

**ATTACHMENT C**  
**PROCESS INFORMATION**

**Table of Contents**

**C.1 MTR Operations ..... 1**

## **ATTACHMENT C**

### **Process Information**

Explosive ordnance stockpiles maintained at MCAS Yuma and other military bases are subject to inventory turnover. Items may become obsolete (weapons systems changes), outdated (shelf-life expiration), or unserviceable (e.g., damaged, dropped items). When relegated to these categories, treatment is necessary to render the munitions inert for disposal. Munitions treatment may also be required when aircraft crash or make emergency landings. Finally, disposal of explosive devices may be required under agreements with local governments or international agreements.

Munitions treatment occurs at the MTR. The annual amount of destroyed munitions varies widely year to year. From 1989 to 1999, the total weight of destroyed ranged from 1,000 pounds NEW to approximately 60,000 pounds NEW (Note: NEW is approximately one-third of the total weight, though it varies by specific munition). On average, about 18,000 pounds NEW was treated at the MTR annually. Information is unavailable between 2000 and 2003. From 2004 to 2014, the total weight of destroyed munitions ranged from 2 pounds NEW to 6500 pounds NEW. However, due to closures of other MTRs in the region, this volume is anticipated to increase by four times to 72,000 pounds NEW annually. In preparation of this expected increase, MCAS Yuma has begun expansion of the ammunition supply point to increase MCAS Yuma's storage capacity. The information provided in the following subsections is presented in accordance with the requirements of 40 CFR 270.23 and 40 CFR 264 Subpart X.

#### **C.1 MTR Operations**

This section describes the MTR operations. Additional details can be found in the CEODU SOP (Permit Attachment A, Exhibit A-5) and in the current version of NAVSEA OP-5 (Permit Attachment B, Exhibit B-6).

Fragment, non-fragment, and white phosphorous open detonation is conducted on the MTR. All explosives greater than caliber .50 ball are detonated. OD operations at the MTR are not conducted on a set schedule; rather, treatment operations are conducted on an as-needed basis. Operations are not conducted in wet weather, when winds exceed 15 mph, in thunder storms or electric storms. The maximum amount of wastes to be detonated during one operation is 3,000 pounds NEW; however, typical treatment operations do not exceed 1,500 pounds NEW because of self-imposed limitations.

Munitions to be treated, including those received from offsite sources may be held at the MCAS Yuma ASP/safe haven for a period not to exceed ten days. The facility consists of bunkers on the south end of Main Base. At the ASP, waste items are inspected, verified against shipping papers (or if from an in-house source, logged on an inventory form as to the type, the NEW, quantities of each item and net cubic feet of displacement), and consolidated, as needed. The waste inventory is manifested to the MTR. Prior to mobilization to the MTR, CEODU prepares a detailed Operations Order identifying staff and responsibilities for the mission. Each team member reads and signs the document prior to executing the mission.

The munitions are loaded onto vehicles for transport to the MTR. Five-ton tactical trucks may also be used for transport. All transport operations are performed on the day the treatment is to occur. The number of vehicles used depends on the type and amount of items being transported. Transportation of these items is governed by 49 CFR 172 Subparts B through I, applicable parts of 40 CFR 263, and the Navy's Shipping Inspector's Manual for Ammunition, Explosives and Related Hazardous Materials (Permit Attachment B, Exhibit B-6). Placards on the vehicles designate the type of explosive being transported (i.e., Division 1.1, 1.2, 1.3, or 1.4 explosives). Upon arrival at the MTR, red flags are displayed on the north and south flagpoles (one mile from the MTR) to indicate that the range is active and treatment operations are in progress. The waste items are transported to and unloaded at the designated area for detonation.

Military explosive ordnance and government-contract explosive ordnance devices are fitted with a time-delayed donor explosive charge and detonated on the ground or in small pits created as a result of previous detonations. Open detonation units are created by the detonation of unexploded ordnance. The detonation of a bomb creates the original pit and subsequent bomb detonation increases the pit size and depth. The detonation units are inspected weekly, after each detonation, and after storm events or high winds. The units are inspected for integrity, depth, and kickout. If an inspection indicates a detonation pit is unusable, it is abandoned and not repaired. When the pit becomes too deep (i.e., unsafe to roll a bomb into, 10 feet or deeper) CEODU will mark the pit with surveyors tape and the Environmental Department will be notified in writing. The Environmental Department will sample the pit and notify the officer in charge (OIC) when the pit can be backfilled with native soil. After backfilling, a new detonation pit is developed in the same place as a result of the next OD event.

All treated munitions are examined for treatment effectiveness. Second or subsequent detonations are performed until the operation is successful. Metal casings and kickouts are collected for recycling as scrap metal. In addition, all kickouts are removed from the floodplain (portion of the MTR west of the road) after final OD event of each operating day.

All operations are monitored from both north and south range flag areas located approximately one mile from the MTR. Two safety bunkers intended for emergency use only are located in the detonation area and are constructed of reinforced concrete pipe. The pipes are approximately three feet in diameter and six feet in length, and are oriented perpendicular to the staged detonation.