UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS NATIONAL CAPITAL REGION
MARINE CORPS BASE QUANTICO
3250 CATLIN AVENUE
QUANTICO VIRGINIA 22134 5001

MCINCR-MCBQO 3750.1B CH-1
B 013
9 JULY 2024

MARINE CORPS INSTALLATIONS NATIONAL CAPTIAL REGION-MARINE CORPS BASE QUANTICO ORDER 3570.1B ADMINISTRATIVE CHANGE 1

From: Commander, Marine Corps Installations National Capital Region, Marine Corps Base Quantico (MCINCR-MCBQ)
To: Distribution List

Subj: REGULATIONS FOR RANGE, TRAINING AREA, AND AIRSPACE OPERATIONS (SHORT TITLE: RANGE REGULTIONS)

1. Situation. Assistant Chief of Staff for Operations, G-3, MCINCR-MCBQ directed changes to the subject order following the required annual review.

2. Mission. To implement changes to the Order.

3. Execution. Changes to the subject Order are as follows:

a. The requirement to obtain a Quiet Hours waiver from Commander, MCINCR-MCBQ was removed.

b. The requirement to obtain an Airspace Waiver was removed.

c. Paragraph 2003.1 was reworded to clarify scheduling priority.

d. Paragraph 4010 SPECIAL EFFECTS SMALL ARMS MARKING SYSTEM (SESAMS) was added to incorporate information published in Safety Of Use Memorandum (SOUM) 01-24.

e. Paragraph 4014 USE OF STEEL REACTIVE TARGETS (SRT) was added to incorporate information published in SOUM 15-23.

f. Paragraph 7004 Trackless Moving Infantry Target Systems (TMITS) was added to identify additional training support capabilities.

4. Administration and Logistics. Recommendations concerning the contents of this Order are welcomed and should be addressed to the Director, Range Management Branch.

5. Command and Signal.

a. Command. This Order is applicable to all commands, organizations, units, and activities authorized to use the ranges, training areas, and airspace associated with the Guadalcanal RTA.

b. Signal. This Order is effective on the date signed.

DANIEL M. SULLIVAN
By direction

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MARINE CORPS INSTALLATIONS NATIONAL CAPITAL REGION-MARINE CORPS BASE QUANTICO ORDER 3570.1B

From: Commander, Marine Corps Installations National Capital Region-Marine Corps Base Quantico
To: Distribution List

Subj: REGULATIONS FOR RANGE, TRAINING AREA, AND AIRSPACE OPERATIONS (SHORT TITLE: RANGE REGULATIONS)

Ref: (a) MCO 3570.1C
(b) MCO 3550.9A
(c) MCO 3550.10
(d) MCO 5100.29C Vol. 2
(e) MCBO 11320.1B
(f) MCO 8025.1E
(g) MCINCR-MCBQO 6200.1D
(h) MCINCR-MCBQO 5760.3B
(i) MCINCR-MCBQO 11015.2D
(j) MCINCR-MCBQO 6100.2C
(k) MCINCR-MCBQO P5560.2E
(l) MCBO 8023.1A
(m) MCO 5100.29C W/CH 1-2 Vol 8
(n) MCO 8025.1E Class V(W)
(o) MCINCR-MCBQO 3565
(p) JRegtO P3570.2 Marine Corps Artillery Fire Support Training SOP
(q) FAA JO 7400.10B Special Use Airspace
(r) MCO 5104.1C
(s) MIL-HDBK 828C Range LASER Safety
(t) TB MED 524 Control of Hazards to Health from LASER Radiation
(u) Integrated Natural Resources Management Plan (INRMP)
(v) MCINCR-MCBQ Hazardous Waste Management Plan (HWMP)

1. Situation

a. Background. Marine Corps Installations National Capital Region-Marine Corps Base Quantico (MCINCR-MCBQ) provides the only Department of Defense (DoD) live-fire range complex within the National Capital Region (NCR). This range complex is a

critical asset to support the training requirements of Marine Corps units, as well as other Services and DoD organizations, within the NCR. Additionally, the range complex supports tenant federal agencies and other federal and local law enforcement agencies from across the NCR. The Commander, MCINCR-MCBQ is responsible for establishing procedures and publishing instructions governing the use of the range complex, and associated airspace, in order to ensure their safe and effective operation.

b. Scope

(1) This order applies to the Guadalcanal ranges and training areas (RTA) and special-use airspace (SUA) located west of I-95. All units, organizations, and individuals who utilize these areas must comply with this order.

(2) This order does not apply to Training Area (TA) 2, 3, or 4, located east of I-95. TAs 2, 3, and 4 are managed and operated in accordance with procedures established by the Commanding Officer (CO), Officer Candidate School (OCS). No live fire training is permitted in these areas.

(3) This order does not apply to academic or applied instruction facilities located within established cantonment areas.

(4) This order has partial application to the outdoor ranges located within the Federal Bureau of Investigation (FBI) Academy cantonment area. The FBI Academy ranges are operated and maintained in accordance with Department of Justice (DoJ) regulations; however, since these ranges fire into the Guadalcanal RTA, they must be properly scheduled and their use must be reported in real-time. Additionally, all FBI range redesigns and modifications, and changes to FBI range procedures must be reviewed by MCINCR-MCBQ to ensure overall compliance with range safety requirements.

2. Cancellation. MCBO 3570.1A.

3. Mission. MCINCR-MCBQ will implement range control procedures in accordance with the references and this Order in order to ensure the safe and effective use of the Guadalcanal ranges, training areas, training facilities, and associated airspace.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent

(a) Purpose. To provide policy and procedures for range users to execute training safely and effectively in the Guadalcanal RTA and SUA.

(b) Method. Develop, publish, and implement specific guidance for the use of the Guadalcanal RTA and SUA; ensuring compliance with all applicable range safety, airspace management, land management, and environmental management requirements, while enabling realistic and effective training to the maximum allowable extent.

(c) End State. Provide range users with clear, comprehensive guidance on how to plan, schedule, and execute safe and effective training aboard MCINCR-MCBQ while preserving life, equipment, and natural resources.

(2) Concept of Operations. All units that schedule and use the Quantico RTA for training will be provided a copy of this Order. Each unit commander must assign personnel to serve as an Officer-In-Charge (OIC) and Range Safety Officer (RSO) prior to conducting training in the Quantico RTA. These OICs and RSOs must attend specific training on the regulations contained in this Order and must demonstrate comprehension prior to assuming their duties providing oversight of unit training. Throughout a unit's planning, scheduling, and execution process, MCINCR-MCBQ Range Management Branch (RMB) personnel will provide advice, review safety procedures, and monitor the execution of training to ensure compliance. Violations of this Order will be recorded in an incident report and, as appropriate, referred to the proper authority for punitive or non-punitive action.

b. Coordinating Instructions

(1) This Order contains substantial revisions and should be read in its entirety.

(2) In the event procedures in this Order conflict with guidance issued by a higher authority within the United States Marine Corps (USMC), the orders of the higher authority shall take precedence; however, such exceptions to this Order must be specifically identified and explicitly acknowledged by both the

unit and MCINCR-MCBQ RMB personnel prior to the execution of affected training.

(3) Non-USMC organizations must comply with USMC regulations when training aboard MCINCR-MCBQ. If USMC regulations prevent an organization from meeting specific training requirements, a request for relief, waiver, or deviation may be submitted to Commander, MCINCR-MCBQ for consideration.

5. Administration and Logistics

a. This Order will be reviewed and updated on an annual basis.

b. Recommendations concerning the contents of this Order shall be forwarded to Director, Range Management Branch, G-3, MCINCR-MCBQ.

6. Command and Signal

a. Command. This Order applies to all commands, organizations, units, and activities authorized to use the ranges, training areas, training facilities, and airspace associated with the Guadalcanal RTA.

b. Signal. This Order is effective on the date signed.

MICHAEL L. BROOKS

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TABLE OF CONTENTS

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CHAPTER 1

GENERAL

1000. PURPOSE AND SCOPE

1. The primary purpose of this Order is to ensure the safe execution of training while also maximizing unit training value and the efficient use of the Guadalcanal Range and Training Area (RTA) aboard Marine Corps Base Quantico (MCBQ). No portion of this Order will be construed as permitting activities that endanger life or property.

2. This Order prescribes policies and highlights precautions to be taken in the use of ammunition, energy producing weapons/equipment, explosives, pyrotechnics, and training devices within the RTA, as well as the general use of the RTA for non-live fire activities.

3. Reference (a) prescribes regulations for the use of ammunition, weapons, and training systems during training. Personnel supervising unit training in the RTA must be familiar with those sections of reference (a) that apply to their scheduled training and the entirety of this Order. Where conflicts occur between reference (a) and instructions contained in Field Manuals (FMs), Technical Manuals (TMs), or other applicable manuals, the more restrictive provision will govern. Weapons, ammunition, or systems not addressed in reference (a) are considered "non-standard" and must be approved for use on a case-by-case basis after review by the appropriate authorities as outlined in paragraph 6012 of this Order.

1001. OVERVIEW

1. The MCBQ Guadalcanal RTA is located west of I-95 and consists of approximately 50,000 acres of ground training space and 141 square nautical miles of Special Use Airspace (SUA). It is composed of 38 Training Areas (TAs) and contains 55 live fire ranges, gun positions (GP), and urban training facilities. The RTA serves as a unique and vital asset to the Marine Corps, other Department of Defense (DoD) units, and numerous federal agencies and civilian law enforcement organizations from across the National Capital Region (NCR).

2. Acronyms and terms used throughout this order are defined in Appendix A. Descriptions of available ranges and training facilities are provided in Appendix B.

1002. MANAGEMENT OF THE RTA

1. The entirety of the Guadalcanal RTA is under the operational control of the Director, Range Management Branch (RMB), G-3, MCINCR-MCBQ. In cases where units are designated as primary or priority users for specific ranges or training facilities, as defined in chapter 3, they possess no authority to modify the purpose or design of the range or facility and are not authorized to grant use of the range or facility to any other unit or organization.

2. All activities in the RTA must be properly scheduled and approved by Range Control Scheduling Office, RMB, using the Range Facility Management Support System (RFMSS). Only Range Control has the authority to approve RTA requests submitted in RFMSS.

3. Training areas that are not scheduled for training or maintenance activities are made available to Facilities Division (GF), MCINCR-MCBQ, to allow for the execution of land management, infrastructure repairs, environmental management, and dispersed recreational activities (e.g., hunting and fire wood collection). No activities of any kind may occur in the RTA without the approval and knowledge of Range Control or under the control of the appropriate GF organization.

4. Per reference (b), all ranges must have an individual range Standard Operating Procedure (SOP) with associated Surface Danger Zones (SDZ) for each weapon and ammunition utilized on the range. These SOPs are approved by and maintained on file with, the installation Range Control Officer (RCO). Requests to modify an existing SOP must be submitted to the RCO.

5. RMB personnel are authorized access to all ranges, training facilities, and training areas at all times for the purpose of inspection, operations, or maintenance. Training units will not interfere with these personnel in performing their duties. If required, units will be placed into a check-fire in order to allow RMB personnel access to restricted locations.

1003. RESPONSIBILITIES

1. Commander, MCINCR-MCBQ

a. Responsible for the overall management and use of all installation property to include the RTA and associated airspace.

b. Responsible for establishing a comprehensive installation range safety program that protects personnel and property while enhancing safe and realistic training, minimizing harmful environmental impacts, and ensuring RTA sustainability.

c. Responsible for establishing a training and certification program for range safety personnel.

d. Is the sole range safety deviation authority in accordance with reference (a).

2. Assistant Chief of Staff (AC/S), G-3 (B03). Serves as the direct representative for the Commander, MCINCR-MCBQ on all matters related to the utilization of the RTA. Normally granted "by direction" authority to review and approve RTA-related waivers and special requests. Provides staff oversight of all RMB operations and activities.

3. Director, RMB, G-3 (B 032). Directly responsible to the AC/S, G-3, and Commander, MCINCR-MCBQ for the successful execution of the RMB mission to "develop, manage, and ensure the safe use of the Quantico ranges and training areas (RTA) and airspace in the Guadalcanal Training Complex in order to enable customers to achieve their training objectives efficiently, effectively and realistically while preserving RTA capabilities for future customers."

a. Supervises the functional areas of Range Resourcing, Range Development, Range Maintenance, Geographical Information Systems (GIS) Support, Airspace Management, and Range Operations.

b. Coordinates with appropriate MCINCR-MCBQ staff organizations and relevant higher headquarters staff personnel in executing range-related responsibilities and ensuring effective sustainment of RTA capabilities.

c. Provides for the integration of Training Support Center Quantico (TSCQ) capabilities with RMB to provide one-stop training support for RTA customers.

d. Supervises the RMB Airspace Manager/Command Airspace Liaison Officer (CALO) who coordinates with the Regional Airspace Coordinator (RAC) and the Federal Aviation Administration (FAA), and provides oversight on SUA policies, future airspace requirements, and reporting of airspace utilization. These duties are normally assigned to the RMB Deputy Director.

4. Range Operations Section. General guidance for duties and responsibilities for Range Control is established in reference (c). Specific terms and divisions of labor outlined below are slightly modified from reference (c) to meet the unique requirements of MCINCR-MCBQ.

a. RCO. Assigned in writing by Commander, MCINCR-MCBQ and reports to the Director, RMB. Provides overall supervision to the Range Operations Section and is directly responsible for safe operations in the RTA. Specific duties and responsibilities are detailed in reference (a).

b. Deputy Range Control Officer (DRCO). Reports to the RCO and is the RCO’s lead representative with tenant commands that utilize the RTA regularly in support of established formal training programs. The DRCO also exercises administrative control of all Marines assigned to RMB and manages Range Operations schedules and meetings.

c. Range Operations Officer (ROO). Reports to the RCO and serves as the central point of control and coordination for all activities conducted within the installation training complex to ensure safe and concurrent operations.

d. Range Operations Chief (ROC). Reports to the DRCO and supervises the development of the duty schedule and execution of daily range support activities. Recommends the assignment of Marines to specific range billets and ensures completion of all annual training and administrative requirements.

e. Range Operations Control Center (ROCC) Supervisor. Reports to the ROO and is the RCO's representative for daily control of the RTA to include daily range use, communications, emergency response, and airspace advisories.

f. Fire Desk Operator (FDO). Reports to the ROCC Supervisor and assists with daily control of the RTA, to include managing range use, communications, emergency response, and airspace advisories. Collects and records all required training information.

g. Range Scheduling Supervisor. Reports to ROO and serves as primary liaison for all standard range scheduling, access, and coordination issues. Supervises all Range Schedulers.

h. Range Scheduler. Reports to the Range Scheduling Supervisor. Processes all RTA training requests and generates notifications of upcoming training to appropriate personnel.

i. Installation Range Safety Officer (IRSO). Reports to the RCO and performs administrative and investigative duties related to the safe operation of ranges, TAs, and training facilities. Reviews unit Risk Assessments (RA) when required to ensure they comply with reference (d) and established range SOPs. Serves as the primary liaison for units requesting to conduct non-standard training.

j. Range Safety Specialist. Reports to the IRSO for RTA safety related matters. Patrols the RTA to ensure compliance with range safety and physical security procedures for all personnel in the RTA. Checks out ranges, training areas, and training facilities to customers and issues all required range keys, radios and equipment. Conducts pre- and post- training inspections of ranges and training facilities to ensure safe utilization and proper clean up. Identifies range maintenance issues and submits items for corrective action.

k. Airspace Coordinator. Reports to the RCO and serves as the RMB POC for aviation training and SUA matters and the scheduling and utilization of the MCBQ SUA for fixed-wing, rotary wing, and Unmanned Aerial Systems (UAS) operations. Also assists the RMB Airspace Manager on all issues related to airspace policy, long range planning, and utilization reporting.

l. RFMSS Functional Administrator. Reports to the RCO and serves as the single POC for RFMSS management, account access, troubleshooting, user training, and administration.

5. Explosive Ordnance Disposal (EOD), G-3. Reports to the AC/S, G-3, and is the technical advisor in all matters pertaining to EOD, unexploded ordnance (UXO) response, and demolitions operations. Range clearance operations are NOT a

primary mission of MCINCR-MCBQ EOD and are only conducted as required to eliminate immediate hazards to personnel and equipment or when such operations support EOD training requirements.

6. Director, Reserve Support Activity (RSA), Quantico. Responsible for supporting non-tenant Marine Corps Reserve (USMCR) units which request to train aboard Camp Upshur and it's facilities.

a. Granted authority to approve unit use of designated training areas in proximity to Camp Upshur for non-live fire training. The use of any DoDICS in these areas requires approval by Range Control. Use of these areas by non-DoD organizations or civilians is not authorized without prior approval by Commander, MCINCR-MCBQ.

b. The Driver Training Course located on LZ-10 (Upshur Parade Deck) is designated for use by MCBQ Traffic Safety Division. RSA Quantico may coordinate directly with TSO for use of LZ-10 by units utilizing Camp Upshur.

7. Commanding Officer (CO), Weapons Training Battalion (WTBn). Designated as the primary user of the Calvin A. Lloyd Range Complex (CALRC) in order to enable the timely execution of assigned marksmanship training missions. Also designated as the primary user of Goettge Demolition Range (GDR) in support of the Method of Entry School's program of instruction (POI). All other units requesting to use ranges located at the CALRC or GDR must first coordinate with WTBn prior to submitting a request in RFMSS.

a. Responsible for the training and supervision of all WTBn personnel assigned to execute range activities at the CALRC and GDR.

(1) Maintains a unit range safety program that complies with the references and this Order. Educates and trains Officers-In-Charge (OIC) and Range Safety Officers (RSO), as well as personnel serving in other required range safety positions, on the unique issues associated with the CALRC and GDR and ensures they are properly qualified or familiar with all weapon systems employed. Designates OICs/RSOs to be certified by the MCBQ RCO.

(2) Ensures all personnel are familiar with the safety conflicts inherent to the CALRC and that personnel operating downrange are fully briefed on downrange hazards.

(3) Coordinates with the IRSO at least 60 days in advance for approval of any schemes of maneuver or non-standard training events that are not covered in existing range SOPs.

e. Responsible for the daily condition of the CALRC and GDR to include cleanliness and basic upkeep. Range maintenance requests will be submitted to RMB for induction into the appropriate maintenance system.

8. CO, The Basic School (TBS). Designated as the priority user of the Quantico RTA in order to enable the accomplishment of assigned entry-level and Military Occupational Specialty (MOS) school POIs. Designated as the primary user of designated training areas and training facilities in proximity to Camp Barrett to support established POIs and remedial training requirements. The use of any DODICs in these areas requires approval by Range Control. Designated as the responsible organization for maintenance and scheduling of physical training (PT) and obstacle courses in proximity to Camp Barrett. Use of any of these areas by non-DoD organizations or civilians is not authorized without prior approval by Commander, MCINCR-MCBQ.

a. Responsible for the training and supervision of all TBS personnel assigned to execute range and training activities in the Quantico RTA.

(1) Maintains a unit range safety program that complies with the references and this Order. Educates and trains OICs and RSOs, as well as other required range safety positions, and ensures they are properly qualified or familiar with all weapon systems employed on the ranges. Designates OICs/RSOs to be certified by the MCBQ RCO.

(2) Coordinates with the IRSO at least 60 days in advance for approval of any schemes of maneuver or non-standard training events that are not covered in existing range SOPs.

b. Responsible for the daily condition of assigned and managed training facilities. Maintenance requests for training facilities will be submitted to RMB for action. Maintenance requests for TBS-managed PT and obstacle courses will be submitted directly to GF but RMB shall be informed of any requests that may impact the use of the adjacent RTA.

9. Director, Federal Bureau of Investigations (FBI) Academy. Responsible for daily operations and conduct of training aboard the FBI Academy ranges, as well as all range maintenance matters, in accordance with Department of Justice (DoJ) regulations.

a. The FBI Academy outdoor ranges are scheduled in RFMSS from 0600-1800 daily with the exception of Sundays and Federal holidays. The Scheduling Office must be informed of any changes or additions to that schedule.

b. Any changes to range SOPs or physical modifications to the FBI Academy outdoor ranges must be reviewed by the RCO prior to implementation to ensure downrange safety.

10. Training Unit COs or Equivalent. The CO of a training unit, or the designated individual-in-charge of an agency or non-DoD organization authorized to train aboard Quantico, is ultimately responsible for compliance with all appropriate regulations and the safe use of the RTA.

a. The CO must ensure personnel assigned to supervise training in the RTA are in compliance with reference (a) and this Order at a minimum.

b. The CO must appoint personnel to serve as OIC/RSO for any training conducted in the RTA. OICs/RSOs must have completed the USMC Level 1 Range Safety Course and the Quantico-specific Range Safety Brief and knowledge check. Additional information on who may be designated as OIC/RSO for specific training events is contained in reference (a) and Appendices C and D. An example appointment letter is provided in Appendix E.

11. Range Safety Personnel. Personnel designated by a CO or equivalent to conduct and supervise training on the Quantico ranges, within training facilities, and in training areas. Appendix C provides guidance on responsibilities.

a. OIC. Ensures the overall safe conduct of unit training and proper use of assigned RTAs in accordance with established rules, regulations, and risk management procedures. Responsible for all aspects of the training event to include communications, logistical support, medical coverage, ammunition handling, and control of all personnel associated with the event. An OIC must be designated for every training event whether live fire or non-

live fire. The Range OIC cannot assume any other duties or participate in live fire training.

b. RSO. Reports to the Range OIC and is directly responsible for the safe employment of all weapons, equipment, ammunition, and explosives used in training. Also responsible to ensure all training personnel wear appropriate personal protective equipment (PPE), comply with all safety procedures, and execute training per established, approved plans.

c. Position Safety Officer (PSO). When assigned, reports to the RSO and is responsible for the safe employment of specific weapon systems or equipment. PSOs are normally assigned when the scope of training is beyond the ability of a single RSO to supervise and/or specialized knowledge is needed to ensure the safe employment of specific systems.

d. Laser Range Safety Officer (LRSO). Reports to the Range OIC and is directly responsible for the safe employment of all laser systems used in training. Also responsible to ensure all training personnel wear appropriate personal laser protective equipment (if applicable), comply with all safety procedures, and execute training per established, approved plans. Must have completed additional instruction on laser safety, be familiar with all laser systems being employed and comply with chapter 7 of this Order.

1004. TRAINING PREPARATION

1. All organizations that train in the RTA must ensure that their personnel are properly prepared to safely and efficiently execute their training plan. Organizations should establish clear, realistic training plans that account for the experience and readiness of training personnel and incorporate appropriate risk management measures.

2. Organizations must also plan appropriately for all required logistics, medical support, communications, and training support to make certain they are prepared to execute the training plan in accordance with their established schedule.

3. It is essential that units assign OICs/RSOs who fully understand the training plan, are experienced with the weapons and equipment being employed and have sufficient maturity and knowledge to effectively supervise training personnel.

1005. SAFETY

1. General. MCINCR-MCBQ encourages RTA users to train as realistically as practicable; however, all training must comply with established safety regulations in order to protect personnel conducting the training event, personnel training in adjacent areas, civilian population adjacent to the RTA, and all equipment, facilities and other property.

2. Safety Mindset. Safety is the responsibility of every individual in the RTA at all times and is key to safe and successful training. Any individual who observes an unsafe condition shall call for a halt to the activity and report the unsafe condition to the OIC/RSO immediately. The activity may not be resumed until the unsafe condition has been corrected. Concerns for safety should never be limited to the training event itself and should always include associated activities such as convoy movement to and from training, maintenance activities, bivouac operations, etc.

3. Conflicts in Safety Regulations. Where discrepancies exist in the safety guidance provided in various publications, manuals, and instructions, reference (a) will govern. If reference (a) is silent on the topic, the most restrictive guidance will be followed until the discrepancy is reviewed by the IRSO and, in consultation with appropriate authorities, a decision is published on the appropriate procedure.

4. Risk Management (RM). The RM process as described in reference (d) will be used to assess and manage risks during training. Units will employ RM procedures to identify operational hazards and implement appropriate controls in order to minimize risks to the training mission. A deliberate RA may be required for specific training events at the discretion of the RCO or IRSO. If required, Risk Assessment Worksheets must be submitted to the IRSO by the training unit prior to a training request being approved. Appendix F provides a format for a Risk Assessment Worksheet if the unit does not have an existing standard.

5. Safety Briefs. The following safety topics must be covered by the OIC/RSO before conducting training in the RTAs. A safety brief template and OIC/RSO safety brief and training checklist are provided in Appendix G.

a. UXO and RTA Hazards.

b. Range Safety.

c. Ammunition Handling and Accountability.

d. Weapons and ammunition malfunctions and notices.

e. Restricted Areas (i.e. dams, historic sites, construction sites, etc.).

1006. DEVIATIONS. A deviation is a temporary departure from range standards and procedures as outlined in reference (a). Only Commander, MCINCR-MCBQ can approve a deviation. A request for a deviation must be submitted in writing from the training unit Commanding Officer and must include the specific deviation being requested, the training standard that cannot be met without a deviation in place, and an explanation of mitigating measures the unit will implement to manage hazards. Certain activities are specifically prohibited in reference (a) and can only be approved by the Commandant of the Marine Corps (CMC).

1007. RTA INCIDENTS. Live fire and tactical training have inherent risk and, despite the most thorough planning and preparation, events can occur that create hazards for people and equipment or result in injuries to people or damage to property. It is essential that training personnel are vigilant and rapidly report incidents that occur in the RTA in order to prevent or mitigate injuries or damage.

1. Range Control shall immediately be informed of any incident or injury, regardless of severity, that occurs within the RTA.

2. Examples of incidents requiring an immediate report are:

a. Injuries or illnesses occurring in the RTA (this includes minor injuries as well as those requiring MEDEVAC/CASEVAC).

b. Firing of weapons outside established safety limits.

c. Aircraft incidents and vehicle accidents.

d. Any munitions mishaps such as duds, misfires, and hang fires.

f. Missing or lost personnel or equipment.

g. All wildfires in the RTA.

h. Other hazardous natural events such as tornadoes, lighting strikes, flooding, etc.

i. Any event which may result in inquiries from the local community.

3. In the event of any incident listed above, units will immediately contact Range Control and provide the following information as applicable to the incident:

a. Name, telephone number, and present location of caller.

b. Type of incident (aircraft, injury, munitions, etc.).

c. Location of the incident (grid coordinates preferred).

4. Range Control will collect additional pertinent information as needed, provide guidance on incident response, and coordinate follow on incident support if required.

1008. MEDICAL SUPPORT. The most significant risk that exists in live fire and tactical training is the risk of injury or death. It is essential that training organizations do their utmost to eliminate and mitigate risks to personnel. To ensure effective response if there is a significant injury, the following regulations are established:

1. Medical Support Requirements. Units are responsible for providing their own medical support for training executed in the RTA. Medical support includes qualified medical personnel with appropriate equipment and a dedicated safety vehicle.

a. Qualified Medical Personnel. A military graduate from the Medical Education and Training Campus at the DOD Healthcare Education Facility, Fort Sam Houston, Texas: Navy Corpsman with Navy Enlisted Classification (NEC) L03A or 0000 and Army Medic with MOS 68W are the standard. Other personnel possessing an Emergency Medical Technician (EMT) or higher certification from an approved United States Department of Transportation National Emergency Medical Services Education Standards Curricula which is current and recognized in the State of Virginia are also authorized. The assigned qualified medical support personnel must have adequate medical equipment on site appropriate for the training activity (e.g., trauma kit, stretcher, back board, neck brace, etc.) and will not be assigned any other duties while providing medical coverage. MCINCR-MCBQ units and tenant commands may request medical support from Naval Health Clinic

Quantico but must submit such requests at least 30 days in advance via e-mail to:

usn.quantico.nmrtc-quantico.list.medical-support@health.mil

b. Alternative Medical Personnel. When approved by a certified military Medical Officer, Military Reservists who are medical professionals in their civilian occupation, but who do not possess a medical MOS, or personnel who have successfully completed the Tactical Combat Casualty Care (TCCC) course, may be assigned to provide medical support when other qualified medical personnel are not not available. All requests to approve alternative medical personnel must be submitted at least 45 days in advance to the Commanding Officer, Naval Health Clinic Quantico via the David R. Ray Branch Clinic Senior Medical Officer. A copy of the approval of alternative medical personnel must be provided to RMB prior to the conduct of training. The alternative medical personnel must have adequate medical equipment as stated in paragraph 1.a. above.

c. Dedicated Safety Vehicle. A government owned (tactical or commercial) or government rented vehicle that can effectively transport a casualty on a stretcher. The vehicle must be specifically dedicated as a safety vehicle, must be present at the training location at all times, should be positioned to quickly respond to a potential casualty, its location should be briefed to all personnel, and it cannot be used for other purposes. If the dedicated safety vehicle departs the training location, all training must cease until it returns or until a suitable alternate safety vehicle is in place. The use of a privately owned vehicle (POV) as a safety vehicle is prohibited.

2. Events Requiring Full Medical Support. A qualified (or alternative) medical person and a dedicated safety vehicle must both be present for the following training events:

a. All live-fire training to include explosives, grenades, blanks, pyrotechnics and, signaling devices, Special Effects Small Arms Marking System (SESAMS), paintball and airsoft.

b. All training in urban facilities.

c. Helicopter rope suspension training (HRST) and rappelling.

d. Parachute operations.

e. Hikes, marches, movements, and land navigation.

f. EOD range support.

g. Obstacle courses, confidence courses and other similar courses.

h. Any training determined by Risk Assessment or IRSO review to have sufficient residual risk factors will require direct medical support.

3. Events Not Requiring Full Medical Support. Units executing training not listed above may request a waiver to provide full medical support. The IRSO may waive the requirement or authorize a lower standard of medical coverage based on the specific activity, the number of personnel participating, and the unit's risk management plan.

4. Special Rules for the Calvin A. Lloyd Range Complex (CALRC). For WTBn units training aboard the CALRC, a single, qualified medical person with equipment, centrally located with the WTBn S-3 and not assigned any other duties, and a single dedicated safety vehicle, positioned at the WTBn headquarters building, will meet required medical support requirements even if multiple ranges are hot simultaneously. If the qualified medical person or dedicated safety vehicle is dispatched to respond to an incident, or otherwise departs the centralized location, all CALRC ranges must go into a check-fire until medical coverage is reestablished. Non-WTBn units scheduled to train at the CALRC must provide their own medical coverage unless they request to fall under WTBn's medical coverage. Such coverage is not guaranteed. Requests should be made to the WTBn S-3 at least 30 days prior to the scheduled training.

5. Recreational Activity Medical Support. Organizations conducting authorized recreational activities in the RTA, such as the Quantico Orienteering Club and Quantico Shooting Club, are required to provide their own qualified medical personnel and dedicated safety vehicles to support their events.

1009. MEDICAL EVACUATIONS (MEDEVACS)

1. Categories of MEDEVAC

a. Urgent (Life Threatening). Emergency patients for whom immediate evacuation is necessary to save life, limb, eyesight, or to prevent complications of serious illness or to avoid permanent disability. An urgent precedence and is a matter of life or death. Examples requiring Urgent MEDEVAC include gunshot wounds, heatstroke, compound fractures, and loss of consciousness.

b. Priority (Non-Life Threatening). Patients who require specialized treatment not available locally and who are likely to suffer unnecessary pain or disability unless evacuated with the least possible delay. Evacuation of seriously wounded or injured personnel who require early hospitalization, but whose evacuation is not a matter of life or death, is a prioritized event. Examples requiring Priority MEDEVAC include Heat exhaustion, respiratory distress, and ongoing nausea and vomiting.

c. Routine (Minor Injuries). Patients whose immediate treatment requirements are available locally but would significantly benefit from evacuation to a treatment facility. A patient with minor illness, or a patient requiring transfer to a medical facility for further treatment is a routine event. Examples requiring Routine MEDEVAC include heat cramps, cuts/scrapes, and minor illnesses.

d. Mass Casualty. A mass casualty is a series of injuries with multiple Priority and Urgent medical patients. The MCBQ Fire & Emergency Medical Service (QFES) defines mass casualty events as any situation with five or more injured personnel. These criteria will automatically trigger the Mutual Aid Agreement with Local and State Fire & EMS agencies.

e. Deceased Casualty. A deceased casualty does not require medevac. Instead, all on-site training will cease and the Provost Marshal Office (PMO) will be contacted by Range Control to report to the scene. PMO will contact Naval Criminal Investigative Service (NCIS) to begin investigative procedures. NCIS will coordinate with the appropriate medical examiner to arrange transport of the deceased for autopsy. Once NCIS has completed on-site activities, training may resume.

2. MEDEVAC Procedures

a. The 911 system does not effectively pinpoint locations aboard MCBQ which may result in delays of emergency response aboard the installation. All MEDEVACs from the RTA MUST be handled through Range Control. Frequencies, phone numbers, and points of contact (POCs) are listed in Appendix H.

b. For the purpose of this regulation, the term MEDEVAC refers to the transportation of any individual from the RTA to receive medical treatment, whether by ground or air.

c. The responsibility for determining the necessity for a MEDEVAC rests with the OIC/RSO based upon advice from qualified medical personnel present on scene.

d. Range Control must be notified immediately of any decision to conduct a MEDEVAC.

e. The dedicated safety vehicle is the primary means for executing non-emergency Routine MEDEVACs. Use of the unit safety vehicle for transportation off base may be necessary as MCB Quantico does not have a Military Treatment Facility (MTF) with emergency or trauma capabilities.

f. Ground transportation by QFES is the primary means for executing Priority and Urgent MEDEVACs.

g. The OIC/RSO may specifically request air MEDEVAC but the final decision to utilize air transport will be made by QFES. Predesignated Landing Zones (LZs) are located on most ranges, in proximity to training facilities, and throughout the TAs as listed in Appendix I. If there is no LZ near the casualty point, the OIC/RSO will coordinate with Range Control to identify the most expedient option for executing an air MEDEVAC.

h. The process flow for MEDEVACS are as follows:

(1) Injury occurs, illness identified. On-site medical coverage assesses and treats the injured personnel and makes recommendations to the OIC/RSO.

(2) OIC/RSO determines precedence and reports the medical event to Range Control to include assessed medical condition of the injured personnel and request for MEDEVAC transportation if required. *[Note: injured personnel is to remain on-site if QFES support is requested.]*

(3) Urgent MEDEVAC: OIC/RSO will request preferred transportation method (ground or air). Unit will not transport injured personnel with safety vehicle. Unit medical support will continue to treat the injured personnel and OIC will provide updates to Range Control until arrival of QFES. Upon arrival, QFES will assume control of the MEDEVAC (Figure 1-1, next page).

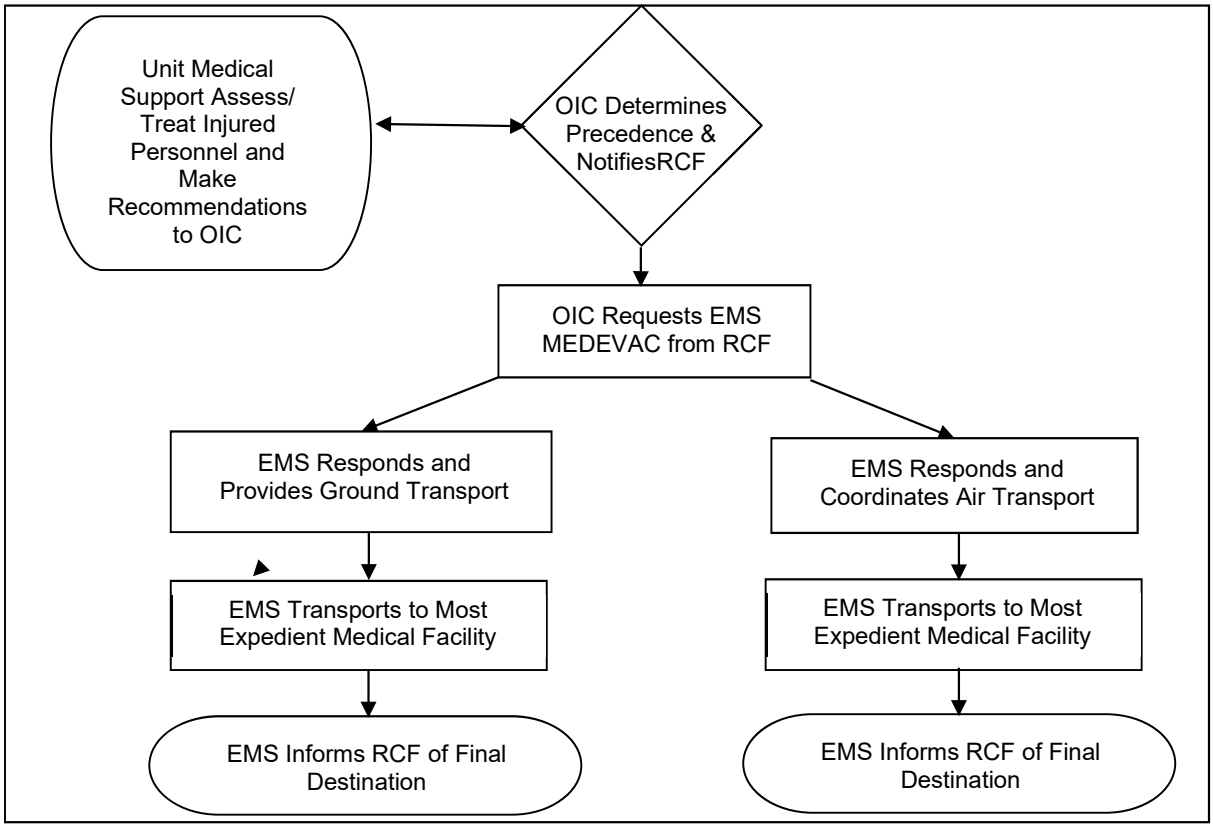

Figure 1-1 Urgent MEDEVAC/Mass Casualty Decision Tree

(4) Priority MEDEVAC: OIC/RSO will request transportation or transport injured personnel via unit safety vehicle. If unit-transported, unit medical support will continue to treat the injured personnel until arrival at the medical facility, if required. OIC will provide updates to Range Control upon arrival at medical facility. If EMS requested, unit medical support will continue to treat injured personnel and OIC will continue to update until QFES arrival. Upon arrival, QFES will assume control of the MEDEVAC (Figure 1-2, next page).

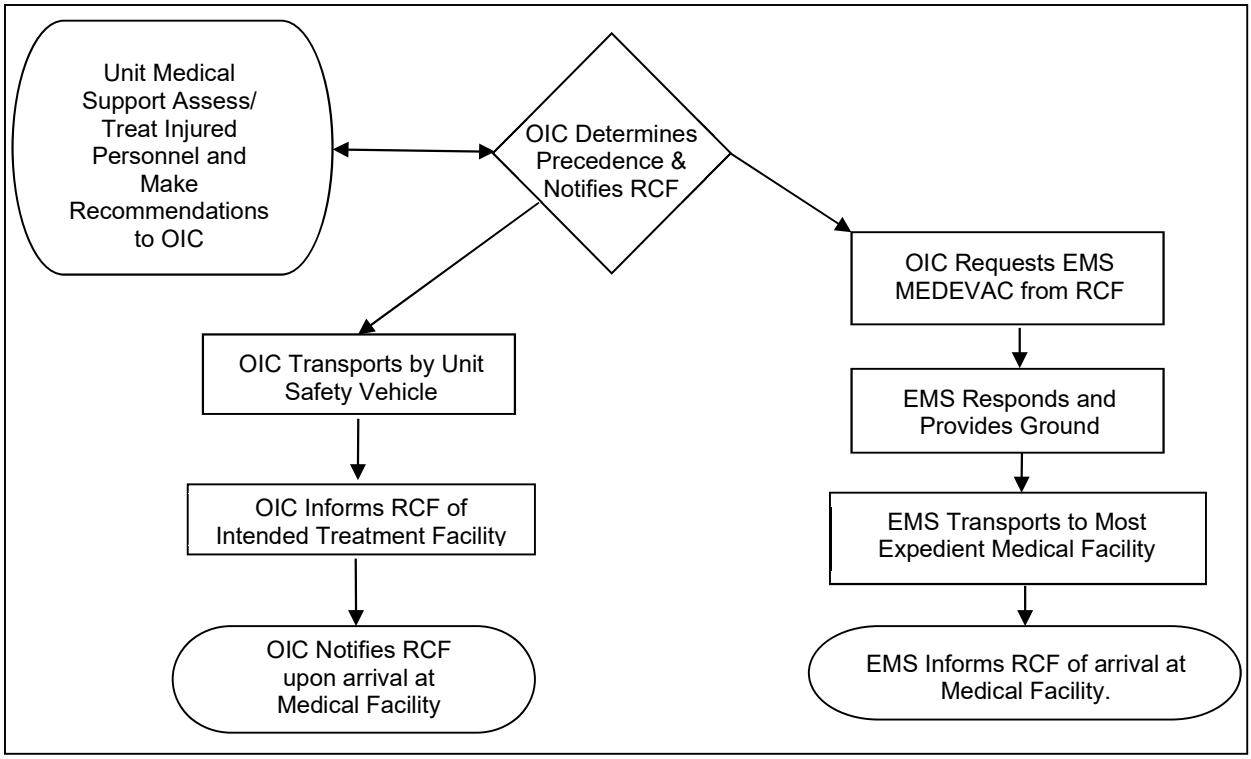

Figure 1-2 Priority MEDEVAC Decision Tree

(5) Routine MEDEVAC: OIC/RSO will request transportation or transport injured personnel via unit safety vehicle. Unit medical support will continue to treat the injured personnel until arrival at the medical facility if required. OIC will provide updates to Range Control upon arrival at medical facility. If EMS is requested, unit medical support will continue to treat injured personnel and OIC will continue to update until QFES arrival. Upon arrival, QFES will assume control of the MEDEVAC (Figure 1-3, next page).

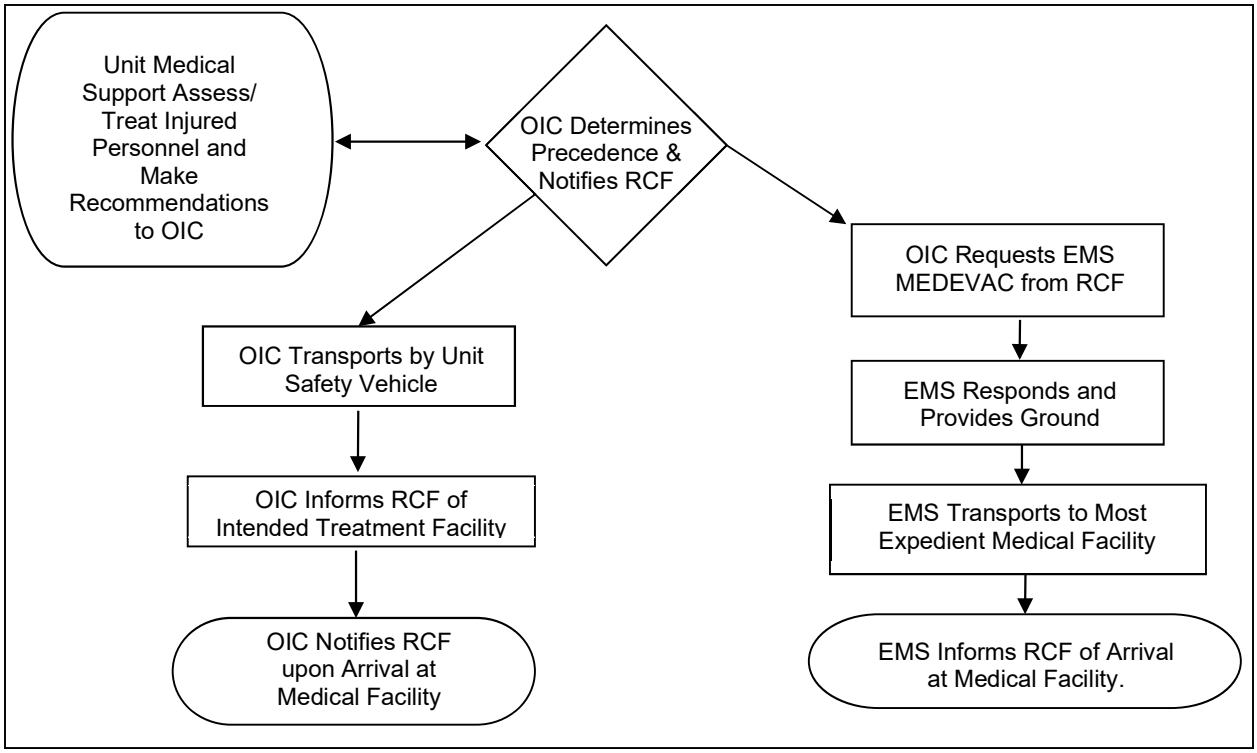

Figure 1-3 Routine MEDEVAC Decision Tree

(6) If a Routine MEDEVAC being transported by unit safety vehicle, OIC/RSO will report departure, arrival of injured personnel at designated medical facility, and return of the unit safety vehicle. The OIC/RSO will remain in check fire while the safety vehicle is gone unless an alternate safety vehicle is identified and reported to Range Control.

(7) For MEDEVACs requiring QFES support, Range Control will direct the OIC/RSO on actions required to facilitate the quickest response, will direct Range Safety Specialist to support QFES access to and from the training site, and will put ranges and other training activities in check-fire as required.

3. Check-Fire Procedures. When an Air MEDEVAC occurs, all live fire and aerial training in the RTA must cease in order to enable Range Control and responding personnel to properly focus on providing the quickest response possible. A complete or partial check-fire may be called for non-Air MEDEVACs as well based on the specific incident. Training units will remain off the net after confirming they are in check-fire and Range Control will notify them when training may resume. In the event an investigation is warranted, the unit(s) involved in the mishap must terminate training and participants shall prepare statements for the investigating officer.

4. Air MEDEVAC Launch Authority. In the event of an Air MEDEVAC, Range Control will contact MCBQ Dispatch Center and relay the request immediately. The Dispatch Center will coordinate with QFES to establish the MEDEVAC transportation plan. Once an air asset is confirmed, QFES personnel on scene will coordinate with Range Control and the training unit to facilitate expeditious landing. QFES will prepare the LZ as required and communications with the MEDEVAC aircraft to provide instructions and updates on injured personnel.

5. MEDEVAC Reporting

a. For any injury that requires MEDEVAC from the RTA the OIC/RSO will immediately notify Range Control, identify themselves by call sign (i.e., Range 12, TA-16G, UTC-A, etc.) and pass the following information:

(1) Category of emergency (Mass Casualty, Urgent, Priority, or Routine).

(2) Location.

(3) Injury Type.

(4) Conscious or unconscious.

(5) Request for ground or air transport.

b. The OIC or RSO from the unit will be the on-scene Commander and will initiate action for first aid until QFES personnel arrive and assume incident command.

c. The OIC or RSO will provide the following additional information as soon as possible or when directed by Range Control:

(1) Victim(s) name, rank, and unit.

(2) Source of injury/illness (i.e., snake bite, gun shot, shrapnel, etc.).

(3) Hazards to aircraft or vehicles at the casualty collection point should movement of the casualty be directed by RMB.

6. Other Medical Matters

a. Injuries or illnesses that occur during training but do not require MEDEVAC must be reported to Range Control. Such reporting allows tracking of trends that can help identify the need for range maintenance or alert other units to hazards.

b. Units may treat minor injuries on-site and return treated personnel to training based on the OIC/RSO assessment.

c. Personnel who depart training for scheduled medical appointments, or who do not require follow-on medical attention, are not considered MEDEVACs and may be transported by vehicles other than the unit safety vehicle.

1010. FIRES IN THE RTA. Despite an active controlled burn program to reduce fuel load, fires are a common occurance in the RTA. Depending on weather conditions, wild fires can spread rapidly and, if not properly managed, can result in conditions that would cause training to be halted or cancelled. It is incumbent upon all personnel in the RTA to prevent fires and immediately report any that do occur. Other information regarding fire prevention and protection is listed in reference (e).

1. Fire Danger Classifications (FDC). Fire Danger Classifications are issued by the Base Fire Chief and Director, Natural Resource and Environmental Activity (NREA) in conjunction with the U.S. Forest Service. All personnel training within the RTA will adhere to the restrictions stated below once an updated Fire Condition has been issued by Range Control.

a. FDC I (Low). Fire danger is low. Fires are not likely to become serious. Control is relatively easy. No restrictions on authorized munitions in the RTA. Normal safety precautions will be followed. "Warming fires" may be authorized by Range Control upon request.

b. FDC II (Normal). Fire danger is moderate. Fires are not likely to become serious. Control is relatively easy. No restrictions on authorized munitions in the RTA. Normal safety precautions will be followed. "Warming fires" may be authorized by Range Control upon request.

c. FDC III (Caution). Fire danger is intermediate. Fires may become serious and difficult to control unless extinguished

when small. "Warming fires" may be authorized by Range Control upon request.

(1) When FDC III is reached, Range Control will notify all units training within the RTA.

(2) Extra caution will be exercised in the use of all blanks, pyrotechnics, tracer, and incendiary ammunition.

(3) "Warming fires" will be used only in designated locations and must be under constant supervision.

d. FDC IV (High). Fires start easily, spread rapidly, and quickly increase in intensity.

(1) Blanks, tracers, incendiary rounds, pyrotechnics, and flame-producing machine gun simulators are prohibited.

Note: Units who have linked ammunition with tracers and who choose to delink ammunition to continue training will adhere to NAVY AND MARINE CORPS AMMO INFO NOTICE 064-2012 "DELINKING" found in Appendix J.

(2) Demolitions and high-explosive ordnance will only be permitted within a fire resistant perimeter, such as bare mineral soil (natural fuels such as brush and saplings cleared away) or recently burned over areas. Authorization is granted at the discretion of the Commander, MCINCR-MCBQ. Range Control will staff and forward requests to continue firing as expeditiously as possible.

(3) Smoking is permitted only in approved locations (areas cleared to exposed earth) specifically designated by the training unit OIC. Smoking can be prohibited at any time by Range Control.

(4) Warming fires are prohibited.

e. FDC V (Hazardous). Fires start quickly, spread furiously, and burn intensely.

(1) No live fire will be conducted without approval of Commander, MCINCR-MCBQ. Generally only mission-essential, time-sensitive training in support of entry-level training will be authorized to continue firing in FDC V. Range Control will staff and forward requests to continue firing as expeditiously as possible.

(2) Demolitions, high-explosive ordnance, pyrotechnics, blanks, machine gun simulators, tracers, and incendiary rounds are prohibited.

(3) Smoking is prohibited in the RTA.

(4) Parking vehicles in tall grass is prohibited.

2. Fire Prevention. Other than approved warming fires, units shall not deliberately start any fires in the RTA.

a. Warming fires must be specifically authorized by Range Control and must be contained in a burn barrel or established within a fire resistant perimeter, such as bare mineral soil, and away from other potential fuels.

b. Range dunnage will not be burned at any range or training area, these items will be removed from the range for proper disposal.

c. The OIC/RSO shall report any condition that poses an immediate fire hazard to Range Control. Conditions not deemed an immediate hazard may be reported during the post-inspection process. Range Control will coordinate for removal of the hazard or request "burn in place" approval from the Base Fire Chief.

d. Excess mortar and artillery increments that must be destroyed on range will be burned in a fire-proof container or an appropriate burn pit with the surrounding cleared to bare earth.

e. Personnel will not deliberately fire illumination rounds, other pyrotechnics, linked belts of all tracer rounds, or other highly combustable ammunition in a way intended to cause a fire.

3. Fire Reporting. All fires, regardless of size, will be reported immediately to Range Control. Units will provide the following information:

a. Name, telephone number, and present location of caller.

b. Size, location and intensity of the fire; strength and direction of the wind; and proximity of the fire to other fuel sources (i.e., brush, dead trees, etc.).

c. Whether the unit has personnel and equipment on hand to monitor and/or fight the fire.

4. Fire Fighting. At no time will training personnel or equipment be placed in jeopardy in order to fight a fire.

a. After reporting a fire, the OIC/RSO will assess the fire and the personnel and equipment available. If the fire is deemed accessible and within unit capability to fight, the OIC/RSO may request permission from Range Control to extinguish the fire.

(1) Personnel will not enter a dud impact area to fight a fire.

(2) Personnel will not go down range into the target area to fight a fire unless requested to and approved by Range Control.

(3) Personnel will not go into areas with significant fuel loads (high, dry grass or thick leaf layers) when there are high winds that can cause fires to surge and potentially trap personnel.

b. The OIC/RSO is the on-site incident Commander until the Fire Department (FD) or Forestry arrives. The FD will assume primary incident command once they arrive on scene.

c. The OIC/RSO will provide unit personnel to extinguish small, manageable, contained fires when directed by the FD, Forestry, or Range Control.

1011. DESTRUCTIVE WEATHER. Destructive weather is any weather condition that might reasonably create unsafe conditions for personnel and/or equipment and which generally occurs on short notice. Range Control makes every attempt to provide advanced notice of destructive weather conditions; however, MCBQ often experiences highly localized “micro-burst” weather conditions that cannot be predicted. OICs/RSOs must consider destructive weather when planning and during the conduct of training.

1. Adequate and timely warning, coupled with prompt and effective actions by unit leaders will reduce injury, prevent loss of life, and protect property from damage due to destructive weather conditions.

2. Range Control maintains communication with Marine Corps Air Facility Quantico (MCAFQ) Weather Section and will notify all training units of impending destructive weather.

3. OICs/RSOs should remain vigilant and take appropriate action based on local conditions even if no official warning has been issued by Range Control.

4. At times, training may be suspended by Range Control until the destructive weather condition has passed.

1012. HEAT CONDITIONS. Units who train at MCBQ over the summer months must take potential hot and humid weather conditions into consideration during their planning process and in preparing their personnel to conduct training.

1. In accordance with reference (f), Range Control is the official Wet Bulb Globe Temperature (WBGT) Station for the west side of I-95 including the entirety of the RTA. Range Control will monitor the WBGT from 1 May to 30 September and issue flag condition notices to all units on the west side of I-95 when the temperature is over 80 degrees Fahrenheit.

2. Unit OIC's/RSO's are encouraged to use their own heat monitoring equipment to assist in making decisions about training activities. However, the more restrictive heat flag condition shall always be used when making these decisions.

3. Unit leaders will consider the WBGT index as it changes and conduct a RA in order to mitigate risk to personnel within the RTA. Garrison and individual activities will conform to the training precautions based on flag conditions below.

4. WBGT Flag Conditions:

a. Green Flag. The WBGT Index reads from (80) to (84.90) degrees. Heavy exercise for personnel that have not become thoroughly acclimated should be conducted with caution and under constant supervision.

b. Yellow Flag. The WBGT Index reads from (85) to (87.9) degrees. Strenuous exercise, such as marching at standard pace, should be suspended for personnel with less than four weeks on-station. Outdoor classes in the sun should be avoided.

c. Red Flag. The WBGT Index reads from (88) to (89.9) degrees. All physical training should be halted for those

personnel not thoroughly acclimated by at least twelve weeks of living and working under similar outdoor conditions. Acclimated personnel may perform limited activity not to exceed six hours per day.

d. Black Flag. The WBGT Index exceeds (90) degrees. All strenuous activity should be halted for all personnel.

e. Administrative Black Flag. A condition created when the Ray Hall Naval Branch Clinic cannot handle additional heat casualties (maximum of 3) and/or when Quantico Fire and Emergency Services (QFES) MEDEVAC assets are limited as determined by the Duty Battalion Chief. All outdoor training is suspended and will not resume until authorized by Range Control. Administrative Black Flag is identified by a black flag flying below, and in conjunction with, the current heat condition flag.

1013. WINTER WEATHER CONDITIONS. Units who train aboard MCBQ over the winter months must take potential cold and snowy weather conditions into consideration during their planning process and in preparing their personnel to conduct training.

1. Range Control will provide as much advanced warning as possible about expected winter weather conditions in order to allow unit leaders to make informed decision.

2. Unit leaders are generally permitted to make the decision on whether their unit will remain in the RTA through inclement weather; however, if Range Control determines severe weather is likely to prevent EMS access, units will be directed to depart the RTA.

a. Road conditions that prevent QFES access to the RTA for MEDEVAC will require all training to cease.

b. Snow and ice accumulation may prevent training such as hand grenades, live fire and movement/maneuver, urban training, and convoy operations.

3. When severe winter weather is predicted and in progress, MCINCR-MCBQ conducts continuous assessments of conditions and will publish Base Operating Condition color codes as a guide for personnel assigned to the base. Training units should use the codes to aid in decision-making.

1014. CIVILIAN USE OF THE RTA. The MCBQ RTA exists specifically to support military training. However, given its

location in the NCR, the MCBQ RTA is also heavily utilized by civilian organizations to conduct weapons training, equipment evaluations, and other associated activities. Use of the RTA by civilian organizations requires written approval from Commander, MCINCR-MCBQ, unless specifically excepted below.

1. DoD Civilians. Many DoD organizations include civilian government employees and contractors, with some organizations consisting solely of non-uniformed employees. These DoD organizations may request and utilize the RTA for training and operational assessments in the same manner as military units, in accordance with this Order and the priorities established in chapter 5. Only those DoD employees who conduct or support training and operational assessments as a condition of their assigned duties may operate in the RTA under an an approved request in RFMSS. All other DoD employees who enter the RTA are considered civilian observers as discussed below.

2. Other Federal Agencies. Other federal agency organizations may request authorization to conduct training and operational assessments aboard MCBQ. Unlike DoD organizations, other federal agencies must establish an interagency support agreement prior to being authorized to schedule and use the RTA. Other federal agency organizations must also provide reimbursement for costs associated with use of the RTA. As with DoD civilians, only those agency personnel whose duties include the requirement to conduct or support training or operational assessments are covered under the organization's RFMSS approval.

3. State and Local Law Enforcement (LLE). State and local law enforcement (LLE) agencies may request and utilize the MCBQ RTA under the same rules as federal agency organizations, to include the need for an agreement and reimbursement. LLE and Emergency Services activities aboard MCBQ in direct support of an operational need under an existing mutual aid agreement are not subject to this order.

4. Government Contractors. Many organizations rely on contractor support to execute their mission. Only those personnel whose contracts require or authorize them to provide support to training and operational assessments are covered under an organization's agreement and approved RFMSS request. [Note: Per reference (a), contractors are prohibited from serving as Range OICs but may serve as RSOs.]

5. Non-federal entities (NFEs). Non-federal entities (NFEs) are private organizations that may be authorized to operate

aboard MCBQ in accordance with reference (g). When specifically authorized by Commander, MCINCR-MCBQ, NFEs may utilize the MCBQ RTA in the execution of their organizational mission. Authorization may be given through a single event approval letter or formal memorandum of agreement which contain specific limitations and responsibilities for use of the RTA. Only those personnel specifically authorized in the NFE approval letter or agreement may participate in events in the RTA and each participant must complete a waiver of liability. NFEs must comply with all applicable regulations established in this Order, except as modified or exempted in the approval letter or agreement, and must complete an agreement to indemnify prior to execution of any event.

6. Civilian Observers of Training. Personnel who enter the RTA to observe training or participate in familiarization events (e.g., Family Days or military appreciation events), must be authorized under an approved civilian participation request. The unit or organization conducting the event in the RTA must serve as the sponsor, submit the participation request, collect waivers of liability as required, and properly control the activity of all observers and participants. Appendix K provides an example civilian request letter.

7. Recreational Activities in the RTA. Recreational activities are only authorized in areas where no training or maintenance activities are scheduled. Personnel conducting recreational activities who come upon military training must depart the area so as to not interfere with the training or put themselves in danger.

a. Dispersed Recreation. Civilians participating in hunting, fishing, woodcutting, and other approved dispersed recreational activities must comply with reference (h) and any additional guidance provided by NREA. Military personnel are considered "civilians" when conducting dispersed recreational activities.

b. Physical Training (PT). Military and civilian personnel are only authorized to conduct physical training in those areas of the RTA specifically authorized by reference (i).

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CHAPTER 2

SCHEDULING

2000. OVERVIEW. The Guadalcanal RTA is a compact but highly complex environment containing numerous ranges with overlapping SDZs and over one hundred range gates to control access. The RTA supports a high volume and wide variety of live-fire and non-live fire training activities. In order to ensure the safety of all personnel and protect property while providing for maximum use of available training capabilities, it is essential that units submit proper and accurate requests for ranges and training areas. All requests must include sufficient information to allow Range Control to assess safety and deconflict the training from adjacent activities. Information requirements include dates, times, facilities, weapons/DODICs, and required support items.

2001. RANGE FACILITY MANAGEMENT SUPPORT SYSTEM (RFMSS). In accordance with reference (c), "RFMSS is the centerpiece of the Range Management System; it is the approved Marine Corps RTA scheduling and management tool. This system provides a standard, integrated, Web-based program that installation RTA management personnel can use to schedule training support for users and manage Marine Corps RTA property. RFMSS supports all major range management processes, to include unit/organization RTA requests, subsequent Range Control approval/disapproval action, and the automation of range firing desk operations."

1. Units that routinely train in the RTA shall designate personnel to submit training requests via RFMSS. RFMSS accounts are requested and approved by the RFMSS Functional Adminstrator. Upon account approval, personnel will be offered individual training sessions. Unit OICs/RSOs shall obtain "read-only" RFMSS accounts prior to designation in order to review safety conflicts and verify the accuracy of training requests prior to training.

2. Units that are new to training aboard MCBQ, or that train here infrequently, shall coordinate training requests through the TSCQ. TSCQ personnel will assist units with identifying the most appropriate training venue and can submit RFMSS requests on the unit's behalf. More information on TSCQ is available in chapter 8 of this Order.

2002. SCHEDULING PROCESS

1. The Range Control Scheduling Office is responsible for receiving, reviewing, and approving or denying all RTA useage requests. Scheduling is colocated with the RMB Safety division in bldg 24144, where units check in and out for training and are issued/return all training related gear. Hours of operation are Monday-Friday 0700-1600 (excluding holidays). Contact info is available on the RMB website or MCB Quantico RFMSS homepage.

2. Range Control will schedule the appropriate amount of airspace required for ground training events. However, requests to use the SUA for rotary wing and fixed wing aircraft activities such as Close Air Support (CAS), simulated CAS (SIMCAS), show-of-force demonstrations, airborne refueling, and parachute operatons, require additional coordination and must be submitted IAW procedures outlined in paragraph 4001.5.

2003. SCHEDULING PRIORITY

1. Approved requests 60 or more days from the start of training have the following general priorities:

a. CMC-directed events/exercises.

b. Marine Corps Formal Schools (in priority order: Entry Level Training, Primary MOS Schools, Secondary MOS Schools, PME Schools).

c. Tenant Command exercises (e.g., MCWL, MCSC, MCIOC, etc.).

d. Marine Corps Operating Forces (including USMC Reserve).

c. Other DoD (in priority order: other Marine Corps organizations, other active and reserve Military Services, DoD Agencies, National Guard, ROTC).

d. Foreign Military Training.

e. Civilian Law Enforcement (with existing agreement).

f. Recreational activities (with existing agreement).

2. RTA requests submitted 30-59 days from the start of training are reviewed and approved on a first-come, first-served basis.

3. RTA requests submitted less than 30 days from the start of training are reviewed and approved on a first-come, first-served basis. These requests require the unit operations or training officer to contact the Scheduling Office with justification for the short fuse request and to conduct additional coordination efforts as outlined below and in paragraph 3006.

a. The Scheduling Office priority is to review and approve events greater than 30 days out from scheduled training start time. This lead time allows for a full review of all potential safety conflicts. Short notice requests can create cascading safety issues that can affect multiple previously approved events. Any short notice request that creates a conflict with previously scheduled training or requires additional airspace will not be approved. Units must be responsive in modifying their short notice request to resolve any conflicts. Only after all conflicts have been resolved can the event be approved.

b. Weapons Training Battalion (WTBn) is authorized to schedule ranges located aboard the CALRC up to 15 days from the start of scheduled training without special coordination to accomodate their unique mission requirements.

3. Units may submit same-day RTA requests to support on-the-spot changes to training plans. Same-day requests are submitted to and approved by the Range Operations Control Center, not the Scheduling Office. Requests are only approved if the requested RTA is available and the event generates no safety conflicts with any other event scheduled in the RTA.

4. In the event that a unit is "bumped" from scheduled training by a higher priority unit or event, the Scheduling Office or TSCQ will make every reasonable attempt to identify and schedule a suitable alternate facility to support the requested training.

2004. PRIORITY OF TRAINING. Due to limited availability of RTA assets to support particular training activities, if two units request the same location for different training events, priority will be given to training event types as follows:

1. CAS.

2. Indirect fire support.

3. All other live fire.

4. Non-live fire tactical training.

5. Administrative movements and hikes.

6. Recreational activities, including recreational fire.

2005. PRIORITY OF USE. In addition to the general priorities established above, certain units and organizations receive additional priority consideration when scheduling designated ranges as outlined here.

1. Primary User. Some ranges and training facilities aboard MCBQ exist primarily to support the assigned mission of a specific unit or organization. These units generally have a responsibility to maintain unique target systems and/or training equipment and have specific operating procedures in place in addition to the Range SOP. In order for other units to utilize these ranges or training facilities, they must first coordinate with the primary user to gain permission to use the range and receive instructions on unique procedures. Only after coordinating with the primary user will a request for these ranges or training facilities be processed by Range Control. Primary User Contacts can be found in Appendix H.

a. CALRC (all ranges) – Primary user: WTBn.

b. Goettge Demolition Range – Primary user: WTBn.

c. Murphy Demolition Range, Camp Barrett TAs, LZ-6, LZ-7 - Primary user: TBS.

d. Fire Training Facility - Primary user: MCBQ FD.

e. Collapsed Structure Trainer – Primary user: Marine Corps Embassy Security Group (MCESG).

f. Confined Space Trainer – Primary user: MCBQ Safety Division.

g. Camp Upshur TAs – Primary user: RSA Quantico.

h. Upshur Parade Deck – Primary user: Traffic Safety Division.

i. R14C Tower – Primary user: MCESG

2. Priority User. Some ranges and training facilities aboard MCBQ were developed or are maintained with funding provided by a

specific unit or organization. Due to their financial commitment, these units are elevated in priority when scheduling the use of the range or training facility they funded. Only CMC-directed events will have a higher priority than the designated priority user. Units do not need to coordinate with the priority user prior to requesting these ranges, but they may be bumped up to 30 days prior to the date of scheduled training.

a. Range 10 – Priority user: Naval Criminal Investigative Service (NCIS).

b. Range 10A – Priority user: HMX-1.

c. Range 14C – Priority user: MCESG.

d. Range 14F – Priority user: U.S. Capitol Police.

e. Range 14G – Priority user: Drug Enforcement Agency (DEA).

f. Charlie Demolition Range - Priority users: FBI, USSS, and MCBQ EOD.

2006. RANGE AND TRAINING AREA REQUESTS

1. Training requests are to be submitted in RFMSS no later than (NLT) 30 days prior to the event. Any requests submitted less than 30 days prior to the event will only be approved under the following conditions:

a. The request does not require a waiver or deviation from this Order, the range or training area SOP, or any other regulation applicable to the requested training and must not involve any non-standard weapons or ammunition.

b. The request must not interfere with any already-approved RTA requests or require changes to scheduled airspace.

c. Any additional documents required (e.g., MOA/MOU, RA, scheme of maneuver, etc.) must be completed and provided at the time of the request.

2. During approved MCBQ Hunting Seasons, new requests and changes to existing requests will not be processed or approved after 1100 the day prior to training since the hunting map for the following day will have been already published.

3. Units who plan to complete training at night must schedule additional time the following morning in order to conduct a cleanup and complete a post inspection during daylight.

4. Units who must reschedule due to circumstances beyond their control (e.g., severe weather, natural disasters, etc.) will receive RMB assistance to identify and schedule training at the next available opportunity.

5. Range requests that include requests for TSCQ support (e.g., targets, target operator, battlefield effects simulator support, etc.) must include specific information on the support requirements as outlined in chapter 7.

2007. CO-USE REQUESTS. A Co-use is defined as the simultaneous use of any range, training facility, or training area by more than one unit, with each unit conducting separate training activities. Joint training is not considered co-use.

1. RTA requests requiring a co-use must be coordinated between all affected units and the Scheduling Office.

a. The unit requesting co-use will be responsible for coordinating with the unit that has already scheduled the range, training area, or training facility.

b. All co-use units will include their co-use agreement, scheme of maneuver, and deconfliction measures in their RFMSS requests.

c. An OIC and RSO will be designated for each unit and will be responsible for their unit's portion of the agreed upon co-use.

2. If one unit plans to complete training early, the remaining unit will assume responsibility for post inspection of the entirety of the range or training facility used.

3. Co-use is not authorized between training and non-training events, including range maintenance activities.

2008. CANCELLATIONS. Units who must cancel training will notify the Scheduling office as soon as possible. For same-day cancellations, units must notify the ROCC. Units failing to communicate with RMB and cancel training are considered a "no-show." Multiple no-shows for a unit may result in loss of training privileges aboard MCBQ. Units must also notify TSCQ of

any cancellations if training support was requested for the event or will lose future support (See chapter 8 of this Order).

2009. BLANKET SCHEDULING. Blanket scheduling is NOT permitted. Blanket scheduling is the practice of scheduling a range or training area for more time than required for training or for periods when the unit does not have a legitimate need. Blanket scheduling is primarily done to protect the range or training area from being scheduled by another unit. Range Control tracks all RTA requests and usage in RFMSS and pulls utilization reports on a regular basis. Units determined to be blanket scheduling will be warned to stop the practice. Continued blanket scheduling may result in the loss of priority in future scheduling, loss of the use of that RTA for a period of time, and/or the requirement to provide a unit training plan signed by the unit Commander prior to being approved in RFMSS.

2010. SPECIAL REQUESTS. Certain training activities require additional coordination in order to promote good community relations and proper RTA management.

1. Quiet hours: Quiet hours are established between the hours of 2200-0600 daily and 0600-1300 on Sundays. Firing of ammunition above 7.62mm is prohibited without approval from RMB.

2. Requests for EOD support shall be made to the Scheduling Office at least 30 days prior to the scheduled event.

a. Units requesting EOD support to emplace additional targets in the dudded impact area will ensure the Scheduling Office is included in any coordination. This requirement shall be captured in the RFMSS request.

b. TSCQ target systems will not be placed in dudded impact area.

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CHAPTER 3

RTA USAGE

3000. OVERVIEW. The Quantico RTA supports a wide variety of activities including military training, demonstrations of new equipment, law enforcement training, dispersed recreational activities (e.g., hunting and fishing), and various maintenance activities. It is essential that every unit and individual operating in the RTA execute their activities as briefed and do not deviate from established schemes of maneuver, published range SOPs, or scheduled hours. Deviating from scheduled and approved plans creates an unacceptable level of risk to personnel and property. OICs and RSOs, as well as supervisors of non-training activities, must be completely familiar with the contents of this Order, other applicable orders, and the details of their scheduled and approved activities prior to entering the RTA.

3001. RTA SIGN-OUT

1. The OIC or RSO will sign out their scheduled ranges, training areas, and/or training facilities with Range Safety no earlier than 24 hours prior to the scheduled start of training.

a. The Range Safety hours of operation are Monday-Friday 0700-1600 (excluding holidays).

b. Units are not authorized to occupy their scheduled RTA until the start time(s) established in the approved RFMSS request and only after the OIC or RSO has signed for the RTA.

2. All range equipment including radios, gate keys, applicable Range SOPs, and range flags will be issued during RTA sign out. The OIC or RSO will be provided a signed copy of all range gear issued. This form must be retained until the completion of all training and/or post inspections.

3002. TRANSITING THE RTA

1. Speed Limits. Speed limit throughout the RTA is 25 mph unless otherwise posted. Speed limit on paved roads is as posted. More information regarding vehicle operation in the RTA can be found in reference (j).

a. When passing troops, the speed limit is 15 mph.

b. During inclement weather conditions, speeds should be further reduced based upon road conditions.

2. Authorized Vehicles. There are five categories of vehicles authorized in the RTAs in support of training events:

a. Tactical vehicles.

b. Non-tactical government vehicles.

c. Government-leased vehicles.

d. Government contractor vehicles.

e. Privately-owned vehicles (POVs) specifically authorized by training unit Commander.

3003. PRIVATELY-OWNED VEHICLES

1. POVs may only operate on paved and primary gravel roads open to normal vehicular traffic, any form of off-road travel is strictly prohibited.

2. POVs are forbidden on the footprint of any range, within any LZs/DZs, inside any training facilities, or on any dirt trails or firebreaks.

3. Unattended POVs will not block access to any road or trail, even if the route is already blocked by a locked gate or barrier. Unrestricted access must be maintained for safety and MEDEVAC purposes.

4. The use of POVs in support of road guard posts must be approved by Range Control prior to commencement of unit training.

3004. RTA SIGNS AND BARRIERS. All personnel in the RTA for any purpose will comply with all posted signs and must not bypass any locked gates or barriers. When required, Range Control may place temporary barricades for roads and trails leading into restricted areas. These temporary barricades will be treated the same as a locked gate.

3005. COMMUNICATIONS

1. Two means of reliable communication are required between the training unit and Range Control. It is the training unit's

responsibility to establish and maintain communication with Range Control.

a. Enterprise Land Mobile Radios (ELMRs) are the primary means of communications. Units may check out ELMR radios from Range Safety when signing out a RTA.

b. Cell phones may be used as the secondary means of communication.

c. Tactical radios may be used for unit internal communications only, they are not an acceptable means for ground range safety communications.

2. Units will monitor the Range Control Safety Network (call sign "RANGE CONTROL") to ensure constant communication. Frequencies and channels are provided in Appendix H and as follows:

a. Primary Ground Safety is: ELMR talk group "Range Safety".

b. Secondary Ground Safety is: Fire Desk 703-784-5321/5322.

c. Primary Air Safety is: 134.1 Very High Frequency (VHF).

d. Secondary Air Safety is: 323.7 Ultra High Frequency (UHF).

3. Training units will conduct radio checks every 30 minutes for live fire and every three hours for non-live fire and/or bivouac. All transmissions will be on the hour or half hour.

4. Training units must cease firing/training if radio communication with Range Control is lost. Training will not resume until radio communication is re-established with Range Control and approval to fire is granted.

3006. RTA CHECK-IN

1. Upon arrival at any range, training area, or training facility, the unit will contact Range Control via ELMR to request permission to occupy.

2. Units will use the RTA facility name as their call sign. Training units occupying multiple RTAs will use their command post location as their call sign.

3. If the training unit finds the scheduled RTA in a poor state of police, the OIC should immediately report the discrepancy to Range Control. Failure to do so will result in the training unit being held responsible for the discrepancy during the post inspection.

4. If training on a live fire range, a Hot Brief will be conducted prior to firing. A copy of the Hot Brief is provided with the RTA sign-out sheet.

3007. CONDUCT OF TRAINING. Units will conduct training in accordance with the applicable Range SOP and established schemes of maneuver. Any modification(s) to the training plan must be briefed to and approved by Range Control prior to the start of training.

3008. END OF TRAINING

1. Upon completion of scheduled training, units will contact Range Control, request post inspection(s), and provide an end of day training report in the following format:

a. Number of personnel trained.

b. Number of vehicles in support.

c. Number of rounds fired by DODIC (if applicable).

d. Number of duds (if applicable).

2. Post inspections will be completed only during daylight hours under the supervision of a RSS. The RTAs used will be restored to the same state of police as existed prior to training.

3. Any contracted services or support (e.g. portable toilets) must be retrieved upon conclusion of training or scheduled for retrieval within one day of departure. Training units will provide an escort for the contractor to emplace and recover any contracted service items.

4. Training units utilizing LZs/DZs are responsible for police calling 25 meters into the tree line.

5. Any gate opened by the training unit must be closed and relocked prior to departing the area.

3009. DAMAGE TO FACILITIES

1. If damage is noted upon occupation of the RTA or is noted during training, the OIC will immediately notify Range Control so that repairs can be made as quickly as possible and so the unit will not be held responsible for damages caused by a previous unit.

2. The training unit will be held responsible for any damage determined to be caused by misuse, abuse, or violations of this Order or applicable Range SOP.

3010. RTA ACCESS RESTRICTIONS

1. Personnel will not bypass locked gates or barriers under any circumstance.

2. Personnel will not enter the RTA without permission from Range Control.

3. Only MCBQ EOD is authorized unescorted access into dudded impact areas.

4. Alcohol is not allowed within the RTA unless approved by Commander, MCINCR-MCBQ. This approval is required in addition to any approval by Marine Corps Community Services (MCCS) for units to supply their own alcohol in support of a unit event.

5. Training in or near cemeteries, burial plots, and historical sites is prohibited. Training units will bypass all such areas by at least (50) meters.

6. Training units are not permitted to block or deny access to any roadway within the RTA without prior coordination.

f. Range Control will approve requests requiring the use of temporary tactical roadblocks on case by case basis.

g. The OIC or RSO must notify Range Control when temporary barriers are emplaced and again when removed.

h. Any tactical roadblocks such as practice mines, trees, concertina wire, etc., must be manned at all times and allow for authorized, non-training vehicles to access the RTA.

3011. RANGE VIOLATIONS

1. In the event of a violation of this Order, all training must be halted until corrective action has been taken.

2. Failure to comply with this Order may subject the OIC and/or RSO to temporary or permanent suspension of certification.

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CHAPTER 4

WEAPONS, AMMUNITION, AND EXPLOSIVES SAFETY

4000. OVERVIEW. The use of military weapons, ammunition, and explosives is inherently dangerous. All personnel training in the Quantico RTA will operate weapons and employ ammunition/explosives in accordance with their design, applicable technical manuals/instructions, established range SOPs, and approved schemes of maneuver.

1. Weapons, ammunition, and explosives will not be modified or employed counter to their design unless specifically requested and approved by appropriate authority.

2. Reference (a) provides overarching guidance on the safe employment of weapons and ammunition and OICs/RSOs must be knowledgeable on those portions that apply to the training being conducted. The policies established below are in addition to, or serve to amplify, the regulations established in reference (a).

4001. AMMUNITION AND EXPLOSIVES (A&E) TRANSPORTATION, HANDLING, AND STORAGE

1. References. A&E, regardless of type, quantity, or location, must meet basic minimum safety and security requirements established in regulations. References (k) and (l) establish policies and procedures associated with the storage, use, and accountability of A&E aboard MCBQ. Appendix L provides a checklist to aid in ammunition handling.

2. Transportation. Units will ensure transportation of all A&E is in accordance with established regulations.

a. Units transporting A&E off base must be aware of and adhere to all additional applicable laws and regulations associated with transporting A&E on public roads.

b. Use of POVs to transport A&E of any kind for military training is strictly prohibited.

3. Handling. The OIC will ensure A&E are properly handled within the RTA from the time of receipt to the time of expenditure or turn-in.

a. Units must ensure they retain packaging until training is complete. Any A&E returned to the ASP must have all appropriate packaging and documentation.

b. A&E will not be abandoned, destroyed, fired indiscriminately, or disposed of improperly.

c. The quantity of A&E unpacked at an ammunition breakdown point will be kept to the minimum required for the efficient execution of training. Excessive breakout creates safety hazards and could cause excessive amounts of unserviceable, unfired ammunition, and is strongly discouraged.

d. All A&E dunnage must be removed from the RTA upon completion of training.

4. Storage. A&E is only authorized to be stored in the RTA for temporary, short duration purposes. A&E will not be left unattended and must be protected by an armed guard at all times. Storage in the RTA will be done in accordance with applicable regulations and will be staged to ensure:

a. A&E is stored out of the weather to prevent degredation.

b. Requirements are met for compatibility and safe separation distance.

c. The Minimum Safe Distance for the Net Explosive Weight (NEW) of the A&E does not escape the range boundary or overlap any occupied building or publicly traveled road.

d. That ignition sources such as matches, lighters, or spark-producing items are not located within 50 feet A&E and fire extinguishers and/or firefighting equipment are staged nearby.

4002. DUDS, MISFIRES, AND MALFUNCTIONS. All incidents involving malfunctions or defects with explosives must be reported in accordance with reference (m).

1. Duds. A dud is an explosive item or component of a weapon system that fails to function as intended when fired. Units will not destroy, move, or disturb a dud.

a. For artillery, mortars, and pyrotechnics, units will report when they experience a 10% or higher dud rate.

b. For all other munitions, duds will be reported as they occur and again on the end of training report by providing the number, type of munition, and the estimated location.

c. Unless they present an immediate hazard to personnel, duds that occur within a designated dudded impact area do not require EOD response.

d. Duds that occur, or are found, outside the dudded impact area require EOD response and must be reported to Range Control immediately. Training will be halted if the dud presents a hazard to personnel or equipment.

e. If a unit experiences a dud hand grenade, training must cease at that location until the dud is cleared by EOD.

f. Unserviceable A&E will not be reported as duds, but shall be returned to the ASP by the using unit.

2. Misfires. A misfire is defined as the failure of a primer or propelling charge or a failure to function of a line charge or demolition charge. All misfire procedures shall be executed on the range in accordance with training manuals for the appropriate weapon system.

a. In the event a misfired round cannot be unloaded or all safety devices cannot be replaced, the firing unit will request EOD support through Range Control.

b. Misfires resulting in injury or damage must be reported to Range Control immediately. All evidence such as components or fragments of the weapon system, ammunition, missile, or rocket will be carefully preserved, but not moved, at the incident site.

3. Malfunctions. A malfunction is a failure to function in accordance with the design, intent, and expected performance when fired, launched, or otherwise employed as specified. Ammunition malfunctions do not include incidents resulting from negligence, improper use, user error, etc. However, reporting of all these incidents is required since they provide useful data in preventing future incidents.

a. Ammunition that fails to perform as expected can normally be attributed to a malfunction, a weapon/equipment deficiency, or human error. In every instance it is imperative that facts surrounding the matter be immediately noted and

appropriately reported so that actions can be initiated to prevent reoccurrence. Using units are responsible for malfunction reports, which should be reported through the unit's logistics channels.

b. When training value is lost due to excessive malfunctions, the OIC will make a determination to continue or to cease firing the ammunition lot(s) involved. All ammunition will be secured until qualified personnel have investigated the incident and determined appropriate disposition and/or reports are generated.

4003. UNEXPLODED ORDNANCE (UXO). UXO is A&E which have been primed, fused, armed, or otherwise prepared for action and fails to function as designed. UXO may be found throughout RTA and can be extremely dangerous. All personnel scheduled to operate in the RTA shall receive a UXO brief by the OIC/RSO prior to training.

1. UXO Reporting. Units will immediately report to Range Control any UXO that is found outside the dudded impact area or threatens safety. Reporting information, at a minimum, should include:

a. Ten-digit grid coordinate.

b. Type of A&E (take photo if possible).

c. If found or occurring during a scheduled training event: the date, time, operator/gunner, OIC/RSO, and event name.

2. UXO Marking. UXO discovered in the RTA shall be marked in the most visible manner possible but at a sufficient distance to ensure safety.

3. UXO Tampering. UXO will not be destroyed, moved, or tampered with in any manner.

4. UXO Response. Upon notification of UXO, Range Control will coordinate with EOD and provide additional guidance to the OIC/RSO. EOD will assess the extent and nature of the threat and conduct an appropriate response. EOD will only respond during daylight hours.

4004. HAZARDS OF ELECTROMAGNETIC RADIATION TO ORDNANCE (HERO). Some electrically initiated A&E are vulnerable to intereference by electromagnetic energy. Reference (n) provides guidance on

the storage, handling, and use of HERO vulnerable ordnance. Extra precautions must be taken to ensure the safe use of these types of A&E. Required separation distances between sensitive A&E, radios, and/or cell phones are:

5. HERO Unsafe Ordnance: 19 feet/six meters.

6. HERO Susceptible Ordnance: 10 feet/three meters.

4005. GROUND WEAPONS. The OIC/RSO for any event employing ground weapon systems must be familiar with and/or qualified in the weapons being employed. In addition, the OIC/RSO should be familiar with the portions of reference (a) which apply to those weapons. Additional instructions are as follows:

1. Precision Rifles

a. All DODICS associated with precision rifles are authorized with some restrictions as noted in the specific range SOP and RFMSS.

b. The .50 caliber MK211 API cartridge (DODIC A606) is prohibited aboard MCB Quantico.

2. Hand Grenades

a. All personnel must have completed practice grenade training within 24 hours of live grenade training and must demonstrate proficiency in the safe handling and throwing of hand grenades.

b. The OIC, RSO and each throwing pit PSO must be specifically certified by the unit CO to perform their assigned duties. Certification will include ensuring personnel clearly understand established immediate action procedures in the event of a dropped grenade, short throw, a grenade thrown other than down range, control of observers, misfire/dud grenade procedures, as well as arming and throwing techniques and pre-live bay requirements.

c. All personnel within (150) meters of the grenade pits must wear approved PPE at a minimum of Level 1: ballistic helmet, body armor, and hearing protection. PPE levels are outlined in Appendix M.

a. Only one high explosive hand grenade will be thrown on a range at a time. Any subsequent grenade will not be thrown until the previous grenade has detonated.

b. Live grenades will not be thrown into standing water, deep snow, or dense vegetation that would obscure the grenade.

c. All handling and throwing of live hand grenades will cease one hour prior to sunset to ensure any potential EOD response occurs during daylight.

d. Safety pins will not be re-inserted once pulled.

e. When a grenade fails to function, the OIC/RSO will:

(1) Cease all grenade throwing. All personnel will remain under cover for five minutes. After five minutes, all throwing pits in the affected bay will be cleared of personnel.

(2) Notify Range Control and request EOD support. Range Control will determine if the unit may continue to train.

(3) If the unit is approved to continue training, only the grenade bays which do not contain a dud may continue to be used.

(4) Once the dud has been cleared, the training unit may return to using that grenade bay.

f. The Scalable Offensive Hand Grenade (SOHG) will not be used in an enclosed structure. This munition is authorized for use in structures with no ceilings or overhead cover.

(1) The SOHG must be thrown from behind a barrier such as a throwing pit or wall in order to protect personnel from blast overpressure and debris.

(2) PPE Level 0 plus hearing protection, or double hearing protection depending on proximity established by regulation, is required for all personnel and observers.

g. Diversionary hand grenades (flashbangs) may be used as follows:

(1) Flashbangs thrown indoors will be thrown from behind a wall, door, or other covered position.

(2) Flashbangs thrown in the open require personnel to remain at least 3.5m from the grenade.

(3) Personnel indoors within the 3.5m hazard area will have double hearing protection and are limited to 50 rounds per day.

(4) Personnel beyond the 3.5m hazard area will have single hearing protection and are limited to 150 rounds per day.

3. Grenade Launchers

a. HE grenades will only be fired into a dedicated dudded impact area.

b. Firing grenades through obstructions or vegetation is prohibited.

c. The Mk-19 must not be fired at targets less than (75) meters away for TP ammunition or less than (310) meters away for HE ammunition.

d. Handheld grenade launchers must not be fired at targets less than (165) meters away for HE ammunition.

e. The OIC/RSO will ensure only low-velocity cartridges are fired from handheld grenade launchers.

4. Rockets and Guided Missiles

a. All loading, preparations for firing, and unloading of rockets and missiles will be done with the weapon pointed down range. Handling and assembly will be in a manner consistent with the appropriate FM/TM.

b. Unobserved impacts will be reported to Range Control immediately.

c. Rockets and missiles will not be fired from within buildings or within (50) meters of a vertical or nearly vertical backstop, barrier, or obstacle unless specifically designed with soft launch capability.

d. Firing of the HE AT4 (M136) and LAW (M72) from the prone or from within a fighting position is prohibited.

e. Only the inert variant of the TOW Missile may be fired aboard MCBQ.

5. Mortars

a. The minimum target engagement distance is 300m for 60mm mortars and 400m for 81mm mortars.

b. An observer must confirm all rounds land within the dudded impact area.

c. Increments removed from rounds prior to firing will be placed in a covered metal or wooden container located at least 25m from the firing position. Increments burned at the conclusion of live fire will be burned on bare mineral soil.

d. Hand-held firing requires observation of the impact area from the person actually firing the mortar.

e. Full Range Practice (FRP) mortar rounds will only be recovered by EOD or properly trained range clearance personnel.

6. Artillery

a. Artillery unit safety certification programs, to include specification of artillery safety billets, will be conducted in compliance with references (a) and (o).

b. The maximum ordinate (max ord) will not exceed 10,000 feet Mean Sea Level (MSL). RFMSS requests must indicate the desired max ord in order to facilitate the activation of adequate airspace.

c. An observer must confirm that all rounds land within the target box. Impacts outside the target box necessitate an immediate check-fire and notification to Range Control.

4006. FIRE AND MOVEMENT/FIRE AND MANEUVER/SHOOTING ON THE MOVE

1. All types of moving and shooting events require PSOs to be assigned per reference (a).

a. Each PSO will be located so that all supervised personnel are visible and can be positively controlled at all times.

b. The RSO and PSOs will be equipped with appropriate signaling devices to initiate a "cease-fire" in the event of danger or emergency.

c. Events conducted during darkness will require more stringent control measures and rehearsals.

2. The OIC, RSO, and PSOs will be thoroughly familiar with safety provisions of reference (a).

3. This type of training requires a deliberate RA for all phases of the exercise; specifically, the OIC/RSO will:

a. Provide specific instructions to all PSOs prior to conducting live-fire.

b. Provide Range Control with a detailed scheme of maneuver prior to the exercise.

c. Ensure all personnel participating in the exercise have conducted a "dry" rehearsal.

4007. AVIATION GUNNERY

1. The OIC/RSO of the ground unit supported by the aircraft or the OIC/RSO of the aircraft unit must conduct a detailed range description brief to participating aircrews prior to commencing live fire activities.

2. Units conducting live fire Close Air Support (CAS) must have a qualified FAC/JTAC present and co-located with the OIC or RSO to ensure continuous coordination with participating units and Range Control.

3. Door gunnery operations will be conducted in accordance with aerial gunnery manuals and the applicable FMs and TMs for the specified aircraft. All fires must be oriented downrange and away from ground personnel.

4. Rotary wing aircraft weapons will only be loaded/unloaded at an approved FARP location and rearming procedures will be in accordance with an approved FARP SOP on file with Range Control.

4008. DEMOLITIONS. The following guidance applies to the use of standard military and commercial explosives and explosive devices. However, the use of commercial explosives must be approved by proper authority prior to use.

1. Demolitions must be closely accounted for throughout training to ensure all explosive materials are either expended or turned in.

a. For standard demolitions training, explosive material will be issued on the range being utilized for demolitions training and must remain within the range footprint throughout the training event. Personnel departing the range during training must verify that they do not have any explosive material on their person.

b. Units must specify if they are requesting to conduct tactical training with demolitions, or training outside of the range footprint. Units conducting this type of training must establish detailed accountability procedures for explosive materials and the scheme of maneuver must be approved by Range Control.

2. Detonation circuits will not be connected or armed on any munitions until immediately prior to the time designated for detonation.

3. Only mission-essential personnel will be allowed within the explosives SDZ during priming and firing.

a. Personnel within the SDZ, but protected by an appropriate shelter, will wear approved protective helmets and hearing protection.

b. Personnel within the SDZ and not protected by an appropriate shelter will wear protective helmets, hearing protection, and body armor; PPE Level 1 per Appendix M.

4. All demolition training/operations must be discontinued when Range Control advises the unit of hazardous weather conditions.

5. Live and inert munitions will not be mixed at the ammo issue point or during training. Demolitions effects simulators containing explosives are considered live munitions.

6. The use of field expedient demolitions must be approved by Range Control. If expedient demolitions are approved, only field expedient methods outlined in applicable FMs are authorized.

7. It is highly recommended that units requiring simulated fires utilize battle effects simulators provided by TSCQ as outlined in chapter 8. However, demolitions may be used to simulate enemy or supporting fires on specified ranges. In such cases, demolition charges will only be detonated in specially prepared pits with positive means to keep personnel at safe distances from the charges and in accordance with the following procedures:

a. Only standard issue TNT or composition C4 in 1/4 pound blocks will be used to simulate fires. Explosives will only be cut in accordance with the instructions provided in the corresponding FM.

b. Charges will be detonated electrically from a position that allows a clear view of the pit and the immediate vicinity around the pit.

c. Blasting circuit wires leading to charges in the detonation pits will be buried in conduit or otherwise secured to prevent personnel from becoming entangled in or tripping over the wires.

d. Only (1) charge will be emplaced in a pit at a time.

e. Pits will be inspected and cleared of objects prior to emplacing charges to remove potential hazardous debris.

f. Charges may only be detonated when prone or crawling personnel are 3m or more from the pit and upright personnel are 25m or more from the pit.

4009. BLANKS AND PYROTECHNICS

1. Blanks. Blank and live ammunition must never be mixed during training. Strict accountability procedures will be employed to ensure the activities remain separate.

a. Blank and live ammunition will not be stored, issued, or utilized on the same range at the same time. The OIC/RSO will ensure separate storage and issue sites are utilized for blank and live ammunition.

b. If blank firing is to be conducted after live fire, there will be a minimum of (2) weapons, magazine, equipment and clothing checks (shakedowns) conducted by (2) different supervisory personnel to verify that no training personnel

retain any loose or unaccounted for live rounds. Only when these checks have been completed may blanks be issued.

c. When firing blank ammunition, the Blank Firing Adapter (BFA) is required for every weapon system designed to accept a BFA.

d. The safe separation distance for firing blanks at personnel is 5m. Personnel training in urban facilities must be especially vigilant to maintain appropriate standoff within their confined spaces.

2. Smoke. The following precautions/restrictions apply to all training involving the use of smoke munitions:

a. Personnel will wear a protective mask when passing through or operating in dense smoke (visibility less than 50m.

b. Special precautions must be taken when using smoke in vicinity of unprotected personnel, helicopters, and publicly traveled roads to ensure it does not impact adjacent activities or extend off base.

c. Sulfur trioxide-chlorosulfonic acid solution (FS) and titanium tetrachloride (FM) smokes are prohibited within the RTA.

3. Practice Mines. Practice mines may be used if they are specifically requested, necessary safety precautions are taken, and all mines are removed upon completion of training.

a. Practice mines will be color coded in accordance with applicable orders and have appropriate stenciled identification markings.

b. Practice mines with fuses containing a small, low explosive charge or a smoke-producing increment must be marked and handled in accordance with applicable manuals.

4. Pyrotechnics and Trip Flares. Pyrotechnics and trip flares may be used if they are specifically requested, necessary safety precautions are taken, and all unexpended items are removed upon completion of training.

a. Pyrotechnics shall be stored away from any ignition sources.

b. Trip flares shall be positioned so the flare does not endanger personnel who activate the device or ignite flammable materials.

c. Artillery simulators must not be thrown in a way that could endanger personnel or ignite flammable materials.

d. Trip flares and artillery simulators shall be counted as they are issued and must be accounted for as expended or retrieved to ensure none are left in the RTA at the completion of training.

4010. SPECIAL EFFECTS SMALL ARMS MARKING SYSTEM (SESAMS)

1. Units requesting use of SESAMS (also referred to as simmunitions or UTM) will conduct a RA per reference (d) prior to conducting training.

2. Live ammunition will not be stored or issued in any location where SESAMS training is being conducted.

3. Authorized SESAMS kits, weapons and ammunition combinations and special requirements are found in Appendix P.

4. All personnel within the established 150m SESAMS safety zone will wear Personal Protective Equipment (PPE) Level-0 per reference (a) along with the correct protective face mask. Personnel participating in the force-on-force training will comply with the protective equipment standards outlined below.

5. SESAMS DODICs are categorized as follows:

a. M1041: 9mm, DODICs AA12, AA21, AB13, AB134, AC36, and AC37.

b. M1042: 5.56mm, DODICs AB09, AB10, and AB11.

c. M1042: 5.56mm, DODICs AC39, AC40, and AC41.

d. M1042: 5.56mm, DODICs AB09, AB10, and AB11.

e. MK 302 MOD-1/303 MOD-1: 5.56mm DODICs AB05 and AB06.

6. Prior to firing, the OIC and RSO will:

a. Ensure only approved SESAMS kits and associated authorized ammunition combinations are utilized.

b. Ensure suppressors are not utilized when firing SESAMS.

c. Ensure all training and scenarios have been reviewed and do not include situations where unintentional headshots may occur. Intentional headshots are prohibited.

d. Ensure force-on-force use is suspended when temperatures fall: Below 23°F or above 104°F for all M1042 marking cartridges. Below 18°F or above 104°F for all M1041, MK302 MOD 1, and MK303 MOD 1 marking cartridges. At temperatures above 104°F, the plastic softens and may rupture or lodge in the barrel upon firing. At temperatures below 23°F or 18°F respectively, the marking dye compound becomes too hard and brittle for proper performance and creates a safety hazard due to increased penetration.

e. The RSO will direct the demonstration of the minimum safe engagement distance of the SESAMS being used. Minimum safe engagement distances are:

(1) 9mm: For M1041 (DODICS AA12, AA21, AB13, AB14, AC36, AC37) the minimum safe engagement distance must be 1.5m (5ft).

(2) 5.56mm: For M1042 (DODICS AB09, AB10, AB11 (manufactured after 2010)) the minimum safe engagement distance must be 1.5m (5ft).

(3) 5.56mm: For M1042 (DODICs AC39, AC40, AC41) the minimum safe engagement distance must be 1.5m (5ft).

(4) 5.56mm: For MK 302 MOD-1/303 MOD 1 (DODICs AB05, AB06) the minimum safe engagement distance must be 4m (13ft).

f. Ensure that all weapons and adapter kits are maintained per applicable TM.

g. Inspect all weapons, magazines, and ammunition pouches or pockets for live ammunition prior to commencement of SESAMS training.

h. Remove all weapons systems not modified to fire the SESAMS marking cartridge from the training location.

i. Ensure all SESAMS-capable magazines are clearly marked.

j. Ensure that magazines are not filled until the SESAMS training evolution is ready to commence.

k. Establish and secure a 150m minimum safety zone from the far corners of the training area and ensure all personnel and participating personnel within the safety zone wear the required PPE and clothing.

7. Required PPE and Clothing

a. PPE requirements per category and DODIC are as follows:

(1) Current UTM Face Mask and ESS Night Vision Goggle combination is authorized for use with all M1041 and M1042 ammunition.

(2) The legacy Eye Tactical CM121 Protective Mask is authorized for use with all M1041 and M1042 ammunition.

(3) Current FX Mask Protector and all legacy series of FX Protective Face Masks are authorized for use with M1041 and M1042 ammunition.

(4) The FX 9002/9003/9004 Protective Face Masks are specifically authorized and required for use with MK 302 MOD-1/303 MOD 1 5.56MM marking cartridges (DODICs AB05, AB06).

(5) The FX 9002/9003/9004 Face Masks are also authorized for use when firing all SESAMs munitions.

b. For all personnel within the 150m safety zone but not actively engaged in the force-on-force use of SESAMS:

(1) PPE Level-0 in accordance with reference (a), Table 2-2.

(2) Correct protective face mask for the DODICs used as listed above.

c. For all participating personnel actively engaged in force-on-force use of SESAMS:

(1) Correct protective face mask for the DODICs used as listed above.

(2) Clothing capable of completely covering the body, the arms down to the hands, and the legs down to the boots.

(3) Head protection.

(4) Full face and eye protection.

(5) Throat protection.

(6) Groin protection.

(7) Single hearing protection.

(8) Gloves.

8. During firing, the OIC/RSO will:

a. Control access to the 150m safety zone.

b. Ensure all personnel and participating personnel within the 150m safety zone continue to wear required PPE until training ceases.

c. Confirm no intentional or unintentional headshots occur.

d. Ensure that minimum safe engagement distances are adhered to at all times.

9. Upon completion of training, the OIC/RSO will:

a. Inspect all weapons, magazines, and ammunition pouches or pockets ensuring all unused SESAMS ammunition is collected. Live SESAMS ammunition must never leave the training area or make its way to the Contractor Support Warehouse. Violation of this rule is subject to immediate suspension of both the OIC and RSO.

b. Account for and turn in all unused ammunition in accordance with applicable directives.

c. Account for, clean, and return all SESAMS kits and PPE to the appropriate location.

4011. CHEMICAL AGENTS. Only those Riot Control Agents (RCA), Chlorobenzalmalononitrile (CS) agents, and other approved chemical munitions specifically authorized for training shall be used in the RTA and they must be employed in accordance with applicable manuals to prevent injury.

1. Employment of chemical agents must be done under the supervision of an officer/staff noncommissioned officer/NCO who

has received formal training in the characteristics, capabilities, and training applications of these agents.

2. When chemical agents are used in a Chemical, Biological, Radiological, Nuclear (CBRN) facility:

a. USMC Units. OIC or RSO must be E-4 or higher and CBRN Specialist (5711 or 5702).

b. Non-USMC Unit. OIC must be E-6 or higher and a CBRN officer or CBRN Specialist. RSO must be E-5 or higher and a CBRN Specialist.

3. When chemical agents are used outside of a CBRN Facility, a CBRN officer or CBRN Specialist is not required; however, the unit will ensure the RSO has trained in a CS chamber within the past year.

a. Units must ensure the atmospheric conditions and/or method of employment does not pose a danger to personnel, wildlife, or property adjacent to or outside the installation boundary.

b. Chemical agents in the open will not be used closer than 500m from any public traffic routes or the nearest inhabited buildings, and not within 1000m of the installation boundary.

4012. NON-STANDARD WEAPONS AND AMMUNITION. Per reference (a), the use of non-standard weapons and ammunition is prohibited unless specifically approved by Commanding General, Training and Education Command (CG, TECOM) (C465). Even if approved by CG, TECOM (C465), Commander, MCINCR-MCBQ retains the final authority to approve or deny the use of any non-standard item aboard the installation.

1. Requests to use non-standard or foreign weapons, systems, and/or ammunition will be made in RFMSS and the comments block must include a list of the non-standard items to be used.

2. A copy of the Limited Safety Release, Safe and Ready Certification, or Safety of Use Memorandum must be provided to Range Control prior to approval of the request.

3. Range Control will submit all necessary information to CG, TECOM (C465) for review and decision, will obtain Commander, MCINCR-MCBQ approval or denial, and will notify the training unit of the final decision.

4. COs/OICs (Grade of O-6 or above) of Special Operations Forces (SOF) may approve the use of non-standard weapons and ammunition for training unique to SOF operations when necessary. However, detailed coordination with Range Control and final approval of the Commander, MCINCR-MCBQ is still required.

4013. USE OF SHOCK ABSORBING CONCRETE

1. 5.56mm and 7.62mm service rifles are authorized for use in both shock-absorbing concrete (SACON) and Amidon Ballistic Concrete (ABC) facilities; however, the 7.62mm ammunition will cause increased damage and accelerated deterioration of the concrete.

2. 9mm and .45 caliber service pistols are authorized for use in facilities made of both types of concrete. Ricochets are likely when firing service pistols at angles less than 20 degrees.

3. Firing .50 caliber ammunition is prohibited in SACON or ABC facilities due to its unpredictability and deep penetration which increase the likelihood that rounds will exit the facility. Additionally, the damage caused to SACON and ABC by .50 caliber ammunition makes its use in these facilities cost-prohibitive.

4. Use of M67 fragmentation hand grenades is authorized in both SACON and ABC facilities when the floor is covered with a minimum depth of 24 inches of sand.

5. The danger of concrete spall from impacts should be considered during the RA process.

6. There are no minimum safe engagement distances associated with approved small arms calibers in SACON and ABC facilities. Using units will ensure compliance with current orders, SOUMs, and local SOPs regarding steel targetry.

7. As a precautionary measure, and until further testing is completed, the same procedures apply for the removal of SACON and ABC debris as those currently used for shoot houses and bullet traps. Personnel who are in these training facilities for extended periods shall be supervised in accordance with local lead monitoring/compliance and industrial hygiene programs.

4014. USE OF STEEL REACTIVE TARGETS (SRT)

1. The OIC and RSO will be properly trained on, and will strictly adhere to, all requirements for SRT use including proper PPE, serviceability, and target placement and engagement.

2. Personal Protective Equipment (PPE) Level 0 is required with eye protection is mandatory, per reference (a) Table 2-2 for all personnel on the range within 50 meters of the firing line. When shooters are engaging SRTs, all personnel within 15 meters of the SRT line will wear gloves in addition to PPE Level-0 with mandatory eye protection.

3. Serviceability requirements for SRT.

a. Units shall only use SRTs (commercial or homemade) with a certified Brinell Hardness Number (BHN) abrasion resistant (AR) rating of AR 500 to AR 550, and that are at least 3/8 inch thick or greater. OICs shall provide and maintain certification of the same.

b. SRTs that are warped, cracked, have dimples (slight surface depressions) 1/32 inch deep or greater, or have holes through them are considered unserviceable.

c. Unserviceable targets must be replaced or only used for engagements exceeding 375 meters.

d. Mounting bolts on the target face will have a rounded head and must be oriented to the shooter. Mounting bolts that are damaged must be replaced.

e. Targets that are intended to flip, swing, or fall must move freely and operate as intended. Targets shall be adjusted to fall with minimal bullet impact.

f. Targets that are designed to rotate and not return to a perpendicular alignment (e.g. spinners) are prohibited.

g. Before and after firing, all moving parts and mechanisms must be lubricated and inspected for wear and serviceability.

h. Lead abatement must be considered when handling steel targets that have been shot. Personnel will wash hands immediately following the handling of SRTs. To reduce lead exposure, it is recommended that personnel use gloves while handling SRTs.

4. The OIC will ensure all SRT are placed in accordance with Appendix O. The RSO and Assistant RSOs will observe and maintain control of the firing line to ensure shooters adhere to SRT engagement requirements.

a. At ranges of 50 meters or less, targets must be placed on flat, soft ground that does not allow ricochet fragments off the ground.

b. When SRTs are engaged at ranges less than 50 meters and are placed over hard surfaces likely to produce ricochet fragments off the ground (like concrete or asphalt), an absorbing material (such as sand) will be placed in front of the target in a box with a minimum size of 30” x 30" to absorb the splatter and prevent projectiles from ricocheting.

c. Careful consideration of the 20-degree backsplash area is required. Closer distances, multiple shooters, and multiple SRTs in a line increase the risk to shooters affected by backsplash. Refer to Appendix O.

d. When engaging multiple SRTs at less than 15 meters, with multiple shooters simultaneously, additional engineering controls must be implemented to mitigate backsplash on adjacent shooters. Engineering controls include, but are not limited to, covering / shielding structural supports and frames with material capable of absorbing bullet fragments (e.g. sandbags, wood frames, ballistic rubber) or placing portable barriers (e.g. wooden partitions) between multiple SRTs to absorb/deflect bullet fragments.

e. Ensure SRTs are prevented from moving (laterally, rotationally, or down-range) from the set-up position during training which would change the 20-degree backsplash area(s) of the targets.

f. Ensure that the minimum safe engagement distance from the muzzle to the SRT is established and maintained for each weapon system and caliber used.

g. Engaging SRT with Enhanced Performance Round (EPR) M855A1 5.56mm ammunition (DODIC: AB56, AB57, or AB58), M80A1 7.62mm ammunition (DODIC: AB79, AB80, AB82), all armor piercing ammunitions, or ammunition with a solid copper alloy projectile is prohibited.

5. The following minimum safe engagement distances apply to all SRT use, all Trackless Mobile Infantry Target (TMIT) use, and in some cases other steel protective plates. To the extent practicable, these distances will apply to the steel silhouettes permanently emplaced in the dud impact areas of the RTA.

a. Pistol Calibers: No closer than 7 meters.

b. Shotgun with "00" Buckshot and Birdshot: No Closer than 10 meters.

c. Shotgun with slug ammunition: No closer than 45 meters.

d. 5.56mm with soft core ammunition to include Frangible Projectiles: No closer than 23 meters.

e. 5.56mm with Steel Penetrators: No closer than 69 meters.

f. 7.62mm (All): No closer than 150 meters.

g. Large calibers such as .50cal, .300, and .338: No closer than 375 meters.

h. Unserviceable SRT: Further than 375 meters for all calibers.

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CHAPTER 5

AIRSPACE AND AIRCRAFT OPERATIONS

5000. OVERVIEW

1. The MCBQ SUA is comprised of the R-6608 Restricted Airspace and DEMO Military Operations Area (MOA) as defined in reference (p) and as depicted in Figures 4-1 and 4-2.

2. The MCBQ SUA is located in a highly complex airspace in proximity to several high-use regional, national, and international airports. Additionally, a majority of the restricted airspace is located within the Washington, DC Special Flight Rules Area (SFRA) which adds additional complexity.

3. It is mandatory that all pilots flying under Visual Flight Rules (VFR) within 60 nautical miles of Reagan National Airport (DCA) VHF omnidirectional range (VOR) with distance measuring equipment (DME) radio beacon (DCA VOR/DME) complete special awareness training for the Washington, DC Metropolitan Area (14 Code of Federal Regulations (CFR) parts 61 and 91, effective February 9, 2009). This training is available in the Aviation Learning Center at:

https://www.faasafety.gov/gslac/ALC/courseLanding.aspx?cID=405

4. Per reference (p), the SUA is available for military use from 0500 to 2400 daily. Use of the SUA outside those hours must be identified via Notice to Airmen (NOTAM) at least 24 hours in advance of use. Units must submit an airspace waiver request if their training activity will require use of airspace outside normal hours.

5001. SPECIAL USE AIRSPACE

1. Restricted Area R-6608. R-6608 is the restricted airspace that overlays the MCBQ RTA. When restricted airspace is activated, non-participating aircraft are prohibited from entering, which protects them from live fire activities in the RTA and military aircraft training in the airspace. The R-6608 airspace is subdivided into sections A, B, and C in order to provide adequate protection while minimizing the effects of military training on the highly congested airspace surrounding the RTA. R-6608 is listed in Flight Information Planning (FLIP) documents and depicted in the FLIP high and low altitude enroute charts.

2. DEMO Military Operations Area (MOA). DEMO MOA is the SUA adjacent to and overlaying R-6608. The DEMO MOA is subdivided into areas 1, 2, and 3 and is listed in FLIP documents and depicted in the FLIP high and low altitude enroute charts. When a MOA is scheduled for use, a NOTAM is published and notification is broadcast via the Automatic Terminal Information Service (ATIS) to all non-participating aircraft that if they enter the MOA, they must avoid military aircraft operations in the area. This notification allows military aircraft to conduct training activities such as air combat maneuvers, aerial refueling, parachute ops, etc., while minimizing the hazard to other aircraft.

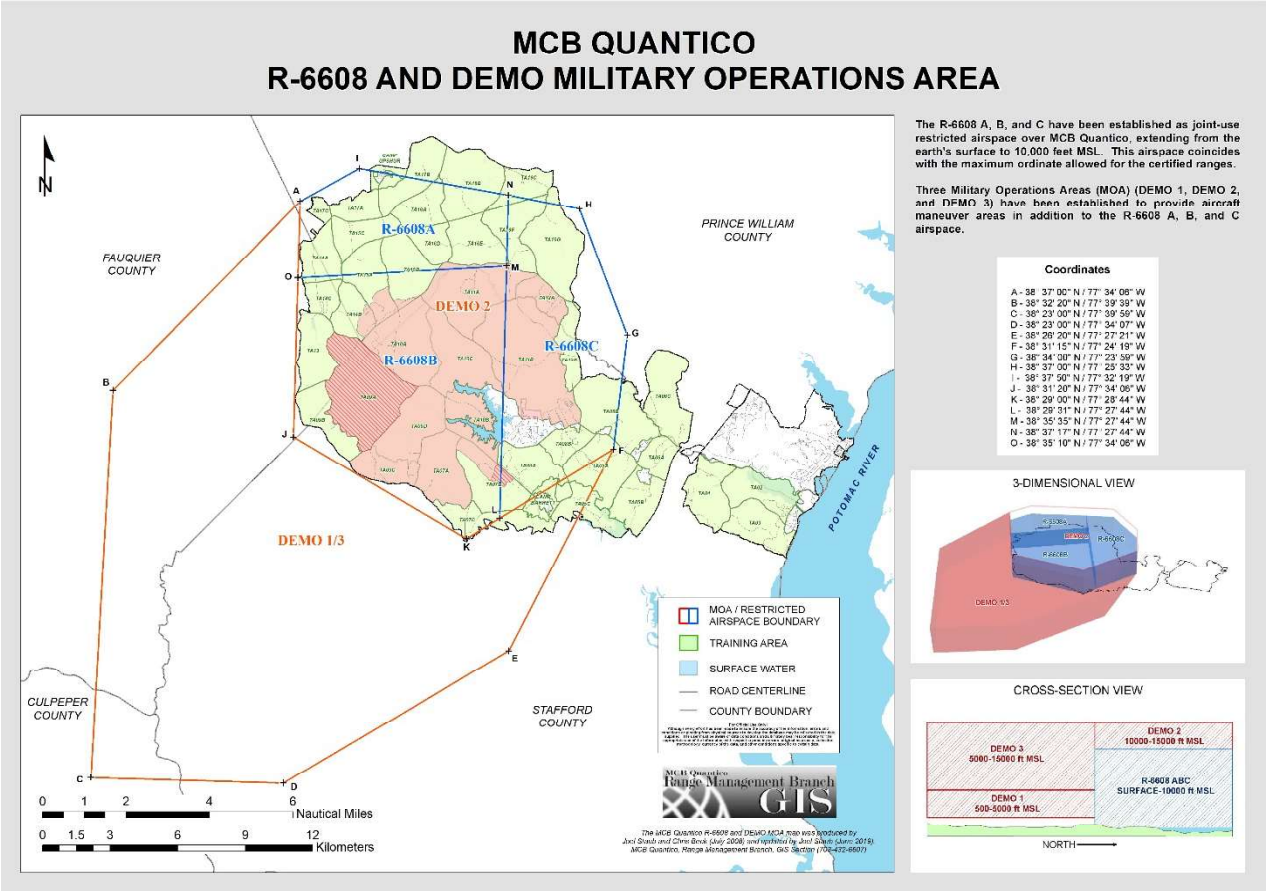

Figure 5-1 R-6608 and DEMO MOA

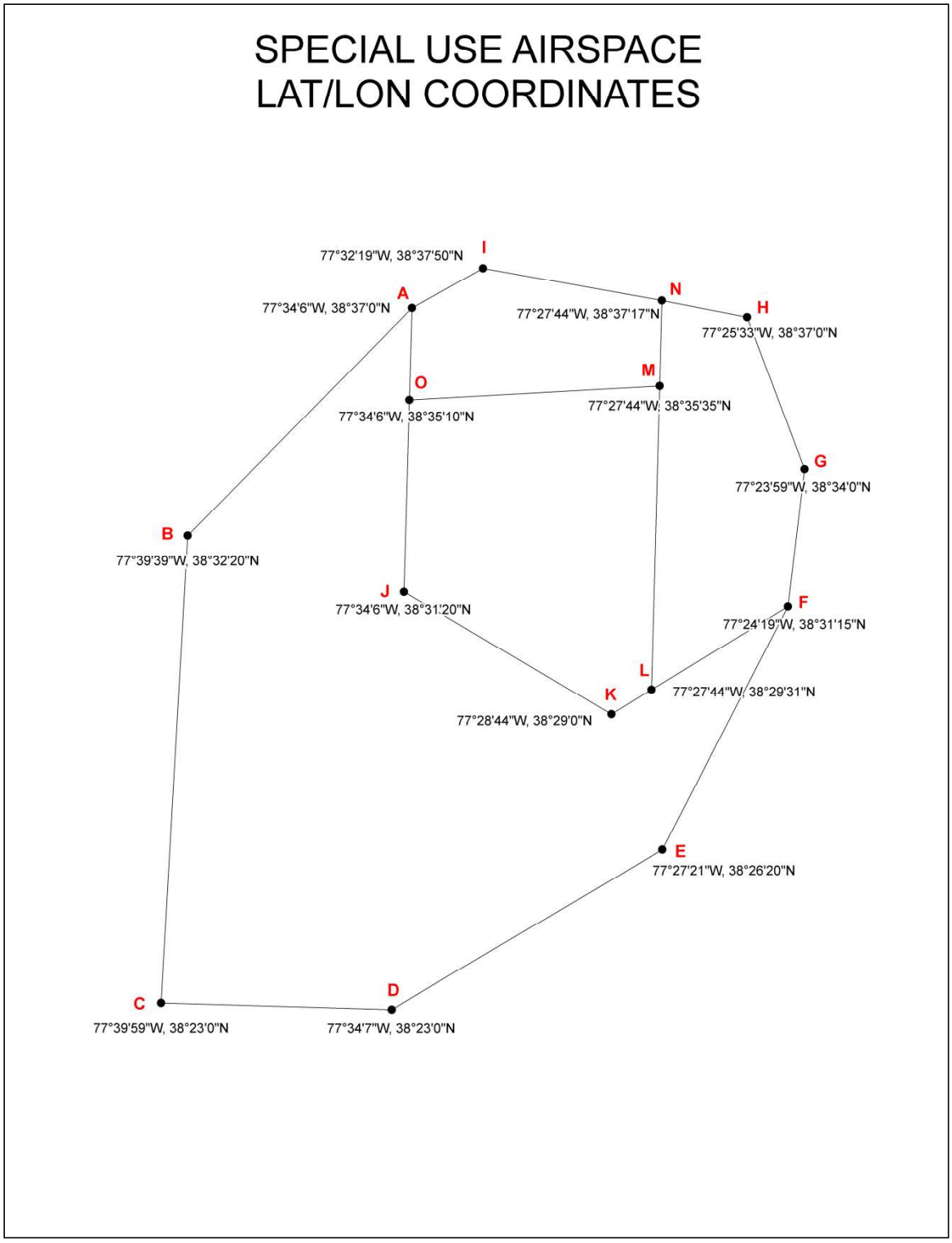

Figure 5-2 SUA Boundary Coordinates

3. Controlling Agency. The controlling agency is the Air Traffic Control (ATC) facility that exercises control of the

airspace when an SUA area is not activated. Potomac Terminal Radar Approach Control (TRACON) is the controlling agency for R-6608 and DEMO MOA.

4. Using Agency. The using agency is the military organization whose activity establishes the requirement for the SUA. MCB Quantico is the using agency for R-6608 and DEMO MOA.

5. Scheduling SUA. The MCBQ SUA schedule is provided to Potomac TRACON and MCAFQ Air Traffic Control (ATC) at least 14 days prior to use. This allows time for the FAA to plan commercial traffic routes into the region and MCAFQ to ensure operational support is available. To permit time for deconfliction of events, all customer requests for use of the SUA must be received in RFMSS at least 30 days prior to the event date.

6. Fixed Wing Aircraft Restrictions. Due to the limited size of the Quantico SUA and close proximity to multiple airports, fixed wing aircraft training operations have additional constraints.

a. To minimize impact on peak commercial aircraft hours in the region, fixed wing operations will generally be scheduled between 1000 and 1500 local. Requests for fixed wing operations outside this time frame must include specific justification in the RFMSS request.

b. No new requests for airspace, or modifications to existing requests that require more airspace or additional time outside the scheduled hours, will be accepted or approved less than 15 days from the scheduled event date.

c. The Forward Air Controller/Joint Terminal Attack Controller (FAC/JTAC) controlling fixed wing aircraft operations must maintain communications with Range Control at all times while aircraft are in the SUA. Should communications between the FAC/JTCAC and Range Control fail, Range Control will attempt to establish communications with the aircraft and will direct them to restrict flight operations to prevent spill out from the SUA. If communications cannot be established between Range Control and the aircraft, Range Control will abort the mission and request MCAFQ ATC to provide appropriate ATC services to the aircraft.

5002. SUA CONTROL PROCEDURES

1. General. Prior to entering or exiting SUA, all aircraft must contact Quantico Range Control on either 323.7 UHF or 134.1 VHF, and maintain two-way communications while operating within SUA unless otherwise coordinated.

2. Restrictions

a. The minimum safe altitude while transiting the SUA shall be not lower than 1000’ above congested areas, or 500’ above other-than-congested areas in accordance with CFR 91.119.

b. Aircraft may transit above hot ranges only if they remain above the minimum safe altitude (ground fire vertical hazard) as briefed by Range Control.

c. Spilling out of the SUA is a hazard to airspace safety and may result in disruption of civilian air traffic. Aircrew diligence is required to avoid spilling out into the extremely congested airspace surrounding this SUA. Spilling out may result in the termination of air operations.

d. Potomac TRACON may occasionally request the immediate release of the SUA back to the FAA due to an emergency situation or operational necessity. If this occurs, Range Control will inform all aircraft of the termination of training and hand off control of affected aircraft to the controlling agency.

3. Loss of Communication

a. Aircraft experiencing loss of communication while in the SUA shall proceed with Naval Air Training and Operating Procedures Standardization (NATOPS) procedures and squawk transponder code 7600. A Beacon Code of 7600 represents that an aircraft has lost radio communications. Aircraft should expect to perform “IDENT” procedures to establish that they are receive only.

b. Aircraft experiencing an emergency while operating in a SUA shall proceed with NATOPS procedures and squawk transponder code 7700. If able, the pilot shall relay aircraft identification, type of aircraft, nature of emergency, and pilot’s intentions to Range Control.

5003. SUA ENTRY AND EXIT

1. Entry (Standard Procedure)

a. Before entering SUA, the aircrew shall contact Range Control on the appropriate control frequency published in Appendix H.

b. Aircrew/Pilot in command will provide:

(1) Call sign(s).

(2) Number and type of aircraft.

(3) Number of personnel onboard.

(4) Direction of entry and intention for SUA.

(5) Ammunition types and quantity.

c. Once two-way communication has been established, Range Control will provide an appropriate range safety brief.

d. Aircraft operating in/out of any LZ which does not lie within SUA coverage must monitor Potomac Approach Control (frequency 306.925 UHF, 126.8 VHF) for traffic advisory information.

e. Pilots operating within that portion of the SUA which falls within the Special Flight Rules Area (SFRA) must squawk their assigned discrete beacon code at all times.

2. Entry (During CAS Training Missions)

a. Participating inbound aircraft in support of of CAS Training Missions will be instructed to contact MCAFQ Arrival on 290.375 UHF or 127.05 VHF for intial entry coordination.

b. Once radar contact and coordination is established, aircrew will be instructed to contact SUA Sector Control on 346.25 UHF, cleared to enter SUA, and be issued the following information:

(1) An initial minimum altitude (hard deck) in order to remain clear of unassociated training hazards and, if applicable, any aviation specific instructions.

(2) A containment, refueling, and exit brief. If applicable, aircraft will verify Military Aircraft Assumes Responsibility for Separation of Aircraft (MAARSA) for refueling operations in MOA.

(3) If appropriate, instruction for aircraft to contact the FAC/JTAC on 326.4 UHF, as well as instruction to monitor SUA Control frequency for the duration of the mission.

3. Exit (All Aircraft)

a. Aircraft under control of SUA Sector Control will advise of the estimated time of departure in order to affect timely coordination of an Instrument Flight Rules (IFR) clearance.

b. Aircraft not under SUA Control will notify Range Control prior to exit.

c. Until cleared to depart, all aircraft will remain within the SUA. Once all aircraft under FAC/JTAC control have exited, the FAC/JTAC will inform Range Control.

5004. HAZARDS TO AERIAL NAVIGATION

1. Communication Towers. There are (4) communication towers within the RTA and SUA:

a. Dirt 7 (TA-9A boundary):
- 120 feet AGL (352 feet above MSL)
- GRID 79847 66812
- Lat/Long 38 31’20.85’N / 77 31’31.28’ W

b. Range 8 (TA-9A boundary)
- 150 feet AGL (407 feet above MSL)
- GRID 77646 68789
- Lat/Long 38 32’23.2’N / 77 33’4.45’ W

c. Camp Barrett (TA-5C)
- 200 feet AGL (230 feet above MSL)
- GRID 87397 63516
- Lat/Long 38 29’40.75’N / 77 26’16.12’ W.

d. MOUT Facility (TA-14B)
- 200 feet AGL (390' above MSL)
- GRID 79407 72757
- Lat/Long 38 34' 33.28’N / 77 31' 56.13’ W.

2. Other Hazards

a. There are two inactive satellite dishes and several smaller antennae/wire arrays in the vicinity of and south of the Raid Facility at GRID 18STH8620078180. There is also a powerline 300m to the north of that site. The only approved landing site for aircraft is LZ Osprey directly adjacent to and east of the Raid Facility.

b. There are also several water towers on the west side of Base located at Camp Upshur, Camp Barrett, WTBn, FBI Academy, and the intersection of MCB-4/MCB-2.

3. Hazardous Weather. For aircrews inbound to the SUA, current weather conditions are available from the Weather Section, MCAFQ (703)784-2298, or on frequency 355.3 UHF.

5005. AIR-TO-GROUND OPERATIONS

1. CAS

a. Air to ground live fire in the presence of personnel on the ground requires positive control by a qualified FAC/JTAC in addition to an event OIC/RSO. Only Type 1 CAS is authorized aboard MCBQ.

b. The FAC/JTAC must contact the ROCC on the day of training to receive an updated hot range brief and to finalize coordination of planned CAS activities.

c. CAS aircraft will adhere to the FAC/JTAC hot brief restrictions. The FAC/JTAC will ensure Initial Points (IPs), headings, attack cones, maximum/minimum altitudes, and egress routes are established to safeguard supporting aircraft.

d. If the aircraft are used in conjunction with combined arms activities, the FAC/JTAC and RSO must be co-located with the fire support coordination element to ensure instantaneous communication with all elements involved and Range Control.

e. Aviation Munitions Impact Point/Area (AMIP/AMIA) 7 and AMIP/AMIA 9 are the only authorized target areas for engagement by fixed-wing aircraft with live general purpose bombs.

f. Prior to weapons release/firing for each pass, final switch configuration will not be accomplished until the aircraft is in such a position that accidental activation or release will

be contained within the range, and not represent a danger to ground personnel.

g. Aircraft conducting CAS missions are limited to one bomb release per plane, per pass.

h. Aircraft will be a minimum of one switch position (excluding trigger) away from weapons release when:

(1) The CAS aircraft is not oriented toward the target area.

(2) The CAS aircraft does not meet cleared hot/abort criteria.

(3) The CAS aircraft lacks positive identification of troop(s), target(s), and/or adjacent unit location(s).

(4) Targeting equipment fails to operate or any aircraft failure that would affect accurate delivery of ordnance.

(5) Loss of direct communications between:

(a) The aircraft and the FAC.

(b) The FAC and Range Control.

(c) The aircraft and MCAFQ (if under SUA Sector Control).

2. Simulated Close Air Support (SIMCAS). SIMCAS aircraft will be under the control of a FAC/JTAC located with the supported ground unit.

3. Aerial Lasing. Aerial lasing is authorized in accordance with applicable orders, regulations, and the current Laser Range Safety Survey Report. Laser operations are covered in detail in chapter 7 of this Order.

5006. FORWARD ARMING AND REFUELING POINT (FARP)

1. There is one (1) rotary wing expeditionary FARP site currently established within the RTA. Any unit desiring to use a FARP must specifically request to do so in their RTA request. All FARP operations will be in accordance with an approved FARP SOP on file with Range Control.

2. FARP information

a. Location: Range 9 – (TA-9A/TA13 Boundary) MGRS 18STH7776671266.

b. Restrictions: Load/Arm facing impact area oriented on an azimuth of 135 degrees grid.

c. Requirements: Approved refueling and/or rearming equipment, spill kit, and qualified personnel must be on site throughout execution of FARP operations.

5007. LANDING ZONES AND DROP ZONES (LZS/DZS). Appendix I provides a list of all LZs/DZs available for use. Aircraft will not land in any areas other than designated LZs/DZs except in an emergency or when coordinated with Range Control in detail prior to execution.

1. Scheduled Use. Units may schedule LZs/DZs in RFMSS under the same procedures used for ranges, training areas, and training facilities as outlined in chapter 5. Scheduled LZs/DZs are not available for use by any aircraft not associated with the scheduled training unless a co-use agreement is established.

2. Unscheduled Use. Aircraft may request same-day LZ/DZ practice approaches and landings. Units must obtain approval from Range Control prior to executing such activities and will be directed to utilize unscheduled LZs/DZs.

3. Restricted Use LZs. Use of certain LZs is restricted and are not available for unscheduled use:

a. LZ-6 and LZ-7 (Camp Barrett) are primarily for TBS use.

b. LZ-9 (WTBn Range 4) is primarily for WTBn use.

c. LZ-Wren (WTBn Ironman Range) is primarily for WTBn use.

d. Upshur Parade Deck (Camp Upshur) is primarily for Safety Division’s Driver Training Course use.

4. Parachute Operations

a. Parachute operations are authorized at (6) locations:

(1) DZ Raven

(2) DZ Cockatoo

(3) DZ Redwing

(4) DZ FBI

(5)DZ Weapons

(6) DZ Turkey

b. A DZ Control Party will establish a position in the DZ during parachute operations and will be responsible for coordinating with Range Control during the entirety of the evolution.

c. Parachute operations in any other location than those mentioned above requires additional coordination with Range Control.

d. All parachute operations will be in accordance with appropriate TMs.

5. FARP and Hung Ordnance Operations

a. Shall be conducted IAW Squadron SOP and adhere to following guidelines:

(1) Fuel bladders and trucks will be placed or parked on secondary spill containment sufficient to contain all possible leaks and spills.

(2) Aircraft will be oriented on heading of 155° magnetic during all fueling, ordnance loading and unloading, and hung ordnance operations.

b. Hung Ordnance procedures shall be handled as such:

(1) Pilot will immediately contact the RCF so appropriate check-fires can be initiated at R09 (if applicable).

(2) Once cleared to proceed to the FARP site, aircraft will proceed inbound in the most direct route possible, keeping the nose of the aircraft oriented toward the TA-9A impact area and away from troops and the installation boundary (to the extent possible).

(3) Set down at the FARP on a heading of 155° magnetic and await further instructions.

5008. UNMANNED AERIAL SYSTEMS (UAS)

1. General. All UAS exercises will be conducted and contained within the SUA in accordance with current Marine Corps and FAA regulations.

2. Due to rapid changes in UAS technology, the use of a particular UAS platform may be prohibited with little to no notification. Only approved platforms will be authorized aboard MCINCR-MCBQO. Units will ensure they remain abreast of current memoranda and restrictions.

3. Commercial off the Shelf (COTS) UAS must be Federal Communications Commission (FCC) compliant.

4. UAS must have a manufactured design and onboard control measures that prevent it from leaving the approved airspace in the event of flight control system failure.

5. Lost Link Procedures. In the event of a lost link or loss of flight control, the training unit will immediately contact Range Control and provide last known location, altitude, and direction of flight. Follow on recovery procedures by the training unit will be as outlined in the SOP specific to the UAS platform in use. Operators will have these manuals on hand throughout operations.

6. UAS will fly only within their approved Restricted Operating Zone (ROZ) and operate only on approved operating frequencies. Numerous ROZs are established within the restricted airspace to support UAS operations and temporary ROZs can be established when required to support unique requirements.

7. See and Avoid. UAS operator will ensure there is a safe operating distance between other aviation activities and unmanned aircraft at all times. UAS operator must yield right of way to all other aircraft.

8. Scheduling. Information in request will include:

a. Required altitudes in feet AGL.

b. Established ROZ or temporary ROZ defined by grid coordinates (10 digit) or a point of origin grid with radius of flight pattern (in meters).

c. Launch and Recovery Site (LRS) and Ground Control Station (GCS) sites. LRS must be within the scheduled ROZ.

d. Type/group and description of UAS.

9. All frequencies used must be approved by the Base Spectrum Manager/G-6 (contact info (703)784-4212). No requests will be approved by Range Control until the training unit provides a Spectrum Manager Approval letter.

10. All UAS operations require an OIC to be present during training.

11. All UAS operators must be qualified in the platform and certified by the unit Commander prior to training.

12. Personnel being trained to operate UAS must be under the supervison of a certified and qualified UAS operator.

13. The training unit must have an established UAS SOP and must provide a copy to Range Control for review prior to RTA request approval.

14. Restrictions

a. UAS will not fly over live fire ranges unless coordinated with and approved by Range Control.

b. UAS operations will not be conducted within 500 m of the installation boundary or restricted airspace (whichever is greater) without specific approval of Range Control.

c. The minimum separation between manned aircraft and UAS is 1000ft vertically and 1000ft laterally.

d. Group 1 weather minimums: 500ft ceiling and 1.5 miles of visibility.

e. Group 2 and larger weather minimums: 3000ft ceiling and three miles of visibility.

f. Night operations must be conducted with appropriate anti-collision or other lighting to ensure visual observation of the UAS.

g. All UAS external load operations must be coordinated through Range Control. Carriage of hazardous materials is not permitted at any time.

h. Recovery of downed UAS must not disrupt adjacent scheduled training. If a UAS is down in any dudded impact area, it will not be recovered without EOD support.

i. Personal UAS are prohibited for use in support of military operations.

j. Personal UAS are prohibited aboard MCBQ unless specifically authorized by Commander, MCINCR-MCBQ.

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CHAPTER 6

LASER OPERATIONS

6000. OVERVIEW

1. All lasers are considered direct fire weapons and have associated Laser Surface Danger Zones (LSDZs) in the same manner as all other direct fire weapons have SDZs.

2. Definition of Terms

a. Diffuse Reflection. The scattering of laser light as it reflects off of a rough surface.

b. Divergence. The increase in the diameter of the laser beam as the distance increases from the aperture of the laser.

c. Maximum Permissible Exposure (MPE). The level of radiation a person may be exposed to without hazardous effect.

d. Nominal Ocular Hazard Distance (NOHD). The measurement from the laser to a distance where laser exposure does not pose a hazard to the eye.

e. Optical Density (OD). Refers to the density of the eyewear (goggles or visors) required to protect the eye from laser radiation.

f. Specular Hazard. A shiny or mirror-like surface. Examples are vehicle windows, polished metals, standing water, Plexiglas, and chrome bumpers.

3. The primary hazard associated with laser light is eye damage. This damage can vary from a small burn, undetectable by the injured person, to severe vision impairment. Eye damage by laser light occurs three ways:

a. Intrabeam or direct viewing. Direct viewing of lasers causes the most serious form of physical injury, as the light beam is focused directly on the retina.

b. Diffuse reflection. Scattered reflection patterns can cause laser energy to impact in unexpected directions and impact unsuspecting, unprotected personnel.

c. Specular reflection. Specular reflections redirect the light beam and can cause the same level of eye damage as direct viewing.

4. The use of appropriate eyewear (goggles or visors) with the correct optical density (OD) and wavelength protection associated with the laser in use will mitigate ocular hazards associated with lasers.

6001. SUPPLEMENTAL LASER INFORMATION

1. Laser Classification. Laser systems are classified according to their relative hazards from Class 1 (least hazardous) to Class 4 (most hazardous).

a. Class 1 laser systems pose no hazard under normal viewing conditions. Class 1M laser systems are only hazardous when viewed by magnifying optics.

b. Class 2 laser systems are low-power visible wavelength lasers which are not considered hazardous for momentary unintentional exposure because the normal observer will blink or look away before eye damage can occur. Class 2M laser systems are low-power visible wavelength lasers similar to Class 2, but are hazardous when viewed with magnifying optics, even for a momentary exposure.

c. Class 3 laser systems are medium-power lasers. They are hazardous to personnel who are in the beam path and viewing the source directly or by specular reflection. They usually do not present a diffuse reflection or skin hazard. Class 3R laser systems are considered safe if handled carefully, with restricted intrabeam viewing. With a Class 3R laser, the MPE can be exceeded with a low-risk of injury. Class 3B laser systems are more powerful and can cause serious eye injury for exposures of very short duration. They can be hazardous for long distances downrange.

d. Class 4 laser systems are very powerful and the most dangerous laser systems. They can be hazardous for extremely long distances downrange from the laser system. They can also present a potential diffuse reflection viewing, skin, and fire hazard.

e. DoD-Exempt Lasers are lasers designed for actual combat, combat training operations, or classified in the interest of national security and are exempted from the requirements

specified in 21 CFR 1040 (Performance Standard for Light Emitting Products).

f. Optical interrupt (OI) laser systems use intense light to obscure the vision of targeted individuals. OIs are intended primarily to serve as a warning device and must meet stringent safety criteria. The devices currently in use may be Class 3R or greater laser systems that can be safely employed for training. However, due to the intensity of the laser beam, it can pose an eye hazard within the NOHD if incorrectly employed.

2. Class 1, Class 2, and Class 3R lasers are authorized for use in all MCBQ RTAs.

a. LRSO/RSO will ensure use of applicable safety features per laser technical manuals.

b. Use of Class 3R and below lasers for force-on-force operations must be coordinated with the IRSO.

3. DoD exempt, unfiltered Class 3B, and Class 4 lasers are restricted to Ranges 7, 8, 8A, 9, 14, 15, WTBn R-4, and MCB-6.

a. Class 3B and higher lasers may be used in other areas if safety features that limit power output are installed and employed. Such use must be coordinated with the IRSO.

b. Use of Class 3B and higher lasers are not authorized for force-on-force operations unless safety switch is engaged, reducing the Laser to a Class 1 equivalent. Such use must be coordinated with the IRSO and must be confirmed on site by the unit's LRSO.

6002. LASER USE PROCEDURES. Users of laser systems will comply with the following:

1. Ensure a certified Laser Range Safety Officer (LRSO) is present during all laser operations. If an LRSO is not available, then the RSO must be qualified on that laser system.

2. Treat all lasers as you would any direct fire weapon.

3. Ensure user familiarity with laser system operation and the associated hazards.

4. Only remove the lens cap when ready to fire the laser down range. Remove the lens cap before applying power source.

5. Do not leave the power source connected to the laser when not actually lasing.

6. Laser systems that do not have lens caps or disconnects from power source must ensure that the down range area of the laser remains clear, that the system is safe, and that the operator is not touching the trigger to the laser system.

6003. LASER SYSTEMS SAFETY PROGRAM. Units that have an inventory of Class 3B or 4 laser systems will establish a local laser hazard control program. This program shall be established as directed by reference (q). A certified Administrative Laser Systems Officer (ALSO) will manage this program.

6004. LASER RANGE SAFETY OFFICER (LRSO) RESPONSIBILITIES

1. An LRSO is one who implements installation SOPs to ensure safe use of lasers on Marine Corps RTAs.

a. The LRSO must be laser system qualified by having successfully completed a standard program of instruction for the particular laser system being used.

b. An LRSO must complete and pass the Laser Range Safety Computer Based Training module on MarineNet.

c. Unit Commanders will designate LRSOs in writing per procedures established in reference (a).

d. An RSO may assume the additional responsibilities of the LRSO for an event if properly qualified.

2. LRSOs will:

a. Be knowledgeable with this Order, references (a), (r) and (s) as well as other applicable FMs/TMs and laser references.

b. Prepare and submit laser training plans for specific laser ranges or TAs where Class 3R or higher lasers will be used.

c. Conduct a face-to-face LRSO brief with Range Control prior to commencing laser operations.

d. Provide range safety briefs to laser range users prior to laser operations.

e. Know the azimuths, elevations, and lateral limits of each laser range, each firing position, and targets to be used.

f. Ensure protective eyewear is used when required. Be sure that unprotected personnel are not exposed to either direct beam or a reflected or scattered beam.

g. Maintain continuous communication with Range Control and any personnel in the target area. Notify Range Control when lasing operations commence and stop lasing immediately if communications are lost.

h. Ensure lasing ceases immediately if positive control of the laser beam is lost.

i. Approve each specific firing of each laser.

j. Ensure there are no specular reflectors that could be a hazard in the target area.

k. Ensure controls are in place (range guards/barriers with laser warning signs) to prohibit unauthorized personnel entry into the Laser SDZ (LSDZ).

l. Ensure the recording of all laser firings (time, location of laser and target, azimuth to target, type laser) in RFMSS and/or for unit records in accordance with reference (s). Unit laser firing logs will be maintained for five years. A Laser Firing Log can be found in Appendix N.

m. Comply with all Range Control LASER Procedures identified in this Order.

n. Comply with applicable duties of the OIC/RSO as listed in chapter 1.

6005. RANGE PROCEDURES FOR LASER OPERATIONS

1. All laser operations must be scheduled and approved in RFMSS.

2. The laser range boundary must be marked with signs (DANGER, Laser Range in Use, DO NOT ENTER) and access roads blocked by

signs/barricades or radio-equipped personnel to ensure that unprotected personnel do not enter the range area.

3. Prior to lasing, the target and range area must be visually inspected to ensure no unauthorized personnel and aircraft are in the hazard area.

4. Lasers will not be activated until the operator has positively identified the target.

5. Never designate aircraft, moving vehicles, or personnel.

6. Never designate specular reflectors such as glass, water, plastics, mirrors, unpainted metal, etc.

7. Only the specific designated run-in headings/flight profiles/laser range parameters will be utilized.

8. Laser operations shall cease in fog, rain, or other inclement weather conditions.

9. The beam must be terminated on government-owned or controlled property and within the LSDZ. Lasers will not be directed at or above the horizon.

10. Personnel movements in areas adjacent to the range area should be known by lasing safety personnel. The OIC of the movement or occupied position adjacent to or across from the lasing range shall be advised of the hazards.

11. When laser-equipped vehicles travel on range roads or public highways, or are not engaged in tactical/operations, the laser exit port must be covered. This includes all ground mounted and handheld systems. The LRSO must ensure lens caps are in place.

12. All lasers used aboard MCBQ must be in compliance with the Naval Laser Safety Review Board (LSRB) with an approval letter on file. Similar laser systems approval letters from other DoD services are also authorized on Marine Corps ranges. In addition, all Class 3B and 4 laser operations require a Range Laser Safety Specialist-certified laser range. The section of the latest MCBQ laser survey applicable to the range being utilized will be provided to each LRSO. This document provides the user with specific information such as lasing points, PDF, and right and left firing points for specific day and night target areas.

13. The underlying concept of laser safety is to prevent intrabeam viewing by unprotected personnel. This is done by locating target areas where no line-of-sight exists between the laser and uncontrolled, potentially-occupied areas, and by removing reflective surfaces from targets. The controls to prevent exposure to hazardous levels of laser radiation are:

a. Beam stops.

b. Controlled access.

c. Restricted airspace.

d. A buffer zone around the target area.

14. The following rules apply for all laser use in the MCBQ RTA:

a. The OIC/RSO/LRSO must be aware of all personnel movements in areas adjacent to the range area. The OIC of any moving personnel or occupied position adjacent to or across from the lasing range must be advised of the hazard. The RCF will pass a coordinating safety advisement as needed to all units.

b. Announcement of laser firing, audible to all training personnel, must be made prior to firing (Example: "Lasing, Lasing, Lasing" shouted aloud).

15. Force-on-Force Laser Operations. Force-on-force scenarios will be approved by Range Control. Instrumented Tactical Engagement Simulation System [I-TESS] is a Class 1 system. Due to the inherent risk of laser use during force-on-force operations, a deliberate RA will be used in all phases of the training or exercise. Specifically, the OIC/RSO/LRSO will:

a. Train safety/controller personnel before conducting force-on-force exercises with lasers.

b. Provide the IRSO with a detailed plan of the exercise including:

(1) A detailed list of all laser use during the exercise will be provided prior to approval in the RFMSS request.

(2) A list of weapons, ammunition, pyrotechnics, smoke and chemicals to be used.

(3) Unit control and communications measures.

(4) Terrain and facilities to be used.

(5) Number of personnel in the training exercise versus number of safety controllers and other personnel in support of the exercise.

16. For detailed information about laser use aboard MCBQ, contact the IRSO at (703)432-6552.

6006. USING UNIT RESPONSIBILITIES

1. Unit Commanders. The CO or designated representative of the lasing unit will:

a. Select, train, and certify safety personnel necessary to assist in complying with the provisions of reference (a) and other applicable laser regulations.

b. Provide adequate control of the target area to prohibit entry of unauthorized personnel.

c. Designate an LRSO for each lasing site; the LRSO can be the OIC/RSO of the firing unit, provided he is at the lasing site and is laser qualified/certified).

6007. LASER RANGES

1. Limitations

a. MCBQ will support lasing operations from fixed and rotor wing aircraft in accordance with current laser range certification.

b. The laser certifications for the RTA address only those class laser systems approved for training scenarios by the Laser Safety Review Board (LSRB). Any laser system used in nontraditional modes, R&D applications, and prototype systems will be handled separately and coordinated with the IRSO and RCO. The Command LSSO will do the specific certification on a case-by-case basis.

2. Ranges

a. Laser certifications may change should the character of the laser-certified ranges change. Units planning to use lasing

devices will confer with the IRSO as to the Base's current laser certifications.

b. All personnel on a laser range or participating in the laser event must all personal protective gear required by all orders and regulations governing the use of lasers.

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CHAPTER 7

TRAINING SUPPORT

7000. OVERVIEW. RMB provides training units with the physical space needed to conduct field training including training areas, training facilities, ranges (including fixed targetry), and airspace. Additional training enhancements such as automated targets, noise simulators, force-on-force training systems, and assistance with training design are available to supplement the existing RTA capabilities. These training enhancements are provided by Training Support Center National Capital Region/Marine Corps Base Quantico (TSCQ). TSCQ is a TECOM organization integrated with RMB which matches existing and emerging technologies with unit training requirements, develops system supported training solutions, and provides training enabler services to ensure realistic and relevant training environments for using units. TSCQ, though funded by TECOM, is available to provide support to all units and organizations that train aboard MCBQ.

7001. TRAINING SUPPORT SERVICES

1. TSCQ offers a range of training support services to ensure units maximize the value of their training time at MCBQ. TSCQ offers capability briefs and RTA tours for units initially considering training aboard MCBQ, assistance in developing training plans to meet unit objectives, help in designing specific training events to best utilize RTA capabilities, and aid in identifying and scheduling the use of training enhancements such as automated targets and noise simulators. TSCQ can also assist non-tenant units with logistical support and billeting needs by identifying resources and points of contact for coordination. TSCQ will assist units in navigating the processes and procedures required to ensure training is planned and coordinated efficiently and effectively.

2. It is highly encouraged that units training aboard MCBQ for the first time, and those with limited experience training aboard MCBQ, begin by contacting TSCQ to start the process of planning and executing training. TSCQ has the ability to submit RFMSS requests on behalf of units who work with them and coordinate directly with the Scheduling Office on behalf of those units to resolve any scheduling conflicts.

3. Units may contact TSCQ at (703) 432-7026/7974/7031/7969 and will be assigned a training support representative who can

provide assistance throughout all phases of planning and executing training.

7002. GROUND TRAINING SYSTEMS (GTS) SUPPORT

1. TSCQ, through the System Support Officer (SSO), provides ground training systems (GTS) and contracted GTS operators to enhance unit training experience and help units achieve desired training objectives. Available GTS include automated target systems along with target operators, various battle effects simulators, training mines and improvised explosive devices (IEDs), and force-on-force training systems with operators when required.

2. GTS equipment and contracted operators are requested through RFMSS. Each range, training area, and training facility in RFMSS has a corresponding Support Services facility and event where equipment and operators can be requested in conjunction with range requests. For instructions or assistance in scheduling GTS support, contact TSCQ.

3. Units that require GTS support that is not associated to a range, training area, or training facility (e.g., a practice IED for classroom instruction) may request training systems under the Support Warehouse Facility in RFMSS.

4. Requests for GTS support must be received 30 days prior to the date requested, the same deadline as for ranges. Under certain circumstances late requests will be considered; however, since units are locked out of RFMSS at 30 days, they must contact TSCQ directly to submit late requests. A late request for GTS support may not be approved even if the range or training facility is approved due to contractual limitations. GTS support requests must be approved in RFMSS NLT 1300 on the last government work day (typically Friday) prior to the week (Monday-Sunday) that the support is required; requests past that date cannot be supported.

5. The government contract for GTS support has a specified, limited number of hours allocated each year per range system. If a unit requests support that requires contractor hours, the support contractor must be actively engaged in providing support throughout the requested time block. Requesting support for longer than actually needed, or sending personnel away early, creates a wasteful expense to the government, and is not tolerated.

a. Any unit that requests GTS support and fails to occupy the range within one hour of the time requested will lose the support for the day. Units who anticipate a delay in training start time, and who contact Range Control or TSCQ prior to the scheduled GTS support start time, may be able to retain their support at the discretion of the System Support Officer. Acceptable delays are those which are unavoidable, such as vehicle breakdowns, equipment failures, inclement weather, and traffic delays. Authorized delays normally result in an extension to the requested support. These extensions are authorized but cannot exceed two hours.

b. Any unit that places itself in a check-fire or non-training status or fails to utilize scheduled support for more than two hours, shall forfeit all remaining scheduled GTS support hours. To avoid losing GTS support, units must specify all planned breaks in training and periods when GTS support is not required in the comments section of the GTS support RFMSS request.

c. Interruptions of training outside the unit's control such as inclement weather, fire conditions, MEDEVACs, or other training halts directed by Range Control are unfortunate occurrances; however, GTS support can only be extended up to two hours beyond the requested support end time even under these circumstances.

7003. FORCE-ON-FORCE SYSTEMS. The Instrumented Tactical Engagement Simulation System (ITESS) and Special Effects Small Arms Marking System (SESAMS) force-on-force training systems are available for use aboard MCBQ, and are available through the training support warehouse. The use of force-on-force systems requires additional planning and coordination for preparation, issue, and recovery of the systems.

1. ITESS

a. System Preparation. Use of ITESS requires the ITESS support contractors to be involved during development of the training unit scheme of maneuver. Training areas and training facilities utilized in the scheme of maneuver must be digitally modeled into the virtual landscape of the system, and in some cases instrumentation of training area or facility is required to enable proper tracking of activities. Depending on the complexity of the scheme of maneuver, and training areas used, additional time may be required for proper modeling and instrumentation.

b. Issue and Recovery. Specific dates and times must be scheduled for the issue and recovery of ITESS equipment through the Support Warehouse Facility in RFMSS; this is in addition to scheduling for the usage of the system.

(1) A roster of participating individuals must be provided prior to issue so equipment can be issued individually. Each trainee is by-name matched to his or her issued system to provide accurate force-on-force After Action Review (AAR) data.

(2) Issue of equipment and zero of weapons requires approximately two hours per 150 training personnel. On the issue date, the unit must bring all supported weapons systems. Small arms transmitters must be aligned to every weapon and must remain on the weapon for the zero to be maintained. Transmitters removed from the weapon in the field must be realigned or they will be ineffective.

(3) Equipment issue will include the initial battery load-out. Depending upon the length of the exercise, a resupply may be required and must also be scheduled.

(4) Prior to turn-in, all ITESS equipment must be cleaned by the unit, and will be inspected at turn-in by the GTS personnel.

2. SESAMS

a. Issue and recovery. A variety of SESAMS options and calibers are available and listed in the support tab in RFMSS. Personal Protective Equipment (PPE) is required when using SESAMS and is available for issue, but PPE requirements must be identified by quantity in the comments of the RFMSS request. SESAMS equipment is bulk issued at the support warehouse. Equipment turn-in requires a unit-provided working party for sanitizing and reassembling cleaned PPE. Specific pick-up and turn-in dates and times must be identified in the RFMSS request.

b. Cleaning and Sanitizing. Prior to turn-in, all SESAMS equipment must be cleaned by the unit, and will be inspected at turn-in by the GTSS personnel.

(1) Cleaning of SESAMS weapons components is not permitted on the premises of the support warehouse. The support warehouse also does not provide rifle or pistol cleaning gear. It is the unit's responsibility to have the appropriate cleaning

gear for the type of SESAMS used (e.g., 9mm bore brushes with rifle cleaning rods for 9mm SESAMS rifle upper receiver kits), and to turn weapons in fully cleaned.

(2) PPE cleaning must occur at the support warehouse to ensure proper health and sanitation standards. Sanitizing solution, sinks, and drying racks are available at the support warehouse for unit use. The unit must provide a working party to return to the support warehouse (3) days after cleaning to re-assemble the sanitized PPE once it is dry.

7004. Trackless Moving Infantry Target Systems (TMITS). TMITS are semi-autonomous robotic targets that move about the RTA to support unit schemes of maneuver and can be programmed to a variety of behaviors.

1. TMITS may be used in live fire and non-live fire training and may be engaged with .338 Lapua and below ammunition.

2. TMITS may be fired upon ONLY when they are within the confines of a designated Op-Box/Target Box defined in the applicable Range SOP.

3. Non-standard TMIT Op-Boxes/Target Boxes may be created to support specific unit training requirements where possible but must be requested by meeting with the IRSO no fewer than thirty days in advance to build appropriate SDZs and Range Certifications.

4. TMITS are schedule in RFMSS (just as all automated target requests), but due to their unique nature, Op-Box/Target Box, and SDZ requirements, units must have the following five fields/elements completed in the request before TMIT support will be approved:

a. A facility or range with an approved TMIT Op-Box/Target Box designated in the Range SOP.

b. The “Robotic Target” event code for that range.

c. A request for the corresponding facility’s “Support Services Robotics” facility.

d. The “Event Support (Robotic Targets)” event code in that Support Services Facility.

e. In the Support Tab of that Support Services Facility a request for "Target: TMIT (Robotic Tgt)" with the quantity required and a detailed timeline of the support needed.

7005. AMMUNITION PROHIBITION. Units must ensure that NO AMMUNITION is included with any equipment being returned to the support warehouse. Ammunition amnesty procedures is a unit-managed program and responsibility. Neither TSCQ nor the GTS support personnel may accept ammunition for turn-in and ammunition is prohibited in the support warehouse or any other TSCQ space.

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CHAPTER 8

ENVIRONMENTAL COMPLIANCE

8000. OVERVIEW

1. This chapter provides an overview of environmental issues, concerns, and procedures that must be considered when conducting training activities in the Quantico RTA. Reference (t) established the overall plan for managing natural resources across MCBQ to include the entirety of the RTA.

2. The RTA contains a wide variety of cultural and natural resources that must be protected to ensure the long-term viability of the RTA for future training and recreational use. Generally, military training and environmental protection are compatible activities, but training units must understand the policies outlined in this chapter to ensure compliance with environmental regulations.

3. Any unit requesting to conduct training that has a high probability of environmental impact (e.g., refueling operations, building deliberate defensive positions, etc.) must notify Range Control at least 60 days prior to the event in order to allow time for detailed coordination with the Natural Resources and Environmental Affairs (NREA) Branch, Facilities Division (GF), MCINCR-MCBQ.

8001. PROHIBITIONS

1. The following acts are strictly prohibited in any RTA aboard MCBQ:

a. Burying, dumping, burning, or otherwise disposing of trash, rubbish, or garbage of any type in the RTA. Units are responsible for removing all such items from the RTA for disposal. Dumpsters and trash receptacles located in the RTA are for use in support of specific range maintenance activities and are not for general use by training units.

b. Burying, dumping, or otherwise disposing of any type of ammunition, explosive material, pyrotechnic, chemical ammunition, or any type of hazardous waste in the RTA.

c. Draining, dumping, or spilling onto the ground or into the water of oil, fuel, or any other chemical from any vehicle, or other machinery, or from any container.

d. Deliberately introducing chemical agents into any body of water on or adjacent to MCBQ.

e. Collecting, removing, destroying, degrading, or defacing any artifacts from pre-historic or historic sites.

f. Killing wildlife except in protection of human life/limb.

g. Felling of trees or clearance of large areas of vegetation.

2. Violation of these provisions will result, at a minimum, in the revocation of OIC/RSO certifications. Additional actions may be taken as well, to include refusal to allow a unit to train aboard MCBQ, disciplinary action under the Uniform Code of Military Justice (UCMJ) and, potentially, fines and civil or criminal charges under federal/state law.

8002. CULTURAL RESOURCES

1. Cultural resources are those physical places or items that give evidence of previous human activity. Aboard MCBQ known cultural resources include cemeteries, historic structures, ruins, and both pre-historic and historic artifacts.

2. Collecting, removing, destroying, degrading, or defacing any cultural resources is prohibited aboard MCBQ.

3. If cultural resources are found in the course of training, or during other activities in the RTA, the unit will leave the site undisturbed and direct all personnel to avoid the site. The unit will notify Range Control if any cultural resource is accidentally disturbed.

8003. NATURAL RESOURCES

1. Natural resources are naturally occurring assets and materials that have intrinsic or extrinsic value. Natural resources include air, land, water, flora, and fauna.

2. Federal regulations require MCBQ to establish and follow an Integrated Natural Resources Management Plan (INRMP) to ensure the ecosystems on DoD lands are protected and enhanced while allowing the lands to continue to meet the needs of military operations. The Quantico INRMP, reference (t), is developed and executed by NREA.

3. Federal regulations also require that military land be made available for hunting, fishing, and other dispersed recreational activity when and where appropriately deconflicted from military training. The hunting and fishing program is managed by NREA in close coordination with RMB and as outlined in reference (f).

4. Training units and personnel will not actively destroy or remove natural resources from the RTA beyond the normal consequences of military training.

8004. PROTECTED SPECIES

1. A number of protected animal and plant species are known, have previously been known, or are suspected to be present aboard MCBQ. These protected species include plants such as the small whorled pogonia and harperella, a mollusk called the dwarf wedgemussel, and animals such as the American bald eagle, the Indiana bat, and the northern long-eared bat.

2. Some known habitats of protected species are marked with signs and/or surrounded by fencing or barbed wire. No personnel will enter these marked areas.

3. Other protected species habitats are either unmarked or not yet identified. Some protected species are only present during certain times of year. Training units are not expected to know how to identify the protected species located aboard MCBQ as identification requires significant training and experience. Training units will be notified if their scheduled training has potential to impact a protected species and RMB will coordinate between the unit and NREA to identify the best way to mitigate those impacts.

8005. WILDLIFE AND VEGETATION

1. Wildlife

a. Personnel training in the RTA will not purposely kill, maim, or harass wildlife unless required to protect the life/limb of training personnel. The unit must immediately notify RMB if any wildlife is killed or wounded.

b. Sick or aggressive wildlife should be reported to the Conservation Law Enforcement Office at (703) 432-6793/94/95 or NREA Branch at (703) 784-4030.

2. Vegetation

a. Felling trees, removal of major tree branches or large shrubs, and clearance of large areas of vegetation is prohibited. These actions destroy prime habitat and create opportunities for excessive soil erosion.

b. Minimal use of live vegetation for camouflage purposes is permitted. Man-made camouflage such as camouflage nets should be the primary materials used. Natural vegetation can be used to augment camouflage and should consist of grasses, brush, and trees that are two inches or less in diameter at breast height.

8006. AIR, LAND, AND WATER RESOURCES

1. Air Quality Management. Any training that includes the use of a generator, involves burning of any materials (other than munition increments or wood as part of an authorized warming fire), or could result in the release of any gases or fumes must be identified at least 60 days prior to the scheduled date in order to allow coordination with NREA.

2. Water Management

a. Deliberately introducing chemical agents into any body of water on or adjacent to MCBQ is prohibited.

b. Fording bodies of water will only occur at designated locations. Requests for fording at other locations must be requested at least 60 days prior to the scheduled date in order to allow coordination with NREA.

c. Vehicles and equipment will not be washed down in reservoirs, lakes, pond, rivers, or streams.

3. Soil Management

a. Personnel will not conduct off road/off trail vehicle travel without prior permission except as follows:

(1) In support of a medical evacuation or other emergency.

(2) When vehicles are employed on a range to conduct tactical training or to transport equipment and weapons required for training or range maintenance.

(3) When moving equipment and supplies into an LZ or other area designated to serve as a command post or bivouac site.

b. Vehicles will not deliberately drive in road culverts or other drainage areas.

c. Units convoying from trails onto paved roads, or crossing paved roads, will ensure all mud and dirt are cleaned from the hard surface road.

d. Excavation, digging, or grading is not permitted in the RTA without prior permission. Training that involves building a deliberate defense or engineering operations that involve earth movement must be requested at least 60 days prior to the planned training to allow time for coordination with NREA.

e. Creation of "hasty" fighting positions in support of small unit tactical training is allowed if requested in RFMSS. All fighting positions must be refilled immediately after use.

8007. WASTE MANAGEMENT

1. Human Waste. Human waste acts as a disease vector that can potentially impact other humans and various wildlife and vegetation. Units will plan for the sanitary disposal of all human waste.

a. The primary method for disposing of human waste is through the use of chemical toilets (port-a-johns). Port-a-johns are positioned on ranges and in high-use locations in the RTA and will be used by all personnel when available. Units planning to bivouac or operate in concentrated areas where port-a-johns are not located will coordinate with RMB and the AC/S, G-4, Logistics Division, to contract for the emplacement, servicing, and removal of port-a-johns in support of their event.

b. For units who are operating in the RTA where no port-a-johns are available and personnel are regularly on the move, personnel will dig and utilize "cat holes" to dispose of solid waste.

c. For units who are operating in the RTA where no port-a-johns are available and personnel are generally stationary or regularly return to a set location, the unit will establish a

"saddle trench" in accordance with FM 21-10/MCRP 3-40A.4. These "saddle trenches" must be at least 100 feet away from water sources and any sleeping or eating areas.

2. Munitions Waste. Munitions waste includes expended brass, explosives residue, used pyrotechnic device materials, and any other constituents from used munitions. Unfired munitions will not be treated as waste and will be handled per AA&E procedures.

a. Burying, dumping, or otherwise disposing of any type of ammunition, explosive material, pyrotechnic, chemical ammunition, or any type of munitions waste in the RTA is prohibited.

b. Munitions waste will be collected, consolidated, and properly disposed of per reference (u).

3. Medical Waste. Medical waste is waste generated as a result of providing medical treatment to personnel and can include both infectious and non-infectious waste.

a. Medical personnel, including corpsman or medic, providing treatment in the field will ensure all medical waste is collected and disposed of in accordance with appropriate orders.

b. Infectious medical waste will not be consolidated or disposed of with other types of solid waste.

4. Other Solid Waste. Other wastes such as trash, wet garbage, engineering materials, communications wire, etc. must be removed from the RTA upon completion of training. These materials present both a health hazard and an operational risk hazard to other training units.

a. Burying, dumping, burning, or otherwise disposing of trash, rubbish, or garbage of any type in the RTA is prohibited. All such items must be removed from the RTA for disposal by the unit. Dumpsters and trash receptacles located in the RTA are for use in support of specific range maintenance activities and are not for use by training units.

b. While operating in the RTA, trash must be retained by the individual generating it or it must be collected by the unit and stored in a covered container that is waterproof and durable enough to keep rodents and other pest out of the trash and

prevent the wind from spreading the trash into surrounding areas.

c. Wet garbage from field messes will be collected in covered containers and must be transported to the nearest mess hall for proper disposal.

d. Refuse, to include ammunition containers, communications wire, barbed/concertina wire, and ration packs, will be collected, consolidated, and disposed of properly.

8008. HAZARDOUS MATERIALS/HAZARDOUS WASTE

1. Draining, dumping or spilling oil, fuel, or any chemical onto the ground or into the water from any vehicle, equipment, or storage container is prohibited. Immediately upon discovery of a spill, the unit will notify Range Control and initiate spill response procedures.

2. Hazardous materials (HAZMAT) used in support of training in the RTA shall be stored in approved, closed, leak-proof containers and shall be employed in strict adherence to applicable HAZMAT regulations. HAZMAT not on the MCBQ Authorized Use List (AUL) must be specifically authorized by NREA prior to use.

3. Fuel farms are not permitted in the RTA without explicit prior approval. Any unit establishing a fuel farm must follow all applicable regulations for spill containment and must have a spill response plan in place. Fuel farms must be sited to prevent the possibility of spilled fuel entering any water supply.

4. Generators, light sets, and other fueled equipment set up in the RTA must have appropriate spill containment and spill response plans in place.

5. Spill containment areas must be inspected regularly during operations to detect possible leakage. During operations at night inspections must be conducted at least hourly. Any rainwater collected in spill containment areas must have hazardous contaminants removed prior to release.

6. Units who generate hazardous waste (HAZWASTE) during training in the RTA will ensure that they follow all applicable HAZWASTE disposal regulations and must establish an appropriate Line of Accounting with NREA for HAZWASTE disposal.

7. HAZWASTE accumulation and storage is not permitted in the RTA

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APPENDIX A

ACRONYMS AND DEFINITIONS

The abbreviations and definitions listed below are pertinent to this Order and are used throughout.

ACRONYMS

A&E.....Ammunition & Explosives
AAR.....After Action Review
ABC.....Amidon Ballistic Concrete
AGL.....Above Ground Level
ALSO.....Administrative Laser Systems Officer
AMIP/AMIA.....Aviation Munitions Impact Point/Area
ARSO.....Assistant Range Safety Officer
ASP.....Ammunition Supply Point
ATC.....Air Traffic Control
BAS.....Battalion Aid Station
BFA.....Blank Firing Adapters
CALRC.....Calvin A. Lloyd Range Complex
CAS.....Close Air Support
CFA.....Controlled Firing Area
CFR.....Code of Federal Regulations
CO.....Commanding Officer
COMDR.....Commander
DME.....Distance Measuring Equipment
DoD.....Department of Defense
DODIC.....Department Of Defense Identification Code
DZ.....Drop Zone
ELMR.....Enterprise Land Mobile Radio
EMS.....Emergency Medical Service
EMT.....Emergency Medical Technician
EOD.....Explosive Ordnance Disposal
FAA.....Federal Aviation Administration
FAC.....Forward Air Controller
FARP.....Forward Arming and Refueling Points
FBI.....Federal Bureau of Investigation
FDC.....Fire Direction Center
FDC.....Fire Danger Class
FD.....Fire Department
FLIP.....Flight Information Planning
FM.....Field Manual
FMFM.....Fleet Marine Force Manual
FP.....Firing Point
GDR.....Goettge Demolition Range
GCS.....Ground Control Station

GIS.....Geographic Information System
GP.....Gun Position
GTS.....Ground Training System
HAZMAT.....Hazardous Material
HERO.....Hazard of Electromagnetic Radiation to Ordnance
HFP.....Helicopter Firing Point
HRST.....Helicopter Rope Suspension Training
IC.....Incident Commander
IED.....Improvised Explosive Device
IFR.....Instrument Flight Rules
IP.....Initial Point
IRSO.....Installation Range Safety Officer
ITESS.....Instrumented Tactical Engagement Simulator System
JTAC.....Joint Terminal Attack Controller
LSDZ.....Laser Surface Danger Zone
LSRB.....Laser Safety Review Board
LZ.....Landing Zone
MAARSA.....Military Aircraft Assumes Responsibility For Separtaion Of Aircraft
MCAFQ.....Marine Corps Air Facility Quantico
MCBQ.....Marine Corps Base Quantico
MCESG.....Marine Corps Embassy Security Group
MCO.....Marine Corps Order
MCRP.....Marine Corps Reference Publication
MCWP.....Marine Corps Warfighting Publication
MEDEVAC.....Medical Evacuation
MIM.....Military Installation Map
MOA.....Memorandum of Agreement
MOA.....Military Operations Area
MOS.....Military Occupational Specialty
MOU.....Memorandum of Understanding
MOUT.....Military Operations in Urban Terrain
MPE .....Maximum Permissible Exposure
MPH.....Miles Per Hour
MSL.....Mean Sea Level
MTF.....Military Treatment Facility
NATOPS.....Naval Air Training and Operating Procedures Standardization
NBC.....Nuclear, Biological, Chemical
NCIS.....Naval Criminal Investigtive Service
NCO.....Non-Commissioned Officer
NEW.....Net Explosive Weight
NFA.....No Firing Area
NLT.....No Later Than
NOHD.....Nominal Ocular Hazard Distance
NOTAM.....Notice To Airmen
NREA.....National Resource and Environmental Activity

OCS.....Officer Candidate School
OD.....Optical Density
OIC.....Officer-In-Charge
OP.....Observation Point
OP.....Observation Point
PMO.....Provost Marshal Office
POI.....Program of Instruction
POV.....Privately-Owned Vehicle
PPE.....Personal Protective Equipment
PT.....Physical Training
RA .....Risk Assessment
RCA.....Riot Control Agent
RCF.....Range Control Facility
RCNI.....Request Control Number Identifier
RCO.....Range Control Officer
RFMSS.....Range Facility Management Support System
RMB.....Range Management Branch
ROCC.....Range Operations Control Center
RSA.....Reserve Support Activity
RSO.....Range Safety Officer
RTA.....Range and Training Area
RTAM.....Range and Training Area Management
SACON.....Shock Absorbing Concrete
SDZ.....Surface Danger Zone
SESAMS.....Special Effects Small Arms Marking System
SIMCAS.....Simulated Close Air Support
SOP.....Standard Operating Procedure
SOUM.....Safety of Use Memorandum
SSO.....System Support Officer
SUA.....Special Use Airspace
TBS.....The Basic School
TCCC.....Tactical Combat Casualty Care
TECOM.....Training and Education Command
TM.....Technical Manual
TOW.....Tube-launched Optically-tracked Wire-guided
TRACON.....Terminal Radar Approach Control
TSCQ.....Training Support Center National Capital Region/Quantico
TSR.....Training Support Request
UAS.....Unmanned Aerial System
UCMJ.....Uniformed Code of Military Justice
UHF.....Ultra High Frequency
UTC.....Urban Training Center
UTF.....Urban Training Facility
UXO.....Unexploded Ordnance
VFR.....Visual Flight Rules
VHF.....Very High Frequency
VOR.....VHF Omnidirectional Range

WBGT.....Wet Bulb Globe Temperature
WTBn.....Weapons Training Battalion

DEFINITIONS

Air Sentry: An individual designated by the Officer-In-Charge (OIC) of Firing to maintain surveillance of an assigned sector of airspace to warn of the approach of aircraft.

Bivouac Area: An area assigned for administrative and logistical functions, such as troop billeting. Field training and live-firing are not conducted within bivouac areas.

Bivouac Operations: Those operations involving troop administrative and logistical functions; troop field billeting.

Cantonment Area: An area assigned for administrative and logistical functions, such as housing, troop billeting, offices, storage, and maintenance areas. Normally, field training and live-firing are not conducted within cantonment areas.

Controlled Firing Area (CFA): Airspace established to conduct activities that would be hazardous to nonparticipating aircraft if not conducted in a controlled environment. It is the range user's responsibility to provide for the safety of persons and property on the surface and to cease firing when aircraft transit the CFA.

Deviation: A departure from the requirements and/or procedures of this Order.

Drop Zone (DZ): A tactical landing zone in which personnel or cargo paradrops are authorized.

Dud: Ammunition of any caliber or weight that has been fired, placed, dropped, thrown, or launched but which fails to function as designed.

Explosive Ordnance Disposal (EOD): The detection, identification, field evaluation, render-safe, recovery, and final disposal of unexploded explosive ordnance (UXO). It may also include the rendering-safe and/or disposal of UXO, which has become hazardous by damage or deterioration, when the disposal of such UXO requires techniques, procedures, or equipment, which exceeds the normal requirements for routine disposal. Also refers to the name of the organization which performs these functions.

Fire and Maneuver Range: Range on which troop movement and live-firing may be conducted simultaneously.

Fire Danger Classification (FDC): Forestry Service rating based on weather conditions and fire burning indices describing the potential for ignition, rate of spread, and suppression probability with regard to fires.

Firing Lane: The area within which a weapon system is fired. It consists of a start firing line, cease-firing disarm line, and left and right limits of fire.

Firing Line or Point: The location from which a weapon is fired at a target or into an impact area.

Formal School: A school, or a course within a school, which produces, as a result of its Program of Instruction (POI), a Marine qualified in a Military Occupational Specialty (MOS).

Hang Fire: An undesired delay in the functioning of a firing system. A hang fire for a rocket occurs if the rocket propellant is ignited by the firing impulse, but the rocket fails to exit the launcher within the expected time frame.

Impact Area: Impact areas are areas within an operational range used to contain fired or launched military munitions. Impact areas may be delineated by operational range use. For example, the delineation of an indirect-fire weapon system impact area accounts for probable error in military munitions range and deflection. The delineation of a direct-fire weapon system impact area accounts for the total surface danger zone from the firing point downrange to the impact point and includes the ricochet area. Impact areas may be further delineated by other operational range uses. These include:

Impact Area, dudded: An impact area with permanently-delineated boundaries normally used to contain non-sensitive, high-explosive, military munitions.

Impact Area, high-hazard: A permanently-designated impact area used to contain sensitive, high-explosive military munitions. A high-hazard impact area is normally delineated within a dedicated impact area where access is restricted due to UXO explosive safety hazards.

Impact area, non-dudded: An impact area with designated boundaries used to contain non-explosive military munitions.

These areas are primarily composed of small arms range safety fans and are available for maneuver when not used for military munitions training.

Impact area, temporarily-dudded: An impact area primarily used to contain non-explosive military munitions that may be temporarily used to contain non-sensitive, high-explosive, military munitions. A temporarily-dudded impact area must be capable of being cleared for maneuver.

Instrument Flight Rules (IFR): Set of regulations under which aircraft operate when weather conditions allow safe flight but the pilot cannot see well enough to operate under VFR. Generally requires the pilot to fly based on instrument readings.

Instrumented Tactical Engagement Simulator System (ITESS): A fully integrated ground combat training system based on the latest laser-based wireless instrumentation products. ITESS provides laser-based force-on-force training with Position Location Information (PLI) reporting, battle tracking, data collection, and rapid After Action Reviews (AARs) for live training events.

Laser: A device capable of producing a narrow beam of intense light (LASER-light amplification by stimulated emission of radiation).

Landing Zone (LZ): A pre-designated, numbered, or named helicopter landing zone, which provides major commands ready access to air transportation and medical evacuation points.

Malfunction: Failure of munition to function in accordance with design, intent, or expected performance.

Military Operations Area (MOA): An airspace assignment established to separate or segregate certain military aircraft activities from IFR air traffic and to identify for VFR air traffic where these military activities are occurring.

Misfire: A failure of a primer, initiation charge or propelling charge to function; a demolition charge fails to function; or a small arms primer fails.

Net Explosive Weight (NEW): The actual weight of explosive mixture of compound in pounds, including the TNT equivalent of other energetic material, which is used in the determination of

explosive limits and explosives safety quantity distance (ESQD) arcs.

No Fire Area (NFA): A designated area into which neither live-fire nor effects of live-fire will occur. NFAs are designated by a six-digit grid with a radius in meters.

Non-Lethal (Or, less than lethal): Pertains to training conducted with munitions not intended to be lethal.

No Show: A scheduled range event where the range usage was not cancelled but the range went unused.

Notice To Airmen (NOTAM): A message to aircraft pilots in a specific area warning of airspace restrictions, equipment outages, or other factors which may affect flight activities.

Observation Point (OP): A point from which impacting ordnance may be observed.

Officer-In-Charge (OIC): An individual designated by the Commanding Officer of the training unit who assumes responsibility for all aspects of training to include, but not limited to, live-fire, paradrops, or air exercises.

Paradrop: The controlled aerial delivery of personnel or equipment by parachute.

Pyrotechnics: Smoke or signals, either flares or grenades. White phosphorous is not considered a pyrotechnic.

Range: A training facility designated for non-live-fire or live-fire weapons training, practice firing of weapons, demolitions, flame weapons, or fire and maneuver exercises.

Range Guard: An individual designated to maintain surveillance over an assigned locale to prohibit unauthorized entry into a surface danger area, and to give the alarm in the event that entry is detected.

Range Safety Officer (RSO): An individual designated by the Commanding Officer of the training unit who provides oversight on the safety of all aspects of a training event.

Restricted Area: Airspace designated under Federal Aviation Regulations, Part 73, within which the flight of non-

participating aircraft, while not wholly prohibited, is subject to restriction.

Special Use Airspace (SUA): Airspace in which aviation activities must be confined because of their nature and where limitations may be imposed on aircraft operations that are not a part of those activities. Types of SUA include Restricted Areas, CFAs, MOAs, and Warning Areas.

Surface Danger Zone (SDZ): The ground and airspace designated within the training complex (to include associated safety areas) for vertical and lateral containment of projectiles, fragments, debris, and components resulting from the firing, launching, or detonation of weapons systems, to include explosives and demolitions.

Training Area: All MCBQ property outside of cantonment area boundaries used for training; the area is administratively sub-divided into numbered training areas for scheduling purposes. Some training areas contain live-fire ranges or impact areas while others are designated solely for non-live fire training.

Visual Flight Rules (VFR): Set of regulations under which aircraft operate when weather conditions allow the pilot to see where the aircraft is going.

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APPENDIX B

RANGE DESCRIPTIONS

RANGE 3A:
Individual small arms range
Ammunition - Up to 7.62mm Special Ball
- Handheld grenade launchers
Max range - 445m
Impact area - TA-7B (High hazard)
Targets - steel hulks, steel replica, and infantry

RANGE 3B:
Hand grenade range
Ammunition - Fragmentation grenades
Max range - 50m
Three bays with six concrete throwing pits each
Practice throwing pits
Impact area - Dudded (No forward movement)
Targets - E silhouettes

RANGE 5:
Small arms static/fire and movement range for squad-sized units
Ammunition - Up to 7.62mm Special Ball
-Hand-held grenade launchers (Practice and illum only)
Max range - 400m
Impact area - Non-dudded
Targets - Automatic, battery-operated static/mover infantry

RANGE 6:
Small arms multipurpose range
Ammunition - Up to 5.56mm
Max range - 75m
Impact area - Non-dudded
Targets - Static (Provided by training unit or TSCQ)

RANGE 7:
Direct and indirect live-fire range
Class 3B and Class 4 lasers
Ammunition - Up to 30mm cannon
- All rockets
- All mortars
- All grenade launchers
- 155mm artillery
- Up to 500lb bombs
Max range - 1800m
Impact area - TA-9A (High hazard)
Targets – Steel replica, Infantry

RANGE 8:
Small arms, machine gun and mortar range
Class 3B and Class 4 lasers
Ammunition - Up to 50 cal MK211
- All rockets
- All mortars
- All grenade launchers
Max range - 700m
Impact area - TA-9A (High hazard)
Targets - Steel hulk, infantry

RANGE 8A:
Small arms, rocket and hand grenade range
Ammunition - Up to 7.62mm link
- All rockets
- Fragmentation hand grenades
Max range - 343m
Impact area - TA-9A (High hazard)
Targets - Steel hulk, steel replica, and infantry

RANGE 9:
Direct and Indirect Multipurpose Range
Ammunition – Up to .50 Cal MK211
- All rockets
- All mortars
- All grenade launchers
- 155mm artillery OP
Max Range – 1800m
Impact Area – TA-9A (High hazard)
Targets – Steel Vehicle Hulk, Steel Infantry

RANGE 10:
Direct Fire Small Arms Multipurpose Range
Ammunition – Up to .300 Win Mag
- Fragmentation Grenades (in house)
Max Range – 400mm
Impact Area – Non-dudded
Targets – Stationary Infantry, Robotics

RANGE 10A:
Direct Fire Small Arms Multipurpose Range
Ammunition – Up to .300 Win Mag
Max Range – 200mm
Impact Area – Non-dudded
Targets – Stationary Infantry, Robotics

RANGE 11:
Small arms static and fire and maneuver/sniper range
Ammunition - up to .300 WinMag
Max range - 950m (from tower)
Impact area - Non-dudded
Targets - Automatic infantry

RANGE 12:
Small arms multipurpose range
Ammunition - up to 7.62mm Special Ball
Max range - 100m
Impact area - Non-dudded
Targets - Static (Provided by training unit or TSCQ)

RANGE 14:
Small arms multipurpose/machine gun/fire and movement range
Ammunition - Up to 7.62mm link
Max range - 600m
Impact area - Non-dudded
Targets - Automatic infantry

RANGE 14C:
Small arms multipurpose/BZO range
Ammunition - Up to 7.62mm Special Ball
Max range - 300m
Impact area - Non-dudded
Targets - Automatic infantry

RANGE 14D:
Small arms/multipurpose range
Ammunition - Up to 7.62mm Special Ball
Max range – 275m
Impact area - Non-dudded
Targets - Static (Provided by training unit or TSCQ)

RANGE 14F:
Small arms/multipurpose range
Ammunition - Up to 7.62mm Special Ball
Max range - 450m
Impact area - Non-dudded
Targets - Static (Provided by training unit or TSCQ)

RANGE 14G:
Small arms/multipurpose range
Ammunition - Up to 7.62mm Special Ball
Max range - 100m
Impact area - Non-dudded
Targets - Static (Provided by training unit or TSCQ)

RANGE 15:
Multipurpose range used for Rifle Company or platoon defensive firing.
Alternate Uses - Class 3B and Class 4 lasers
Ammunition – Up to .50 cal., 40mm, mortars, and rockets
Max range – 750m
Impact area - TA-9A (High hazard)
Targets – Steel replica, Hulks, connex boxes and steel infantry

RANGE 15A:
Small arms multipurpose range
Ammunition - Small arms multipurpose/machine gun up to 7.62mm
Max range – 300m
Impact area – Non-dudded
Targets - Static (Provided by training unit or TSCQ)

MORTAR POSITIONS: MP9A, MP9B, MP9C, MP9D
Ammunition - Up to 120mm Mortar
Max Range - 1800m
Impact Area – TA-9A (Range 15 high hazard)
Targets - Steel vehicle replica, connex box, and steel infantry

GUN POSITION 4:
Artillery gun position
Ammunition - up to 155mm howitzer
Max range – 5500m
Impact area – TA-9A (Range 7 high hazard)
Targets – Steel vehicle replica and steel infantry

GUN POSITION 45:
155mm Indirect Fire Gun Position
Ammunition – 155mm Artillery
Max range – 7000m
Impact area – TA-9A (Range 15 high hazard)
Targets – Steel vehicle replica, Connex Box

GUN POSITION TOKYO:
155mm Indirect Fire Gun Position
Ammunition – 155mm Artillery
Max range – 5240m
Impact area – TA-9A (Range 15 high hazard)
Targets – Steel vehicle replica, Connex Box

CHARLIE DEMOLITION RANGE:
Demolitions Range
Charge NEW – 50 lbs. (fragmentation and non-fragmentation)

GOETTGE DEMOLITION RANGE:
Assault Breacher (Range with Classroom)
Charge NEW – 10 lbs. (non-fragmentation)
Structures - Classroom
-SACON breacher house with window facade
-Roof breaching facade
-Door breaching facade
-Breachable wall compound with five interior buildings
-Two small Breachable houses

MURPHY DEMOLITION RANGE:
Demolitions Range
Charge NEW – 58 lbs. (non-fragmentation)
-15 lbs. (fragmentation)
-Bangalore Torpedo
-Claymore Mine
-APOBS

MOUT FACILITY:
17 brick and concrete structures used for urban training to include a lighted classroom, a tunnel network, and outfitted with Middle-Eastern atmospherics. Non-live fire. Blanks and simulated munitions only.

MOUT DEFENSIVE BUILDING:
Two-story brick and concrete building used for urban defensive techniques and live fire.
Ammunition – Up to .300 WinMag
Max range – 500m
Impact area – Non-dudded
Targets – static/robotics

COMBAT TOWN (CBT):
13 brick and concrete structures used for urban training outfitted with Middle-Eastern atmospherics. Non-live fire. Blanks and simulated munitions only.

RAID FACILITY (RAID FAC):
Used for conducting raid training or for limited MOUT training. Includes a radar site complex consisting on one main administrative building and two large radar dishes. Non-live fire. Blanks and simulated munitions only.

URBAN TRAINING CENTER (UTC) ZONE A:
64 container structures used for MOUT training. Non-live fire. Blanks and simulated munitions only.

URBAN TRAINING CENTER (UTC) ZONE B:
40 container structures used for MOUT training. Non-live fire. Blanks and simulated munitions only.

URBAN TRAINING CENTER (UTC) ZONE C:
60 container structures used for MOUT training. Non-live fire. Blanks and simulated munitions only.

URBAN TRAINING CENTER (UTC) ZONE D:
Nine container structures used for MOUT training. Non-live fire. Non-kinetic. **No Blanks or simulated munitions.**

URBAN TRAINING CENTER (UTC) ZONE E / FORWARD OPERATING BASE (FOB):
Used to train personnel in FOB procedures and as a FOB facility for operations throughout the RTA. Includes an Entry Control Point (ECP), guard towers, lights, and protective walls. Non-live fire. Blanks and simulated munitions only.

WTBN RANGE 1:
Small arms multipurpose range
Ammunition - Up to 7.62 special Ball/7.62mm X 54R Foreign Weapons
Max range – 300 yds
Impact area - Non-dudded
Targets - Static (Provided by training unit or TSCQ)

WTBN RANGE 2:
Known Distance Rifle Qualification Range
Ammunition - Up to 7.62 special Ball/7.62mm X 54R Foreign Weapons
Max range – 600 yds
Impact area - Non-dudded
Targets - Manually-operated 6’ X 6’ qualification targets

WTBN RANGE 3:
Known Distance Rifle Qualification
Ammunition - Up to .338 LaPua Magnum
Max range – 600 yds
Impact area - Non-dudded
Targets - Manually-operated 6’ X 6’ qualification targets

WTBN RANGE 4:
Known Distance Rifle Qualification/Rifle Team/Sniper Range
Ammunition - Up to .338 LaPua Magnum
Max range – 1000 yds
Impact area - Non-dudded
Targets - Manually-operated 6’ X 6’ qualification targets
- Static (Provided by training unit or TSCQ)

WTBN SMALL ARMS TACTICAL RANGE (SAT):
Multipurpose/Combat Shooting Small Arms Ranges
Ammunition - Up to 7.62mm
Max range – 50 yds
Impact area - Non-dudded
Targets - Static (Provided by training unit or TSCQ)
- Pneumatic target system

WTBN IRONMAN RANGE:
Unknown Distance Multipurpose Small Arms Range
Ammunition - Up to 7.62 special Ball/7.62mm X 54R Foreign Weapons
Max range – 400 yds
Impact area - Non-dudded
Targets – Six lanes for placement of non-automatic static targets or robotics and six lanes for automatic static and moving targets

WTBN COMPETITION PISTOL:
Known Distance Competition Pistol Range
Ammunition - .22, 9mm, and .45 cal
Max range – 50 yds
Impact area - Non-dudded
Targets - 50 pneumatic turning target system (user-provided)

WTBN REQUALIFICATION PISTOL:
Known Distance Pistol Requalification (Walk-down)
Ammunition - .22, 9mm, and .45 cal
Max range – 50 yds
Impact area - Non-dudded
Targets - 50 pneumatic turning target system (user-provided)

WTBN SHOTGUN RANGE
Skeet and trap shooting
10, 12, 20 and .410 gauge birdshot
Targets - clay pigeons (provided by training unit)

WTBN WEAPONS TESTING FACILITY
Rifle and Pistol Testing and Evaluation
Ammunition - Up to .50 cal
Max range – 300 yds
Impact area - Bullet Trap
Targets - Paper/Cardboard

CLASS 3B AND CLASS 4 LASER RANGES

Range 7
Range 8

Range 8A
Range 9
Range 11
Range 14
WTBn Range 4
MCB-6

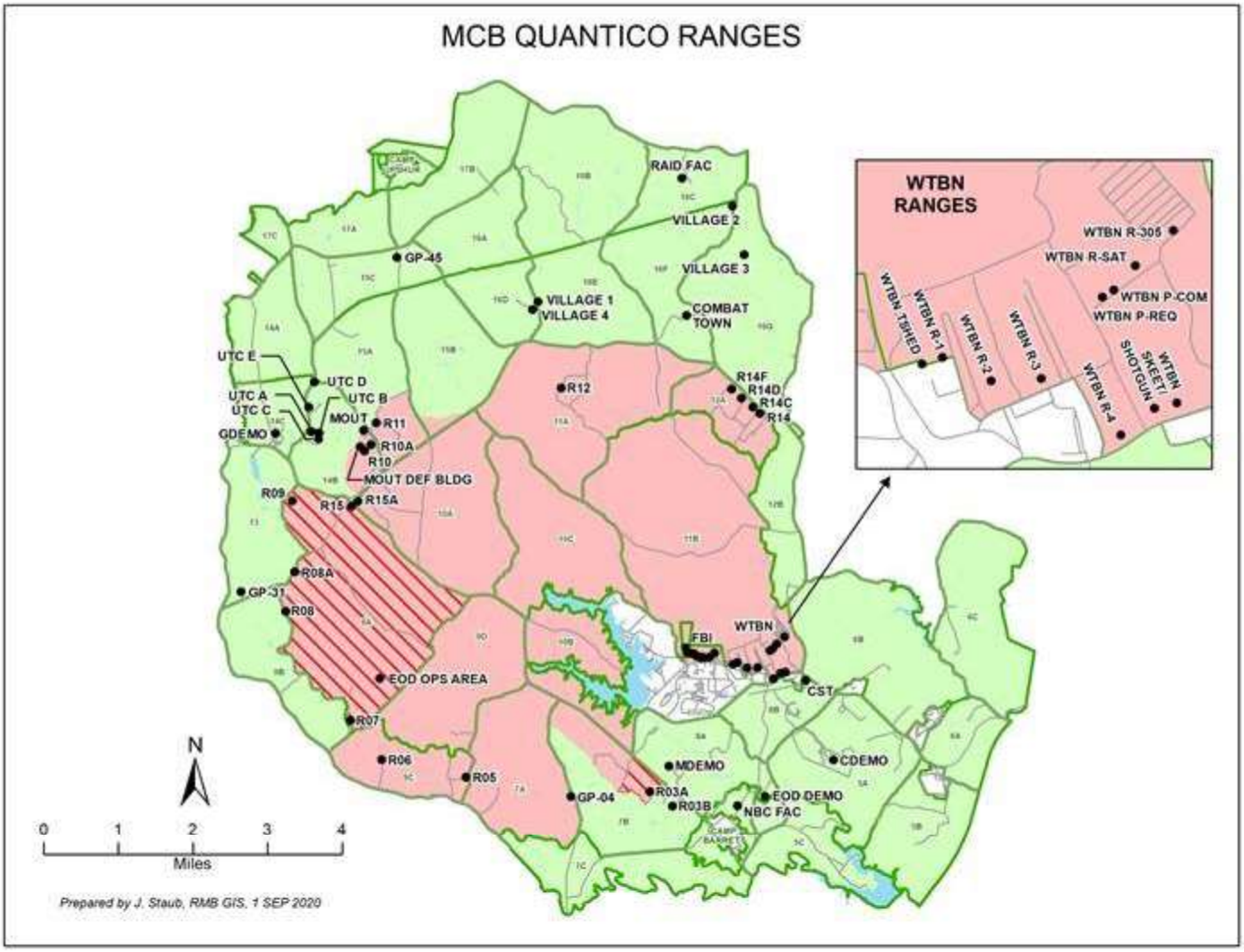

Figure B-1

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APPENDIX C

OIC/RSO CERTIFICATION AND RESPONSIBILITIES

1. Using Unit Commander. The Commander of a designated unit or the individual in charge of the agency or department using MCBQ RTA is responsible for:

a. The condition of the RTA to which assigned and the safe, proper conduct of the unit's personnel and equipment.

b. Ensures compliance with this order, MCO 3570.1C, applicable technical manuals (TMs), field manuals (FMs), doctrinal publications, installation range guidance, and applicable SOPs for safe training and firing for each weapon system within the command.

c. Ensures all personnel within the command are briefed on and comply with installation range procedures and safety requirements including required personal protective equipment.

d. Ensures that all OIC/RSO are properly trained and qualified in accordance with all regulations and orders governing range safety.

e. Designates the OIC/RSO in writing.

f. Designates an OIC and RSO for each firing event and/or maneuver in accordance with Table 1 in Appendix D.

(1) Ensure Range OICs will not participate in training events for which they are responsible, nor will they serve in any other capacity during those events.

(2) Ensures the RSO will have no additional duties during the firing exercise.

g. Ensures personnel performing duties of OIC and RSO are certified in accordance with the established Marine Corps and Installation range safety certification program in paragraph 2 of this appendix.

h. Complies with range safety certification program requirements in MCO 3570.1C for OICs and RSOs to ensure they are:

(1) Competent and properly instructed in the performance of their duties.

(2) Knowledgeable or qualified in the weapon systems for which they are held responsible and in safe ammunition handling and use procedures.

(3) Develops unit SOPs for laser operations, to include provision for immediate medical attention for personnel who incur eye or other overexposure to laser energy and reporting laser overexposure incidents in accordance with references (a), (g), and (i).

(4) Applies risk management and develops controls and procedures for all phases of training events.

2. OIC and RSO Certification Process

a. Marine Corps Requirement. OICs and RSOs must complete the Range Safety Course Basic Distance Learning Course (Range Safety) on MarineNet prior to completion of the Quantico installation OIC/RSO training.

(1) The course can be found by logging into MarineNet at https://www.marinenet.usmc.mil/MarineNet/Home.aspx then enrolling in the Range Safety course (RTAMRSOCAA).

(a) For DoD members who require access to MarineNet, you can request an account on the website listed above and with a DoD-issued CAC, your account should activate immediately.

(b) For non-DoD members who require access to MarineNet, you can request an account on the website above but must provide the name and contact information for a "Sponsor." The Sponsor must approve the request before the account can be activated. Contact the Range Safety Specialist for Sponsorship information.

(2) Upon completion of the Range Safety Course on MarineNet, personnel must complete the proctored exam.

(a) Marine Corps units will likely have a proctor within their command. Proctor and Unit Training Representative (UTR) accounts and training are available on the MarineNet site.

(b) Non-Marine Corps and non-DoD units can also request proctor and UTR accounts through MarineNet.

(c) In the event a unit, agency, or individual does not have access to a proctor, they can utilize the MCB Quantico Learning Resource Center (LRC) located in Bldg 2006 (room 332), Hawkins Ave, Quantico, VA, 22134 (703) 784-4288. The LRC is open Mon-Fri 0800-1600. Proctoring cuts off at 1400 to allow time to complete testing prior to close.

(d) Should there be any issues or concerns with the Range Safety course, obtaining a MarineNet account, or obtaining a MarineNet proctor account, contact the College of Distance Education and Training (CDET) help desk at (888) 435-8762 (option 2).

(3) Upon successful completion of the proctored exam for the Range Safety course, all personnel need to provide a copy of their certificate to the Scheduling Office. The certificate can be dropped off in person or emailed to the Scheduling Office organizational mailbox (OMB) at: MCBQ_RNG_SCH@usmc.mil.

Note: This certification is valid for three years from the date of completion unless otherwise revoked.

b. Installation Requirement. Upon successful completion of the Marine Corps requirement, OICs and RSOs must complete the MCB Quantico Installation OIC/RSO brief (MCBQ Brief).

(1) Marine Corps personnel and all other DoD CAC holders: The MCBQ Brief can be completed using the distance learning platform hosted on MilSuite at: https://www.milsuite.mil/university/mcbq-oic-rso/

(a) An account is automatically created using the certificates present on the CAC during initial login.

(b) Once completed, email the completion certificate to the Scheduling Office OMB at MCBQ_RNG_SCH@usmc.mil.

(c) Include in the email your rank, name, unit name and preferred POC email address and cell phone number to complete the required fields in RFMSS.

(d) Email any additional documentation such as Laser Range Safety Officer (LRSO) certificates and a copy of the appointment letter signed by the Unit Commander to the Scheduling Office OMB listed above. A template for this letter can be found in Appendix E.

(2) Non-DoD personnel: The MCBQ Brief is held in person and via teleconference on the last Friday of each month at 0900.

(a) Briefs are held in the Scheduling Office Conference room of bldg. 24144. Seating is limited to 10 personnel on a first-come-first-served basis.

(b) Personnel can call into the brief using the dedicated conference line by dialing from a DSN phone line: 94-434-7357 or from a commercial phone line: 301-909-7357 and entering code: 87622623

(3) Required items for in-person/teleconference briefs.

(a) Copy of the Range Safety course certificate.

(b) Copy of the brief. A copy can be viewed, downloaded to a personal device or printed out from the RMB website under the "OIC/RSO QUALIFICATION" tab at: https://www.quantico.marines.mil/Offices-Staff/G-3-Operations/Range-Management-Branch/

(c) Copy of the appointment letter signed by the Unit Commander. A template for this letter can be found in Appendix E.

(d) Any additional documentation, such as Laser Range Safety Officer (LRSO) certificate.

(4) OICs and RSOs will be issued a laminated OIC/RSO card upon request that indicates they have successfully completed the process and are now qualified to serve as OIC and RSO in the MCB Quantico Range and Training Area (RTA).

(a) The card provides validation of completion in the event RFMSS is unavailable and the OIC and RSO cannot be verified electronically.

(b) The reverse side of the card contains the phone numbers to Range Control so the OIC and RSO can maintain communication with Range Control and can also alert Range Control in the event the unit may be late to help avoid cancellation. See chapter 5 for details.

3. OIC

a. Qualifications

(1) Commissioned officer, warrant officer, SNCO/NCO, or civilian equivalent. NCOs serving as OIC will be in the grade as shown in Table 1-1 of MCO 3570.1_ at a minimum.

(2) OICs will be knowledgeable in the weapon systems for which they are responsible. For weapon systems equipped or dependent on lasers, the OIC will be knowledgeable of laser hazards and proper employment. The OIC holds responsibility and accountability for the conduct of the activity and the adherence to governing regulations and guidance. He/she must be able to fully influence the conduct of the event.

(3) Proof of satisfactory completion of installation range safety certification program.

b. Duties

(1) Assume responsibility for the RTA prior to occupying by signing for the scheduled RTA at RMB (WTBn S-3 for WTBN ranges) no earlier than 24 hours prior to occupying the scheduled RTA. For any RTA scheduled on a weekend, the RTA must be signed prior to close of business on Friday.

(2) Be responsible for the check-in/checkout process for all RTAs.

(3) Ensures the overall safe conduct of training and the proper use of the training complex.

(4) Receives range safety briefing from the installation range control organization on use of the RTAs.

(5) Ensures the RSO is physically present and executing the duties of the RSO during the conduct of the training exercise.

(6) Sign for all ammunition and explosives on the appropriate ASP issue document and enter the quantity received by DODIC, document number, and lot number on the expenditure report, ensuring the quantity matches the appropriate document.

(7) Responsible for ammunition accountability. The OIC is responsible for personnel shakedown and police call.

(a) The OIC shall inventory and sign for ammunition and explosives on the NAVMC 11381 Expenditure Report.

(b) The OIC ensures all ammunition malfunctions and accidents are reported to Range Control, in accordance with reference (h).

(8) Ensures the RSO has receipt of final clearance to fire from Range Control.

(9) Ensures dual means of communications are established and maintained with the RCF allowing instant communication between the actual OIC/RSO and the RCF.

(a) WTBn ranges will maintain continuous direct communication with the RCF. Radios are provided by WTBn S-3.

(b) WTBn ranges will maintain direct communication with WTBn S-3. WTBn S-3 will maintain continuous direct communication with the RCF. The direct communication with WTBn S-3 satisfies the dual communication requirement with the RCF.

(10) Ensures ammunition and explosives are properly handled, transported, stored, and accounted for within the training complex from the time of receipt to the time of expenditure or turn in.

(11) Reports the number and type of munitions expended by DODIC to Range Control upon conclusion of training event.

(12) Ensures confirmation briefs for firing and/or maneuver exercises are coordinated with Range Control.

(13) Ensures coordination and approval has been granted from the Scheduling Office for civilian personnel entering the training site.

(14) Briefs the RSO on the duties to be performed in support of the training event. Requires the RSO to brief the OIC on the safety of the facility and unit, and the preparedness to commence live-fire operations.

(15) In accordance with reference (d), implements ORM for all phases of the training event. The OIC shall have in their possession, at all times during the conduct of training, a detailed ORM worksheet signed by the unit Commander covering all phases of training. An ORM worksheet can be found in Appendix F.

(16) Is physically present and capable of influencing the conduct of training (live-fire or non-live-fire) during the entire event.

(a) The OIC of WTBn ranges will be physically present on the WTBn range complex during all live-fire training.

1. The range complex consists of the Weapons Training Battalion area, to include Ranges 1-4, Requalification and Competition Pistol Ranges, the Small Arms Tactical (SAT) Range, the shotgun range, and the Ironman Range.

2. The OIC must be physically present on the range during live fire with foreign weapons and live fire on Range 1.

(17) Ensures all personnel wear the appropriate Personal Protective Equipment (PPE), which at a minimum includes eye protection and hearing protection during all live-fire events. All military and civilian personnel conducting live-fire training will wear the appropriate PPE equivalent for their services or agency.

(18) Ensures the RSO is qualified with the weapon(s) or weapon system(s) being used.

(19) Reports all information to Range Control from the Live-Fire Brief provided in the Range SOPs and all other information directed by Range Control.

(20) In the event of a MEDEVAC/casualty evacuation, the OIC or an appointed representative will suspend fire and follow procedures as outlined in paragraph 1008 of this Order.

(21) Ensures the environmental requirements in chapter 8 of this Order have been met.

(22) Additional OIC responsibilities prior to, during, and after firing can be found in Appendix D.

12. RSO

a. Qualifications

(1) The RSO must be a commissioned officer, warrant officer, staff noncommissioned officer, or civilian. Civilian contractors may act as RSOs when approved by the installation

Commander/senior Commander. Grade requirements will be in accordance with Appendix D. Personnel assigned as RSO will have no other duties during that period of training. Assistant Range Safety Officers (ARSOs) may be appointed as RSOs as required.

(2) Must have successfully completed the MarineNet Range Safety Course (Basic) – distance learning (course RTAMRSOCAA). Must be qualified on the weapon systems for which they are responsible. For weapon systems equipped with or dependent upon lasers, the RSO will be certified on the laser system and proper employment. The RSO bears responsibility and accountability for the safety of the activity and the adherence to governing regulations and guidance. As such, the RSO must be able to fully observe the conduct of the event.

(3) Must have satisfactorily completed the MCBQ Range Safety Certification Program.

b. Duties

(1) The RSO is responsible for the enforcement of applicable safety regulations contained in this Order, reference (a), and all applicable Marine Corps Warfighting Publications (MCWPs), Marine Corps Reference Publications (MCRPs), FMs, Fleet Marine Force Manuals (FMFMs), TMs, and ordnance publications.

(2) Receives range safety briefing from the installation range control organization on use of the RTAs.

(3) Ensures the range flag is raised before commencing live-fire and lowered after informing Range Control of the intent to cease live-fire. During times of darkness or low lighting, a red flashing light shall be utilized in place of the flag.

(4) Determines when it is safe to fire in accordance with applicable regulations and this Order.

(5) Ensures proper supervision of personnel performing misfire, hang-fire, and cook-off procedures.

(6) Ensures control of target areas to prohibit entry by unauthorized personnel.

(7) Ensures that a Field Medical Service Technician, Navy Enlisted Classification (NEC) L03A or NEC 0000 Corpsman, Army/Air Force medic, or other qualified medical support

personnel and dedicated emergency vehicle with driver are present on the range.

(8) Fully familiar with MEDEVAC/CASEVAC procedures contained in paragraph 1008. In the event of an emergency situation/accident, the RSO will notify Range Control.

(9) The RSO ensures the following before granting clearance to fire:

(a) Proper coordination, instruction, and positioning of road guards assigned throughout the RTAs. At a minimum, road guards shall be posted in pairs and shall:

1. Have and maintain positive two-way communication with the OIC and RSO.

2. Have sufficient water if separated from other Marines.

3. Restrict access to RTAs by unauthorized personnel.

4. Clear the access of personnel into the RTAs with the OIC.

(b) Proper positioning of weapons and personnel.

(c) Use of authorized ammunition and explosives to include proper charge, fuse, and fuse settings in conjunction with the current fire condition.

(d) Verify the firing settings and ensure the weapons systems are within the prescribed safety limits.

(e) Ensures the SDZ is clear of all unauthorized personnel.

(f) Ensure personnel wear PPE.

(g) Permission is received from Range Control to commence training and live-fire operations.

(10) Maintains positive two-way communication with Range Control at all times. If communication is lost, the RSO will stop training and/or order a check-fire until communication is re-established with Range Control.

(11) Conducts radio checks with Range Control every 30 minutes while in a "Hot" status. When in a "Cold," check-fire or occupied status, the OIC/RSO will send a situation report to Range Control every three hours on the hour and continue to monitor the safety network. The OIC/RSO will provide the final radio check when displacing. Training units will establish their own internal communications network for all administrative needs (road guards, etc.). Range Control will not provide radios or communication networks for internal communication needs.

(12) Orders immediate cease-fire or check-fire when any unsafe condition occurs.

(13) Physically present during all live-fire training.

(14) Verify, upon the completion of firing or firing order, to the OIC that all weapons and weapons systems are clear and safe before allowing the removal of weapons from the firing area.

(15) Verify to the OIC, upon the completion of the RTA police call that all personnel have been checked and are clear of all ammunition and ordnance before they secure from the area.

(16) Ensures a qualified, school-trained rappel/Helicopter Rope Suspension Training (HRST) master (or other DoD service equivalent) is present at all times during rappel/HRST operations.

(17) During laser operations the RSO will:

(a) Ensure unit personnel employing lasers receive thorough safety briefs, to include explanations of specific laser-related hazards, safety equipment, detailed range safety procedures, and comply with procedures outlined in reference (a).

(b) Know and observe horizontal and vertical safety limits of the laser range.

(c) Ensure unit SOPs comply with range safety procedures and reference (a) and follow unit SOPs for laser operations and training exercises.

(d) Cease laser operations immediately if positive control of the laser beam is lost.

(e) Ensures a qualified Laser Range Safety Officer (LRSO) is present, per references (a), (g), and (h). The RSO may serve as both, if qualified.

Note: An RSO checklist is provided in Appendix G of this Order to assist the RSO.

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APPENDIX D

OIC/RSO APPOINTMENT REQUIREMENTS

Officer In Charge and Range Safety Officer Appointment Requirements

Weapons system	Officer in Charge [1]			Range Safety Officer [1]		
	Officer	Warrant Officer	Noncommissioned Officer	Officer	Warrant Officer	Noncommissioned Officer
CALFEX/CAX using outside fire support, troop, battery, squad, platoon, company; or battalion and larger.[6]	X	X	E-7	X	X	E-6
Live-fire exercises using organic weapons, squad through company, battery, troop.	X	X	E-7	X	X	E-6
Direct fire antitank rockets and missiles.	X	X	E-7	X	X	E-6
Air defense artillery rockets and guided missiles.	X	X		X	X[5]	
Field artillery[3]	X	X	E-7	X	X	E-6
Aerial gunnery and air defense weapons; live grenades, grenade launchers, and grenade machine guns; live mines and demolitions; tank and fighting vehicle cannons.	X	X	E-7	X	X	E-6
Mortars	X	X	E-6	X	X	E-6[4]
Practice hand grenades: sub-caliber training devices; laser devices; firing devices; simulators and trip flares; small arms and machine guns.	X	X	E-6	X	X	E-5
Chemical agents and smoke[2]	X	X	E-6	X	X	E-5
Non-Live Fire	X	X	E-5	X	X	E-5

Notes:
[1]Civilians in the grade of (GS)-07 and above, or equivalent, may act as OIC; GS-05 and above or equivalent, may act as RSO.
[2]For the Marine Corps, OIC and RSO must be E-4 and above and be chemical, biological, radiological, and nuclear (CBRN) MOS 5702/5711 when conducting CBRN or smoke training. For the Army, OIC RSO must be CBRN qualified when conducting CBRN or smoke training.
[3]Use of E-7$_s$ as OIC$_s$ is authorized only when approved by the senior Commander (Army) installation Commander (Marine Corps). Duties normally performed by either the battery executive officer or the platoon leader.
[4]RSO for Marine Corps can be E-5 for mortar training activities.
[5]Senior Range Safety Officer (SRSO) will be a chief warrant officer four, or higher, or a civilian in the grade of GS-12, or above.
[6]For battalion or larger CALFEX/CAX, OIC will be a field grade commissioned officer; exercise RSO will be E-7 or above.

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APPENDIX E

RANGE OIC AND RSO APPOINTMENT LETTER

SERVICE BRANCH OR DEPARTMENT
MARINE CORPS INSTALLATIONS NATIONAL CAPITAL REGION
MARINE CORPS BASE QUANTICO
3250 CATLIN AVENUE
QUANTICO, VIRGINIA 22134-5001

IN REPLY REFER TO:
SSIC CODE
OFFICE CODE

From: BILLET, UNIT NAME
To: Range Control Officer, Marine Corps Base Quantico

Subj: APPOINTMENT OF RANGE OFFICER IN CHARGE AND RANGE SAFETY OFFICER FOR NAME OF COMMAND

1. In accordance with reference (a), Commander are required to appoint their Range Officer in Charge (OIC) and Range Safety Officers (RSO) in writing. This is to certify that the OIC is knowledgeable in the weapons systems and ammunition for which they are responsible and the RSO is weapon system qualified. This includes the use of small unmanned aerial vehicles and systems (sUAV/sUAS) and lasers.

2. Personnel rotations, qualifications, and training requirements can adversely impact the accuracy of OIC and RSO rosters. Continuously updating certification information increases the likelihood of human error and creates and administrative burden. For this purpose, all certified OIC and RSO personnel will be tracked in the Range Facility Management Support System.

3. Accordingly, this letter verifies that any individual appointed to OIC and RSO duties by this Command is currently qualified in accordance with reference (b) and (c), to include units records of individuals certifications for weapon systems, ammunition, and evens for which they will be responsible.

4. In addition to their individual qualifications, the rank/civilian grade equivalent requirements are verified. Military and Government Employees may be assigned as either OIC or RSO and Government Contractors may be assigned as RSO only

5. The point of contact for this correspondence is RANK/NAME at EMAIL or PHONE NUMBER

U. R. TRAINING

Figure E-1

Figure E-1

1. All information highlighted in the red text must be filled in. The actual format of the letter will be based on the organization submitting.

2. The appropriate unit or department letterhead or equivalent format as appropriate is authorized.

3. Standard subject identification code (SSIC) or equivalent.

4. Office code if applicable.

5. Date of signature.

6. From. Unit Commander (Department Chief, Head, Supervisor) is preferred or a delegate with "By Direction" authority.

7. To. Will always be the same to be in accordance with the references.

8. No "Via" line is required. Although the signed letter will be sent directly to Range Management Branch (RMB) for review, then forwarded to the Installation Commander, it is RMB that prepares the endorsement and gives recommendation after review/corrections. This expedites the process.

9. The subject will always be the same but the name of command, unit, section, etc. will represent the appointee's unit.

10. The references remain the same. If additional references are required, they can be added.

11. Body. For the most part, these paragraphs can remain the same unless there is a specific reason to add additional details.

12. Paragraph 1 is the statement that covers an acknowledgement of the requirement to have this letter in standing.

13. Paragraph 2 justifies the generalized nature of the letter avoiding by-name rosters.

14. Paragraph 3 is the verification of OICs to be knowledgeable and RSOs to be qualified in the weapons and ammunition they are responsible for.

15. Paragraph 4 verifies the personnel assigned as OIC/RSO will meet the rank/rank equivalent requirements and acknowledgement

that a contractor for the government may not serve as an OIC in accordance with federal laws.

16. Paragraph 5 is the point of contact for this authorization.

17. Signature line will be the name of the billet holder in the 'From' line.

18. A workable document is available for download on the RMB website: https://www.quantico.marines.mil/offices-staff/g-3-operations/range-management-branch/

Note: For assistance, contact IRSO at (703)432-6552.

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APPENDIX F

RISK ASSESSMENT FORMAT

1. Description. Units conducting training for which there is not an approved detailed training plan on file with Range Control must submit a Risk Assessment (RA) worksheet to RMB. Figure G-1 is an example format if the unit does not have an existing format.

2. Point of Contact. The POC for RA submission is the IRSO at (703)432-6552/DSN 278-6552.

RISK MANAGEMENT MATRIX MARINE CORPS BASE QUANTICO							
TRAINING EVOLUTION:		**ORGANIZATION:**		**PREPARED BY:**		**DATE:**	
OPERATIONAL PHASE	**HAZARD**	**CAUSES**	**INITIAL RAC**	**DEVELOP CONTROLS**	**RESIDUAL RAC**	**HOW TO IMPLEMENT**	**HOW TO SUPERVISE**

HAZARD SEVERITY:
I – CATASTROPHIC- Death, permanent disability, major property damage.
II – CRITICAL- Permanent partial disability, major system damage, minor property damage.
III – MARGINAL- Minor injury, minor system or property damage.
IV – NEGLIGIBLE- 1st aid, minor system repair.

MISHAP PROBABILITY:
A – FREQUENT
B – LIKELY
C – OCCASIONAL
D – UNLIKELY

RISK ASSESSMENT CODE: (RAC)
1 – CRITICAL
2 – SERIOUS
3 – MODERATE
4 – MINOR
5 – NEGLIGIBLE

RAC ASSESSMENT CODE MATRIX

HAZARD SEVERITY	MISHAP PROBABILITY A	B	C	D
I	1	1	2	3
II	1	2	3	4
III	2	3	4	5
IV	3	4	5	5

COMMAND REVIEW / APPROVAL

Figure F-1

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APPENDIX G

OIC/RSO EXAMPLE RANGE BRIEF AND CHECKLIST

Example Live-Fire Range Safety Brief

1. This is your range safety brief for Range _____.

2. The Officer in Charge (OIC) is _____.

3. The Range Safety Officer (RSO) is _____.

4. The Assistance Range Safety Officer (ARSO) is _____.

5. The four weapons safety rules are:

a. Treat every weapon as if it were loaded.

b. Never point your weapon at anything you do not intend to shoot.

c. Keep your finger straight and off the trigger until you are ready to fire.

d. Keep your weapon on "safe" until you are ready to fire.

6. The misfire pit is located _____ (if required).

7. Safety is paramount. Safety will always be priority NUMBER ONE. No movement on the range will be permitted before informing the RSO. All road guards will be briefed and placed by the RSO only. Anyone departing or entering the range will notify the RSO before doing so.

8. Everybody is a safety officer. If you observe a situation that you feel is unsafe, call an immediate cease-fire (check fire for mortars) or stop (for individuals, Javelins, SMAWs, blasting caps). A cease-fire must be given verbally and physically by giving the hand-and-arm signal to cease fire. In the case of a cease-fire, all weapons will go to Condition 4. Do not wait to be told. OIC/RSOs will check the back blast area to ensure it is properly cleared.

9. During firing, the OIC will be located _____ and the RSO will be located _____ the corpsman will be located _____.

10. The dedicated safety vehicle is located _____. The safety driver is _____. Strip map to hospital. Vehicle keys are located _____.

11. MEDEVAC will be handled by medical personnel and the OIC or RSO in conjunction with Range Control. All other personnel will stay clear of the emergency. (Go over routes to hospital or nearest LZ). Muster at the assembly area for accountability.

12. Duds/UXO (are/are not) typically found on this range. Do not pick up, hit, kick, or throw ordnance of any type. Notify the RSO immediately of possible UXO locations. Dud procedures for this range are as follows: Recognize, Retreat, and Report.

13. There (will be/will not be) maneuvering on this range. If a Marine is within 15 degrees of your muzzle, DO NOT FIRE. Be aware of your position and the Marines around your position. If you are in doubt of the situation, DO NOT FIRE.

14. Overhead fire (is/is not) authorized for this range. The overhead firing procedures for this range are as follows: _____.

15. If you should encounter a stoppage, apply immediate and/or remedial action (whichever is appropriate for the weapon being fired) and complete the drill. Continue with the drill until you hear the command to cease-fire, at which point you will comply unless told to do otherwise by a safety officer. (Go over immediate and/or remedial action for all weapons being fired on the range. If you should hear or feel an audible pop, immediately cease-fire and notify the OIC or RSO. An audible pop is a strange noise made when a primer detonates but fails to ignite any or all of the propellant. This is sometimes accompanied by excessive smoke escaping from the chamber area.

16. The primer has enough power to kick the projectile out of the case and if a small portion of the propellant ignites, it can lodge the projectile partway down the barrel).

17. The uniform for this range is _____. Hearing and/or eye protection (is/is not) required on this range while conducting live fire.

18. Observe the downrange area. Your left lateral limit is _____, your right lateral limit is _____. Your internal lateral limits are the left and right of your targets. Your limit of advance is _____. All of your rounds will impact in this SDZ. You will fire on your

designated targets only. Muzzles will be pointed in a safe direction at all times.

19. The only types of ammunition that will be used on this range are _____. Note: Brief any notice of ammunition re-classification or ammunition information notice. Information of this type will be in a message.

20. The weapons to be used on this range are _____. (Go over the condition codes for all weapons to be fired).

21. Are there any left-handed shooters (or throwers for hand grenades)?

22. Does anybody wear glasses or contact lenses that does not have them?

23. The Heat Condition is _____, other weather concerns are ____.

24. The Fire Danger Class is___. Use of Pyro, tracers, and smoking is/is not allowed. Smoking is not allowed near ammunition. Designated smoking area is located _____.

25. Personal Protective Equipment (PPE) level is ___ and will be properly worn and used at all times.

26. Ammunition issue point is located _____ and ammunition is properly stored and guarded.

27. Cross-range firing is strictly prohibited.

28. Continually check range impact area to ensure it is clear of all personnel and equipment. Be sure to check for low-flying aircraft and helicopters.

29. No ammunition will leave the range or be taken into porta-johns. Self check, buddy check, and line-out of all personnel by the RSO will take place to ensure 100% accountability of ammunition. Note: Expenditure reports for ammunition will be filled out after line-out by RSO is completed.

30. All ammunition dunnage will be taken to _____. Ensure it is separated from all live ammunition.

31. This concludes the range safety brief. Are there any questions?

32. Report all Marines trained, ammunition expended, by type, to Range Control. Officer-in-Charge and Range Safety Officer.

Example OIC/RSO Training Checklist

Administrative tasks

___ Ensure all range flags are up and red lights are set.
___ Ensure gates are secured or manned, if necessary.
___ Read SOP.
___ Conduct a detailed inspection of the terrain to ensure no ricochet hazards are present.
___ Ensure all targets are set up.
___ Inspect target set-up and target design to ensure no ricochet hazards are present.
___ Targets in stands.
___ Targets type _____.
___ Establish solid/dual communication with range control via radio.
___ Assign person to prepare ammo for issue for all relays.
___ Rounds per shooter.
___ Relays.
___ Ensure the range is laid out correctly.
___ Range perimeters are within the SDZ.
___ Target line is in correct location; spot check.
___ Firing lines are in the correct location.
___ Ammo issue point is in the correct location.
___ First aid kit is in the correct location.

Pre-fire tasks/briefs

___ Count off and assign relays, if necessary.
___ Conduct a complete safety check (clear extra weapons!).
___ Prepare weapons for firing.
___ Brief the ammo SNCO/NCO: _____ will be the ammo NCO. Ammo NCO will break ammo down into ____ piles of ____ rounds, each with one set of earplugs per pile. Ammo NCO will also be responsible for the first aid kit.
___ OIC/RSO will read all local range regulations before firing.
___ Brief the course of fire.
___ Brief the conduct of fire.
___ Brief the medical emergency plan.

OIC/RSO Sample Checklists Cont.

___ Brief the range-specific environmental policies and issues.
___ Read the local safety brief.

Shooter briefs

Brief 1: Appointments

___ The OIC is _____.
___ The RSO is _____.
___ The ARSO is _____.
___ The safety supervisors are _____.
___ The ammo SNCO/NCO is _____.
___ The corpsman is located _____.
___ The safety vehicle and driver are located _____.

Brief 2: Range layout

Note: Read all local range regulations before firing.
___ Brief the left and right limits of range.
___ Brief the location of the ammo issue point.
___ Brief the location of the first aid kit.
___ Brief road guard positions.

Note: Road guards should be positioned in pairs.

Duties during live fire (sample)

___ Ensure that shooters are wearing ear protection.
___ Check the down range area to ensure the environment did not change in regards to the ricochet hazards. If a hazard is created during training, cease fire and correct the hazard. If you cannot correct the hazard, cease fire and contact Range Control.
___ Brief the details of each drill. Explain each drill before it is fired.
___ Follow the course of fire. Do not deviate.
___ Conduct the shoot safely. As always, safety is paramount.
___ Check for errors and corrections. Ensure that SNCOs/NCOs conduct proper checks and use correct coaching techniques.
___ Conduct radio checks.

After-firing duties (sample)

___ Unload, show-clear. Do not forget about extra weapons.
___ Conduct a complete safety check.
___ Police call.
___ Ensure details are appointed to take down targets, police call, etc.
___ Take down range flags. Regroup at a convenient location
___ Return range property.
___ Ensure during the conduct of your shoot, no new ricochets hazards were created. If ricochets hazards were created,

correct the hazard. If you cannot correct the hazard, refer the issue to Range Control for maintenance.

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APPENDIX H

FREQUENCIES AND POINTS OF CONTACT

AGENCY	EQUIPMENT	TYPE	CH/Talk Group	FREQ
Range Safety Network	Motorola	ELMR	1	N/A
Range Safety Network (Air)	Tactical	URC-200 or CM-300/350	N/A	323.7
Range Safety Network (Air)	Tactical	URC-200 or CM-300/350	N/A	134.1

The Call Sign for Range Control is "Range Control."

Range Control Points of Contact:

MCBQ PHONE NUMBERS (DSN 278)	
Fire Desk Supervisor	(703) 784-6722
Fire Desk	(703) 784-5321/5322
Scheduling Supervisor	(703) 784-6412
Range Safety Division	(703) 432-7466/7467
Istallation Range Safety Officer	(703) 432-6552
Airspace Manager	(703) 784-6412
RFMSS Administrator	(703) 432-6611
Fax	(703) 784-6725
Training Support Center	(703) 784-5518
Website	https://www.quantico.usmc.mil/activities/?Section=Range

Primary User Points of Contact:

MCBQ PHONE NUMBERS (DSN 278)	
Weapons Training Battalion	(703) 432-6703
The Basic School	(703) 784-5369
Quantico Fire Dept	(703) 784-5516
MCESG	(703) 784-4863
Base Safety	(703) 432-1218
Reserve Support	(703) 784-5566
Ray Hall Medical	(703) 432-5541
PMO	(703) 784-2252
NREA	(703) 784-5523

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APPENDIX I

LANDING ZONES AND DROP ZONES

NAME	LOCATION
DZ-COCKATOO	8A
DZ-FBI	FBI ACADEMY
DZ-RAVEN	8B
DZ-REDWING	15C
DZ-TURKEY	14B
DZ-WEAPONS	WTBN
LZ-6	CAMP BARRETT
LZ-7	B2
LZ-8	LUNGA REC AREA
LZ-9	WTBN
LZ-ALBATROSS	17A
LZ-BIGBIRD	14A
LZ-BLACKBIRD	9B
LZ-BLUEBIRD	9A
LZ-BLUEJAY	14B
LZ-BUZZARD	15A
LZ-CANARY	16B
LZ-CARDINAL	15A
LZ-CHICKADEE	15A
LZ-CHICKEN	5A
LZ-CONDOR	9A
LZ-CRANE	16D
LZ-CROW	16G
LZ-CUCKOO	15A
LZ-DOVE	7B
LZ-DRAKE	15C
LZ-DUCK	15B
LZ-EAGLE	16B
LZ-EGRET	14B
LZ-FALCON	6B
LZ-FINCH	16F
LZ-GOOSE	15A
LZ-GOSHAWK	15A
LZ-GRACKLE	12A
LZ-GROUSE	14C
LZ-GULL	7A
LZ-HARRIER	16G
LZ-HAWK	13

NAME	LOCATION
LZ-HEN	7C
LZ-HUMMINGBIRD	15A
LZ-KIWI	14B
LZ-LOON	9C
LZ-MALLARD	12B
LZ-MARTIN	16G
LZ-ORIOLE	12A
LZ-OSPREY	16C
LZ-OWL	8A
LZ-PARROT	8A
LZ-PEACOCK	16G
LZ-PELICAN	15B
LZ-PENGUIN	15C
LZ-PEREGRINE	16E
LZ-PHEASANT	16A
LZ-PIGEON	16G
LZ-QUAIL	11A
LZ-REDBIRD	9A
Upshur Parade Deck	CAMP UPSHUR
LZ-ROBIN	7B
LZ-SNIPE	16D
LZ-SPARROW	7B
LZ-STARLING	5A
LZ-STORK	15C
LZ-SWAN	9C
LZ-TERN	15B
LZ-THRUSH	5C
LZ-TOUCAN	17A
LZ-VULTURE	16B
LZ-WOODPECKER	11A
LZ-WREN	WTBN


MCB QUANTICO LANDING ZONES
LZ-EAGLE
LZ-ROADRUNNER
CAMP UPSHUR
LZ-OSPREY
LZ-PHEASANT
LZ-VULTURE
LZ-PEACOCK
LZ-TOUCAN
LZ-ALBATROSS
LZ-CANARY
LZ-MARTIN
LZ-DRAKE
LZ-PENGUIN
DZ-REDWING
LZ-SNIPE
LZ-PIGEON
LZ-TERN
LZ-STORK
LZ-GOOSE
LZ-CRANE
LZ-FINCH
LZ-CUCKOO
LZ-HUMMINGBIRD
LZ-DUCK
LZ-PEREGRINE
LZ-BIGBIRD
LZ-GOSHAWK
LZ-CHICKADEE
LZ-WOODPECKER
LZ-CROW
LZ-HARRIER
LZ-QUAIL
LZ-GRACKLE
LZ-CARDINAL
LZ-ORIOLE
LZ-EGRET
LZ-PELICAN
LZ-GROUSE
LZ-BUZZARD
LZ-HERON
LZ-KIWI
LZ-BLUEJAY
LZ-TURKEY
LZ-CONDOR
LZ-BLUEBIRD
LZ-MALLARD
LZ-HAWK
LZ-WREN
LZ-BLACKBIRD
DZ-FBI
LZ-FALCON
LZ-9
LZ-8
LZ-REDBIRD
DZ-COCKATOO
DZ-RAVEN
LZ-DOVE
LZ-CHICKEN
LZ-SWAN
LZ-PARROT
LZ-OWL
LZ-STARLING
LZ-LOON
LZ-ROBIN
LZ-GULL
LZ-SPARROW
CAMP BARRETT
LZ-THRUSH
LZ-7
LZ-6
LZ-HEN
N
0 1 2 3 4
Miles
Prepared by J. Staub, RMB GIS, 1 JUN 2018

Figure I-1

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APPENDIX J

DELINKING AMMUNITION INFORMATION NOTICE

SUBJ/NAVY AND MARINE CORPS AMMO INFO NOTICE 064-2012
POLICY FOR THE DELINKING AND ACCOUNTABILITY OF DELINKED
SMALL ARMS AMMUNITION (1305-A064,A131,A151,A576)//
REF/A/DOC/NAVSUP P-801/1 APR 12//
AMPN/NAVSUP P-801 DTD 1 APR 12//
POC/ANNA LUCAS/GS12/49935/LOC:BLD407/TEL: DSN 430-2107
/TEL: 717-605-2107/FAX: 430-5390/EMAIL: ANNA.LUCAS@NAVY.MIL
RMKS/

1. LAST AIN XMITTED 261930ZAPR12

2. THIS AIN SUPERSEDES NAVSUP GLS AINS 054-2005 AND 043-2012 (191935ZJUL05 AND 261930ZAPR12)

3. THIS AIN APPLIES TO MARINE CORPS STOCK ONLY

4. REQUEST DISSEMINATION OF THIS AIN TO ALL USING UNITS AND ACTIVITIES THAT UTILIZE, STORE AND/OR TRANSPORT SUBJECT

5. AMMUNITION. DELINKING AND LINKING OF SMALL ARMS AMMUNITION IN ORDER TO MEET RANGE CONDITIONS IS STRONGLY DISCOURAGED. DELINKING AND LINKING FOR ADJUSTMENT OF BELT LENGTH IS AUTHORIZED. USING UNITS WILL VERIFY RANGE CONDITIONS PRIOR TO ORDERING AMMUNITION. AMMUNITION SUPPLY POINTS (ASPS) MUST BE COGNIZANT OF LOCAL RANGE CONDITIONS AND MAINTAIN AMMUNITION STOCKS THAT ARE AUTHORIZED FOR VARIOUS RANGE CONDITIONS.

6. LINKED AMMUNITION MUST BE UTILIZED FOR ITS INTENDED PURPOSE/WEAPON SYSTEM. AT NO TIME WILL LINKED AMMUNITION BE REQUISITIONED FOR THE PURPOSE OF DELINKING TO BE EXPENDED AS A SINGLE ROUND.

7. THE DELINKING OF ANY AMMUNITION WHERE EVERY ROUND HAS AN INCENDIARY ELEMENT (I.E., DODIC A576, 4&1 LINKED) IS PROHIBITED. ALL LINKED AMMUNITION MANUFACTURED IN THIS TYPE OF CONFIGURATION IS CAPABLE OF STARTING FIRES DURING HIGH FIRE HAZARD CONDITIONS IN THE SAME MANNER AS A ROUND WITH THE TRACER ELEMENT. THE USE OF STRAIGHT BALL AMMUNITION SHALL BE UTILIZED DURING TIMES OF HIGH FIRE HAZARDS.

8. THE DELINKING AND LINKING OF AMMUNITION WILL ONLY OCCUR IF NO AUTHORIZED SUBSTITUTE AMMUNITION IS AVAILABLE. IF AN AUTHORIZED SUBSTITUTE IS NOT AVAILABLE AND A DELINKING OPERATION

IS TO TAKE PLACE, THE COMMANDING OFFICER OF THE UNIT CONDUCTING THE DELINKING OPERATION MUST ENSURE THAT A WRITTEN SOP IS IN PLACE AND THAT THE DELINKING AND LINKING OPERATIONS MUST BE CONDUCTED WITHIN THE RANGE COMPLEX AREA. ADDITIONALLY, THE AMOUNT OF AMMUNITION TO BE DELINKED WILL BE LIMITED TO THE AMOUNT REQUIRED FOR THE FIRING LINE AND THE READY LINE, IN THE EVENT RANGE CONDITIONS CHANGE CAUSING A CEASE-FIRE EVENT OR CANCELLING THE LIVE FIRE. THIS WILL REDUCE THE AMOUNT OF UNSERVICEABLE AMMUNITION GENERATED DURING THE DELINKING PROCESS AND SUBSEQUENT LOSS OF AMMUNITION FROM THE UNIT'S ALLOCATION.

9. WHEN CONDUCTING DELINKING/LINKING OPERATIONS, THE FOLLOWING CONCERNS MUST BE ADDRESSED:

a. CONDUCT ALL DELINKING/LINKING OPERATIONS IN A SAFE, CONTROLLED MANNER ACCORDING TO AN APPROVED WRITTEN SOP.

b. PERSONNEL WILL PERFORM LINKING/DELINKING OPERATIONS WITH PROPER SUPERVISION.

c. MAINTAIN LOT INTEGRITY OF THE DELINKED ROUNDS BY PROPERLY MARKING, REPACKAGING, AND SEPARATING THEM.

d. TO PREVENT POSSIBLE LINK FAILURE, MINIMIZE THE REUSE OF MACHINEGUN LINKS. M27 LINKS THAT HAVE BEEN USED IN DELINKING/RELINKING OPERATIONS LOSE 2 INCH LBS OF TORQUE AFTER JUST ONE DISASSEMBLY AND REASSEMBLY OPERATION.

10. IF A DELINKING OPERATION HAS OCCURRED, THE UNIT SHALL LINK THE UNUSED AMMUNITION BACK TOGETHER IN THE SAME QUANTITY AS THE ORIGINAL BELTS WERE ISSUED. THIS LINKING OPERATION MUST BE DONE WITHIN THE RANGE COMPLEX AREA PRIOR TO DEPARTURE AND SUBSEQUENT TURN-IN OF AMMUNITION BACK TO THE SUPPORTING AMMUNITION SUPPLY POINT. UNITS MUST MAINTAIN THE LOT INTEGRITY OF THE DELINKED AMMUNITION BY PROPERLY REPACKAGING THESE ROUNDS BACK INTO THEIR ORIGINAL CONTAINERS.

11. DELINKED AMMUNITION WILL BE RETURNED TO THE ASPS AS THE ORIGINAL DODIC AS IT WAS ISSUED. ACCORDINGLY THE DELINKED AMMUNITION WILL BE PICKED UP ON THE ASPS ACCOUNTABILE RECORD AS ISSUED. ASPS THAT RECEIVE TRACERS FROM DELINKING OPERATIONS, WILL NOT REISSUE/REUSE DELINKED TRACERS. DELINKED TRACERS WILL BE LOCALLY RECLASSIFIED TO CONDITION CODE HOTEL AND DEFECT CODE MBCZ50 (BALL CTG MISSING) WILL BE APPLIED. AS AN EXAMPLE, TRACERS REMOVED FROM A064 WILL BE CARRIED ON THE ASPS ACCOUNTABLE RECORD AS A064 WITH THE CONDITION CODE HOTEL ASSIGNED AND DEFECT CODE MBCZ50 APPLIED.

12. CONTACT PM-AMMO AT AMMOMAIL@USMC.MIL, DSN 378-8794/8796, OR COMM 703-432-8794/8796 FOR ASSISTANCE ON THIS MATTER.

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APPENDIX K

CIVILIAN REQUEST LETTER

DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3280 RUSSELL ROAD
QUANTICO, VIRGINIA 22134-5103

IN REPLY REFER TO:
3570
MF
01 May 18

From: Director, Marine and Family Programs Division
To: Commander, Marine Corps Installations National Capital Region, Marine Corps Base Quantico

Subj: REQUEST FOR AUTHORIZATION FOR CIVILIAN PERSONNEL TO PARTICIPATE IN LIVE-FIRE EVENT IN SUPPORT OF: IRONMAN RANGE, MILITARY ORIENTATION DAY

Ref: (a) MCO 3570.1C
(b) MCBO 3570.1A
(c) Range Standard Operating Procedures (SOP)

Encl: (1) Scheme of Maneuver
(2) ORM

1. It is requested, per the references, that Marine and Family Programs Division (MF), Manpower and Reserve Affairs (M&RA) be granted authorization for civilian personnel (150) to participate in live-fire events on 10 May per enclosure (1).

2. The event will be conducted on Ironman Range per enclosure (1), using paper targets, steel plate racks, and automated targets. Weapons fired will be: (3) M9A1, (2) M45CQBP, (3) M4A1, and (2) M27 IARs. Ammunition used in these weapons will be 9mm NATO (A363), .45cal NATO (A475), and 5.56mm NATO (A059). No crew-served weapons will be used. All participants, to include the Range OIC, RSO, and PSOs, as well as any spectators, will wear appropriate PPE during the entirety of the event and all personnel will have one-on-one supervision by qualified WTBn PSOs while firing per enclosure (2).

3. Point of contact for this matter is Captain Doug Takach at (703) 432-9532 or douglas.takach@usmc.mil.

M. A. DAY

Enclosure (1)

Figure K-1

SCHOOL:	Marine and Family Programs Division (MF)	COURSE:	VIP
LESSON TITLE:	Military Orientation Shoot	LESSON DESIGNATOR:	N/A
PREPARED BY:	Captain Douglas M. Takach	DATE:	01 May 2018

IDENTIFY HAZARDS			ASSESS HAZARDS	MAKE RISK DECISIONS		IMPLEMENT CONTROLS	SUPERVISE
Major Steps	Sub-Steps	List Hazards	Initial RAC	Develop Controls	Residual RAC	How to Implement	How to Supervise
Live Fire		Ammunition Malfunction	2	Ammo section will drop and pick up all ammo needed. Ammo will be staged on a table and covered by poncho/tarp in the event of inclement weather. Ammo will be issued from a controlled point.	4	PSO's will ensure controls are followed	RSO will ensure one to one PSO to shooter ratio.
		Live Fire Injury	2	Personnel will remain in designated area, safety brief to cover encounters with snakes/indigenous wildlife.	4		
		Negligent discharge	2	Safety brief given by RSO. Weapons class and familiarization administered prior to live fire. Proper hearing and eye protection worn while on the firing line. Navy Corpsman present during live fire. PSO supervising shooters activities.	4		
		Weapons malfunction	4	Discuss weapons safety rules before live fire. Weapon remains on safe until Personnel intend to fire. ne.	5		
		Direct fire	4	Ammunition will be inspected by PSOs. Weapons handling test administered prior to live fire. User serviceability conducted by shooter. LTI/PFI conducted on all weapons prior to live fire.	5		
		Destructive weather.	2	Point out L/R lateral limits. Shooters fire only on targets with clear line of sight. Shooters will NOT move out of assigned position.	4		
		RSO	2	Include in safety brief and prior to all classes that identifies who to report accountability to, and where to go for shelter. Inform them of where to leave weapons safely during lightning	4	RSO/OIC Monitor the S-3/Range Control weather conditions, and remain vigilant for how weather appears on range.	RSO
Cease Training Criteria (CTC): (During training, supervisor may identify other hazards that require a decision by CT.)		Any injury down range will initiate an immediate cease fire, participants will back off the line and the OIC/RSO will get accountability, the RSO will call EJ for the corpsman IAW with range regulations.					
Approving Signature:		M. A. Day, Col, USMC			Date:	01 May 2018	

Enclosure (2)

Figure K-2

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APPENDIX L

AMMUNITION CHECKLIST

UPON DELIVERY OF CLASS V TO FIRING SITE	
	Have range supervisory personnel, in conjunction with the unit ammo tech, completed a physical inventory of all items matching quantities inventoried against quantities on the requisition document (DD Form 1348-1)?
	Has the Officer-In-Charge (OIC) or his/her appointed representative signed/accounted for the ammunition and explosives?
	Has the number of individuals making the issue to the troops been kept to the minimum number necessary to enhance control and accountability?
	Are issues being made with respect to lot integrity (i.e., if a malfunction occurs to a specific lot) that lot can easily be identified and collected from individuals?
	Is ammunition being prematurely removed from packing prior to actual need?
	Is packaging being saved for turn-in?
	Has security been established on the ammunition?
	Has ammunition been provided proper protection from the elements?
DURING EXERCISE	
	Do supervisory personnel have in their possession an Ammunition Malfunction Data Collection Guide (NAVMC 10155 Card) in the event of a malfunction?
	Do supervisory personnel know what to do in the event of a malfunction (i.e., cease firing, render assistance to casualties, identify all witnesses to the malfunction and safeguard weapon material and fragments which could provide evidence as to the cause of the malfunction)? Reference (e) and chapter 7 apply.
AFTER COMPLETION OF EXERCISE	
	Has all unexpended ammunition been collected and repackaged by matching lot numbers of ammunition to packaging?
	Have supervisory personnel, in conjunction with the unit ammo tech, conducted a physical inventory of unexpended ammunition, and completed a turn-in document (DD Form 1348-1)?
	Has the OIC signed the turn-in document (DD Form 1348-1) verifying the types and quantities of ammunition to be turned in are correct?
	If there was a malfunction, has a malfunction/deficiency report been initiated per reference (e)?

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APPENDIX M

PERSONAL PROTECTIVE EQUIPMENT

PERSONAL PROTECTIVE LEVEL	PERSONAL PROTECTION REQUIRED
0[1]	Combat uniform/standard utility uniform, hearing/eye protection
1[1]	Body armor and helmet, hearing/eye protection
2[1]	Body armor with front/back enhanced small arms protective insert (E–SAPI) plates and helmet, hearing/eye protection
3	Body armor with front/back/side E–SAPI plates and helmet, hearing/eye protection
Notes: [1] Eye protection is encouraged. Based on risk assessment, the unit Commander may require ballistic and/or laser eye protection.	

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APPENDIX N

LASER FIRING LOG

COMMAND	
RANGE	
DATE	
SYSTEM	
USER	
MISSION COMMANDER	

FIRING # TIME	TARGET LOCATION	FIRING POSITION/HEADING

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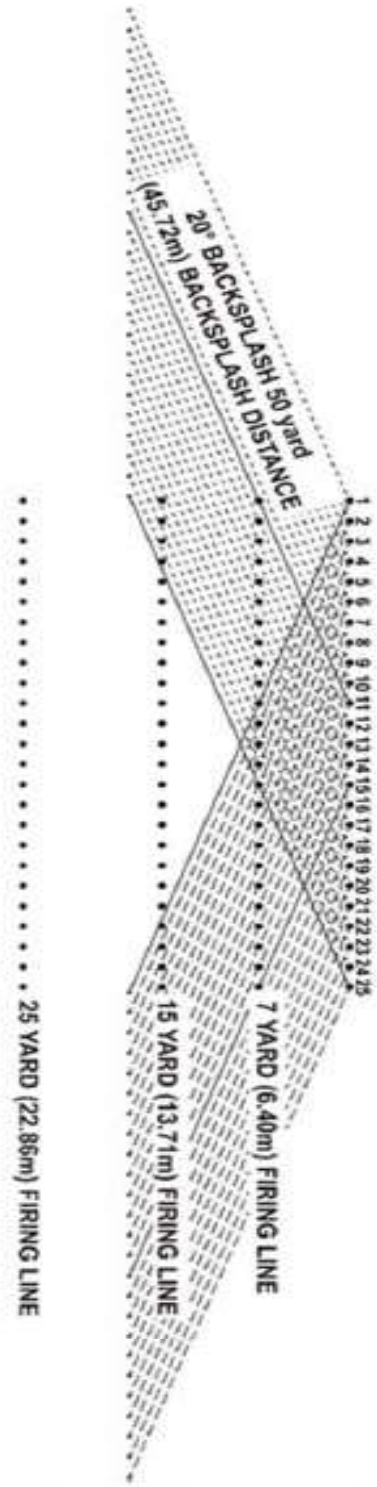
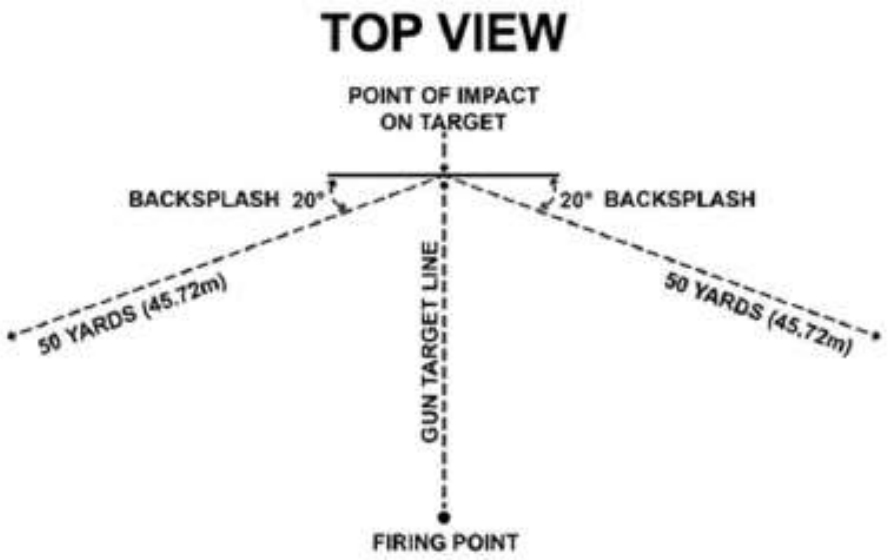
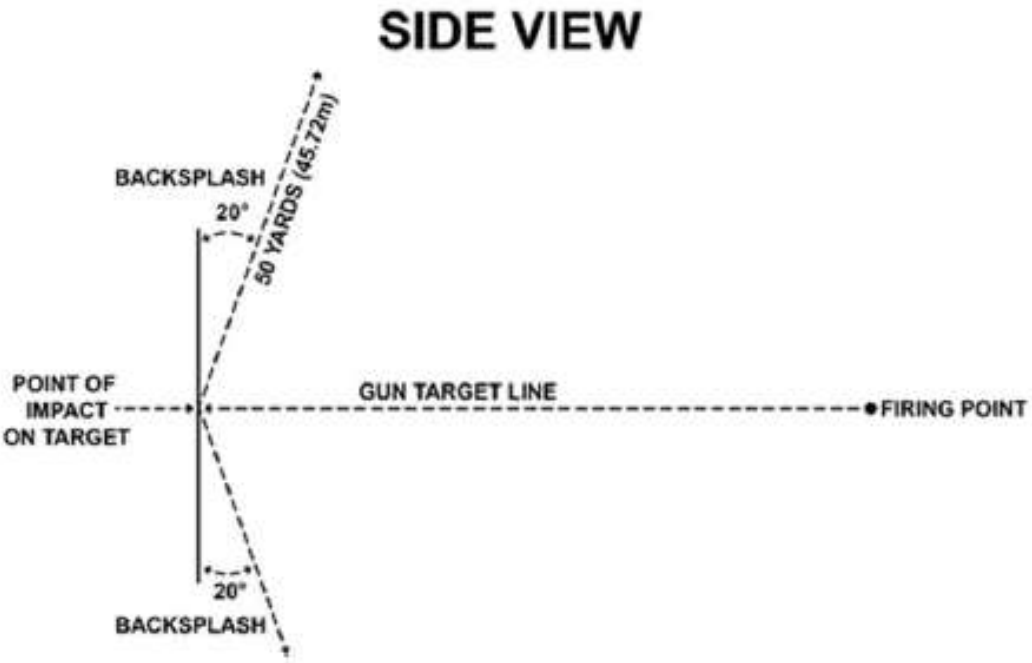
APPENDIX O

SRT DIAGRAMS



Multiple Stationary Steel Reactive Targets (SRT) in line.





Single Steel Reactive Target

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APPENDIX P

AUTHORIZED SESAMS KITS, WEAPONS, AND AMMUNITION COMBINATIONSAND SPECIAL REQUIREMENTS

1.UTM SESAMS and authorized ammunition combinations:

a. M4 / M16 / M27 IAR with UTM Mod 1 bolt conversion kit (P / N 01-3910, NSN 1005-01-698-5634), previously referred to as the Generation II universal bolt conversion kit. The only ammunition authorized for this configuration are:

Nomenclature	DODIC	NSN	TYPE
M1042 (Blue)	AB09	1305-01-536-5822	5.56mm
M1042 (Red)	AB10	1305-01-536-5827	5.56mm
M1042 (Yellow)	AB11	1305-01-536-5829	5.56mm
M1042 (Blue)	AC39	1305-01-670-5103	5.56mm
M1042 (Red)	AC40	1305-01-670-5126	5.56mm
M1042 (Yellow)	AC41	1305-01-671-1588	5.56mm

b. M18 MHS with UTM slide and barrel conversion kit (P / N 01-3290, NSN 1005-01-698-5684). The only ammunition authorized for this configuration are:

Nomenclature	DODIC	NSN	TYPE
M1041 (Red)	AA12	1305-01-439-9717	9mm
M1041 (Blue)	AA21	1305-01-449-3208	9mm
M1041 (Blue)	AB13	1305-01-536-7721	9mm
M1041 (Red)	AB14	1305-01-536-7722	9mm
M1041 (Blue)	AC36	1305-01-670-4234	9mm - LEAD FREE
M1041 (Red)	AC37	1305-01-670-4963	9mm - LEAD FREE

2. FX SESAMS and authorized ammunition combinations:

a. 9mm conversion for M16 / M4. M16 Upper Receiver (P / N 5310192, NSN 1005-01-697-8470) and M4 Upper Receiver (P / N 5310202, NSN 1005-01-698-5213) with M4–M16 Bolt (P / N 5308990, NSN 1005-20-002-4811). The only ammunition authorized for these configurations are:

Nomenclature	DODIC	NSN	TYPE
M1041 (Red)	AA12	1305-01-439-9717	9mm
M1041 (Blue)	AA21	1305-01-449-3208	9mm
M1041 (Blue)	AB13	1305-01-536-7721	9mm
M1041 (Red)	AB14	1305-01-536-7722	9mm
M1041 (Blue)	AC36	1305-01-670-4234	9mm - LEAD FREE
M1041 (Red)	AC37	1305-01-670-4963	9mm - LEAD FREE

b. M4 / M16 with FX Bolt Kit Assembly (P / N 5310550, NSN 1005-01-698-5416). The only ammunition authorized for this configuration are:

Nomenclature	DODIC	NSN	TYPE
MK302 MOD1 (Blue)	AB05	1305-01-533-6670	5.56mm
MK303 MOD1 (Red)	AB06	1305-01-533-6674	5.56mm

c. M9 modification kit. M9 Pistol Barrel (P / N 5308270, NSN 1005-01-698-5350). The only ammunition authorized for this configuration are:

Nomenclature	DODIC	NSN	TYPE
M1041 (Red)	AA12	1305-01-439-9717	9mm
M1041 (Blue)	AA21	1305-01-449-3208	9mm
M1041 (Blue)	AB13	1305-01-536-7721	9mm
M1041 (Red)	AB14	1305-01-536-7722	9mm
M1041 (Blue)	AC36	1305-01-670-4234	9mm - LEAD FREE
M1041 (Red)	AC37	1305-01-670-4963	9mm - LEAD FREE

3. Special Requirements

a. M1041 (AA12, AA21, AB13, AB14, AC36, AC37) and M1042 (AB09, AB10, AB11) marking cartridges have been assigned an Electrostatic Discharge (ESD) Code of "E". Code "E" is issued to ordnance items that are not sensitive to 25 kV Human-Borne (PESD) or 300 kV Helicopter ESD (HESD).

b. M1042 (AC39, AC40, AC41) is safe for PESD exposure and Safe and operable for Vertical Replenishment (VERTREP) HESD exposure; alternatively stated: Not susceptible to VERTREP HESD exposure in its approved packaging configuration.

(1) The subject ordnance is not safe bare in the HESD environment. Helicopter or rotary wing aircraft rotors / blades must be still (off) and the aircraft grounded when the bare ordnance is in proximity of the aircraft.

(2) The subject ordnance must be sealed in its approved packaging configuration when exposed to HESD environment.

c. There are no Hazards of Electromagnetic Radiation to Ordnance requirements associated with the M1041 and M1042 marking cartridges.

END