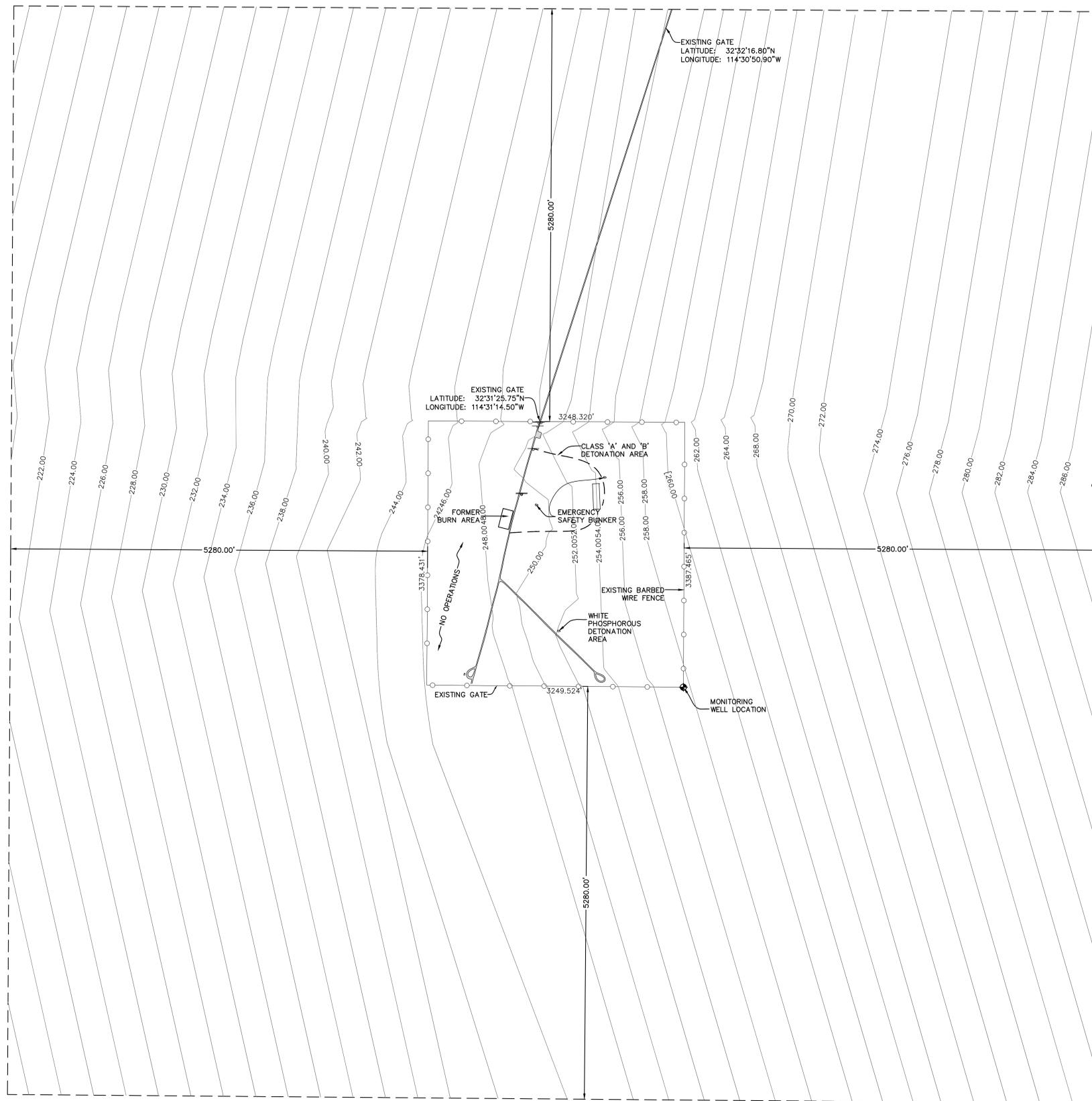
The MTR is a hazardous waste treatment facility, as defined by 40 CFR Part 264; and as such, is operated in accordance with an Arizona Hazardous Waste Management Act (AHWMA) Permit. Munitions Treatment through open detonation (OD) is permitted on the MTR. The MTR has a 3,000 pound net explosive weight (NEW) limit per open detonation.

2.0 Prohibited Activities

The following specific operations are PROHIBITED on the MTR:

1. Waste storage is prohibited;
2. Treatment of infectious waste, chemical or biological munitions is prohibited;
3. Treatment of radioactive materials is prohibited;
4. Treatment of any wastes that cannot be detonated is prohibited;
5. Treatment of free liquids is prohibited;
6. Treatment of shipping containers and ordnance packing materials is prohibited;
7. Munition operations > 3,000 lbs Net Explosive Weight (NEW) is prohibited;
8. Operations west of the MTR access road are prohibited (Figure 1);
9. White Phosphorus operations are prohibited in the Fragmentation Area and the Class A & B Detonation Area;
10. Operations after daylight hours and during electrical/ thunderstorms are prohibited.

FIGURE 1
MTR SITE MAP



TOPOGRAPHIC MAP/SITE MAP			
MUNITIONS TREATMENT RANGE BARRY M. GOLDWATER RANGE MCAS YUMA, YUMA, ARIZONA			
SIZE	PROJECT NO.	PROJECT MANAGER	REV.
-	10GC007	STACY GUTIERREZ	0
SCALE	DATE	DWG	FIGURE 1
NTS	DECEMBER 2013		

3.0 Required Qualifications for Conducting Operations on the MTR

Only personnel who are qualified and authorized in accordance with Reference f (*MCO 3571.2G Explosive Ordnance Disposal Program*), may conduct treatment operations at the MTR. These qualified EOD personnel must meet the requirements listed in 40 CFR 260.10 for explosives/munitions emergency response: an individual trained in chemical or conventional munitions or explosives handling, transportation, render-safe procedures, or destruction techniques. This requirement is met through basic NAVSchool EOD training. Personnel conducting treatment operations on the MTR must have a letter of appointment from MCAS Environmental.

Additionally, personnel operating on the MTR must comply with the requirements of 29CFR 1910.120(e) and 40CFR 264.16 which require:

1. 40-hour course on Hazardous Waste Management
2. Annual 8-hour refresher courses on Hazardous Waste Management

4.0 Security/Inspections

Security of the MTR is provided using the following measures:

1. Limited Access- The MTR operating area is accessed through one of two gates. Gates are closed and locked when the range is not in use.
2. Mandatory Weekly Inspections- EOD must inspect the MTR weekly to:
 - a) Identify evidence of unauthorized entry within MTR boundaries
 - b) Check condition of warning signs, boundary fences, and gates
 - c) Maintain overall readiness of the MTR
 - d) Check condition of access and periphery roads

All inspections must be documented on a Call Sheet and MTR Inspection Checklist. This required paperwork must be maintained in the CEODU Operations and Inspections Log. ADEQ can inspect the MTR facility and MTR permit records during normal business hours.

5.0 Operations

5.1 General

Each explosive operation is unique. Therefore, a detailed Operation Order, Lesson Plan, or Disassembly and Inerting Procedure is required, in addition to this SOP, for non-emergency EOD operations and training involving live ordnance. The Operation Order,

Lesson Plan, or Disassembly and Inerting Procedure will cover operation specific policies and procedures that cannot be delineated in this manual.

Review and approval of Operation Orders, Lesson Plans, and Disassembly and Inerting Procedures is delegated to the OIC of the EODU. This SOP, together with approved Operation Orders, Lesson Plans, or Disassembly and Inerting Procedures will serve as an SOP for non-emergency explosive operation and training involving live ordnance conducted at the MTR.

5.2 Hours of Operation

Routine demolition and training operations will be conducted only during normal work hours, sunrise to sunset, Monday through Friday.

5.3 Personnel Roles and Responsibilities

For every non-emergency operation (including training), at least three qualified personnel must be present: an OIC (who may also assume OpsO responsibilities), an RSO, and a Naval Medical Corpsman (or equivalent).

5.3.1 Officer in Charge (OIC)

The OIC is responsible for the organization and safe conduct of all operations. The OIC will be EOD-qualified. Operation Orders, Lesson Plans, or Disassembly and Inerting Procedures for the operation will designate the OIC.

5.3.2 Operations Officer (OpsO)

The OpsO is responsible for assisting the OIC with the organization and safe conduct of all operations. Operation Orders, Lesson Plans, or Disassembly and Inerting Procedures for the operation will designate the OpsO.

5.3.3 Range Safety Officer (RSO)

The RSO will be EOD-qualified. Operation Orders, Lesson Plans, or Disassembly and Inerting Procedures for the operation will designate the RSO.

5.3.4 Naval Medical Corpsman

A Naval Medical Corpsman, or equivalent, will be present anytime munitions treatment or other explosive operations are being conducted at the MTR. If the Naval Medical Corpsman (or equivalent) leaves the site, the operation must cease.

5.4 Scheduling/Range Utilization Requests

5.4.1 By Military Organizations

- a. Requests for use by military personnel other than EOD will be routed through the MCAS Yuma EOD Officer.
- b. Each using unit must provide their own range safety officer.
- c. Each unit must provide their own corpsman, safety vehicle, and Class V (W) materials.
- d. A qualified representative from MCAS Yuma EOD will be present during all operations on the MTR.

5.4.2 By Non-Military Organizations.

- a. Requests will be forwarded, through MCAS Environmental and CEODU to the Commanding Officer, MCAS Yuma (Operations Officer).

5.5 General Safety Precautions

Review all general safety precautions applicable to the conduct of explosive operations on the MTR as listed in the following references:

- b. NAVSEA OP 3565 (HERO Manual)
- c. NAVSEA SW020-AG-SAF-010 (Transportation Safety Handbook)
- d. NAVSEA SW020-AF-HBK-010 (Drivers and Inspectors Manual) Glove Box Edition
- e. NAVSEAINST 8020.14 Shore Station Explosives Safety Inspections
- f. MCO 3571.2G Explosive Ordnance Disposal Program
- g. DoDDIR 4715.11 Explosive Safety CONUS (Ranges)

Specific safety precautions for each operation will be annotated in the Operation Order, Lesson Plan, or Disassembly and Inerting Procedure pertaining to the specific operation.

In the case of an accident, incident, or emergency mishap, the RSO is responsible for ensuring that all operations cease immediately, the OIC is responsible for mustering the onsite personnel and conducting a head count, and the Naval Medical Corpsman is responsible for initiating a MedEvac, as necessary.

5.5.1 Safety Equipment

- a. The following safety equipment is required for all operations on the MTR:
 - i. Safety Vehicle equipped with:
 - a) Radio
 - b) Emergency lights
 - c) Cellular phone
 - d) Siren
 - e) Shovels
 - f) Fire extinguishers
 - ii. Medical kit
 - iii. Hand-held radios
 - iv. Portable Eyewash
 - v. 5 gallon container of water

Safety equipment, beyond what is listed above, required for each operation will be based on the operation being conducted. Required safety equipment will be listed in the Operation Order, Lesson Plan, or Disassembly and Inerting Procedure pertaining to the specific operation.

5.6 Communication

All range operations require two forms of communication. A minimum of one handheld radio (maintained by the RSO) and one cell phone will be tested as operational before each range operation. Emergency numbers will be stored on the cell phone. All personnel will be familiar with radio and phone.

To establish two-way communication for every operation, EOD personnel must contact Range Scheduling or Air Traffic Control (via cellular phone or radio) to notify them of the start of operations prior to arriving at the MTR. Operations will not begin until two-way communication is established. If during an operation, two-communication is lost, all operations will cease until positive communications are re-established.

5.7 Security/Warning Signals

Prior to the immediate initiation of an open pit detonation, the following actions will be taken:

(1) The red "Baker" flags are raised at the entrance gates to the MTR. The RSO will conduct a communications check with all personnel on the range. A visual check of the perimeter will be done to establish that no unauthorized personnel are present on the range.

- (2) The range access road will be blocked to ensure no one enters the range during the detonation.
- (3) The siren on the EOD vehicle will be sounded for one minute prior to the first detonation only.
- (4) A "fire in the hole" will be sounded 3 times prior to every detonation.
- (5) For misfires, the following wait times apply: Time Fuse and non-electric blasting cap-60 minutes, shock tube (NONEL)-30 minutes, and electric blasting cap-30 minutes. If combination-firing systems are employed, wait the maximum wait time, i.e. electric caps into NONEL or sensitized detonating cord will require a 60-minute wait time.

5.8 Receipt of Hazardous Waste

5.8.1 Manifested Hazardous Waste

Manifested hazardous waste received at the MTR for treatment will be handled following 40 CFR 264.71. The list of Munitions Inventory and Paperwork tasks is provided to assist the OpsO while performing these tasks. If questions arise while processing EPA Form 8700-22A, Uniform Hazardous Waste Manifest or any of the paperwork, immediately request assistance from the OIC and the Environmental Department.

5.8.2 Un-manifested Waste

Un-manifested waste may be accepted at the MTR. Prior to accepting un-manifested waste, assistance will be requested from the Environmental Department. The Environmental Department will approve/disapprove all requests concerning un-manifested waste. If the request is approved, the Environmental Department will complete the required paperwork and assist the OIC/OpsO to ensure all requirements of applicable law are met.

5.8.3 Land Disposal Restrictions

For treatment operations, the generator must provide a Land Disposal Restriction (LDR) Notification to the EODU. This is a one-time requirement for each generator and each waste stream, i.e., if the generator has previously sent a specific waste to the MTR for treatment, then the LDR notification requirement has already been met. For new generators and for new waste streams (i.e., new waste characteristics), the LDR notification must accompany the Uniform Hazardous Waste Manifest.

5.9 Storage

There will be no storage hazardous waste on the MTR.

5.10 Treatment Procedures

Specific procedures used for munitions treatment depend on the amount and type of munitions to be treated and explosives to be used. The Operation Order, Lesson Plan, or Disassembly and Inerting Procedure, per references (a) through (f), and other EOD publications, and technical manuals will be used to plan the appropriate treatment strategy.

5.11 Backfilling

No backfilling of shot holes shall occur without notification to MCAS Environmental. Soil within the hole must be sampled prior to backfill in accordance with the requirements of the MTR RCRA Permit.

MCAS Environmental schedules and oversees sampling event. An EOD escort is required for all sampling events. MCAS Environmental will coordinate for EOD escort.

6.0 Recordkeeping

6.1 Operating Records

Written operating records of all operations conducted at the MTR will be maintained in the Operations and Inspection Log. The following information must be recorded and maintained in the operating record until the facility is closed:

1. The quantity of hazardous waste received, the specific manifest document numbers (if the waste was accompanied by a manifest), the date of its treatment, and the amount/type of explosives used will be recorded on or attached to the Commitment Sheet.
2. The hazardous waste treatment location (i.e., the MTR).
3. Records and results of waste analyses and trial tests as available.
4. Summary reports and details of all incidents that require implementing emergency procedures as specified in 40 CFR 264.56 (i).
5. Records and results of inspections as required by 40 CFR 264.15(d).
6. Monitoring, testing, or analytical data, and corrective action when required (maintained by MCAS Environmental).
7. In the event of accident/incident, all investigation reports will be maintained in the operating log.

6.2 Training Records

In compliance with 40 CFR 264.16(e) and reference g.- (*DoDDIR 4715.11 Explosive Safety CONUS (Ranges)*), personnel training records will be maintained for a period of five years after personnel have been transferred or separated from this command. The following information will be contained in the training records:

1. Letters of appointment with job description and responsibilities.
2. Copy of graduation certificate for the 40-hour course on Hazardous Waste Management.
3. Copy of 8-hour annual refresher course certification.
4. Copy of graduation certificate from the Naval Explosive Ordnance Disposal School and refreshers.