

MUNITIONS EMERGENCY AND DISPOSITION STANDARD OPERATING PROCEDURE 20

20.0 INTRODUCTION

Marine Corps Systems Command (MARCORSYSCOM) establishes requirements and procedures for control, use, and safe handling of weapons and ammunition. Primary instruction for safe handling of munitions is promulgated in the Marine Corps Ammunition Management and Explosives Safety Policy Manual. Standard Operating Procedures for Class V Munitions at MCLB Barstow is detailed in *Draft* Base Order P8020.2B. The Headquarters Battalion Commanding Officer has overall responsibility that is delegated to the Arms, Ammunition, and Explosives Officer (AA&E Officer) for munitions control, storage, use, and safety at MCLB Barstow. The 12 February 1997 USEPA Military Munitions Rule (MR) amended the Resource Conservation and Recovery Act (RCRA) by defining the conditions under which munitions can become hazardous waste. California regulations pursuant to the USEPA MR are promulgated in the Proposed Preliminary Draft Regulation R-97-20 that provides changes concerning munitions to hazardous waste management regulations in Title 22, Division 4.5, Chapter 10, Sections 66260.10 through 66270.42.

MCLB Barstow personnel shall comply with all procedures and requirements of this SOP and specific munitions disposal requirements in federal and California waste regulations. This SOP provides the following information that will help you understand what you must do to comply with laws, regulations, and policies for control, use, and safe handling of munitions:

- Munitions Control, Storage and Handling Requirements
- Munitions Safety, Hazards, and Emergency Response
- Malfunction and Accident Reporting
- Salvage and Disposal Requirements
- MCLB POCs
- Sources of Additional Guidance
- Desktop Procedures (unit personnel)
- Program Management Desktop Procedures

20.1 MUNITIONS CONTROL, STORAGE, AND HANDLING REQUIREMENTS

Protection of personnel, Marine Corps assets, and the environment requires strict control of and safe use, handling, and storage of munitions and proper disposal of excess, defective, and spent munitions. MCLB Barstow personnel shall follow procedures contained in Navy, Marine Corps, and Base Orders and instructions and direction provided by the AA&E Officer, the Explosives Safety Officer (ESO), and the Base Ammunition Storage Facility (BASF) and small arms range personnel. Personnel shall also immediately report any hazardous incidents involving munitions or any observance of unsecured explosives or munitions to MCLB Barstow emergency response forces or the Provost Marshall. Personnel shall not touch or approach compromised munitions, but shall maintain a safe distance and secure the location to protect other personnel from inadvertent exposure to munitions hazards.

Though MCLB Barstow units service large caliber weapons systems, no large caliber munitions are stored or used at the Base. All munitions used, transported, and stored at MCLB Barstow are for small arms up to and including 60 caliber and all gauges of shotgun shells. Munitions at MCLB Barstow are stored at the BASF (Building 370) or in limited quantities at unit locations specifically authorized by the Commanding Officer MCLB Barstow. Although munitions storage at MCLB Barstow is limited to small arms, temporary storage of items larger than 60 caliber may be authorized by MARCORSYSCOM Explosives Safety if munitions are not damaged. Storage of the authorized small caliber ammunition must comply with the fire protection regulations and physical security requirements in OPNAVINST 5530.13B. Authorized storage quantity is limited as follows:

- 25 pounds net explosive weight (NEW) Class/Division 1.4 munitions
- 10 pounds NEW Class/Division 1.3 munitions
- 3.2 pounds NEW Class/Division 1.2.2 munitions (8DWBS - MK141 Mod 0 charges)
- Combined total 1.2.2, 1.3, and 1.4 cannot exceed 35 pounds NEW
- No Class/Division 1.1 or other Class/Division 1.2

Small arms cartridges must be stored in separate locked containers or safes from the associated weapons. Small arms ammunition containers must also be clearly marked as containing ammunition and separated from other hazardous materials. Strict accountability is required for each round of ammunition stored or issued. Units shall maintain ammunition storage authorization and personnel access rosters and provide storage quantity and locations to the Base Fire Department.

Unit Commanders shall determine munitions requirements for unit training using the established Class V(W) training allowances in MCO P8011.4H and provide a Statement of Annual Requirements showing a quarterly breakdown of required munitions to the AA&E Officer. If the Class V(W) training allowances are not sufficient to support unit training requirements the unit commander shall forward a recommended change to the appropriate allowance via the chain of command following the format provided in Appendix C of MCO P8011.4H.

Units desiring to draw munitions from their established allowance shall submit requisitions to the BASF Records Office via the chain of command using a Local Request Form available through the BASF Records Section, a DD Form 1348 Hard Card Ammunition Request, or a MILSTRIP Requisition to the Base Commanding Officer. If a munitions requisition is to be cancelled, the BASF Records Section is to be notified as soon as possible. To continue a requisition beyond the pickup date specified in the original request, a DIC (AMA) transaction with the revised date is to be submitted to the BASF at least 24 hours prior to the original pickup date.

Drivers with valid Explosives Driver's Physical Certificate and current transportation of munitions training may transport munitions in authorized, properly marked, and placarded tactical vehicles. Vehicles authorized for transport of munitions are listed in NAVSEA OP 5 Vol. 3. Placard requirements are provided in NAVSEA SWO20-AG-SAF-010 and NAVSEA SWO20-AF-ABK-010. Munitions shall not be transported in privately owned vehicles, passenger vehicles, special purpose vehicles, vehicles carrying high frequency electrical transmitting equipment, the HMMWV when in the four-passenger cab configuration, or in trailers other than the K-4A, M105, or M127. Load capabilities are provided in NAVSEA SWO20-AC-SAF Vols. 010, 020 and 030. Vehicles must be equipped with a 10-pound purple "K" powder or 10-pound ABC type fire extinguisher and munitions must be secured with tie downs to prevent movement during shipment. Armed security is also required for all ammunition transport to or from the armory or the training areas.

Munitions will only be issued to a qualified Ammunition Technician (MOS 2311), an officer, or senior non-commissioned officer (SNCO). The individual signing for the munitions will be responsible for the munitions until expended, turned back into the BASF, or received by another officer or SNCO authorized to sign for the munitions. Units will submit expenditure reports via their chain of command to the AA&E Audit/Verification Officer within 48 hours of completion of training.

Munitions shall always be handled in a manner that will prevent shock or friction and shall not be unnecessarily exposed to inclement weather or prolonged direct exposure to sunlight. Munitions shall not be thrown, dropped, kicked, stood on, sat on, or handled carelessly. If munitions are accidentally dropped from a height greater than four feet or if any damage to containers or munitions is noticed, the dropped or damaged munitions shall be inspected in place by Ordnance Personnel and certified safe prior to any further handling or use. Call EOD when necessary to inert damaged munitions or mitigate any unsafe condition. Any munitions in green colored wooden crates will be inspected prior to handling for the presence of crystals indicating a pentachlorophenol hazard. If crystals are visually observed, the boxes shall only be handled by personnel wearing protective gloves and respirators to minimize exposure to toxic dust.

Material handling equipment authorized for munitions use is listed in NAVSEA OP 2173. Equipment used to move munitions shall be inspected annually, after each repair, and before use and must be in good condition both mechanically and electrically. All equipment operators must have munitions safety training for the device used and have a thorough understanding of the operation, application, and limitation of the equipment and the hazards posed by the munitions. No flame or spark-producing device will be carried or used by personnel handling munitions. Smoking is prohibited within 100 feet of cased or quantity munitions.

Munitions may be returned to the BASF for the following reasons:

- a. When items are no longer required.
- b. As directed by higher authority.
- c. Remaining assets within lot number, in case of malfunction.
- d. When an item has been reclassified as unserviceable or suspended code due to a Naval Ammunition Reclassification (NAR) message or local reclassification. (The BASF maintains an NAR file per NAVSEA TWO24-AA-ORD-010.)

Returned munitions will be delivered to the BASF in the original issue containers with identification codes, lot numbers, condition code, and quantity identified on a DD Form 1348-1/1A. In accordance with NAVSEA OP 5 Vol. 1, munitions of different codes and lot numbers will not be placed in the same containers and empty containers will have hazardous markings obliterated and will be clearly marked empty. Users are also required to inspect returnable munitions for serviceability and identify unserviceable munitions by a separate turn in document and request a formal investigation for any items rendered unserviceable due to improper handling or transportation.

20.2 MUNITIONS SAFETY, HAZARDS, AND EMERGENCY RESPONSE

Inherent Hazards of Munitions

Munitions are designed to inflict casualties, destroy property, and material. Munitions make no distinction between friend and foe. Negligence and improper handling can cause ammunition to function before its intended use or to malfunction when not properly used.

Personnel shall follow all published safety procedures when handling munitions and immediately report any hazardous incidents involving munitions or any observance of unsecured explosives or munitions to MCLB Barstow emergency response forces or the Provost Marshall. Personnel shall not touch or approach compromised munitions but shall maintain a safe distance and secure the location to protect other personnel from inadvertent exposure to munitions hazards.

Explosive incident response actions differ depending on whether or not fire is present. The following are general guidelines for response actions. More detail concerning specific hazards and actions based on type of munitions is provided in Table 20-1.

Take the following action for Explosive Incidents Not Involving Fire:

- Identify the product;
- Eliminate all ignition sources;
- Isolate the area;
- Do not attempt to remove the explosives yourself, explosives may be unstable; and
- Acquire expert assistance for removal of the explosive.
 - Qualified agencies include but are not limited to:
 - (1) Military EOD department.
 - (2) Local police department with a bomb squad.
 - (3) Local sheriff's department with a bomb squad.
 - (4) Shipper or manufacturer.

In the event of a serious accident involving explosives, do not separate, upright, or move the carrier vehicle until the explosive cargo has been removed. Before vehicles are moved, explosive cargo should be moved a minimum of 300 feet from the incident. Flush all flammable and combustible liquids from the scene prior to removing, separating, or righting damaged vehicles.

Take the following action for Explosive Incidents Involving Fire :

- If conditions permit, identify the material;
- Evacuate the area a minimum of 2,500 feet;
- Attempt to keep the fire from reaching the cargo;
- If possible, separate the tractor and trailer;
- Use large quantities of water, foam, or dry chemical;
- **DO NOT FIGHT FIRES IN THE CARGO AREA;**
 - If the fire reaches the cargo area establish an unmanned hose line and immediately evacuate the area.
 - High temperature can make explosives unstable.
- Exercise caution during overhaul due to potential of re-ignition; and
- **DO NOT MOVE EXPLOSIVES WITHOUT QUALIFIED ASSISTANCE.**

A few causes of accidental explosions of munitions are:

- Fire
- Rough handling
- Sustained subjection to high temperature
- Alteration and/or modifications

TABLE 20-1A
MUNITIONS HAZARDS AND HAZARD CONTROL

Division Designator	Type of Hazard	Withdrawal Distance	Fire Fighting Procedures
1.1	Mass detonating	4,000 Feet	<ol style="list-style-type: none"> Will not be fought unless a rescue attempt is being made. If there is suitable separation between non-explosive and symbol 1 materials and if approved by the fire chief, fire-fighting forces may attempt to extinguish the fire. If personal safety is in doubt, take suitable cover.
1.2	Non-mass detonating, fragment producing	2,500 Feet	<ol style="list-style-type: none"> Give the alarm and attempt to extinguish the fire if in an early stage. Fire-fighting forces should fight the fire. If not possible, prevent the spreading of the fire. Detonation of items could occur. Provide protection from fragments.
1.3	Mass fire	600 Feet	<ol style="list-style-type: none"> May be fought if explosives are not directly involved. If white phosphorous (WP) munitions are involved, smoke is liberated. <ol style="list-style-type: none"> WP munitions may explode. Phosphorous should be immersed in water or sprayed with water continuously. For fires involving HC (high concentrate) smoke and incendiaries: <ol style="list-style-type: none"> Water should not be used unless large quantities are available. Use dry sand or dry powder agent in the early stage. For fires involving pyrotechnics and incendiaries: <ol style="list-style-type: none"> Protect adjacent building and magazines. Do not use CO₂, Halon Extinguishers, or water. Allow magnesium to cool unless it is in contact with flammable material. In this case use a two-inch layer of sand or powder on the floor and rake the burning material onto this layer and smother.
1.4	Moderate fire, no blast	0	<ol style="list-style-type: none"> Fight these fires. Expect minor explosions and hot fragments

TABLE 20-1B
MUNITIONS HAZARDS AND HAZARD CONTROL

Chemical Hazard Symbol	Chemical Ammunition and Substance	Hazard	Fire Fighting Instructions
Full protective clothing set-2 (yellow)	Riot control/smokes (G), Incapacitating agents (K)	Toxic as aerosol vapor	1. Approach from upwind and extinguish fire. 2. Decontamination may be required
Full protective clothing set-3 (white)	White phosphorous/ White phosphorous plasticized (H)	Spontaneously flammable when exposed to air	1. Post fireguard until the leak has been removed. 2. After removal of agent, post fireguard for two days for possible re-ignition. 3. Use putty knife to remove small amounts, then use blowtorch to burn off remainder.
Wear breathing apparatus	HC smoke (G)	High concentration of smoke	1. Do not use water
Wear breathing apparatus	Incendiary/ Pyrotechnic material (G)	Burns with extremely high temperature	1. Do not use water. 2. Do not look at burning material.
Wear breathing apparatus	Signaling smokes (G)	High concentration of smoke	1. Prevent spread of fire. 2. Smother incipient fire with dry chemical from portable fire extinguisher or cover with sand.

Munitions Compatibility Groups:

Group A – Primary explosive.

Group B – Articles containing a primary explosive and not containing two or more protective features.

Group C – Propellant explosive or other deflagrating explosive or articles containing such explosives. Examples are single-, double-, triple-based, and composite propellants, rocket motors (solid propellant), and ammunition with inert projectiles.

Group D – Secondary detonating explosive or black powder or articles containing a sedentary detonating explosive, in each case without means of initiation and without a propelling charge, or articles containing a primary explosive and containing two or more effective protective features.

Group E – Articles containing a secondary detonating explosive, without means of initiation with a propelling charge (other than one containing flammable liquid or hypergolic liquid). Examples are artillery ammunition, rockets, or guided missiles.

Group F – Articles containing a secondary detonating explosive, with its means of initiation, with a propelling charge (other than one containing flammable liquid or hypergolic liquid) or without propelling charge. Examples are items initiated by means of a bouchon firing device, grenades, sounding devices, and similar items having an in-line explosive train in the initiator.

Group G – Pyrotechnics or articles containing both an explosive and an illuminating, incendiary, tear-producing or smoke-producing substance (other than a water-activated article or one containing white phosphorous, phosphide, or flammable liquid or gel or hypergolic liquid). Examples are flares, signals, incendiary or illuminating ammunition, and other smoke- or tear-producing devices.

Group H – Articles containing both an explosive and white phosphorous. Examples are WP, PWP, or other pyrophoric material.

Group S – Substances or articles so packed or designed that any hazardous effects arising from accidental functioning are limited to the extent they do not significantly hinder or prohibit fire fighting or other emergency response efforts in the immediate vicinity of the package. Examples are thermal batteries, explosive switches or valves, and other ammunition items packaged to meet the criteria of this group.

MUNITIONS COMPATIBILITY

CLASS	A	B	C	D	E	F	G	H	S
A	X								
B		X							X
C			X	X	X				X
D			X	X	X				X
E			X	X	X				X
F						X			X
G							X		X
H								X	X

20.3 MALFUNCTION AND ACCIDENT REPORTING

The provisions of this chapter are applicable to all units conducting training with or handling munitions at MCLB Barstow.

20.3.1 Definitions. An Explosive Mishap includes all of the following occurrences, near occurrences, and/or circumstances:

1. Chemical Agent Accidents. Any occurrence involving a chemical agent which, in the opinion of a medically trained authority, did result in a disability injury, or will result in \$10,000 or more in damage to property from contamination.
2. Dangerous Defect. A defect, found upon visual examination or local test, in an explosive material/system which is capable of resulting in an explosive mishap (i.e., ruptures of explosive containers, exposing filler, protruding primers, partially armed fuses, safety devices missing or defective, etc.).
3. Explosive Accident. An unplanned explosion or fire involving an explosive material/system. This includes inadvertent actuation, jettison, release or launching resulting in a fatality or injury to personnel, fire, explosion, or damage to property (personal or government).
4. Explosive Incident. An occurrence that creates a potentially hazardous situation. Incidents include, but are not necessarily limited to:
 - a. Human errors in processing, assembly, testing, loading, storing, transporting, handling, using or disposing of an explosive material.

- b. Unusual or unexpended occurrences, unnatural phenomena, unfavorable environments or instances of equipment failure that may damage or affect safety or reliability of an explosive.
 - c. Loss or abandonment of an explosive material resulting in a potential hazard to untrained personnel who may find the item.
 - d. Misused or unauthorized alteration of an explosive material.
 - e. Any failure or malfunction of, or damage to, a launched device or associated hardware, which occurs when an explosive material is being handled or otherwise manipulated.
5. Explosive Near-Mishap. Any event, which, except for chance, would have been an explosive mishap.
6. Malfunction. The term applied to an explosive material when it fails to function/perform in the manner for which it was designed. Malfunctions are considered major or minor as follows:
- a. Major Malfunction. Failure to function in the manner for which designed resulting in or potentially capable of resulting in personal injury and/or material damage.
 - b. Minor Malfunction. Failure to function in the manner for which designed and does not result in injury or material damage, such as a dud, premature fire, etc.
7. Hangfire. Temporary failure or delay in the action of a primer, igniter, or propelling charges.
8. Misfire. Failure of a component to fire or explode following an intentional attempt to cause an item to do so.

20.3.2 Malfunctions, Misfires, and Accidents Involving Munitions

Personnel involved in the employment of munitions must be aware of the need for prompt evaluation and timely reporting of incidents and accidents where munitions have not functioned as designed. When such incidents occur, the individual in charge of the unit concerned must immediately begin to assemble the vital information that will permit timely and accurate evaluation and reporting.

The individual in charge of the firing exercise will have the following items in his possession:

- a. A copy of the applicable range regulations.
- b. NAVMC 10155 (Rev-10-71), Ammunition Malfunction Data Collection Guide.
- c. Telephone number for the Provost Marshal's Office, 577-6666/6201/6667.

20.3.3 Malfunction and Deficiency Reports

A copy of NAVMC 10155 will be carried by all supervisory personnel involved in the handling and firing of munitions in accordance with MCO 8025.1D. The NAVMC 10155 will be used to collect data needed to report malfunctions. The senior individual at the scene of the malfunction/accident will comply with the following procedures.

- a. Immediately order a cease-fire.
- b. Render assistance to any casualties.
- c. Identify all witnesses to the malfunction.
- d. Safeguard weapons, materials or fragments that could provide evidence as to the cause of the malfunction.
- e. Initiate action to photograph weapons (in their original positions), material, munitions, and fragments that could provide evidence as to the cause of the malfunction. All evidence will be held for 120 days after the malfunction for further investigation by higher authorities.
- f. Request that weapons and munitions be inspected for serviceability. Weapons involved in a malfunction will be safeguarded by the Range Safety Officer (RSO) or the Range Officer-in-Charge of the firing detail to preserve evidence until Provost Marshal can arrive on scene and the inspection of the weapons and munitions has been completed.
- g. Identify and record all lot numbers or serial numbers of each munitions component involved when applicable.
- h. Record all evidence of unauthorized disassembly, alteration, or substitution of the munitions and weapons involved.
- i. Establish details as to the proper or improper handling of munitions to include crimping, striking, exposure to open flame or weather conditions prior to the malfunction.
- j. Establish the degree of cleanliness of the munitions and weapons.
- k. Establish the condition of the munitions packaging and appearance prior to receipt.
- l. Segregate all of the malfunctioning lots for turn-in to the BASF. All Class V residue will be turned in unless the stability of the munitions are suspect. Ordnance personnel will inspect all suspect munitions prior to delivery of items to the BASF.
- m. Request EOD support as appropriate.
- n. Notify the AA&E Officer of the malfunction so that a local suspension of the affected lots may be imposed.
- o. Obtain all data and information required for the malfunction report.
- p. In cases involving injury to personnel or damage to equipment, retain all witnesses, except those injured, at the scene until the investigating officer arrives.

When a malfunction involves injury or death, the incident will be reported by the most expeditious means available to the following personnel:

- a. During Working Hours. AA&E/Ordnance Officer, upon notification, will notify the following personnel:
 - (1) Headquarters Battalion Commanding Officer.
 - (2) Headquarters Battalion 1st Sgt at extension 577-6700.
 - (3) Deputy Provost Marshal at extension 577-6666/6201/6667.
 - (4) Base Safety Office at extension 577-6722.
- b. After Working Hours. Command Duty Officer will be notified at extension 577-6611. The Duty Officer will in turn notify Provost Marshal's Office, AA&E Officer, and the Battalion 1st Sgt.

Responsibilities of Unit Commanders

- a. When a malfunction occurs that does not involve injury or death, immediately notify the AA&E Officer for assistance in submitting the formal report. After normal working hours, notify the Command Duty Officer, located in Building 15, at extension 577-6611, and the BASF Duty NCO through the Provost Marshal's Office.
- b. Submit a message malfunction report within 24 hours of the malfunction. Strict compliance is required in order to expedite submission. An advance copy of the report is to be provided to the AA&E Officer for review. The malfunction message shall contain an information copy to the Base Explosive Safety Officer. It is recognized that in some cases it will be virtually impossible to gather all the required information within 24 hours. In cases where all pertinent information cannot be provided in the initial report, a Supplemental Report will be submitted within 15 working days of the initial report.
- c. Appoint an Investigating Officer and immediately proceed with the investigation.
- d. Ensure the weapons found at fault during the investigation are suspended from use and properly labeled to prevent use until the defect/condition is corrected or evaluation instructions are received.
- e. Malfunctions that are obviously attributable to weapon deficiencies shall be reported utilizing DD Form 368, Report of Deficiencies Found in Material, via the appropriate chain of command.
- f. Provide for separate maintenance and security of the weapon, fragments, and pertinent debris related to the malfunction for a period of 120 days unless directed otherwise by higher authority.

20.3.4 Malfunction Attributable to Other Causes

Supervisory and other responsible personnel must be aware that malfunctions are not always caused by faulty munitions. Common malfunctions and accidents not attributable to faulty munitions, but to human error or weapon failure are:

- a. Misfire. Misfires are defined in Section 20.3.1 as a round of munitions in which the propellant has failed to ignite but may be safely unloaded from the weapon. Other related information includes:

(1) Misfires resulting from human error or weapon error are:

- (a) Failure to completely close the bolt or breech mechanism.
- (b) The improper assembly of firing mechanisms and firing locks.
- (c) Failure to install the firing pin.
- (d) A failure to replace a broken or worn firing pin.
- (e) Weak springs in firing mechanism and firing locks.

(2) Misfires will be handled by the using unit as follows:

- (a) Munitions will be left in the weapon for the safe waiting period as prescribed in the appropriate technical instruction.
- (b) When the appropriate time has elapsed, remove the round from the weapon, replace all safety devices, and return the weapon to the appropriate container.
- (c) Properly mark and return the round to the BASF if it has been determined that the munitions are safe to transport.
- (d) If the using unit is unable to withdraw the round from the weapon, EOD assistance should be requested.

- b. Duds. Duds are defined as munitions items that have failed to function per the design intent when fired, launched, or otherwise employed as specified (e.g., an AT4 fires but the warhead fails to detonate on impact). Related information includes:

(1) Duds resulting from human error or weapon failure are:

- (a) Failure to remove safety wires, pins, etc., from the fuse.
- (b) The shearing off of delay fuses on impact with hard, rocky surfaces.
- (c) Failure to set the fuse from a safe to an armed position.
- (d) The utilization of improper fuse.

(2) Premature and delayed burst result from:

- (a) Improper fuse setting.
- (b) Failure to remove muzzle covers and other obstructions.
- (c) Improper machine gun head spacing.

- (d) Permitting live rounds to remain in the overheated weapon chamber.
- (e) Abuse or mishandling of munitions and fuses (e.g., striking fuse, primer, or projectile against a sharp object).

Although investigations and reports are required when the above incidents cause death, injury, or damage, the cognizant personnel must be careful in evaluating the cause to ensure that munitions are not necessarily suspended when human error or a weapon failure are at cause.

20.3.5 Defective Munitions.

Malfunctions that are caused when munitions are fired will be reported to the AA&E/Ordnance Officer. The report will be filed with the unit's direct command and sent out to other units who conduct training to help prevent injuries or destruction to property.

20.4 SALVAGE AND DISPOSAL REQUIREMENTS

Munitions and munitions components must be properly classified and handled per the correct classification to avoid violation of hazardous waste regulations and potential compliance enforcement actions including fines and other civil or criminal penalties.

According to federal and State of California hazardous waste regulations as modified in accordance with the USEPA Military Munitions Rule (MR), military munitions are conditionally exempt (CE) from regulation as hazardous waste, but only if handled and classified according to provisions contained within the MR and promulgated in 40 CFR 260 and 22 CCR 66260. Specifically, a military munition is not a waste when:

- a. Used for its intended purpose, including:
 - (1) Use in training military personnel or explosives and munitions emergency response specialists (including training in proper destruction of unused propellant or other munitions): or
 - (2) Use in research, development, testing, and evaluation of military munitions, weapons, or weapon systems; or
 - (3) Recovery, collection, and on-range destruction of unexploded ordnance and munitions fragments during range clearance activities at active or inactive ranges. However, "use for intended purpose" does not include the on-range disposal or burial of unexploded ordnance and contaminants when the burial is not a result of product use.
- b. An unused munition, or component thereof, is being repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subjected to materials recovery activities, unless such activities involve use constituting disposal as defined in 22 CCR 66261.2(d)(1)(B), or burning for energy recovery as defined in 22 CCR 66261.2(d)(2)(B).

Munitions not subject to the CE exemption are classified as waste military munitions (WMM) and must be handled, stored, and transported in accordance with all HW regulations and specific waste storage requirements in 22 CCR 66265.1200 through 66265.1202.

Key exceptions to the CE exemption are as follows:

- a. The munition is abandoned by being disposed of, buried, burned, detonated (except during intended use as specified for intended use, incinerated, or treated prior to disposal; or
- b. The munition is removed from storage in a military magazine or other storage area for the purpose of being disposed of, burned, or incinerated, or treated prior to disposal; or
- c. The munition is deteriorated or damaged (e.g., the integrity of the munition is compromised by cracks, leaks, or other damage) to the point that it cannot be put into serviceable condition, and cannot reasonably be recycled or used for other purposes; or it has exceeded the shelf life specified for that munition pursuant to DOD Document 4140.27-M, Shelf-Life Management Manual, and the munition has not been inspected, tested, restored, or redesignated in a re-use account within the timeframe specified by DOD Document 4120.27-M (Any munition that has not been classified into a CE category, such as "unserviceable," "Condition Code H," "demilitarization," and "resource recovery and disposition," prior to expiration of shelf-life is classified as WMM); or
- d. The munition has been declared a waste by an authorized military official.

In addition, chemical weapons are excluded from the CE approach.

Items not eligible for the CE exemption may still be provisionally exempt from some hazardous waste transportation restrictions and requirements if movement of the munitions is necessary to mitigate an immediate threat to human health, public safety, property, or the environment as determined by an explosive or munitions emergency response specialist as defined in 22 CCR 66260.10. The person responsible for the munitions or explosive materials in this situation must within 5 calendar days mail or distribute notice to nearby residents, businesses, appropriate local agencies, and other interested parties the name and address of the person responsible for the materials, a brief description of the wastes, and a brief description of the action taken, and an explanation why the situation was an emergency; and send a copy of the notice and distribution list to the Department of Toxic Substances Control (DTSC). An immediate threat situation shall be presumed to exist if:

- a. There is a known or suspected presence of military munitions, or explosive material, or an explosive device;
- b. There is a likelihood of human exposure; and
- c. There is a likelihood of detonation.

Unserviceable issued munitions will be classified and marked as unserviceable and transported to the Marine Corps Air Ground Combat Center in Twentynine Palms, California. The AA&E Officer will complete a Munitions Disposition Request following instruction in Section 7010 in MCO P8020.10A and forward the request to MARCORSYSCOM Explosives Safety for disposition instruction.

20.4.1 Salvage of Munitions Components and Shipping and Storage Containers

The following general guidelines will be followed in the return of salvageable items (e.g., brass, links, empty ammo cans):

NOTE: All range residue and ammunition residue will be treated as live ammunition until turn in to BASF Personnel.

Fired brass (small arms: 7.62mm, 5.56mm, 9mm, etc.) will be segregated by type and will be free of all foreign substances, such as steel clips, links, sand, and dirt.

- (1) All brass will be kept at the Rifle Range House until the last day of firing has ended and at that time will be turned over to BASF Personnel for inspection and turn in to the Defense Reutilization and Marketing Office (DRMO). Brass from test fires at the indoor range adjacent to Building 573 will be collected upon completion of firing and turned in to BASF Personnel.
- (2) BASF Personnel will transport brass to Building 367 for temporary storage until an inspection by certified personnel can be conducted.
- (3) Turn in of all brass to DRMO will be done on DD 1348's with the following statement and signature of the inspecting individual hand written on it in the remark blocks:

"I certify that the above listed items are free of any and all explosive residue per my inspection on (date)."

(4) All quantities on the DD 1348's will be written in pounds, not by number of shell casings turned in.

In accordance with NAVSEA OP 5, Vol. 1, Paragraph 11-5.5, all markings or lettering on the outside of empty containers must be obliterated and the container marked as empty except if the container is to be used later to reissue ammunition. BASF Personnel have a designated storage area for all containers that are to be used at a later date. The container must be completely marked out with Green or Black paint and kept in the designated storage area. If empty ammunition containers are going to DRMO, the following is required:

- (1) All markings of lettering on the outside of the container must be obliterated and the container marked as empty. Empty containers that are subject to turn-in to DRMO will be marked by affixing a weather resistant placard or tag stenciled with the word "EMPTY" in approximately 1-inch letters. Palletized containers will be marked with the word "EMPTY" on at least one side of the pallet. Each ammunition container that is not palletized will be marked individually with a tag or placard with the word "EMPTY" on it.
- (2) Munitions containers will have all explosive residue and rounds removed. Plastic and cardboard must be removed from these containers and all hazardous markings must be obliterated and the container marked as empty.
- (3) All ammunition containers will not be used for any other purpose except storage of ammunition, until the container has been inspected and marked by certified personnel.
- (4) High-dollar value containers (aviation ordnance containers, copperhead cans, etc.) will be returned to the BASF. All hazardous markings are to be obliterated and the container marked as empty.

20.5 MARINE CORPS LOGISTICS BASE POINTS OF CONTACT

The Munitions Emergency and Disposition POC is the Headquarters Battalion Arms Ammunition and Explosives Officer (AA&E Officer). The AA&E Officer is located in Building 302 and can be contacted at (760) 577-6709. The Explosives Safety Officer (ESO) is located in Building 117 and can be contacted at (760) 577-6722. The Provost Marshal is located in Building 37 and can be contacted at (760) 577-6669. The 759th EOD Detachment at Fort Irwin can be contacted at DSN 470-4093.

20.6 SOURCES OF ADDITIONAL GUIDANCE

- *Draft* Base Order P8020.2B, Standard Operating Procedures for Class V Munitions
- MCO P3570.1A, Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat
- MCO 4610.15C, Shipments of Military Equipment, Explosives, and Other Dangerous Material
- MCO P8011.4H, Table of Allowances for Class V(W) Material Peacetime
- MCO P8020.10A, Marine Corps Ammunition Management and Explosives Safety Policy Manual
- MCO 8020.11W (also OPNAVINST 8020.14), Department of the Navy Explosives Safety Policy
- MCO 8023.3A, Qualification and Certification for Class V Munitions
- MCO 8025.1D, Class V (W) Malfunction and Defects Reporting
- MCO 8027.1D, Interservice Responsibilities for Explosive Ordnance Disposal
- MCO 8300.1C, Marine Corps Serialized Control of Small Arms System
- MCO 8373-2E, Authorization/Allowances for Pistol/Rifle Ammo
- NAVSEA OP 5, Vol 1, Ammunitions and Explosives Ashore Safety Regulations for Handling, Storing, Production, Renovation, and Shipping
- NAVSEA OP 2173, Vol 1 & 2, Approved Handling Equipment for Weapons and Explosives
- NAVSEA OP 3347.3, U.S. Navy Ordnance Safety Precautions
- NAVSEA 3565, Electromagnetic Radiation Hazards to Ordnance
- NAVSEAINST 4570-1A, Demilitarization and Disposal of Surplus Ordnance
- NAVSEA 8011.3, Small Arms Ammunition Allowance for Civilian and Military Security and Police Guards, Couriers, and Agents
- NAVSEAINST 8020.8B, DOD Ammo and Explosives Hazard Classification
- NAVSEAINST 8020.14B, Shore Stations Explosives Safety Inspections
- NAVSEAINST 8023.11, Standard Operating Procedure for the Processing of Expendable Ordnance at Navy and Marine Corps Activities
- NAVSEAINST 8370-2, Small Arms and Weapons Management Policy
- NAVSEA SWO20-AC-ABK-010, Shipping Inspectors Manual for AA&E (Glovebox)
- NAVSEA SWO20-AG-SAF-010, Navy Transportation Safety Handbook

- NAVSEA SWO20-AG-SAF-020, Transportation and Storage Data for Ammunition, Explosives, and Related Hazardous Materials
- NAVSEA SWO23-AG-WHM-010, Handling AA&E with Industrial MHE
- NAVSEA TWO24-AA-ORD-010 (P801), Ammo Unserviceable and Limited Use
- NAVORD OP 1014.3, Ordnance Safety Precautions
- NASUP P-724, Conventional Ordnance Management Policies
- OPNAVINST 5530.13B, Department of the Navy Physical Security for Conventional Arms, Ammunition and Explosives (AA&E)
- ABO 8010-1E, Procedures for Handling Found Ordnance
- DOD Document 4140.27-M, Shelf-Life Management Manual
- 40 CFR 260-265, Hazardous Waste Management (munitions disposal)
- Proposed Preliminary Draft Regulation R-97-20 (22 CCR 66260-66265, Hazardous Waste Management - munitions disposal)

The following office administers the Marine Corps Explosive Safety Program:

- Environmental & Explosives Safety Branch
Commander, MARCORSYSCOM
PMAM, CODE: EES
2033 Barnett Ave. Suite 315
Quantico, VA 22134-5010
Telephone (703) 784-9478, FAX (703) 784-9476

20.7 DESKTOP PROCEDURES (UNIT PERSONNEL)

To optimize compliance with munitions emergency and disposition requirements and to avoid regulatory violations, MCLB Barstow personnel at the unit or office level must comply with and follow procedures in this SOP, MCO P8020.10A - Marine Corps Ammunition Management and Explosives Safety Policy Manual, and other applicable regulations and directives. The Headquarters Battalion AA&E Officer at (760) 577-6709 will provide clarification of requirements upon request. The following is a synopsis of the applicable requirements.

1. Unit personnel issued munitions in the course of their regular duties or for qualification or proficiency training shall safeguard weapons and munitions at all times, follow all munitions safety procedures, and limit weapons discharge and munitions expenditures to authorized use.
2. The unit commander or his or her designated representative shall determine unit requirements for munitions, submit and update as necessary the Statement of Annual Requirements, and schedule, track, and report munitions expenditures.
3. The unit commander shall also develop and implement control procedures, including preparation of proper storage facilities, and personnel access controls to safeguard all munitions assigned to unit personnel and make sure all weapons and munitions expenditures are limited to authorized uses, and personnel follow all weapons and munitions safety procedures.

20.8 PROGRAM MANAGEMENT DESKTOP PROCEDURES

The Headquarters Battalion AA&E Officer has the responsibility under the Commanding Officer MCLB Barstow for implementing the Munitions Control, Storage, and Use Program for MCLB Barstow. The position responsibilities include control, storage, and use of all munitions at MCLB Barstow. The Installation and Logistics Department Environmental Division Hazardous Waste Program Manager (HWPM) has responsibility of the proper storage and disposal of waste military munitions (WMM). The following desktop procedures cover specific responsibilities

AA&E Officer

1. Set up the Munitions Control, Storage, and Use Program that includes safety, munitions control, and munitions use and disposal procedures.
2. Program and budget for personnel, equipment, materials, training, and monitoring to comply with munitions management requirements.
3. Request munitions disposition instructions from MARCORSYSCOM for excess, obsolete, unserviceable, and waste Class V munitions and execute disposition instructions.
4. Make sure items designated as WMM are prepared for shipment.
5. Complete appropriate shipping control documents for munitions transported under CE and retain all munitions disposition records for three years.
6. Complete and retain ED/CD training records including dates, names of participating individual, types and quantities of munitions used, and locations where conducted.
7. Retain copies of all non-waste and waste Class V material shipping documentation.
8. Maintain a current and updated Notice of Ammunition Reclassification (NAR) Manual.
9. Conduct waste munitions inspections and retain copies of all inspections and inventory records.
10. Provide copies of WMM inspections and inventories to the installation Environmental Division.

HWPM

11. Prepare and sign HW manifest for WMM.
12. Coordinate shipment of WMM and notify federal/state agencies in the event that a shipment of WMM is lost.
13. Coordinate the reinstatement of CE for transportation when required.
14. Provide/coordinate hazardous waste training (initial and recurring).
15. Include WMM storage and handling training records into environmental compliance evaluations.
16. Update the installation's Emergency Preparedness and Contingency Plan to reflect ammunition and explosives.
17. Provide written notification of all response actions involving military munitions to COMMARCORSYSCOM and DC I&L (LFL).
18. Develop Explosive Safety Submission (ESS) for COMMARCORSYSCOM approval and DC I&L (LFL) review and concurrence that includes safety and health plans, qualification of personnel documentation, and quality assurance and procedures that address explosives safety.
19. Conduct and coordinate response actions with COMMARCORSYSCOM (AM), DC I&L (LFL), and the MCLB Barstow ESO and 759th EOD Detachment personnel.

Figure 20-1

**AMMUNITION MALFUNCTION DATA
COLLECTION GUIDE (8025)**

Ammunition that fails to perform as expected can normally be attributed to a malfunction, human error, or a weapon/equipment deficiency. In every instance, it is imperative that certain facts surrounding the matter be immediately noted and appropriately reported so that remedial action can be initiated to preclude recurrence. Attention is invited to the fact that the cognizant design agent will conduct a detailed technical investigation predicated in part on the data provided by the user in the malfunction report. To ensure that the report contains the essential data, personnel on the scene must take notes on the elements enumerated below as they relate to the particular situation. MCO 8025.1 contains the specific reporting requirements.

NOTE: The following is not a complete list of the data elements required in the malfunction report but rather is limited to those elements which must be immediately noted at the scene to enhance report accuracy.

1. Note the details of what actually occurred and the actions of appropriate personnel immediately prior to the malfunction (this is essential in determining whether human error caused or contributed to the situation as a result of inattention, carelessness or deviation from standard procedures). Check for residue from the item (s) involved. If present, accumulate and retain.

2. Record time, date and weather conditions.

3. Identify the item(s) involved. FSN/DODIC and lot number of the complete item and lot numbers of the major components, if identifiable. Or, FSN/DODIC and lot number of each individual item used to make up the complete round (e.g., 355mm projectile, fuse, primer, and propellant charge).

4. Condition of the ammunition prior to use. Was item or packaging wet or discolored. Did either appear deteriorated. Was item adversely exposed to the environment (e.g., prolonged exposure to the direct rays of the sun, exposed to rain, snow, etc.) Any indications of rough handling or unauthorized alteration/tampering.

5. Identify the weapon utilized. Model and serial number. Condition of the weapon prior to and after firing. Number of rounds fired on this date. Elevation, zone in which fired, increments used, range to target, fuze setting. Was the weapon operated properly and did it function normally. Length of recoil. Any evidence of unburned propellant or residue in the tube. Could foreign material have entered the tube prior to firing. Any indication of non-standard conditions or practices.

*US GPO:1990-742-162

NAVMC 30155 (Rev-10-71)

PREVIOUS EDITIONS WILL NOT BE USED

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FIGURE 20-1 – NAVMC 10155 AMMUNITION MALFUNCTION DATA COLLECTION GUIDE

