

ATTACHMENT E
PROCEDURES TO PREVENT HAZARDS

Table of Contents

Section	Page
E.1 Security Procedures and Equipment	1
E.2 General Inspection Requirements	2
E.3 Preparedness and Prevention	3
E.4 General Hazard Protection	4
E.5 Prevention of Accidental Ignition or Reaction of Wastes	5

LIST OF EXHIBITS

Exhibit E-1 MTR Inspection Checklist

ATTACHMENT E

Procedures to Prevent Hazards

The information provided in this section is submitted in accordance with the requirements of 40 CFR 270.14(b)(4), (5), (6), (8), and (9); 40 264.14; 40 264.15; 40 264.17; and 40 264, Subpart C. This section addresses security procedures, preparedness and prevention requirements, general hazard prevention, and prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes.

E.1 Security Procedures and Equipment

The BMGR has artificial or natural barriers that completely enclose the MTR. The MTR is completely surrounded by a three-strand barbed wire fence and 5-foot tall coils of razor wire. Gates on the north and south sides of the MTR and one-mile north and south of MTR on the MTR access road are all locked. Fences do not completely surround the BMGR, but segments of fence are placed at certain recognized entry points to warn of impending entry to a controlled location. Natural barriers of mountains and inhospitable desert also serve to control entry to the BMGR. Only selected sections of the BMGR are accessible to the public. Public (e.g., hunters) access to areas of the range that are inactive is granted after obtaining a "hold harmless" agreement from MCAS Yuma's Range Management Office. However, not all sections of the BMGR are accessible to the public. Warning signs are legible from 25 feet and are posted at all BMGR gates, on the range boundary south of Interstate 8, and on the fence surrounding the MTR. Warning signs are printed in both English and Spanish.

The CEODU teams do not maintain permanent stations on the MTR. Personnel travel from the MCAS Yuma Main Base to perform scheduled operations. During treatment operations there is controlled entry into MTR. At the end of these operations, CEODU personnel return to MCAS Yuma Main Base. After every detonation CEODU personnel enter the MTR only after 24 hours have elapsed. Access to the MTR is not manually controlled when CEODU personnel are not present. However, since no explosive ordnance is stored onsite and any potentially hazardous residues generated during the treatment process are collected and subsequently treated, on-site security between operations is not a significant concern.

The OD units have scheduled operations, and with respect to timing of these operations, security procedures are strictly followed. The waste is detonated almost immediately after it is brought to the site; therefore, there are no security requirements for storage of reactive waste prior to disposal. Hazardous wastes in route to the MTR are subject to 49 CFR 172 Subpart I, Security Plan Requirements.

The CEODU SOP (Attachment A, Exhibit A-5) requires that for every non-emergency operation (including training), at least two EOD personnel must be present: an OIC and a Range Safety Officer (RSO). In addition, a Naval Medical Corpsman must also be present. The specific responsibilities of each EOD personnel are detailed in CEODU SOP (Attachment A, Exhibit A-5).

Range Management at MCAS Yuma is notified upon arrival of the CEODU team at the MTR and before any explosive initiation. Radio contact with Range Management is maintained throughout the operation. A first aid kit and medical personnel (Naval Medical Corpsman) are onsite during all treatment operations. Procedures for the evacuation of injured personnel during emergency situations are included in Section 5.5 of the CEODU SOP (Attachment A, Exhibit A-5).

E.2 General Inspection Requirements

The MTR is inspected on a weekly basis to ensure that no unauthorized personnel have trespassed within MTR boundaries, check the condition of all warning signs, boundary fences, and gates, maintain the overall readiness of the MTR, ensure the MTR's preparedness in the event of emergency, and check the condition of access and periphery roads. Documentation of each inspection is recorded in the MTR Inspection Checklist (Exhibit E-1). Security devices, including fences, signs, and gates are also inspected weekly. Range areas, including main and perimeter roads, gate area, flag poles, and periphery are inspected monthly. Communications equipment (radios and cell phones) and safety and emergency equipment, such as fire extinguishers, first aid equipment and emergency crew shelters are inspected before and after each use. After each inspection, the completed MTR Inspection Checklists are filed in the operating record stored at the CEODU building.

Another inspection item is to verify that vegetation has not encroached on these locations. Since this area is comprised of sand dunes, the re-vegetation potential is minimal.

Vehicles used to transport demolition materials, explosives, and personnel are inspected prior to transporting explosives and inspections per the Navy's Shipping Inspector's Manual for Ammunition, Explosives, and Related Hazardous Materials (Attachment B, Exhibit B-7). The CEODU crew assigned to each truck will clean and service it at the end of each day's operations. Additionally, they will draw and stow any required replacement hardware, such as chains or shovels, and inform the OIC of any expenditures. If a vehicle breakdown occurs during operations, the crew will report it to the OIC for call-in to mobile maintenance.

If inspections reveal that non-emergency maintenance is needed at the MTR, then CEODU personnel will initiate immediate action(s) to preclude further damage and to reduce the need for emergency repairs. If a hazard is imminent, or has already occurred during the course of an inspection, or any time between inspections, then remedial action will immediately be taken in accordance with the Contingency Plan. Appropriate authorities will be notified according to the Contingency Plan (Attachment F). In the event of an emergency involving the release of hazardous constituents to the environment, efforts will be directed towards containing the hazard, removing it, and subsequently decontaminating the affected area as outlined in the Contingency Plan (Attachment F).

E.3 Preparedness and Prevention

The MTR is designed and operated to minimize the possibility of any unplanned release of hazardous waste to the environment. Specific operating procedures include detonation of waste ordnance immediately upon arrival at the MTR, regular inspections, treatment of hazardous (including reactive) debris from detonation operation, and collection of non-hazardous debris for recycling.

An RSO is present during all MTR operations. The RSO's responsibilities are detailed in the CEODU SOP (Exhibit A-5). They include, but are not limited to:

- Overseeing all safety regulations and ensuring that the required safety equipment is used.
- Accounting for all explosives treated and completing the Commitment Sheet (Exhibit A-5).
- Conducting a thorough safety briefing per the CEODU SOP for all CEODU personnel involved in the operation.
- Verifying that two-way communication checks are conducted prior to conducting the operation.
- Providing the Naval Medical Corpsman with a copy of the Emergency Procedures.
- In the event of an emergency or accident, verifying that all operations have stopped, assisting in the initiation of emergency procedures, and following the directions of the OIC.

In addition, the OIC is responsible for ensuring that pre-operation tasks, range operation tasks, and post-operation tasks are completed before, during, and after every MTR event to ensure preparedness and to prevent emergencies from occurring, recurring, or spreading to other parts of the facility.

Because of the inherent dangers involved in CEODU operations, it is imperative that adequate two-way communications be available during all operations. Cellular phones or radios will be used as means of two-way communication. This allows communications with safety networks including Range Operations, Range Scheduling, Air Traffic Control, CEODU, and Search and Rescue (SAR) (in the event of a medical evacuation [MEDEVAC]).

To establish two-way communication for every operation, CEODU personnel contacts 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-way communication is lost, all operations will cease until positive communications are re-established.

If re-establishment is unsuccessful, Range Management will dispatch a vehicle and/or helicopter to the MTR to ensure that there has not been a mishap. If the Naval Medical Corpsman, or the OIC in his absence, decides to MEDEVAC injured or sick personnel, he will notify the CEODU by radio (primary) or cellular phone (alternate). He will provide information detailing the number of personnel injured, a brief description of the incident and nature of injuries, name, rank, social security number (SSN)/military occupational specialty (MOS), unit for each injured person, location and grid coordinates, type of MEDEVAC being requested (air or ground), and where the CEODU safety vehicle will meet the ambulance, or how the landing zone will be marked (smoke, truck, air panel, etc.).

Two fire extinguishers (1 water [9.5 pounds] and 1 dry chemical [20 pounds]) are required to be in the onsite CEODU trucks, during each event. All fire extinguishers are inspected monthly by the MCAS Yuma fire department (inspection records are maintained at the fire department) and are required to be checked (verify that extinguisher is present and does not require recharge) before and after each event. The Contingency Plan (Attachment F) details actions to be taken in case of an emergency.

Arrangements with local authorities (40 CFR 264.37) are discussed in the Contingency Plan (Attachment F).

E.4 General Hazard Protection

Explosive ordnance is loaded and unloaded by trained personnel. Munitions are placed directly onto/into the specific treatment locations for OD operations. Following a treatment event, non-hazardous metal scrap is collected for recycling.

Runoff of any hazardous waste from the OD units is not likely. It is also unlikely that any water supplies would be impacted. The hydrologic and hydrogeologic characteristics of the MTR are presented in Attachment D.

CEODU operations take place in remote locations on the BMGR where there are no installed utilities. Operations can continue as long as natural lighting is adequate and during the time periods specified in MCAS Yuma's Open Burn Permit and permit conditions. The OIC is responsible for monitoring the available light and making all decisions concerning the ordnance disposal operations.

During all ordnance disposal operations, each member of the CEODU team wears leather work gloves when handling munitions, residue, or scrap metal. Protective clothing for disposal operations where detonation is the primary hazard is the BDU uniform with steel-toed boots and a cover. Protective clothing for disposal operations where fire is the primary hazard is also the BDU uniform, gloves, cover and steel-toed boots. Sleeves are rolled down during these operations. During disposal operations of exposed white phosphorous, a face shield is also worn in addition to the other clothing.

E.5 Prevention of Accidental Ignition or Reaction of Wastes

All explosive wastes are kept from sources of ignition or reaction. CEODU personnel are very familiar with OD procedures, further minimizing the chance for accidental ignition or reaction of wastes.

In transporting explosive ordnance for treatment at the BMGR, certain precautions are taken to ensure that ignition or reaction of wastes is prevented. The reactive wastes are packaged securely, segregated by separating incompatible items, secured on vehicles and transported according to United States Department of Transportation (DOT) regulations. Incompatible wastes are not mixed for transportation to or at the BMGR. All transportation and shipment of explosive ordnance follows the Navy's Shipping Inspector's Manual for Ammunition, Explosives and Related Hazardous Materials (Attachment B, Exhibit B-7).

**EXHIBIT E-1
 MTR INSPECTION CHECKLIST**

ITEM	CONDITION				INITIALS	SIGNATURE OF EOD NCOIC
	SAT	UNSAT	NA	NI		
SECURITY DEVICES (Weekly)						
Security of Gates						
Security of Fences/Warning Signs						
Evidence of Tampering						
Evidence of Damage						
Other						
RANGE AREAS (Weekly)						
Main and Perimeter Roads						
Flagpoles						
Emergency Crew Shelters						
Vegetation Encroachment						
Other						
COMMUNICATIONS EQUIPMENT						
Test of Radios						
Test of Cellular Phones						
OTHER EQUIPMENT						
Fire extinguishers						
Shovels						
Portable Eyewash						
5-gallon Water Container (Portable Shower)						
First Aid Kit						
PPE						
Gloves						
Respirator						
Eye Protection						

Legend: SAT – Satisfactory UNSAT – Unsatisfactory NA – Not Applicable NI – Not Inspected

DATE / TIME: