Documents controlling Range Safety

Chapter 1 - Introduction
Chapter 2 - Ranges
Chapter 3 - Ammunition
Chapter 4 - Firing
Chapter 5 - Targets
Chapter 6 - Small Arms
Chapter 7 - Grenades and Grenade Launchers
Chapter 8 - Antitank Rockets
Chapter 9 - Recoilless Weapons
Chapter 10 - Mortars
Chapter 11 - Field Artillery
Chapter 12 - Tank/Fighting Vehicle Gunnery
Chapter 13 - Aviation Gunnery
Chapter 14 - Air Defense Artillery Weapon Systems
Chapter 15 - Antitank Guided Missiles
Chapter 16 - Chemical Agents and Smokes
Chapter 17 - Mines, Firing Devices, Trip Flares, Simulators, and Explosive Charges
Chapter 18 - Laser Range Safety
Chapter 19 - Live-Fire Exercises
Appendixes A, B and C

1. Where would you find the surface danger zone (SDZ) for a field artillery cannon?
   Chapter 11

2. Where would you find information on firing blank ammunition?
   Chapter 6

3. Where would you find general information about issuing ammunition?
   Chapter 3

4. Where would you find information on warning signs and signals?
   Chapter 4

5. Where would you find procedures for safety during live-fire exercises?
   Chapter 19

Select the Marine Corps Order and the Army Regulation that govern range safety for the Marine Corps and the Army from the list below.

Click Submit when you are finished.

- [ ] AR 385-63
- [ ] MCO 385-63
- [ ] DA PAM 385-63
- [x] MCO 3570.1B
- [ ] AR 3570.1B
- [ ] DA PAM 3570.1B
- [ ] MCO 3500.1A
Select the correct boxes for the two unique qualities of MCO 3570.1B/AR 385-63 from the list below.

**Click the Submit button when you are finished.**

- The document is an inter-service document consisting of a Marine Corps Order and an Army Regulation.
- The document is a secret document that governs range safety.
- MCO 3570.1B/AR 385-63 is an inter-service document that serves as guidance for other branches of the military, civilian organizations, and law enforcement agencies.
- The document is also the ultimate governing document for the Coast Guard.
- The Air Force uses this document to govern collaborative exercises between itself and the Army.
- The document contains specifications for each range and how that range differs from other ranges.

You are setting up a range for an exercise where you will use flanking fire from a machine gun mounted on a vehicle.

Select the chapter of DA PAM 385-63 from the drop down box where you can find information on flanking fire with machine guns. Then press the Submit button to check your answer.

- Chapter 6

Your unit commander wants to conduct a live-fire exercise and he wants you to plan it. Look in the DA-PAM to locate the chapter where you would find information on live-fire exercise planning. Then select them from the list below.

**Choose the best response to his suggestion.**

- Chapter 4
- Chapter 6
- Chapter 12
- Chapter 19

*Feedback*

Correct. Chapter 19 is about Live-Fire Exercises and contains a section called Exercise Planning.

Close
Select the 2 minimum distances that targets should be engaged at for each ammunition type. Click Submit when you are finished.

- Targets will be engaged only at ranges greater than 250 meters with TP ammunition
- Targets will be engaged only at ranges greater than 310 meters with HE ammunition
- Targets will be engaged only at ranges greater than 125 meters with HE ammunition
- Targets will be engaged only at ranges greater than 50 meters with TP ammunition
- Targets will be engaged only at ranges greater than 25 meters with TP ammunition
- Targets will be engaged only at ranges greater than 400 meters with HE ammunition
- Targets will be engaged only at ranges greater than 75 meters with TP ammunition

Risk Management

### Marine Corps Risk Assessment Matrix

<table>
<thead>
<tr>
<th>Severity</th>
<th>Likely (A)</th>
<th>Probably (B)</th>
<th>May (C)</th>
<th>Unlikely (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catastrophic</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Critical</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Moderate</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Negligible</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
Click each image to read each description and choose the type of control that is being implemented for each one. Click Submit when you are finished.

Engineering
Protective Gear
Administrative
Administrative

Read the list of actions taken in the ORM process, then drag the ORM steps to the correct actions taken for the tornado hazard. Click Submit when you are finished. Click Reset to reset the exercise.

Step 1: Identify Hazards
Identified tornadoes as a possible hazard

Step 2: Assess Hazards
Gave the tornado risk an RAC of 3, because it is unlikely but highly dangerous

Step 3: Supervise
Watched diligently for tornadoes during the exercise

Step 4: Implement Controls
Explained that personnel needed to go to the basement of building 49 immediately if a tornado was spotted

Use the risk assessment matrix to determine the Risk Assessment Code (RAC) then select the correct RAC from the choices below. Roll your mouse over each category for a definition of that category.

|RISK ASSESSMENT MATRIX|
|---|---|---|---|---|
|SEVERITY |
|Catastrophic | 1 | 1 | 2 | 3 |
|Critical | 1 | 2 | 3 | 4 |
|Moderate | 2 | 3 | 3 | 5 |
|Negligible | 3 | 4 | 5 | 5 |

PROBABILITY

Likely

Probable

May

Unlikely

A

B

C

D
Read the statement and select the best definition from the choices below.

In the context of ORM and range safety, mitigation of risk is the ability:

- To monitor an event in order to ensure controls are implemented
- To halt or stop actions until a risk is resolved
- To minimize or eliminate the threat a risk presents by implementing controls
- To evaluate the risk that each hazard represents

Drag the appropriate control type to the space provided for each control listed.

Controls:

- Engineering
- Administrative
- Engineering
- Protective Gear

1. Placed limit stakes at gun positions to eliminate fire outside intended boundaries
2. Told personnel of the ricochet threat due to concrete targets
3. Strictly enforced an ammunition transportation policy to transport mortar rounds to the range
4. Passed out hard ear protection before exercise began to protect against hearing loss
5. Placed concrete bermades in front of range gates
6. Made personnel perform a "dry run" before allowing live-fire and maneuvering on the course

Look at your list below and place a check in the box next to the five items that you think are real hazards. Click Submit when you are finished.

- Range has been used for rocket firing in the past
- Range may have unexploded ordnance (UXO)
- Range gate has no way of locking or latching
- Senior range safety officer (SRSO) will be present at this exercise
- Unit members firing the rocket have no previous experience firing this rocket
- Unit has no protective gear for this exercise
- Targets are concrete, distance approx. 100m
Drag each step number to its corresponding statement in the process.

_Step 2: Assess Hazards_ 1. Gave the hearing protection hazard a risk assessment code (RAC)

_Step 4: Implement Controls_ 2. Briefed personnel on the importance of hearing protection and passed out ear plugs

_Step 1: Identify Hazards_ 3. Found that the unit does not have any ear plugs for the upcoming exercise

_Step 5: Supervise_ 4. During the exercise, watched to make sure all were wearing ear plugs

_Step 3: Make Risk Decisions_ 5. Ordered Corporal Meyers to get ear plugs for everyone

Range Safety

![Diagram of Range Safety Program]

- **Installation-Wide Range Safety Program**
  - **Level 1:** Installation Commander
  - **Level 2:** Range Control Officer
  - **Level 2:** Installation Safety Manager
  - **Level 2:** Range Control Officer

**Exercise-Specific Range Safety Responsibilities**

- Officer In Charge
- Range Safety Officer
- Laser Range Safety Officer

**The Individual**
Duties of RCO, OIC, RSO and LRSO

Progress Check Part 1

Each officer involved in range safety has a different set of responsibilities.

Read the action, then drag the person who executed that action to the empty frame. Click each person to see a list of their responsibilities. Click Submit when you are finished.

Action: I supervised a misuse with the AT-4 during B2O training.

- Verifies plan for exercise and receives briefing from range control
- Ensures the RSO is physically present on the range
- Gives final order to begin firing once clearance is given from range control
- Supervises misuse, hangfire, and cook-off procedures for a weapons system
- Establishes and maintains primary and secondary communications
- Makes sure that ammunition and explosives are properly transported, stored, and accounted for from the time of receipt to the time of expenditure or turn-in

Drag the corresponding person to each action. Click the Submit button when you are finished.

Reported a .50 cal cook-off to Staff Sergeant Thompson, the officer in charge of the exercise.

Called a cease-fire when Private Burns passed in front of my squad as we were about to fire.

Recorded a series of known hazards on Range 5 after several injuries were reported by using units.

Supervised transport of all ammunition for CALFAX exercise to make sure all policies and procedures are followed.

Filing cabinets with four drop targets describing the outline of each officer.

Submit
Reset
OIC/RSO Rank Requirements

Progress Check

An AT-4 anti-tank missile exercise is being conducted today on Range 4.

Click the button to open the rank requirement table.

Choose the answer that best represents the primary individual responsible for range safety while conducting an exercise.

- Installation commander
- OIC
- Unit commander
- RSO

Choose the answer that best represents the primary individual responsible for coordination of ranges and development of range safety program requirements.

- RSO
- OIC
- Installation commander
- RCO
Lesson 2 Quiz
Quiz Question 3

Read the statement, and select the correct position from the list.

I am responsible for many things as part of the range safety process. My biggest responsibility is to supervise the overall conduct of the exercise. I make sure that we succeed in training our unit, while continuing to make safety a priority. Some of my responsibilities include:

- Briefing the RSO on his/her duties and receiving the safety and readiness brief from the RSO
- Implementing risk management in all phases of training and
- Unit commander
- OIC
- Installation commander
- RCO

Feedback
Correct. The OIC has many responsibilities, including the supervision of the exercise, to make sure the troops are being trained successfully and safely.

Lesson 2 Quiz
Quiz Question 4

You have been tasked with selecting an RSO for a MK-19 exercise. While you have four trustworthy, weapons systems qualified personnel to choose from, you must also choose the correct individual in accordance with The Order/Reg.

Click the button to open the rank requirement table. Then select the only person that can serve as the RSO according to the Order.

- Sergeant Taylor, E-5
- Corporal Smith, E-4
- Private Anderson, E-2
- Staff Sergeant Kamp, E-6

Feedback
Correct. According to the rank requirement table, only an E-6 or above officer can serve as the RSO for this type of exercise.
Lesson 2 Quiz
Quiz Question 5

A misfire occurs with a MK-19 automatic grenade launcher during an exercise.

Select the person from the list who is responsible during this type of incident.

- RCO
- OIC
- RSO
- LRSO

[Feedback]
Correct. According to the responsibilities stated in the Order, the OIC is responsible for supervising misfires, hangfires, and cook-offs.

Lesson 2 Quiz
Quiz Question 6

Which position below is responsible for safety during exercises involving lasers?

Select the person from the list who is responsible for safety during this type of exercise.

- RCO
- OIC
- RSO
- LRSO

[Feedback]
Correct. The LRSO is responsible for safety during laser exercise due to his/her extensive experience using lasers and knowledge of the laser related hazards.

10
Types of Impact Areas

Progress Check

Range control is scheduling a MK-19 exercise. Your unit will be firing HE/DP rounds. Knowing what you know about impact areas, select the impact area you are required to fire into.

You are in a MK-19 exercise with HE/DP rounds. What type of impact area are you required to fire into?

- Temporary
- High-hazard
- Dedicated
- Low-hazard

Feedback

Correct. Because the risk of dud ordnance requires that grenades (40mm HE) shoot into an area where personnel are not allowed to enter, with the exception of EOD personnel, you are required to fire into the high-hazard impact portion of the dedicated impact area.

Close

Importance of Airspace

Progress Check

You are the RSO for a MOUT exercise and a small plane entered the area. Fire teams are ordered to engage ground targets and suppress simulated fire from a second floor window of a building. It has become apparent to you as you watch; that some of those firing suppressive fire are aiming at a much higher window.

Knowing that range control has accounted for airspace, select the appropriate action to take:

- Call an immediate cease-fire
- Warn the next fire-team about keeping their fire focused
- Allow them to continue as it may increase their sharp shots
- Warn the entire unit at the next break in the exercise

Feedback

Correct. Personnel actions are posing a threat to airspace. It is necessary to call a cease-fire because of the threat of damage to planes. This is a threat to safety regardless of how small it may be.

Close
Lesson 3 Quiz

Quiz Question 1

Select the best statement representing a range according to Title 10 of USC 101:

- A land area with solid targets for the use of practice firing
- An area of land or water that includes airspace, which may include firing lanes, test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and exclusionary areas
- A static area dedicated to target practice for one specific weapon system
- A land area for practice firing at targets, which may include test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and exclusionary areas

Correct. Title 10 of USC 101 defines a range as: A designated land or water area that is set aside, managed, and used for range activities of the Department of Defense. Such term includes the following:

- Firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and exclusionary areas.
- Airspace areas designated for military use in accordance with regulations and procedures prescribed by the Administrator of the Federal Aviation Administration.

Ranges vary in their use and purpose. Some ranges have specific purposes such as artillery. Other ranges may be used for everything from small arms to aerial bombardment.

Close

Lesson 3 Quiz

Quiz Question 2

You have been assigned a range for a MK-19 firing HE/DP exercise. You have been directed to fire into the impact area shown here, with strict orders from range control against maneuvering in that area. Judging by your orders from range control, what type of impact area is this?

- Dedicated
- Temporary
- High-hazard
- All of the above

Correct. High-hazard impact areas are extremely dangerous as they contain sensitive high explosive munitions within their permanent boundaries. These areas should never be entered without consent from range control.

Close
Lesson 3 Quiz

Quiz Question 3

The Notice to Airmen and Mariners (NOTAM) is crucial to securing safe skies and waterways. What does the NOTAM tell pilots and mariners?

Select the best statement describing the information NOTAM provides pilots and mariners.

- The time and type of exercise and the airspace or waterway affected
- The times airmen and mariners are not allowed to enter an area
- The times that installation forces will be conducting exercise
- The most efficient detour routes around the installation to conduct the exercise

Feedback

Correct. The purpose of the NOTAM is to notify airmen and mariners of the time and type of exercise, and the airspace or waterway being used to conduct the exercise.

Lesson 3 Quiz

Quiz Question 4

You are the QIC for a convoy operations and small arms exercise. Your commanding officer informs you that he would like to shoot mortars with HE in support of maneuvering troops. You tell him that you can not allow that to happen for the following reason:

Select the best statement from below to answer his question.

- You need to fire mortars before or after troops maneuver with the intention of NOTAM to support firing while troops maneuvering.
- Range safety requirements prohibit firing mortars in support of maneuvering troops.
- Range control needs to be told that the training plan has not cleared the HE for use in this area.
- Range control has not given clearance to shoot HE and you do not have the correct high-hazard impact area.

Feedback

Correct. You have not cleared this with RCO and you do not have the correct high-hazard impact area.
Small Arms SDZs
Progress Check

Drag the appropriate measurements and angles to their corresponding locations and drop them on the batwing SDZ. Click Submit when you are finished.

Distance X
Distance Y
Distance W
Angle P
Angle Q
Dispersion area
Ricochet area
Area A
Area B

Submit
Reset

Small Arms SDZs
Progress Check

Drag the appropriate measurements and angles to their corresponding locations and drop them on the cone SDZ. Click Submit when you are finished.

Distance X
Dispersion area
Ricochet area
Area A

Distance X
Submit
Reset
Small Arms SDZs
Progress Check

Click an icon below to open one of the references. Then select the matching weapon and ammunition for the SDZ shown here.

- 7.62mm, Special Ball M118
- .50 cal., M2 Ball
- 20mm, M20 TP-T
- 5.56mm, M855 Ball

Correct. The correct answer is B, the .50-caliber machine gun firing M2 ball ammunition uses the SDZ shown on the screen.

<table>
<thead>
<tr>
<th>Caliber</th>
<th>Impact media</th>
<th>Dist. X</th>
<th>Dist. Y</th>
<th>Angle X</th>
<th>Angle Y</th>
<th>Vertical Error</th>
<th>Angle 1</th>
<th>Angle 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>.50 cal.</td>
<td>Earth/water</td>
<td>6,500</td>
<td>5,211</td>
<td>2,903</td>
<td>38.19</td>
<td>0.36</td>
<td>63.35</td>
<td></td>
</tr>
<tr>
<td>M2 Ball</td>
<td>Steel/concrete</td>
<td>6,500</td>
<td>4,147</td>
<td>714</td>
<td>478</td>
<td>16.03</td>
<td>44.13</td>
<td></td>
</tr>
</tbody>
</table>

Moving and Multiple Targets & SDZs
Progress Check

You are the RSO for an exercise where personnel will be firing from multiple firing lanes. You need to adjust the SDZ for multiple firing lanes and targets by dragging the left and right lateral limits of fire to their proper locations.

Use the slider bars at the firing line to adjust the SDZ for multiple firing lanes and targets. Click Submit when you are finished.
Impact Media

Progress Check

You are the RSO for an M9 pistol exercise firing 9mm M882 ammunition with steel impact media.

Click the Pocket Guide icon to open the Pocket Guide. Find the appropriate SDZ dimensions and select the correct SDZ setup below.

Lesson 4 Quiz

Quiz Question 1

There are two types of SDZs for small arms.

Select the two small arms SDZ types from the list below. Click Submit when you are finished.

- Explosive projectile
- Type A
  - Batwing
  - Non-explosive projectile
  - Cone
- Type B

Feedback

Correct. Batwing and cone are the two types of surface danger zones for small arms.
Lesson 4 Quiz
Quiz Question 2
Look at the SDZ for this 7.62mm M16 Special Ball exercise.

Drag the corresponding values to the correct locations on the SDZ.
Click Submit when you are finished.

Distance X
Distance Y
Distance W
Angle R
Angle Q

Feedback
Correct. You placed all the distances and values in their correct locations.

Submit
Reset
Close

Lesson 4 Quiz
Quiz Question 3
You are getting ready for an M16A2 exercise.
Select the SDZ that you would most likely utilize for a single firing point and single target exercise.

Feedback
Correct. This surface danger zone is the only one equipped for a weapon firing from a single firing position without explosive projectiles. Since this exercise does not use explosive projectiles, you do not need an Area A and an Area B.

Close
Lesson 4 Quiz

Quiz Question 4

You are the QIC for a machine gun qualification exercise. The exercise originally called for firing from a single gun position at a single target. Now your unit commander wants to use a multiple target setup. Multiple targets affect your SDZ.

Select the SDZ that represents the adjustments you made for multiple targets.

[Diagrams of three different SDZs]

Lesson 4 Quiz

Quiz Question 5

You are conducting a pistol firing exercise using the .45 caliber M1911 Pistol. The original SDZ was calculated for earth impact media. You now find out that the range you have been assigned uses steel targets. Knowing that some personnel could miss the target and the round could impact the steel, you decide to change your SDZ to the worst case scenario.

Select one of the Resources below and identify the worst case scenario for your weapons system and ammunition.

- Distance Y = 1690m
- Distance Y = 1211m
- **Distance Y = 1111m**
- Distance Y = 1016m

[Feedback message]

Correct. The new Distance Y for steel impact media is 1111 meters. Steel impact media using steel targets will have different deflection and ricochet characteristics than earth impact media such as a sand or small hill.
Lesson 4 Quiz
Quiz Question 6

You need to find the dimensions of the SDZ for an exercise where you will fire M2AP ammunition from a .50 caliber machine gun with concrete impact media.

Click the excerpt from The Order/Reg or Pocket Guide. Then enter the correct values for each distance as follows:

Distance X = 6100m
Distance Y = 4300m
Area W = 718m
Angle P = 16.30°
Angle Q = 33.10°

Excerpt from Order/Reg
Excerpt from Pocket Guide

http://www.quantico.usmc.mil/ - Feedback - Microsoft Internet Exp...

Feedback

Correct. You found the correct values for this type of exercise by looking them up in your resources. The correct answer is Distance X = 6100m, Distance Y = 4300m, Area W = 718m, Angle P = 16.30°, Angle Q = 33.10°. These values are found in the tables located in the Pocket Guide, Order/Reg and the Smart Pub along with the values for most other weapons and ammunition with all types of impact media.

<table>
<thead>
<tr>
<th>Caliber</th>
<th>Impact media</th>
<th>Dist. X (meters)</th>
<th>Dist. Y (meters)</th>
<th>Area W (m2)</th>
<th>Vertical hazard</th>
<th>Angle P (degrees)</th>
<th>Angle Q (degrees)</th>
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</thead>
<tbody>
<tr>
<td>50 cal M2 Earth/Water</td>
<td>6100</td>
<td>5142</td>
<td>1659</td>
<td>904</td>
<td>40.60</td>
<td>65.60</td>
<td></td>
</tr>
<tr>
<td>AP Stone/Paved</td>
<td>6100</td>
<td>4300</td>
<td>718</td>
<td>462</td>
<td>16.60</td>
<td>33.19</td>
<td></td>
</tr>
</tbody>
</table>
Lesson 4 Quiz

Quiz Question 7

You are conducting an M16A2 exercise where you will fire 5.56mm M193 ball ammunition at Earth impact media. You will be using a cone SDZ and you need to find the dimensions of the SDZ.

Click the excerpt from The Order/Reg or Pocket Guide below to find Distance X of the SDZ for this type of exercise. Then select the correct Distance X measurement.

- Distance X = 3.069m
- Distance X = 3.433m
- **Distance X = 3.100m**
- Distance X = 2.004m

![Excerpt from Order/Reg](http://www.quantico.usmc.mil/...)

Ammunition Inspection & Malfunction Reporting Procedures

Progress Check

You are Staff Sergeant Koenig, RSO for an M16A2 firing exercise where the shooters are working as fire teams engaging multiple targets in a field firing setting. Your ammunition was stored just behind the firing line for immediate issue. Unfortunately a thunderstorm came through leaving about 400 rounds pre-staged and exposed to the rain.

Corporal Anderson experienced what he thought was an "audible" thunderstorm. The OIC checked the bore and found no obstruction.

Sergeant LoStracco, the squad leader, just reported that a weapon malfunctioned. After sending medical personnel to provide first aid and evacuate personnel, you begin gathering information for your reports.

Select the pieces of data that would go into your report. Click MCO P8025.1D and the Ammunition Malfunction Collection Data Card should be included in your report. Click Submit when you are done.

- Time, date, and weather during exercise: 0900-0925, 25 Aug 19...
- Terrain at the scene of the malfunction: open firing range...
- Targets moving or stationary: stationary...
- Total number of 5.56 ball ammunition which malfunctioned: 100...
- Weapon used to fire malfunctioning rounds: M16 A2, S/N...
- Date of last weapon cleaning...
- Prior to firing/employment: the ammunition was unpacked and subject to rain...
- Date unit last qualified with weapon...

![Feedback](http://www.quantico.usmc.mil/...)

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Ammunition Inspection & Malfunction Reporting Procedures

Progress Check

You are Staff Sergeant Smith, the RSO for a mortar firing exercise. Your range setup consists of multiple gun positions that are firing at the same target. Training is going well when Corporal Mathews yells, "Misfire!"

Select the statement below that best represents the steps you should take in this situation.

- Notify range control of the malfunction and wait for their instructions.
- Order a cease-fire down the gun line, move everyone to safety, and notify the gun line and contact range control.
- Follow weapon misfire procedures outlined in the TM and contact range control.
- The OIC supervises misfire procedures and contacts range control.

Feedback

Correct. The OIC supervises the misfire procedures and contacts range control.

Close

Ammunition Handling

Progress Check

You finished a B20 training exercise this morning. Your unit is currently at a MOUT facility preparing for a non live-fire MOUT exercise. They are congregated at the ammunition staging area. As you approach the ammunition staging area you notice that there are some safety concerns.

Based on what you know about the situation, rank the areas of concern and identify the areas of concern that need your attention.

- Personnel are missing their personal protective equipment.
- The team is tired from their morning exercise.
- Live and blank ammunition are stored in the same location at the staging area.
- The ammunition is not protected from the elements.
- The weapons do not appear to have been prepped with their safety devices.

Feedback

Correct. You identified the areas of concern to be:

- Personnel are missing their personal protective equipment.
- Live and blank ammunition are stored in the same location at the staging area.
- The ammunition is not protected from the elements.
- The weapons do not appear to have been prepped with their safety devices.

Submit

Reset
Lesson 1 Quiz

Quiz Question 1

There is a Marine Corps Order and an Army Regulation, called the Order, that contains the ammunition handling procedures and regulations for each service.

Select both the Army Regulation and the Marine Corps Order on ammunition handling from the list below.
Click Submit when you are finished.

☐ MCO 3570.1B
☐ AR 385-63
☐ MCO 385-63
☐ AR 3570.1B
☐ MCO P8020.10A
☐ MCO P3570.1B
☐ DA PAM 2750

Lesson 1 Quiz

Quiz Question 2

You are the OIC for an M16A2 firing exercise. You appointed Sergeant Thomas to watch the progression of the exercise from the other end of the firing line because of his expertise with the weapon. He suggests that "we mix blank rounds randomly to make the weapons malfunction."

Choose the best response to his suggestion.

☐ That’s a good idea, we have a deployment coming up and you never know what we could get into.
☐ These guys don’t have much experience with breaking down their weapons.
☐ We’ll need to document that we mixed in blanks when we... We can’t do that. We never mix live and blank ammunition.

Correct. The documents that govern ammunition handling are MCO P8020.10A and AR 385-64.
OIC/RSO Communication
Progress Check

As the RSO, you are sending Private Jones to guard Gate 3, which is equipped with a guard house, a land-line phone and a red streamer to warn incoming personnel and vehicles of the range’s “hot” status. Gate 3 is often used by unauthorized personnel to gain entry to the range road as a shortcut. During your pre-fire inspection you found that Private Jones had no method of communication. Click the SOP icon to read an excerpt about the SOP at the range. Then choose the correct communication setup for Private Jones.

- Primary: Cell phone
  Secondary: Land-line telephone
- Primary: Radio
  Secondary: Land-line telephone
- Primary: Radio
  Secondary: Cell phone
- Primary: Land-line telephone
  Secondary: Radio

Section on Communications

Correct. You chose B: Primary: Radio, Secondary: Land-line telephone. According to this SOP excerpt, “Radio will be used as the primary means of communication.” The SOP excerpt also states, “If a land-line telephone is available at the range, it can be used as the secondary means of communication.” It is extremely important that communications are established and maintained. The SOP for your particular range will tell you the proper method of communication for your range.

Special Safety Scenarios
Emergency Procedures Progress Check

You are the RSO and you see Private Johnson move forward from the firing line. The shooter next to Private Johnson’s firing position did not see him and continued to fire, hitting Private Johnson.

Select the best response to this situation.

- Private Johnson, are you all right!
- Cease-fire! Cease-fire!
- Private Stevens, call for MEDEVAC!
- Lieutenant Green, get Doc Taylor, I think Private Johnson is going to need medical attention!

Correct. You chose B: “Cease-fire! Cease-fire!” You should always call a cease-fire at the first sign of trouble. Good reaction.
Special Safety Scenarios
Emergency Procedures Progress Check

Doc Taylor tells you that Private Johnson is seriously injured, he is losing blood fast and needs to be MEDEVAC’ed. Select the response that reflects the next action you should take.

Select the best response to this situation.

- Private Stevens, did you see anything? I need to find Private Johnson ourselves if we need to.
- Everyone get back to the staging area while we attempt to lend assistance to Private Johnson.
- Lieutenant Green, regroup your men behind the firing line to lend assistance to Private Johnson.
- Range control, this is range 6. We have a major injury that requires MEDEVAC. Doc Taylor has informed you that Private Johnson requires MEDEVAC. Range control should be the first call you make upon receiving that information. Range control will now initiate the emergency response personnel.

Feedback

Correct. You chose B: "Range control, we are at the north end of the range 6 firing line. The victim is a male, approximately 30 years of age with a gun shot wound." You need to deliver information to range control as soon as they request it. Getting the patient to the hospital is now your number one priority. You have finished this exercise, click Next to continue.

Close

Special Safety Scenarios
Emergency Procedures Progress Check

Range control has contacted you with a request for information that will help expedite the process of getting Private Johnson treatment.

Select the best response to this situation.

- Private Stevens, get the dedicated safety vehicle so Private Johnson ourselves if we need to.
- Range control, we are at the north end of the range 6 firing line. The victim is a male, approximately 30 years of age with a gun shot wound. Lieutenant Green, contact range control, they have someone that you can answer.
- Range control, please contact Petty Officer Taylor. He and he is attending to the victim and will have the best info to give you.

Feedback

Correct. You chose B: "Range control, we are at the north end of the range 6 firing line. The victim is a male, approximately 30 years of age with a gun shot wound." You need to deliver information to range control as soon as they request it. Getting the patient to the hospital is now your number one priority. You have finished this exercise, click Next to continue.

Close
**Info on: lights**

Good job! The red flashing lights are used to warn oncoming people of the dangers of a live-fire range during times of limited visibility.

**Info on: streamer**

Good job! The red streamer warns people of the dangers of a live-fire range. Read the range SOP to find if red streamers are used on your range and where they go.
Great! The lateral limit markers are used to identify to shooters the left firing limit and right firing limits so shooters don’t fire into restricted areas.

You have completed this exercise. Click Next to continue.
Lesson 2 Quiz

Quiz Question 1

You are an RSO for a live-fire mortar exercise. There are several people with whom you need to communicate. You know that you need communications with range control, gate and tower guards, observers and _________.

Select the best answer statement to complete this sentence.

- the military police
- the unit commander
- the OIC
- the installation fire department

Feedback

Correct. The RSO needs communications with range control, gate and tower guards, observers, air sentries, and the OIC who will also be present and in charge of the overall exercise.

Lesson 2 Quiz

Quiz Question 2

You are testing your communications before beginning an M240G exercise. Primary radio communications check out. However, your team has no method of secondary communications. Each member of your team is carrying their own personal cell phones.

Click the SOP to find out more on communications.

- Create a series of hand signals that you can use
- Use the assigned radio backup frequency
- Use an amplified bullhorn to call the RSO
- Use personal cellular telephones to call

Feedback

Correct. The correct answer is: Use personal cellular telephones to call the RSO, OIC and range control. The SOP states that personal cell phones can be used as the secondary form of communication. The only valid form of secondary communication on the list is the cell phone.
Lesson 2 Quiz

Quiz Question 3

Your live-fire exercise is going on as planned when Private Sanchez yells to tell you that Lieutenant Jones has been hit by a ricochet fragment in the face. Lieutenant Jones is conscious, but it is clear that he needs emergency medical attention. Get Lieutenant Jones the treatment he needs by following general emergency procedures.

Correct. The proper order is:
1. Call cease-fire
2. Contact range control and start first aid as needed
3. Maintain contact with range control and give critical information.

It is extremely important to the safety of personnel that you know the correct actions to take in the event of an emergency. You are in charge of safety and need to act swiftly and accurately when an emergency situation arises.

Submit  Reset  Note

Lesson 2 Quiz

Quiz Question 4

Of the possible responsibilities of an OIC or RSO, responsibilities to be used in a serious life-threatening situation are:

Click the SOP to review the excerpt on OIC/RSO responsibilities to be used in a serious life-threatening situation.

Provide information on type of injuries
Initiate medical care
Drive victim to hospital
Lock down range complex
Provide patient location
Re-explain safety procedures to the unit
Take over for injured personnel to continue
Direct medical personnel to scene

Submit  Reset  Note

Feedback

Correct. The most likely responsibilities, according to the SOP, are to provide information on the type of injuries, provide the patient location, and direct medical personnel to the scene. You will always need to provide range control with critical information that will expedite the process.
Lesson 2 Quiz

Quiz Question 5

Click the three most commonly used range warning symbols.

Click the Submit button when you are finished with your selections.

Lesson 2 Quiz

Quiz Question 6

Range control provided you with a red streamer when you checked out Range 7 for machine gun qualifications. When you arrived, you found that your range is equipped with a tower, two forward observation platforms, red lateral limit poles, and a road gate which is the only entrance to the range. The tower has a streamer and red flashing lights. The observation platform is adjacent to the range and far from foot or vehicle traffic. Which of these areas should be fitted with the red streamer?

Select the best choice from the list below.

- The tower
- The forward observation platforms
- The red lateral limit markers
- The road gate

Correct. The red streamer, red artillery streamer, and red flashing light are the most commonly used range warning signals.

Correct. The correct response is D: The road gate. The gate at the entrance to the range is the primary location for warning streamers. Refer to the SOP for a range for specific requirements.
Lesson 2 Quiz
Quiz Question 7

It is the responsibility of both the OIC and RSO to __________. 

Select the best choice from the list below.

- be aware of installation fire-threat levels
- protect endangered species
- account for weather conditions
- all of the above

Correct. The correct answer is D: all of the above. All environmental factors need to be accounted for by the OIC and RSO.

Lesson 2 Quiz
Quiz Question 8

You are the OIC for an exercise. Lightening has just occurred, and you need to consider the safety of personnel. 

Select the best response from the list below.

- Continue with the exercise. It is safe.
- Call a cease-fire and remain on station.
- Proceed with the exercise until the danger has passed.
- Order a cease-fire, get participants out of danger, and then contact range control.

Correct. The correct answer is D: Order a cease-fire, get participants out of danger, and then contact range control. This course of action is the safest.
Completing the RSO Checklist

Task 1: Verify Rank Requirements

**Checklist Item 1**

Look at the requirements for this exercise. Click Yes if both Lt. Jones, rank O-2, and you, as the RSO, Staff Sergeant Johnson, meet rank requirements. Click No if either or both of you do not meet the requirements.

<table>
<thead>
<tr>
<th>Rank Requirement Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

**Task**

You need to check the rank requirement table to verify that the OIC, Lt. Jones, and you, as the RSO, Staff Sergeant Johnson, meet rank requirements for this ETO training event.

Go to Task: 1 2 3 4 5 6 7

**Weapon System**

<table>
<thead>
<tr>
<th>OIC</th>
<th>RSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

- Practice hand grenades; sub-caliber training devices; laser devices; firing devices; simulators & trip wires; small arms and machineguns
- Chemical agents and smoke; 2.6
- Aerial gunnery & air defense weapons; flamethrowers; live grenades, grenade launchers, and grenade machine guns; live mines & demolition; tank & fighting vehicle cannon; recoilless rifles
- Field Artillery
- Mortars
- ADA rocket systems and guided missiles
- Direct fire antitank rockets and missiles

**Checklist Item 2**

Weather conditions are very hot and the terrain is somewhat dry. Check with your OIC to learn the danger code for today’s conditions and then select the appropriate code listed below.

- Blue
- Green
- Yellow
- Orange
- Red

**Task**

Check with Lt. Jones to verify today’s fire danger code.

Go to Task: 1 2 3 4 5 6 7

**Feedback**

Correct. Today’s danger code is orange, which indicates that you must use extreme caution. It is extremely important that you know the correct Danger Code so you know the type of ammunition that is restricted if any.

Click the Next button to continue.
Completing the RSO Checklist
Task 2a: Identify Prohibited Ordnance

Checklist Item 2a
Now that you know the danger code, verify whether there are any prohibited ordnance.

- Yes, armor piercing is prohibited
- No, nothing is prohibited for this danger code
- Yes, tracers are prohibited
- Yes, live rounds are not permitted at all

Task
You know the danger code, now use your Range SOP to find out if there are any prohibited ordnance for that danger code.

Go to Task: 1 2 3 4 5 6 7

The following is the minimum an RSO will brief prior to a static live fire range:

OIC/RSO Checklist

1. Rank Requirements
   - OIC: Lt. Jones D-2
   - RSO: Sgt. Johnson E-6

2. Limit Markers
   - Left/Right

3. Primary Direction of fire:

4. Gate Guards (if required):
   - Location:

5. Road Guards (if required):
   - Location:

6. Other Sentinels (if required):
   - Location:

7. Mun Support:

8. On Range/At Clinic:

9. Ambulance Location:

---

Completing the RSO Checklist
Task 3: Verify Markers In Place

Checklist Item 3
Are both the left and right lateral limits in place?

Yes  No

Task
Verify that both the left and right lateral limits are in place for your exercise.

Go to Task: 1 2 3 4 5 6 7

Feedback
Correct. Both limits are in place here. Always make sure you verify that limits are in place before you begin an exercise.

Close
Completing the RSO Checklist
Task 3a: Identify Primary Direction of Fire

Checklist Item 3a
Use the mouse to move the compass to the primary direction of fire. Click your mouse when the compass is displaying the correct measurement. Then click the Submit button.

Task
Use your Range SOP to find the primary direction of fire for this range.

Go to Task: 1 2 3 4 5 6 7

Feedback
Correct. You learned in the SOP that the correct measurement is 12 degrees magnetic North. Knowing the correct direction of fire is crucial to your safety as well as the safety of personnel on your range and other ranges.

Click the Next button to continue.

Completing the RSO Checklist
Tasks 3b, 3c, & 3d: Determine Guard or Sentry Needs

Checklist Items 3b, 3c, & 3d
Verify the range's requirement for any guards or sentries.

Task
Use your Range SOP to determine whether your range requires any guards or sentries.

Go to Task: 1 2 3 4 5 6 7

Feedback
Correct. Your range SOP says that Range 302 requires that you post a road guard at the entrance to the tank trail. Make sure you post the necessary guards to avoid unauthorized entry to the range.

Click the Next button to continue.
Completing the RSO Checklist
Task 4: Determine Safety Vehicle and Corpsman Location

Checklist Item 4
Verify the location of your corpsman and safety vehicle.

Task
All ranges require a corpsman or medic and a safety vehicle. Use your Range SOP to verify the location of your corpsman and safety vehicle for this range.

Go to Task: 1 2 3 4 5 6 7

☐ Behind the center of the firing line
☐ At the range entrance
☐ At the end of the firing line
☐ At the range exit

Click the Next button to continue.

Feedback
Correct. This range requires that the corpsman and safety vehicle be on range behind the center of the firing line. Make sure you verify that the corpsman and safety vehicle are in position.

Click the Next button to continue.

Completing the RSO Checklist
Task 5a: Determine Ammunition Staging Location

Checklist Item 5a
Click the place on the range where you can stage ammunition.

Task
Use your Range SOP to determine the proper location to stage the ammunition.

Go to Task: 1 2 3 4 5 6 7

Feedback
Correct. Your range is equipped with 3 ammunition tables for staging of ammunition.

Click the Next button to continue.
Completing the RSO Checklist

Task 5b: Verify Ammunition Type

Checklist Item 5b
Verify the type of ammunition that will be used for this exercise.

☐ 9mm
☐ 7.62mm
☐ .222cal
☐ 5.56mm ball

Task
Verify the type of ammunition used for today’s M16A2 BZO exercise.

Go to Task: 1 2 3 4 5 6 7

Feedback
Correct. You are using 5.56mm ball ammunition. Make sure you are only using the ammunition authorized for this range.

Completing the RSO Checklist

Tasks 6a & 6b: Determine Range Frequencies

Checklist Item 6a & 6b
Verify the primary and secondary radio frequencies used to contact range control.

☐ Primary- 30.30, Secondary- 40.20
☐ Primary- 29.60, Secondary- 44.80
☐ Primary- 36.50, Secondary- 40.20
☐ Primary- 30.30, Secondary- 44.80

Task
Use your Range SOP to find the radio frequencies for range control.

Go to Task: 1 2 3 4 5 6 7

Feedback
Correct. It is very important that you know the primary and secondary frequencies for range control so you can communicate with range control and monitor the safety net.
Completing the RSO Checklist
Task 6c: Identify Range Control Phone Numbers

Checklist Item 6c
Verify the telephone numbers used to contact range control.

☐ (507)555-3474, (507)555-3473, (507)555-3472
☐ (507)555-4632, (507)555-4633, (507)555-5637
☐ (507)555-4326, (507)555-4327, (507)555-4328
☐ (507)555-6432, (507)555-6433, (507)555-6434

Task
Use your Range SOP to find the three telephone numbers used to contact range control.

Go to Task: 1 2 3 4 5 6 7

Ammunition:

a. Location: Ammo Tables
b. Verify type and suitability: 5.56mm Ball

Range Control Contact Info:

a. Primary Frequency: 36.50
b. Secondary Frequency: 50.20

Feedback
Correct. It is very important that you know the telephone numbers for range control so you can communicate with range control if the radio is not working.

Close

Ensure Safe Range Operations
Planning for an M16A2 BZD Exercise

Private Kowalski
I have just experienced an audible pop. What should I do?

Task
Use your knowledge of range safety and your critical thinking skills to safely handle Private Kowalski’s audible pop according to range safety procedures.

☐ Have Private Kowalski continue firing
☐ Perform the M16A2 audible pop misfire procedures yourself
☐ Contact Lieutenant Jones and inform him of the situation so he can supervise the M16A2 audible pop misfire procedure
☐ Call a cease-fire and conduct a safety check

Feedback
Correct. It is the OIC’s responsibility to supervise all misfire, hangfire and cookoff procedures. The RSO can also conduct the procedure, but only if authorized by the OIC.

Close
Ensure Safe Range Operations
Planning for an M16A2 BZO Exercise

Petty Officer Barnes
Staff Sergeant Johnson, Corporal Jackson tripped on his way to the firing line and cut his hand.

Task
Use your knowledge of range safety and your critical thinking skills to safely handle Corporal Jackson's hand injury.

- □ Call a cease-fire
- □ Have Corporal Jackson bandage himself and keep firing
- □ Call a cease-fire and contact range control to start
- □ Make sure Petty Officer Barnes provides first aid to Corporal Jackson.

Feedback
Correct. Corporal Jackson's injury does not require a cease-fire. This minor injury does not necessitate a MEDEVAC, but treatment is required. Have Petty Officer Barnes provide first aid to Corporal Jackson.

http://www.quantico.usmc.mil - Feedback...

Yes No

Ensure Safe Range Operations
Planning for an M16A2 BZO Exercise

A plane enters the range and is about 200ft above the line of fire. Should you order a cease-fire?

Task
Use your knowledge of range safety and your critical thinking skills to safely handle the oversight of a small plane.

Feedback
Correct. You need to call a cease fire for the safety of the plane.
Ensure Safe Range Operations
Planning for an M16A2 BZO Exercise

Lieutenant Jones
Staff Sgt. Johnson, we’ve completed firing and all live rounds have been turned in. Range control has been notified we’re cold. What else does the unit need to do before exiting the range?

Task
Use your resources to verify whether you need to perform actions to close the range.

☐ Fire off remaining rounds in open lots
☐ Clean up all damage and call in the Range Inspector
☐ Contact range control to report that the range is clear
☐ You have performed all duties, no action needed

Feedback
Correct. According to the Range SOP, you need to clean up all damage and call in a Range Inspector to inspect the range before you leave.

Click the Next