

**UNITED STATES MARINE CORPS**  
**Marine Corps Base Camp Pendleton**



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**RANGE AND TRAINING AREA**  
**STANDARD OPERATING PROCEDURES**  
**(BO 3500.1N)**

**25 March 2008**



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Range Operations Division  
Operations and Training Department  
Box 555021  
Camp Pendleton, California 92055-5021



UNITED STATES MARINE CORPS  
MARINE CORPS BASE  
BOX 555010  
CAMP PENDLETON, CALIFORNIA 92055-5010

BO 3500.1N  
O&TROD  
25 Mar 08

BASE ORDER 3500.1N

From: Commanding Officer  
To: Distribution List

Subj: MARINE CORPS BASE, CAMP PENDLETON (MCB, CamPen), RANGES AND TRAINING AREAS (RTA), STANDARD OPERATING PROCEDURE (SOP)

- Ref: (a) MCO P3570.1B (Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat)  
(b) MCO 3574.2K (Entry Level and Sustainment Level Marksmanship Training with the M16A2 Service Rifle and M9 Service Pistol)  
(c) NAVMC 11381 (Expenditure Report)  
(d) Camp Pendleton Military Installation Map, V795S, Edition 2-NIMA  
(e) BO 5090.2A (Environmental Compliance and Protection Manual)  
(f) MCB, CamPen Aviation Training Facilities Inventory of 24 Feb 2005  
(g) MCWP 3-15.7 (Static Line Parachuting Techniques and Training)  
(h) BO P5000.2J (Base Regulations)  
(i) FM 23-30 (Grenades and Pyrotechnic Signals)  
(j) MCO P4400.150E w/ERRATUM CH1-2 (Consumer-Level Supply Policy Manual)  
(k) MCO P8020.10A (Marine Corps Ammunition Management and Explosives Safety Policy Manual)  
(l) BO P8000.3 [Ammunition and Explosives Safety (A&E Safety)]  
(m) OPNAVINST 5530.13B [Department of the Navy Physical Security Instruction for Sensitive Conventional Arms, Ammunition, and Explosives (AA&E)]  
(n) MCO 8025.1D w/CH1 (Ammunition and Explosive Safe Policies, Programs, Requirements, and Procedures for Class V Material)  
(o) MCO 5104.1B (Navy Laser Hazards Control Program)  
(p) BUMEDINST 6470.23 (Laser Safety Program Reference Guide)  
(q) FM 6-2 (Tactics, Techniques, and Procedures for Field Artillery Survey)  
(r) JtRegtO P3570.2B (Marine Corps Artillery Safety Standing Operating Procedures)  
(s) FM 6-50 (Tactics, Techniques, and Procedures for Field Artillery Cannon Battery)  
(t) TM 43-001-28 (Technical Data Sheets for Ammunition)  
(u) FACS FACSDINST 3120.1A (Amphibious Assault Helo Ops/Bombing and Strafing Regs/Amphibious Assault Area/Amphibious Vehicle Training Area)

1. Situation. The Commanding Officer is republishing information, instructions, and procedures governing the use of ranges, training areas, airspace and sea space operated and controlled by MCB, CamPen.

2. Cancellation. BO P3500.1M.

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

3. Mission. To ensure all agencies and units operating within Camp Pendleton ranges, ground and water areas, and airspace under the control of the Commanding Officer, MCB, CampPen adhere to these regulations.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. Final result desired is personnel operating within Camp Pendleton ranges, ground and water areas, and airspace operate in a safe manner, preserving life, equipment, and natural resources.

(2) Concept of Operations. This Order will be distributed as directed and all agencies shall review and incorporate procedures from this most current version.

b. Subordinate Element Missions. The Marine Corps Base Range Working Group will conduct an annual review of this Order.

c. Coordinating Instructions

(1) This Order contains substantial revision and should be completely reviewed.

(2) In the event these instructions conflict with those issued by higher authority, the orders of the higher authority shall take precedence. Notify the Commanding Officer (Attn: AC/S, O&T) of any conflict or question of interpretation.

(3) Review of the laser special instructions, aviation special instructions, range special instructions and the aviation facilities study should be accomplished by commanders and all personnel in a supervisory role prior to conducting any training aboard MCB, CampPen.

(4) Commanders of organizations utilizing the ranges of Camp Pendleton are encouraged to submit recommendations concerning improvements or changes to the Commanding Officer (Attn: AC/S, O&T).

5. Administration and Logistics. Directives issued by this Headquarters are published and distributed electronically via e-mail. Electronic versions of Base directives can be obtained at website <https://158.238.251.13/pendleton/ACSMANpower/Adjutant/BO/default.aspx>.

6. Command and Signal

a. Command. This Order is applicable to all commands, organizations, units and activities located aboard Camp Pendleton.

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

  
W. GILLESPIE  
By direction

DISTRIBUTION: A-3  
B



UNITED STATES MARINE CORPS  
MARINE CORPS BASE  
BOX 555010  
CAMP PENDLETON, CALIFORNIA 92055-5010

BO 3500.1N Ch-1  
O&TROD  
7 Apr 09

BASE ORDER 3500.1N Ch-1

From: Commanding Officer  
To: Distribution List

Subj: MARINE CORPS BASE, CAMP PENDLETON (MCB, CAMPEN) RANGES AND TRAINING AREAS (RTA), STANDARD OPERATING PROCEDURE (SOP)

Encl: (1) New page inserts to BO 3500.1N

1. Situation. To transmit new pages to BO 3500.1N.
2. Mission. This change incorporates new policy regarding aviation operations in the R-2503 Special Use Airspace on MCB, CamPen. It sets forth responsibilities for aircrew certification, clarifies aviation ordnance delivery procedures, and updates Close Air Support operations.
3. Execution. Remove pages iii through vi, 4-1 and 4-2, 4-7 through 4-16, 5-1, 4-29 and 4-30, 5-1, A-3 and A-4, and B-1 through B-3 of the basic order and replace with corresponding pages in the enclosure.
4. Summary of Changes. The changes to Chapter 4 of the order are extensive, and it should be reviewed in its entirety.
5. Filing Instructions. This change transmittal will be filed immediately after the signature page of the basic order.

  
S. A. FERRANDO  
By direction

DISTRIBUTION: A-3  
B

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distribution is unlimited.

LOCATOR SHEET

Subj: MARINE CORPS BASE, CAMP PENDLETON (MCB, CamPen), RANGES AND TRAINING  
AREAS (RTA), STANDARD OPERATING PROCEDURE (SOP)

Location: \_\_\_\_\_  
(Indicate location(s) of copy(ies) of this Order.)

RECORD OF CHANGES

Log completed change action(s) as indicated.

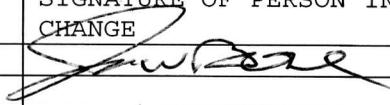
CHANGE NUMBER	DATE OF CHANGE	DATE ENTERED	SIGNATURE OF PERSON INCORPORATING CHANGE
Change 1	09/04/07	09/04/07	

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Chapter 1

General

1000. PURPOSE AND SCOPE

1. General. This Order prescribes the regulations and general precautions to be taken in the firing or other use of live ammunition and explosives; the use of training areas, airspace, sea space, landing and drop zones (DZs); and other range and training facilities at MCB, CamPen.

2. Purpose. The primary purpose of this Order is to ensure a safe and realistic training environment. Nothing contained in these regulations will be construed as permitting live-fire or other training activities that endanger life or property.

3. LFAM. Policies concerning Live-Fire and Maneuver (LFAM) training are promulgated by the Range Control Officer (RCO). All LFAMs shall be conducted in accordance with a brief approved by the RCO.

4. Warning. Failure to comply with these regulations may subject the offender to administrative action or disciplinary action under the Uniform Code of Military Justice.

1001. UNIT COMMANDER

1. General. Ensure compliance with this Order, the most current edition of directives in the MCO 3570 series [references (a) and (b)], applicable Technical Manuals (TMs), Field Manuals (FMs), and Marine Corps Warfighting Publications (MCWPs), applicable Safety Of Use Memorandums (SOUMs), installation range guidance, and applicable Standard Operating Procedures (SOPs) for safe training and firing for each weapon system within the command.

a. Designate an Officer in Charge (OIC) and or a Range Safety Officer (RSO) for all training events per this Order and in accordance with the provisions listed in figure 1-1 and 1002 and 1003 of this Order.

b. ORM. Develop Operational Risk Management (ORM) procedures for all phases of training events. A signed ORM, with OIC and RSO designated, must be on hand during all training activities. An ORM worksheet is provided in Appendix G of this Order.

2. Briefing. Ensure all personnel within the command are briefed on installation range procedures and safety requirements including required personal protective equipment.

1002. OFFICER-IN-CHARGE (OIC) OF TRAINING

1. General. The OIC shall be of equivalent or senior rank to the RSO. The OIC maintains surveillance of firing and safety within the entire surface and vertical hazard space of the assigned range; he/she shall be physically present at live-fire events. The OIC is a supervisory position. The OIC may personally participate in training.

<b>Officer-in-Charge (OIC)/Range Safety Officer (RSO) Appointment Requirements</b>						
<b>EVENT</b>	<b>OIC*1</b>			<b>RSO</b>		
	<b>OFF</b>	<b>WO</b>	<b>NCO</b>	<b>OFF</b>	<b>WO</b>	<b>NCO</b>
<b>HC Smoke/Chemical Agents</b>	X	X	E-6	X	X	E-6
<b>AT-4 9mm Tracer Trainer, 9mm Spotting Rifle (SMAW) not rocket, LAV Brewster, Practice Hand Grenades, All 40mm TP, Laser Devices, Simulators, Trip Flares, Small Arms, Machine Guns, .50 cal and below</b>	X	X	E-6	X	X	E-5
<b>Field Artillery</b>	X	X	E-7	X	X	E-6
<b>LFAMs, Combined Arms Live-Fire Exercises, Aerial Gunnery, Air Defense Weapons, *2</b>	X	X	E-7	X	X	E-6
<b>Aerial Gunnery &amp; Air Defense Weapons; Flame-Throwers; Live Hand Grenades, Grenade Launchers, (All 40mm HE); Live Mines, Demolitions; Tank &amp; Fighting Vehicle Cannons; Recoilless Rifles</b>	X	X	E-7	X	X	E-6
<b>Mortars/USMC</b>	X	X	E-6	X	X	E-5
<b>SRC-1 ITEMS: Javelin/AT-4/Dragon/Stinger RSO REQUIREMENTS NON WAIVERABLE</b>	X	X	E-7	X	X	E-6
<b>Live-Fire Exercises Using Organic Weapons, Squad Company, Battery, and Troops. Direct Fire NON SRC-1 ITEMS: TOW, SMAW &amp; ROCKET MISSILES</b>	X	X	E-7	X	X	E-6
<b>Parachute Ops/(HST) Ops/ Dive Ops (Qualified Instructor)/Rappelling/HRST</b>	X	X	X	X	X	E-4
<b>Training Area/Bch Operations/Training Facilities (NO Munitions)</b>	X	X	X	X	X	E-4
<b>Training Area/Bch Ops/Training Facilities (With Munitions)</b>	X	X	E-6	X	X	E-5
<b>Mortars US Army</b>	X	X	E-6	X	X	E-6
<b>Special Effects Small Arms Marking System (SESAMS)</b>	X	X	E-7	X	X	E-6
<b>Steel Reactive Targets (SRT)</b>	X	X	E-7	X	X	E-6
<p>*1. The OIC shall be of equivalent or senior rank to the RSO. *2. The OIC shall be a field grade officer for battalion or larger Combined Arms Live-Fire Exercises (CALFEXs) and LFAMs.</p>						
<p>Figure 1-1.--Officer-in-Charge (OIC)/Range Safety Officer (RSO) Appointment Requirements</p>						

2. Training

a. The OIC shall have completed the Distance Learning Range Safety Course (DLRS) and the Range Safety Certification Course (RSCC).

b. Upon successful completion of the RSCC, the OIC's Commanding Officer will submit a roster to the RCO certifying their personnel as OICs.

c. Range Operations will complete the certification process by entering those names into the Range Facility Management Support System (RFMSS) data base.

### 3. Responsibilities

a. The OIC shall have a detailed Operational Risk Management (ORM) worksheet signed by the unit commander that covers all phases of training to be conducted in his/her possession at all times while training. For LFAM training, an approved concept of operations, scheme of maneuver and RCO Brief Sheet must also be in his/her possession at all times while training.

b. The OIC shall ensure all personnel wear the appropriate personal protective equipment. Helmets and flak jackets shall be worn for any live-fire event involving movement or maneuver, high explosives or grenades, machinegun, or close quarters battle in shoot houses. For all other training, either the ORM or unit SOP will determine if helmets and flak jackets will be required.

c. The OIC shall be certified on the weapon(s) or weapon systems(s) being used and brief the RSO on the duties to be performed in support of the training event. The OIC needs to clearly establish the requirement for the RSO to brief him/her on the safety of the facility/unit, and the readiness to commence live-fire operations prior to the start of firing.

d. The OIC is also responsible for ammunition and explosives on the NAVMC 11381, Expenditure Report [reference (c)]. Refer to paragraph 7001.4 in Chapter 7 of this Order.

e. OICs are further responsible for ammunition and explosives malfunction reports. Refer to paragraph 7003 in Chapter 7 of this Order.

f. The OIC will verify that the RSO is qualified with the weapon(s) or weapon systems being used.

g. The OIC will ensure that the RSO provides for an emergency vehicle and medical personnel for all training events as prescribed in figure 1-2.

h. In the event of a Medical Evacuation (MEDEVAC), the OIC or an appointed representative will suspend all training, and will:

(1) Ensure first aid is rendered.

(2) Ensure LONGRIFLE is contacted and the location, nature of the accident, and assistance required is reported. If radio communication fails, use any means available to contact LONGRIFLE (760) 725-3974.

(3) Refer to paragraph 1009 in this Chapter for additional MEDEVAC information.

#### 1003. RANGE SAFETY OFFICER (RSO)

1. General. The RSO assists in maintaining surveillance of firing and safety within the entire surface and vertical hazard space of the assigned range; he/she shall be physically present at the training site. The RSO is a supervisory position. The RSO shall not personally participate in training. THE RSO WILL NOT BE ASSIGNED OTHER DUTIES NOR FIRE A WEAPON, and will be the last to leave the range following completion of firing and clean-up, ensuring that the range is clear of all personnel and equipment. The RSO will ensure that all trash and brass are removed from the range after completion of training.

## 2. Training

- a. The RSO shall have completed the Distance Learning Range Safety Course (DLRS) and the Range Safety Certification Course.
- b. Upon successful completion of the RSO class, the RSOs Commanding Officer will submit a roster to the RCO certifying their personnel as RSOs.
- c. Range Operations will complete the certification process by entering those names into the Range Facility Management Support System (RFMSS) data base.

## 3. Responsibilities

- a. The RSO is responsible for the enforcement of applicable safety regulations contained in this Order, directives in the MCO 3570 series, and other applicable field, technical, and ordnance publications.
- b. The RSO must be able to identify the right and left lateral limits for all live-fire ranges, and that each firing position observes the proper left and right limits for each firing lane. The RSO will ensure that no cross firing between firing lanes occurs.
- c. The RSO shall maintain communications with LONGRIFLE at all times. When communications are lost, the RSO will cease all training until communications are reestablished.
- d. RSOs shall conduct the check-in/check-out process for all ranges and training areas as outlined in paragraph 6002 in Chapter 6 of this Order.
- e. The RSO for rappelling/HRST training shall be a qualified Rappel/HRST Master and be present at all times during rappel/HRST operations.
- f. The RSO for assault climbing training shall be a qualified Assault Climber/Mountain Leader, and be present at all times during training.
- g. The RSO for High Concentrated (HC) smoke and Nuclear Biological and Chemical (NBC) operations must be a qualified 5711/5702 or equivalent.
- h. The RSO shall ensure all weapons settings [i.e., headspace, timing, Fire Direction Center (FDC), and safety "T"] are correct.
- i. The RSO shall provide for an emergency vehicle and medical personnel for all training events as prescribed in figure 1-2.

## 1004. SAFETY

### 1. Safety

- a. Safety is the responsibility of every individual, at all times, and is a key factor in successful training. Concerns for safety, however, should never be limited to the training event itself, but should always include associated activities as well; including any movement to and from training, maintenance activities, bivouac operations, etc.
- b. Any individual who observes an unsafe condition shall report the location and condition immediately to LONGRIFLE. A training event or any

<b>MEDICAL SUPPORT REQUIREMENTS FOR LIVE-FIRE AND TRAINING AREAS</b>			
<b>CATEGORY</b>	<b>DESCRIPTION</b>	<b>MINIMUM CAPABILITIES</b>	<b>ALLOWED TRAINING COVERAGE</b>
1	Combat Life Saver	<ul style="list-style-type: none"> <li>• Patient assessment</li> <li>• Basic First Aid</li> <li>• Basic Airway Management</li> <li>• Cardiopulmonary resuscitation</li> </ul>	<p>Any training not involving ordinance</p> <p>Exceptions: Dive Ops, Para Ops, HRST Ops</p>
2	EMT-I All Corpsmen or Medics	<ul style="list-style-type: none"> <li>• Patient assessment</li> <li>• Advanced first aid</li> <li>• Use of adjunctive breathing aid &amp; administration of oxygen</li> <li>• Automated External Defibrillator</li> <li>• Cardiopulmonary resuscitation</li> <li>• Transportation of ill &amp; injured persons</li> <li>• Manual Defibrillation</li> <li>• Endotracheal (ET) intubation</li> <li>• Esophageal-trachea airway device (combitube)</li> <li>• Endotracheal (ET) intubation</li> </ul>	<p>Cat-1 Coverage</p> <p>Dive Ops, Para Ops, HRST Ops</p> <p>Static Fire of Small Arms (.50 caliber &amp; below)</p>
3	EMT-II All Corpsmen or Medics	<ul style="list-style-type: none"> <li>• All EMT-I skills</li> <li>• EKG monitoring</li> <li>• Defibrillation &amp; Cardioversion</li> <li>• Antishock trousers</li> <li>• Intravenous infusion</li> <li>• Esophageal airway</li> <li>• Obtain venous blood</li> <li>• 9 medications</li> <li>• Laryngoscope</li> <li>• Gastric suction</li> </ul>	<p>Cat-2 Coverage</p> <p>Any High Explosives or Demolitions</p>
	Paramedic Special Ops Corpsmen Medics IDTs	<ul style="list-style-type: none"> <li>• All EMT-I and IIs skills and medications</li> <li>• Laryngoscope</li> <li>• Endotracheal (ET) intubation (adults, oral)</li> <li>• Glucose measuring</li> <li>• Valsalva's Maneuver</li> <li>• Needle thoracostomy and cricothyroidotomy</li> <li>• Nasogastric intubation (adult)</li> <li>• 21 medications</li> </ul>	<p>Any Fire &amp; Movement/Maneuver</p> <p>Any CQB/IBT Training</p>

Figure 1-2.--Medical Support Requirements for Live-Fire and Training Areas

other activity affected by the unsafe condition shall be halted until the unsafe condition has been corrected. Anyone has the option to call "cease-fire" over their respective LONGRIFLE frequency. The greatest danger to life and limb is associated with live-fire; therefore, range restrictions for various weapons/ammunition are listed the special instructions for each range and in paragraph 1005 of this Chapter and in Appendix C of this Order.

c. Where conflicts occur with safety instructions contained in Field and Technical Manuals, the provisions in the MCO 3570 series and this Order shall be adhered to.

#### 1005. RANGE RESTRICTIONS

##### 1. General

a. Firing or bombing will be conducted on authorized ranges and LFAM areas only. This does not prohibit the controlled use of blank ammunition or noisemakers (small, controlled demolition charges of ¼ pound of TNT or equivalent) in accordance with this Order.

b. The use of chemical ammunition will be in strict compliance with paragraph 7008 in Chapter 7 of this Order. The use of riot agents (CS) and other obscuration materials shall be in strict compliance with paragraph 7009 in Chapter 7 and Appendix E of this Order.

c. Personnel not specifically scheduled to be on ranges or training areas are not authorized.

##### 2. POVs and Privately Owned Weapons

a. Privately owned vehicles (POVs) are prohibited on all live-fire ranges, Artillery Firing Areas (AFAs), Mortar Firing Areas (MFAs), and training areas with the exception of the following ranges and training facilities: 102, 103, 116 series, 130 series, 131 parking lot, 213, 214, 314 series, Edson Range Complex, 25 Area Combat Town parking lot, and SIAC parking lot. Parking of POVs on access roads to live-firing ranges, AFAs, MFAs, and training areas is also prohibited without a POV pass from the RCO. Prior to being issued a POV pass, personnel shall submit a command letter (Battalion-level) to the RCO justifying the need to utilize a POV in support of training. During authorized hunting and fishing periods, the RCO may authorize hunter POV parking along main roads in training areas.

b. Privately owned weapons are only authorized on MCCA-designated ranges.

c. Carrying military weapons to and from any range in POVs is not authorized without organizational commander's approval.

d. Violation of any vehicle provisions may result in the issuance of a traffic violation and appearance before the MCB Magistrate and/or administrative action or disciplinary action under the Uniform Code of Military Justice.

e. All use of All Terrain Vehicles (ATVs) must be approved by the RCO [seven (7) days prior to the event]. All operators shall be required to have a current Base ATV Safety Card and all ATVs must be fitted with a spark arrestor.

3. Civilians

a. Civilians in unit-sponsored functions which include participation or observation, may be requested no less than thirty (30) days prior to the event, through the Commanding Officer, MCB, CamPen (Attention: AC/S, O&T).

b. DOD Employees or Government Contractors operating within the scope of their employment or contract are not subject to this provision.

4. Physical Training. Individual Unit PT and or recreational activities in training areas shall be scheduled via the Range Scheduling Office. This includes individual PT.

5. Alcohol. Alcohol is not allowed on ranges or in training areas unless a waiver has been granted by the Commanding Officer, MCB, CamPen.

1006. WAIVERS TO REGULATIONS. Requests for waivers to the provisions contained in this Order will be addressed to the Commanding Officer, MCB, CamPen (Attention: AC/S, O&T) no less than thirty (30) days prior to the planned event. It is recommended that waiver requests be coordinated with the RCO prior to submission. Refer to figure 1-3 for waiver, brief, SDZ diagram, and airspace requirements.

1007. ACCIDENT REPORTING. When a training accident occurs on a range or in a training area, a report will immediately be made to LONGRIFLE by radio or telephone. In addition, the unit commander will immediately notify the appropriate chain of command. When ordnance material is involved, the accident will also be reported to the Base Explosive Safety Officer and an ordnance malfunction report shall be filed, if required.

1008. AIRCRAFT ACCIDENTS

1. Procedures

a. Notify LONGRIFLE in the event of any aircraft accident on Camp Pendleton ranges or training facilities.

b. The following information shall be reported, if available.

(1) Location

(2) Type of aircraft

(3) Personnel involved

(4) Aircraft armament

(5) Name, grade, organization, and present location of the caller

c. If the crash occurs in an impact area, LONGRIFLE will ensure live firing in that area has ceased and an EOD Technician or individual designated by the RCO is present before authorizing entry into the impact area.

d. Firing shall not resume until the rescue has been completed and all personnel and equipment have been accounted for.

<b>WAIVER, BRIEF, SDZ DIAGRAM, AND AIRSPACE REQUIREMENTS</b>		
WAIVERS	Thirty (30) days prior to event <u>with all endorsements</u>	
BRIEFS	LFAMs	Sixty (60) days prior to training evolution if not in a dedicated impact area, with all SDZs/Concept of Operations/signed ORM.
	MFAs	Thirty (30) days prior to training evolution with all SDZs (if applicable)/Concept of Operations/signed ORM (face to face with RCO).
	SESAMS	Seven (7) days prior to training outside of Combat Towns/shooting houses. All training must be conducted IAW the SOUM.
	CAS/UAVs/Field ASP	Seven (7) days prior to training.
	Live-fire Movement/Maneuver on permanent ranges	Fourteen (14) days prior to training evolution, with all SDZs/Concept of Operations/signed ORM.
SDZs	Fourteen (14) days prior to the training evolution (unless in conjunction with a previously mentioned range/event). <i>Required for all indirect-fire weapons unless utilizing the pre-established SDZs on file with the RCO.</i>	
AIRSPACE REQUESTS	R-2503A/B	Five (5) working days prior to event for activation of airspace between the hours of 0000 and 0559.
	R-2503C	Twenty (20) working days prior to activation of airspace.
	R-2503D	Thirty-five (35) working days prior to activation of airspace.
Figure 1-3.--Waiver, Brief, SDZ Diagram, and Airspace Requirements		

1009. MEDICAL EVACUATION (MEDEVAC) PROCEDURES

1. General

a. LONGRIFLE is the coordinator for all MEDEVACs. LONGRIFLE must be notified of all accidents or medical emergencies occurring at Camp Pendleton ranges and training facilities. It is critical in order to ensure a timely response to training accidents, that the incident details, victim's injuries, vital signs, and assets necessary to best address victim injuries are clearly relayed to LONGRIFLE. The following information pertains to MEDEVAC responses.

(1) The Camp Pendleton Naval Hospital is not trauma-capable.

(2) The Camp Pendleton (Base) Fire Department must be on-scene for the arrival of any civilian air ambulance to ensure the victim(s) is prepared

for transport and the landing zone is identified and marked in accordance with civilian air ambulance expectations.

(3) Civilian air ambulance companies advertise a fifteen (15) to twenty (20) minute response time, but may be longer if their local assets are already committed.

(4) A victim should not be transported via military aircraft (helo). It may be better to await a civilian air ambulance and the Base Fire Department to adequately stabilize the victim for civilian air ambulance transport.

(5) Extractions requiring airborne support may be delayed for up to one (1) hour due to the non-availability of local airborne extraction assets.

(6) Camp Pendleton does not have a military MEDEVAC aircraft on standby.

b. Competent medical personnel or the senior Marine on location shall determine the extent of a medical emergency. Sound judgment will always be paramount in any successful response to an emergency.

c. In most circumstances, evacuation by vehicle will be the most effective means of transportation. Sound judgment will always be the factor in determining which mode of transportation to use.

d. Red pyro/smoke is designated as the alternate signal for any emergency. Therefore, red pyro/smoke will not be used unless a bona fide emergency exists. Any unit/aircraft sighting red pyro/smoke should check-fire and immediately contact LONGRIFLE.

2. Categories. There are three classifications of MEDEVACs. The MEDEVAC category shall be relayed to LONGRIFLE.

a. Emergency/Urgent (Life Threatening). Requires immediate response. This category includes any injury considered to be life threatening or loss of limb status if not transported in a timely manner (typically by civilian air ambulance).

b. Priority (Non-Life Threatening). Requires timely response. This category includes any serious injury not considered to be life threatening or loss of limb status. Evacuation normally accomplished by ground ambulance.

c. Routine (Minor Injuries). May or may not require transport. This category includes minor injuries, (cuts, bruises, sprains not involving head or spinal cord injury). MEDEVAC, if required, is normally accomplished by organic unit assets.

3. MEDEVAC Controlling Agency

a. LONGRIFLE will remain the principal controlling agency during an actual MEDEVAC emergency. If a radio is the only means of communication, contact LONGRIFLE on any available frequency. If a radio is not available, contact LONGRIFLE at (760) 725-3974. If a telephone or radio is not available, use RED SMOKE/RED PYRO with caution.

b. DURING A MEDEVAC, ALL UNITS ON BASE RANGE CONTROL SAFETY NETS SHALL CONTINUE TO MONITOR THE NETS, BUT SHALL NOT TRANSMIT UNLESS THEY REQUIRE ADDITIONAL MEDEVAC SUPPORT.

c. Unless deemed otherwise by competent authority, names and full social security numbers of injured personnel should not be relayed over the radio. Range inspectors may be used to relay or gather sensitive accident and/or medical information.

1010. FIRE DANGER RATING (FDR)

1. General. FDRs and associated control measures are promulgated to reduce the danger from wildland fires. FDRs are applicable to all organizations and individuals at Camp Pendleton at all times.

2. FDRs. FDRs are defined in figure 1-4 of this Order.

3. Dissemination

a. The FDRs are determined and disseminated by the Base Fire Department. They are also available on the Range Operations Division Share-Point intranet site.

b. When the FDR changes, a notice reinforcing the FDR will be sent by the Range Operations Division (AC/S, O&T) to all units at Camp Pendleton.

4. Action

a. RSOs shall allow firing or training to commence only after ascertaining the FDR in effect and adopting the appropriate fire prevention measures.

b. LONGRIFLE shall notify RSOs of FDR changes as they occur.

c. In the event of a wildland fire on any range, impact, or training area, the RSOs will immediately ensure that no personnel are in danger and then notify LONGRIFLE by the most expeditious means possible stating the exact location and extent of the fire and its proximity to any personnel, equipment or property (to include targetry/equipment/signage) that may be in danger. LONGRIFLE will then instruct the RSOs as to what action to take prior to the arrival of the Base Fire Department. The RSO shall follow the directions of LONGRIFLE and or the Base Fire Department to ensure the safety of personnel and equipment. UNDER NO CIRCUMSTANCES WILL ANYONE ENTER AN IMPACT AREA TO FIGHT FIRES.

d. The RCO will monitor all range and training area fires as they occur, and is authorized to assist the Base Fire Chief to safeguard government property and personnel. This will include the control of firing and the removal of units from training areas threatened by fire. Maximum effort will be made not to interfere with scheduled training, however, safety considerations shall take precedence.

e. Fires will not be started on any range or in any training area except when authorized by the AC/S, O&T. Cutting of trees and brush for such fires is prohibited per paragraph 2001.1 in Chapter 2 of this Order. Fires will be carefully extinguished prior to leaving the area. FIRE WILL NOT BE PERMITTED WHEN the FDR is **VERY HIGH** or **EXTREME**.

<b>FIRE DANGER RATINGS</b>		
<b>FIRE DANGER RATING (HAZARD)</b>	<b>CAUTION TO BE EXERCISED</b>	<b>NECESSARY PRECAUTIONS</b>
0 - 30 (LOW)	Use normal caution.	Any type of ammunition may be used with care. Smoking is permitted.
31 - 40 (MODERATE)	Use normal caution. Fires will start easily.	Any type of ammunition may be used with care. Smoking is permitted.
41 - 60 (HIGH)	Use extra caution. Fires will start very easily.	The beginning of the high danger period. Any type of ammunition may be used, with care, on ranges and within impact areas. Recommend the use of pyrotechnics, demolitions, and heat or flame-producing devices within training areas be limited as much as possible to cleared areas or areas previously burned for that purpose. Smoking is permitted only in cleared areas or firebreaks.  Note paragraph 1012.2 concerning restrictions in the perimeter training areas.
61 - 80 (VERY HIGH)	Use extreme caution. Fires are very hard to control.	Firing will be permitted on all ranges unless restricted by RCO. Minimal use of pyrotechnics, demolition, and heat or flame-producing devices (including blanks and smoke grenades) is allowed within training areas; however, use is restricted to cleared or previously burned areas only. Smoking will be permitted only in cleared areas or on firebreaks.  Note paragraph 1012.2 concerning restrictions in the perimeter training areas.
81 & Higher (EXTREME)	Flash condition. This is the <u>highest class of fire danger</u> . Fires started are practically impossible to extinguish and usually continue until danger rating conditions improve or burn themselves out. The <u>utmost caution with fire-producing agents and devices must be exercised at all times</u> .	<u>The firing of high explosives, pyrotechnics, incendiaries, or other ammunition likely to cause fires is prohibited unless specifically authorized by RCO.</u>  <b>The use of any type of training/live ordnance (to include blanks), heat or flame-producing devices (heaters, welders, stoves, or open fires) in training areas is strictly prohibited unless authorized by RCO.</b> <b>No off-road activities by vehicles (HMMWVs, etc.) are permitted without authorization from RCO.</b>  <u>Firing units will exercise maximum precautions to prevent fires from starting. Smoking shall not be permitted under any circumstances.</u>

Figure 1-4.--Fire Danger Ratings

f. Approval for using munitions not authorized during certain FDR conditions shall be submitted to the RCO.

g. Burning of powder may be conducted as described in Appendix D.

1011. PROCEDURES FOR DEALING WITH FIRES

1. General. Personnel training on Camp Pendleton will not generally engage in firefighting, and under no circumstances will personnel attempt to fight a fire in an impact area. Upon discovering a fire in a training area, the senior person present will determine whether personnel present can extinguish the fire. It is important to remember that firefighting is, at best, a very dangerous activity. Firefighting can be deadly, especially without proper training. In making this determination, the following facts should be considered with the greatest importance placed on safety of personnel.

- a. Size and type of fire.
- b. Speed at which the fire is spreading.
- c. Probability of injury to those personnel attempting to extinguish the fire.
- d. Probability of damage to government property.
- e. Equipment available to combat the fire.

2. Discovering a Fire. Upon discovering a fire, the OIC/RSO should take the following steps.

- a. Evacuate all personnel and equipment to safety as long as the removal of equipment does not endanger personnel.
- b. Inform LONGRIFLE of the fire size and location, cause, and type of fire (e.g., wildland fire, vehicle fire, fuel fire, etc.) if possible. If unable to contact LONGRIFLE, inform the Base Fire Department by the most expeditious manner at (760) 725-3333 or 911.
- c. Remain in the area with his/her unit in a safe area, subject to orders of the Base Fire Department.

1012. FIRE PREVENTION PLAN

1. General. Most wildland fires result from careless acts rather than being the result of normal training activities. All reasonable means available must be taken to prevent such fires, and to reduce damage when they do occur. All personnel must be aware of the dangers of fire at Camp Pendleton, and train in a manner that minimizes fires.

2. Fire Prevention Plan. Wildland fires remain the most destructive (and costly) threats to Camp Pendleton training resources. In past years more money has been spent on fire prevention, firefighting, and post-fire restoration than was obligated for range improvements. In an attempt to continue to control these escalating costs without seriously degrading realistic training, the following Base Fire Prevention Plan is in effect.

- a. As required, the Base Fire Department will conduct controlled burns.

b. Flame, heat-producing devices, pyrotechnics, or training activities in the perimeter training areas defined as Bravo I, II, III, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliet, Lima, November, and Sierra, that could cause a fire are PROHIBITED when the FDR is VERY HIGH or EXTREME unless approved by Range Control.

c. No ordnance of any kind, flame/heat-producing devices including blanks, or training activities that could cause a fire are authorized in the perimeter training areas during FDRs of VERY HIGH or EXTREME unless approved by Range Control.

3. FDR Updates. FDR updates may be received by contacting LONGRIFLE or accessing the Range Operation Share Point Web Site at <https://158.238.251.13/pendleton/OT/staff/rod/default.aspx>.

1013. CONTROLLED BURNS

1. The Base Fire Chief will conduct controlled burning. Requests for controlled burning on ranges and in training areas will be submitted to the RCO who will coordinate the request with the Base Fire Chief and AC/S, O&T. The Base Fire Chief will coordinate with the AC/S, ES.

1014. PERMITTED FIRING TIMES

1. 0600-2359. All weapons/ordnance are permitted.

2. 0000-0559. All weapons/ordnance may be permitted by Range Operations. A request must be submitted via RFMSS or e-mail to Range Scheduling at least five (5) working days in advance.

1015. CAMP PENDLETON MILITARY INSTALLATION MAP

1. Grid Coordinates. Unless otherwise described, all grid coordinates used in this Order correspond to the Camp Pendleton Military Installation Map; V795S; 1:50,000; NAD 83/WGS 84 [reference (d)].

2. Magnetic Headings/Directions. Unless otherwise stated, all headings/directions used in this Order are magnetic.

3. Ordering Map. You may order the Camp Pendleton Military Installation Map; V795S; 1:50,000; NAD 83/WGS 84 [reference (d)] directly from the National Imagery and Mapping Agency (NIMA). The NSN is 7643014836697, and the reference number is V795CPPENDLMIM (select current edition).

## Chapter 2

### Environmental Procedures

2000. GENERAL. The ranges and training areas of Camp Pendleton are heavily used. Camp Pendleton is also the home of many endangered species, wetlands, sensitive habitats and cultural resource sites, which are protected by federal laws strictly enforced by local regulatory agencies. To successfully achieve all training objectives while complying with environmental laws and regulations, it is essential to consider environmental concerns while planning training operations and exercises. Proper planning will preserve all training facilities for future generations of Marines, therefore, it is essential that training units adhere to the provisions in this Chapter. All users of ranges and training areas are responsible for knowing and adhering to applicable environmental laws and regulations, including, but not limited to, the current Fire Danger Rating and restrictions associated with the environmentally sensitive areas identified on both the Camp Pendleton Military Installation Map [reference (d)] and the most current MCB Environmental Operations Map. The MCB Environmental Operations Map is a Geospatial Information System (GIS) Map, and may be obtained through the AC/S, ES. Questions concerning applicable environmental regulations may also be referred to the AC/S, ES [National Environmental Protection Act Branch (NEPA Branch) at (760) 725-9759/9763].

#### 2001. ENVIRONMENTAL CONSTRAINTS APPLICABLE TO ALL TRAINING ACTIVITIES

1. Prohibited Activities. The following activities are prohibited on all ranges and training areas aboard Camp Pendleton.

a. Burying, dumping, abandoning, or disposing of solid waste (e.g., trash, rubbish, or garbage), except in approved containers (i.e., "dumpsters") or at established landfills.

b. Burying, dumping, abandoning, or disposing of any type of military munitions.

c. Unlawfully disposing hazardous waste, including unlawfully releasing (e.g., venting, draining, or spilling) oil, fuel, and all other hazardous substances from vehicles, equipment, storage tanks, or containers into the air, ground, or water.

d. Removing or intentionally destroying threatened or endangered plants, trees, brush, cactus, or any other vegetation (refer to the MCB Environmental Operations Map). Cutting or removing tree limbs or large portions of any other plant is also prohibited. Limit camouflage material to previously felled vegetation.

e. Contact the the AC/S, ES prior to conducting activities involving cutting/removing/trimming of brush, trees, cactus, or any other type of vegetation that may be considered threatened or endangered as indicated by the MCB Environmental Operations Map; and prior to any activity involving soil excavation, grading, filling, or digging fighting positions in or adjacent to protected habitat areas as indicated by the MCB Environmental Operations Map.

f. Killing, injuring, or harassing wildlife and livestock. Killing poisonous snakes and other wildlife in self-defense is not prohibited. Most

snakebites on the Base have resulted from untrained individuals trying to handle snakes. Contact the Base Game Warden for snake removal.

g. Removing (i.e., stealing), intentionally destroying, or intentionally disturbing archaeological, Native American, and/or historical materials, artifacts, buildings, and/or sites.

2. Earthwork. Impact berms contain lead, a toxic metal and potential hazardous waste. Consult with the AC/S, ES, before beginning earthwork on or near impact berms.

3. Violations. Violations of these provisions may result in disciplinary action under the Uniform Code of Military Justice, or prosecution in state or federal court. Violations of these provisions may also result in potential adverse impacts to future training opportunities aboard the Base.

2002. AREAS PROHIBITED TO TRAINING FOR ENVIRONMENTAL REASONS

1. Prohibited Areas. Prohibited land areas are listed below.

a. Designated historical/archeological sites.

b. Landfills.

c. Installation Restoration and National Priority List (NPL) environmental clean-up areas.

d. Any area where training land restoration and erosion control work is ongoing (usually, but not exclusively, coastal bluffs and terraces). These areas will be marked with appropriate warning signs and fences.

e. Training in the vicinity of rivers, creeks, and natural drainage areas may require special consideration; therefore, it is subject to the provisions of paragraph 2007 in this Chapter. Provisions contained in the most current MCB Environmental Operations Map may also apply.

f. Avoid, to the maximum extent possible, parking vehicles or heavy equipment under the canopies of trees. Do not dig fighting holes under the canopies of trees. These activities damage the root systems, eventually killing the trees.

g. Off-road vehicular traffic during periods of peak soil moisture conditions frequently results in severe gullyng and training land degradation. This leads to decreased training opportunities and hazardous conditions that create safety concerns. Whenever possible, vehicular traffic shall remain on designated roads following significant rainfall.

h. The Cocklebur Sensitive Area, consisting of non-beach lands west of the I-5 Freeway from the beach access road immediately north of MCTSSA to French Creek Lagoon, excluding the LCAC Facility (598 790 to 605 795 to 595 808 to 595 805 to beginning) is off-limits.

i. Areas marked with orange carsonite markers or signs, which say, "Off Limits for Environmental Reasons," "California Least Tern Nesting Site," or "Wetlands" are off-limits to training units.

2. Other restrictions. Specific operational restrictions for sensitive areas are delineated in paragraph 2007 in this Chapter.

2003. POLICE OF RANGES AND TRAINING AREAS

1. General. Police of ranges and training areas is the responsibility of the using unit. It is the responsibility of the OIC/RSO to ensure ranges, training facilities, and training areas used by their units have been properly policed. All solid waste brought to ranges, training facilities, and training areas; including cardboard, wrapping materials, food waste, communication wire, expended brass, and ammunition containers, shall be removed from those areas and recycled or disposed of in approved containers (i.e., "dumpsters") or established landfills. No unit will depart their training location until that area is in a proper state of police. An inspection by a Camp Pendleton Range Safety Specialist may be required prior to departure.

2. Dumpsters. Dumpsters are not provided and are not authorized at ranges or training areas.

3. Hazardous Material. Hazardous materials (HAZMAT) (e.g., weapons cleaning gear, paint, POLs, etc.) used while training shall be stored in approved, closed, leak-proof containers. All HAZMAT shall be clearly marked, identifying the contents of the container. All HAZMAT spills shall be reported immediately to LONGRIFLE, who will notify the Base Fire Department and the AC/S, ES (HAZMAT). Units shall use available resources to prevent and contain spills, at or near the source of the spill, and submit required formal spill reports to the AC/S, ES.

2004. FIELD HEADS, URINALS, AND WASTEWATER

1. General. Any organization assigned to a range and/or training area shall properly police heads in their assigned area. Trash will not be disposed of in any head, urinal, or chemical toilet.

2. Chemical Heads. Platoon size or larger units, and stationary units, shall use chemical heads. Chemical heads may be coordinated through Base Property (760)725-4532. Users shall also coordinate the planned location of heads via the Range Scheduling Office prior to placement. This ensures chemical heads will be clear of surface danger zones. As a last resort, squad size or smaller units maneuvering alone may use properly constructed straddle-trenches or cat holes to dispose of solid human waste. However, they shall not be constructed/dug in or adjacent to watercourses. For safety reasons, before using urinals and/or chemical heads, check them for poisonous insects and other hazards.

3. Showers. Wastewater from temporary showers (grey water) may be discharged to land if a local permit is obtained through the AC/S, ES. Provisions shall be made to ensure that all discharged grey water percolates at the discharge site; and does not flow to surface waters or dry watercourses. All grey water disposal shall comply with Preventive Medicine regulations and standards for military field operations.

2005. FIELD DRINKING WATER SUPPLY

1. General. All connections to the water system shall be attached in such a manner as to prevent cross-connections and back siphoning from a contaminated

source to the potable distribution system. Prevent water hoses at vehicle filling sites from contacting any source of contamination, including the vehicle, ground, tools, and equipment.

2. Pumping. Units shall obtain approval from the AC/S, FAC to pump water from any lake, pond, stream, river, well, storage area, sitting irrigation pumps, and well drilling equipment. Water drawn from the Base distribution system for further transport and uses as potable water shall be protected from accidental contamination. All hoses or valves marked "potable" shall be kept scrupulously clean at all times.

3. Reports. Report all instances of water pipe breaks, valve and pipe leaks, and other system failures to the AC/S, FAC (Emergency Maintenance Branch) at (760)725-4683/4368.

2006. OPERATION OF VEHICLES. Whenever possible, vehicles will use secondary [dirt or decomposed granite (DG)] roads within training areas. The speed limit is 25 mph for all areas, unless otherwise posted.

1. To the maximum extent possible, administrative vehicle traffic shall use existing roads and paths to or within the established camp, command post, or bivouac site.

2. Vehicles operating tactically, in support of a training objective, may transit terrain as dictated by the scenario, providing they do not damage threatened or endangered species habitat, or archaeological sites. Vehicles operating in the vicinity of creeks or rivers shall use existing roads, trails, and stream crossings. Traffic is not permitted in creek or river beds except at established crossings. Refer to paragraph 2007 in this Chapter for specific environmental restrictions in these areas.

3. Unit commanders are requested to use prudent judgment in the scheduling and conduct of training and exercises that might result in heavy vehicular traffic over recently burned terrain.

4. No off-road activities by vehicles [High Mobility Multi-Purpose Wheeled Vehicles (HMMWVs, etc.)] will be permitted when the Fire Danger Rating (FDR) is EXTREME, without permission from LONGRIFLE prior to entering the training area or range.

2007. ENVIRONMENTAL CONSIDERATIONS AND RESTRICTIONS

1. General. To comply with federal, state, and local laws for the protection of the environment, special care must be taken when conducting training in sensitive environmental areas. When planning training events, refer to the most current edition of BO 5090.2A, NEPA [reference (e)], the Camp Pendleton Military Installation Map [reference (d)] and the most current MCB Environmental Operations Map to determine locations of sensitive areas, and use the guidance found in this Chapter to determine applicable restrictions in those areas. For training events larger than a Marine Expeditionary Unit (MEU) in size, or when operational requirements conflict with the following guidance, exercise commanders must obtain approval from the AC/S, ES.

2. Environmental Training. Training for unit S-3 and S-4 officers/SNCOs interested in specific environmental training focused on operational planning and execution (i.e., MCB Environmental Operations Map) is provided by the AC/S, ES. Additional information and course schedule are provided in BBul

5090, or by contacting the Environmental Training Branch at (760) 725-7308/7309.

3. Environmental Documentation. Provided MEU and smaller size units use the training areas and ranges for the purposes specifically outlined in this Order, and strictly adhere to the environmental restrictions associated with each range, submission of environmental documentation is not required. Exercise commanders shall coordinate with the AC/S, ES to determine the level of environmental documentation required for exercises larger than a MEU in size, and when environmental restrictions in this Order conflict with training requirements. The following is the coordination lead time recommended for those actions requiring formal environmental documentation from the AC/S, ES.

- |                         |          |
|-------------------------|----------|
| a. Company size         | 60 days  |
| b. Battalion size       | 90 days  |
| c. Regiment size        | 120 days |
| d. Larger than regiment | 150 days |

4. Wetlands. Wetlands are found throughout Camp Pendleton, typically in valley bottoms, and are characterized by soil types, hydrology, and specific vegetation. Their distribution is not limited to "wet" areas. Activities in wetlands involving soil disturbance and/or fill may require a permit, and impacts to wetlands supporting threatened or endangered species will require special consultation and approval. Vehicles operating in the vicinity of wetlands are authorized year round, and shall remain on existing roads and creek crossings. Troop movement on foot is authorized year round on existing roads, trails and crossings. Off-road vehicular or foot traffic, excavations, and/or fill occurring in wetlands must be reviewed by the AC/S, ES, and receive appropriate permits prior to conducting the action.

5. Vernal Pools. Vernal pools are wetlands, usually holding water for only one to four months during late winter and spring, and are known to occur in several training areas on Camp Pendleton. The highest densities of vernal pools are found in the Bravo Two, Oscar One, Oscar Two, Tango, Uniform, and Victor Training Areas; and White Beach. Many of these pools contain rare and federally endangered plant and animal species. When operating within the vicinity of vernal pools:

- a. Foot traffic is authorized year round. Digging, including construction of fighting positions is prohibited in vernal pools.
- b. Vehicle/equipment operations near known vernal pool areas shall be kept on existing roads, year round. Contact the AC/S, ES prior to conducting activities involving soil excavation, filling, or grading.
- c. Bivouac/Command Post/Field support (e.g., showers, messing, fueling, water purification, etc.) activities shall be kept to at least 50 meters from identified vernal pools.

6. Coastal Marshes and Lagoons

a. Vehicles must stay on existing roads and trails in the vicinity of coastal marshes and lagoons from 1 March to 15 September. Foot traffic is

prohibited in all coastal marshes from 1 March to 15 September, and prohibited all year in the Santa Margarita Estuary (portions of Beach Section G or Blue Beach) and the mouth of Cocklebur Canyon (Beach Section F).

b. Vehicle operations and foot traffic in the vicinity of coastal marshes, estuaries, and lagoons are authorized year round on existing roads, trails and established crossings. Off-road vehicular traffic or foot traffic, excavations, and/or fill activities needing to occur in coastal marshes, estuaries, and lagoons must be reviewed by the AC/S, ES, and receive appropriate permits and approvals prior to conducting the action.

#### 7. Endangered Species

a. The endangered California Least Tern nests on most Base beaches between 1 March and 15 September. This bird uses coastal lagoons, mud/salt flats, beaches, dunes, ocean, and tide line for nesting, foraging, and resting. Training activities can disrupt nesting, frighten adult birds, cause nest abandonment, and separate chicks from their parents.

b. The threatened Western Snowy Plover nests on most Base beaches between 1 March and 15 September. They may be present on any Camp Pendleton beach throughout the year. This bird uses coastal lagoons, mud/salt flats, beaches, dunes, ocean, and tide line for nesting, foraging, and resting. Training activities can disrupt nesting, frighten adult birds, cause nest abandonment, and separate chicks from their parents.

c. The Light-footed Clapper Rail is a secretive marsh bird. This bird was last documented nesting at the Santa Margarita Estuary in 2003, but some are still occasionally found using the coastal marshes of the Base.

d. The endangered Tidewater Goby is a small fish living in the shallow water of coastal lagoons and estuaries on Camp Pendleton. These small fish are most abundant in lagoons where fresh water flowing downstream meets the salt water from the Pacific Ocean. All coastal estuaries and lagoons aboard Camp Pendleton provide habitat for this species, including those on Red, Blue, and Green Beaches; and Beach Sections D and F. Activities disturbing the waters and vegetation of coastal lagoons/estuaries, or causing sediment to be transported into these lagoons will affect the Tidewater Goby. Any vehicular traffic within or across a lagoon/estuary can be harmful due to the very limited area of suitable Goby habitat within most lagoons and estuaries. Even small POL leaks from vehicles can contaminate water enough to adversely impact the Gobies.

e. The endangered Southern Steelhead Trout is an extremely rare fish found in San Mateo Creek. Ocean-going steelhead can grow to 24" before returning upstream to spawn during the winter rainy periods. Spawning and rearing occurs in stream pools in the Delta Training Area and further upstream (off the Base). Southern Steelhead Trout may be adversely affected during this critical time since its lifecycle is adversely altered in the estuary, rearing pools, or flowing stream waters of San Mateo Creek.

8. Estuarine/Beach Endangered Species Management Zones. To protect the California Least Tern, Western Snowy Plover, Light-footed Clapper Rail and Tidewater Goby, the restrictions listed below apply when operating within the following areas: all coastal lagoons and estuaries; marshes and salt flats associated with San Mateo Creek, San Onofre Creek, Las Flores Creek, "Hidden Creek" grid coordinates 580818, Aliso Creek, French Creek, and Cocklebur

Creek watersheds; and the Santa Margarita Endangered Species Management Zone, defined as the beach area extending from the south end of White Beach (594 797) to the southern end of the Santa Margarita River Estuary, delineated by the dirt access road running seaward at the southern edge of the estuary (620 760), encompassing the Cocklebur Canyon outlet and the Santa Margarita River Estuary, extending inland to Stuart Mesa Bridge.

a. Obtain authorization from the AC/S, ES before entering any lagoon or estuary, marsh, mud/salt flat, or posted nesting area. Bivouacking and digging of fighting positions are prohibited in the vicinity of the Estuarine/Beach Endangered Species Management Zones during the period of 1 March to 15 September.

b. Between 1 March and 15 September, all activities involving smoke, pyrotechnics, loud noises, blowing sand, and large groupings of personnel [fourteen (14) or more] shall remain at least 300 meters away from fenced or posted nesting areas. All other activities shall be kept at least five (5) meters from these areas

c. Foot traffic involving less than fourteen (14) personnel shall be kept as far away as possible, and approach no closer than five (5) meters to posted nesting areas between 1 March and 15 September. Unit hikes shall remain on the hard packed sand, as close to the ocean water edge as possible. When passing posted nesting areas, minimize all noise.

d. Vehicle and equipment operations in the management zones shall be kept to a minimum between 1 March and 15 September. All vehicles shall travel on hard packed sand and shall not approach posted nesting areas or lagoons closer than five (5) meters. Speeds shall not exceed 25 mph. Tracked vehicles shall travel as close to the water (upper few inches of waves) as possible, year round, in the Santa Margarita Endangered Species Management Zone. Vehicle operations, inside fenced areas on the edge of the bluff between Aliso and French Creeks (White Beach), are not authorized between 1 March and 15 September.

e. Engineering operations, outside of approved landing exercise support, shall be coordinated with the AC/S, ES prior to the initiation of activities. Generally, earth-moving activity at beaches is authorized only for areas of invigorated sand at least 300 meters from posted nesting areas, unless specifically requested and approved by the AC/S, ES.

f. Boat operations are not authorized in lagoons and estuaries. Landing Craft Air Cushions (LCACs) shall not enter the management zones between 1 March and 15 September, except when entering or exiting seaward; and on return, shall exit the ocean heading directly up to the facility access ramp. Small boats may be permitted in the Santa Margarita Estuary between 16 September and 1 March, with prior approval from the AC/S, ES.

g. To the maximum extent possible, vehicles and troops accessing the beach at White Beach during the period of 1 March and 15 September shall follow a route along the base of the northerly bluff to maintain the maximum distance from the Tern colony.

## 9. Other Endangered Species

a. The Least Bells Vireo is a small, inconspicuous endangered bird living in low, dense growths of willows, brush, and weeds along the drainages

on Camp Pendleton between March and September. The Vireo is known to nest in the vicinity of the Santa Margarita River and in creek/river bottom areas in the following training areas: Alpha Two, Alpha Three, Bravo Three, Golf, Hotel, India, Juliett, Lima, November, Oscar One, and Oscar Two; and the Santa Margarita River basin.

b. The Southwestern Willow Flycatcher is a small, inconspicuous endangered bird living in taller trees, willows, brush, and weeds along the drainages on Camp Pendleton between March and September. The Flycatcher is known to nest in creek/river bottoms areas in the following training areas: Alpha Two, Alpha Three, Bravo Three, Golf, Hotel, India, Juliett, Lima, November, Oscar One, and Oscar Two; and the Santa Margarita River basin.

c. The endangered Arroyo Southwestern Toad is found in and around stream and river bottoms. This toad has been found along the Santa Margarita River; the DeLuz, Roblar, San Onofre, San Mateo, Cristianitos, and Talega Creeks; and within the Alpha One, Alpha Two, Alpha Three, Bravo One, Bravo Two, Bravo Three, Charlie, Delta, Golf, Foxtrot, Hotel, India, Kilo Two, Oscar One, Yankee Training Areas; and the Quebec and Whiskey Impact Areas. The adults breed and deposit their eggs in shallow pools adjacent to streams or in slow moving portions of the streams between February and June. Adult Toads have been found up to one kilometer from streams in many different habitats. Toads are active at night on roads and trails near streams, especially during wet weather in late winter and early spring.

d. For the conservation of the Least Bells Vireo, Southwestern Willow Flycatcher, and the Arroyo Southwestern Toad, the following measures shall be taken for training activities in creek/river bottom (riparian) habitat areas.

(1) Extreme caution beyond that required by the Fire Danger Rating (FDR) is necessary when using pyrotechnics; and when conducting other activities likely to cause a fire.

(2) Foot traffic is authorized year round on existing roads, trails, and creek crossings. Consult with the AC/S, ES prior to cutting/removing vegetation.

(3) Vehicles operating in the vicinity of creeks, rivers, or drainages shall use existing roads, trails, and established creek/river crossings. Vehicle traffic on roads in Arroyo Toad habitat between 15 March and 31 August shall be minimized to the maximum extent practical.

(4) Consult with the AC/S, ES prior to bivouacking, cutting/removing vegetation, trenching, grading, filling, or conducting engineering operations in or adjacent to creek/river bottom areas.

(5) Dust produced in or adjacent to creeks and rivers shall be minimized to the maximum extent practical.

e. Threatened California Gnatcatchers live in open to dense Coastal Sage Brush areas. These small songbirds are year round residents of Camp Pendleton. They are known to inhabit the Alpha Two, Bravo Two, Bravo Three, India, Juliett, Kilo Two, Lima, Mike, November, Oscar One, Oscar Two, Papa One, Papa Two, Romeo Two, Romeo Three, Tango, and Uniform Training Areas. Fires and other activities such as crushing or removing brush negatively affect these birds and their habitat. Activities involving loud noises, smoke, and concentrations of personnel disrupt their behavior, particularly

during the breeding season between 1 February and 15 August. For the conservation of this threatened species, the following measures shall be followed for training activities in identified occupied Coastal Sage Brush areas.

(1) Extreme caution beyond that required by the FDR is necessary when using pyrotechnics and when conducting other activities likely to cause a fire.

(2) Foot traffic between 1 February and 15 August shall be kept to existing roads, trails, and established training facilities to the maximum extent practical. Foot traffic may be authorized in California Gnatcatcher habitat areas between 16 August and 31 January; however, care must be exercised to avoid crushing or otherwise destroying brush vegetation.

(3) Vehicles may leave existing roads between 1 August and 31 January, FDR permitting, and provided brush vegetation is not crushed or removed.

(4) Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) shall be kept at least fifty (50) meters from California Gnatcatcher habitat areas, year round.

f. Endangered Pacific Pocket Mice live in very open to relatively dense brush areas within three miles of the coast. They have been found in the Oscar One Training Area, immediately east of the San Onofre II Housing Area, and State Park leased lands north of Cristianitos Road. These rodents spend the day in burrows and come out at night to feed on seeds. Nighttime aerial illumination can increase their susceptibility to predators between 15 March and 15 September, when they are most active above ground. Activities that could crush the rodents in their burrows, dig them up, or bury them shall not be permitted at sites they occupy. Soil compaction caused by vehicle operations off existing roads and trails degrade their habitat by preventing them from digging their burrows. Soil compaction occurs most easily between December and June, when soil is moist. For the conservation of this endangered rodent, the following measures shall be taken by units training in habitat areas.

(1) Foot traffic is authorized, year round; however, digging, including construction of fighting positions, shall be avoided.

(2) Vehicle/equipment operations near known habitat shall be kept on existing roads, year round. Contact the AC/S, ES prior to conducting activities involving soil excavation, filling, or grading.

(3) Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) shall be kept at least fifty (50) meters from Pacific Pocket Mouse habitat areas, year round.

g. The endangered Stephens Kangaroo Rat lives in relatively open (non-brush), weedy areas. They live in areas that frequently burn. This rodent is known to inhabit the Bravo One, Golf, India, Juliett, Kilo Two Training Areas; and the X-Ray, Whiskey, and Zulu Impact Areas. These rodents spend the day in shallow burrows and come out at night to feed on weed seeds. Activities that could crush the rodents in their burrows, dig them up, or bury them, shall not be permitted at occupied sites. Soil compaction caused by vehicle operations off existing roads and trails degrades their habitat by

preventing them from digging their burrows. Soil compaction occurs most easily between December and June, when soil is moist. For the conservation of this endangered rat, the following measures shall be followed by units training in habitat areas.

(1) Foot traffic is authorized year round; however, digging, including construction of fighting positions, shall be minimized.

(2) Vehicle/equipment operations near known habitat shall be kept on existing roads, year round. Contact the AC/S, ES prior to conducting activities involving soil excavation, filling, or grading.

(3) Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) shall be kept at least fifty (50) meters from the Stephens Kangaroo Rat habitat areas, year round.

10. Rare Plant Species. Rare and federally listed plant sites are found throughout Camp Pendleton, and are carefully noted on the MCB Environmental Operations Map. For the protection of identified sites, the measures listed below shall be followed by units training in the areas.

a. Foot traffic is authorized, year round; however, digging, including construction of fighting positions, shall be avoided at locations of rare plants.

b. Vehicle/equipment operations near known habitat shall be kept on existing roads, year round. Contact the AC/S, ES prior to conducting activities involving soil excavation, filling, grading, off-road vehicular operations, or vegetation cutting/removal.

c. Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) shall be kept at least fifty (50) meters from identified rare plant sites. No cutting or trimming of rare plants is allowed without consultation with the AC/S, ES.

11. Archaeological and Cultural Resources. Archaeological sites are located throughout Camp Pendleton. Archaeological sites are the physical remains of the lives and activities of the people who lived in the prehistoric or historic past, and may include artifacts such as stone (arrowheads, projectile points), human bone materials, pottery, and other physical remains of life. Some sites are visible on the soil surface; others are visible only after some level of ground disturbance has occurred. Since all sites and their contents are protected under law, approval must be obtained from the AC/S, ES prior to any activity adversely impacting archaeological sites. The Base has surveyed and documented the locations of all visible archaeological sites. For the protection of known and unknown archaeological sites, the following measures should be taken.

a. Foot traffic is authorized, year round. Digging, including construction of fighting positions is prohibited at known archaeological sites.

b. Vehicle/equipment operations shall be kept on existing roads through known archaeological sites, year round. Contact the AC/S, ES prior to conducting activities involving mechanical soil excavation, filling, or grading in the vicinity of known archaeological sites.

c. Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) shall be kept at least fifty (50) meters from identified archaeological sites.

d. When conducting operations, if archaeological materials are discovered on the ground or below soil surfaces, the following measures should be taken.

(1) Avoid disturbing any archaeological materials.

(2) Notify the AC/S, ES as soon as possible (with the exact grid coordinates, if possible, and site description).

(3) Do not remove materials from the area.

e. If human bone material (to include fragments) is discovered during any operation, the area must immediately be evacuated, leaving the remains intact. Notify LONGRIFLE as soon as possible.

12. Endangered Species Summary. Figure 2-1 provides a summary of endangered species/protected habitat locations.

Sensitive Environmental and Natural Resources in Training Areas										
Beaches and Training Areas	Least Bells Vireo	Arroyo Southwestern Toad	Stephens Kangaroo Rat	California Gnatcatcher	Least Tern/Western Snowy Plover	Pacific Pocket Mouse	Rare Plant Sites	Light-footed Clapper Rail	Vernal Pools	Southwestern Willow Flycatcher
Sect. A	X						X		X	
Sect. B							X		X	
Sect. C	X						X		X	
Sect. D							X		X	
Sect. E					X		X		X	
Sect. F				X	X			X	X	
Sect. G					X		X			
Sect. H					X					
Alpha 1	X	X								
Alpha 2	X	X		X			X			X
Alpha 3	X	X								X
Bravo 1		X		X			X		X	
Bravo 2		X		X			X		X	
Bravo 3	X	X		X						
Charlie		X					X			
Delta		X							X	
Echo							X			
Foxtrot							X			
India	X	X	X				X			X
Golf	X	X	X				X			
Kilo 1			X				X		X	
Kilo 2		X	X	X			X		X	
Juliett	X		X	X			X			
Lima	X			X			X			X
Mike	X			X			X			
November	X			X			X		X	
Oscar 1	X	X		X		X	X		X	
Oscar 2	X			X			X		X	X
Papa 1	X			X			X			
Papa 2				X			X			
Papa 3							X			
Romeo 1										
Romeo 2				X			X			
Romeo 3				X			X			
Tango				X						
SEE MCB ENVIRONMENTAL OPERATIONS MAP FOR SPECIFIC LOCATIONS										
Figure 2-1.--Sensitive Environmental and Natural Resources in Training Areas--Continued										

Chapter 3

Scheduling Procedures

3000. GENERAL

1. Scheduling. The Range Scheduling Office is the scheduling agency for all Camp Pendleton ranges, training areas, training facilities, airspace, and sea space. To schedule, the Range Control Scheduling Office must receive a Range Facility Management Support System (RFMSS) data entry A MINIMUM OF SEVEN (7) DAYS prior to the planned activity. If there is a legitimate reason for not using RFMSS, a Training Area Request (TAR) may be submitted to the Range Scheduling Office using the following methods: as an e-mail attachment (pndl\_otrangescheduling@usmc.mil), hand-delivered to the Range Scheduling Office (BLDG 2399) or via Naval message. The Camp Pendleton TAR is provided in Appendix G of this Order, on the Camp Pendleton web site, and on the Range Operations Division Share-Point site (<https://158.238.251.13/pendleton/OT/staff/rod/default.aspx>). RFMSS accounts can be established by contacting the RFMSS Administrator at (760) 725-0359.

2. Canceling. Once ground ranges, training facilities, airspace, and/or sea space have been scheduled, it is the responsibility of the unit scheduled to use the facility to conduct its training during the allotted time period. Should there be a requirement to modify a scheduled range time, or a need to cancel the range request, the unit shall notify the Range Scheduling Office via e-mail or fax at (760) 725-4090.

3001. SCHEDULING PRIORITIES

1. Precedence. Range and training facilities will be scheduled for requesting units in the precedence outlined in figure 3-1 of this Order.

2. "Priority Use" for Zulu Impact Area. To increase training efficiency, a "Priority Use" scheduling system for the Zulu Impact Area has been implemented at Camp Pendleton. "Priority Use" establishes priorities for range and airspace utilization for that particular day as follows.

a. Air Priority Days. Aviation operations have priority use of the Zulu Impact Area on the first three (3) Wednesdays and Thursdays of each month. Ground Units desiring to conduct Close Air Support (CAS) operations should schedule the event on Air Priority days. Parachute operations with patterns over flying the Zulu Impact Area will be afforded priority on air priority days only.

b. Ground Priority Days. Ground operations have "Priority Use" of the Zulu Impact Area on Monday, Tuesday, Friday, Saturday, and Sunday during the first three weeks of the month. During the last week of the month, ground operations have priority the entire week. Rotary-wing operations driven by ambient light requirements will also be considered on a case-by-case basis during the last week of the month.

3. "Priority Use" for the Whiskey Impact Area. "Priority Use" establishes priorities for range and airspace utilization for firing into the Whiskey Impact Area on that particular day as follows.

<b>SCHEDULING PRECEDENCE</b>			
PRECEDENCE	UNIT	REMARKS	SCHEDULING WINDOW
1	USMC Formal Schools	SOI, MCRD, WFTBN and AAS Bn	180 Days
2	MEU or higher level exercises (including USMCR) Division Schools and HIMARS	ADCON/OPCON units will schedule via higher headquarters, who will consolidate and submit to Range Scheduling	120 Days
3	FMF (including USMCR) Base Commands Navy Commands		90 Days
4	Other DoD/Reserve/ National Guard		60 Days
5	Civilian Law Enforcement/ Recreation/ Hobbyists		30 Days
Figure 3-1.--Scheduling Precedence			

a. Air "Priority Use." Monday through Friday, 1400 - 1700 and 2000 - 2300.

b. Ground "Priority Use." Monday through Friday, 0600 - 1400, 1700 - 2000, 2300 - 2400; and all day on Saturday and Sunday.

4. Non "Priority Use." Requests for non "Priority Use" of the Zulu and Whiskey Impact Areas must be submitted at least twenty (20) days prior to the event, but will not be approved until seven (7) days prior to the event; and will be disapproved if all conflicts cannot be resolved.

5. "Priority Use" Period. "Priority Use" will be not honored if the scheduling request is received less than seven days prior to the planned event.

6. Exceptions to "Priority Use." For key events (e.g., MCCREs, VIP Demos, FIREXs), when access to the Whiskey and/or Zulu Impact Areas is not accommodated by "Priority Use" as described in paragraphs 3001.2 and 3001.3, units may coordinate with the Director, Range Operations Division for access to impact areas for the number of consecutive days required to successfully accomplish required training.

3002. TRAINING AREA REQUESTS (TARs)

1. Scheduling

a. Units desiring to schedule a range or training area must use the methods described in paragraph 3000.1.

b. Typically, up to five units or 500 personnel will be scheduled in training areas, up to three units on the beaches and the boat basin, and only one unit on range and training sites (e.g., rappel towers, gas chambers).

c. Units desiring to occupy a range or training site, which is already scheduled by another unit shall obtain co-use.

(1) BOTH units must submit a completed Operational Risk Management (ORM) Form that, in addition to mitigating all other risks and assigning the RSO and OIC, explains how both units can accomplish their training safely. Both of these ORMs must be received by Range Scheduling at least five (5) working days prior to the start of the event. If the completed ORMs are not received prior to the deadline, co-use will automatically be denied. No co-use will be authorized or scheduled until both ORMs have been received and reviewed, and all conflicts resolved.

(2) Only the Range Control Officer (RCO) can approve co-use.

(3) After the co-use is granted by the Range Control Office, the second unit must schedule the range.

2. Beaches. Requests for use of the State Beach (north, center, and south), Green Beach, and leased areas will be submitted, in the same manner described above, thirty (30) days prior to the planned event. Approval will be on a case-by-case basis. Units must receive approval from the Assistant Chief of Staff, Marine Corps Community Services (AC/S, M CCS) for the use of these beaches prior to submitting a request to the Range Scheduling Office. You may contact the San Onofre Recreation Beach Office at (760) 725-7422/7935 or the Del Mar Recreation Beach Office at (760) 725-2134/2313.

3. Surface Danger Zone (SDZ) Diagram Overlays. For indirect-fire techniques requiring a SDZ diagram, the overlay shall be submitted to the RCO at least fourteen (14) days prior to firing unless the SDZ is on file with the RCO. All SDZs shall be constructed using the 1:50,000 Camp Pendleton Military Installation Map [reference (d)]. The SDZ diagram will be constructed per MCO 3570 series.

4. Waivers. An appropriate waiver request and any required overlays shall accompany any training not covered by this Order. Waiver requests shall be submitted to the Range Scheduling office at least thirty (30) days prior to the planned event per paragraph 1006 of this Order.

5. Hikes and Convoys. Units requesting training areas for hikes or convoys shall submit an overlay of the proposed route to the Range Scheduling Office at least fourteen (14) days prior to the event unless the overlay is on file with the RCO. The format for overlays can be obtained by calling the Range Scheduling Office at (760) 725-3510/4219.

6. Environmental. Any environmental considerations and requirements associated with the requested training shall be approved, prior to submitting

a TAR, by contacting the AC/S, ES [National Environmental Protection Act Branch (NEPA Branch)] at (760) 725-9759/9763.

7. Port-a-Johns. Units must request additional port-a-john support for any training areas/beaches from the Base Property Office at (760) 725-1979 or 763-0590. Be prepared to provide the information listed below.

- a. Date they are to be emplaced.
- b. Date they are to be removed.
- c. Number of personnel that will be using them.
- d. Point of contact and phone number.

3003. RIFLE AND PISTOL KNOWN DISTANCE (KD) RANGE REQUESTS

1. Requests. Requests for rifle and pistol KD ranges shall be submitted to the Officer-in-Charge (OIC), Marksmanship Training Branch at (760) 752-3436. Upon approval, requests will be consolidated and forwarded to the Range Scheduling Office on a monthly basis by the OIC, Marksmanship Training Branch.

2. KD Scheduling Conference. An annual Marksmanship Training Scheduling Conference is held during the April/May time frame to coordinate rifle and pistol range schedule for the next fiscal year. A Basegram is published stating the location, date, and time of the conference.

3004. AIRSPACE AND AVIATION RANGES/FACILITIES SCHEDULING REQUESTS

1. General. Specifics concerning Camp Pendleton Special Use Airspace (SUA) and aviation training activities, ranges, and facilities are provided in Chapter 4 of this Order. RFMSS scheduling requests and TARs supporting all aviation training activities must be submitted to the Range Scheduling Office as described in paragraph 3001.1 in this Chapter. Scheduling requests involving fixed-wing CAS/Simulated Close Air Support (SIMCAS) must specify the appropriate Initial Point (IP), type mark, type of ordnance, and requested airspace. All CAS/SIMCAS/Tactical Air Control Party (TACP) evolutions must be briefed to the RCO at least seven (7) days prior to the event.

2. Overlays. Scheduling requests for all the events listed below require overlays depicting flight routes and altitudes of participating aircraft. The format for overlays can be obtained by calling the Range Scheduling Office at (760) 725-3510/4219. The overlays shall be submitted no later than seven (7) days prior to the event.

- a. CAS/SIMCAS/TACP.
- b. Flights in support of LAAD training.
- c. UAV operations.
- d. Photo missions.
- e. Any other aviation training as identified by the Range Scheduling Office.

3005. CONTRACTOR OPERATION AND MAINTENANCE OF TRAINING SYSTEM RANGES

1. General. The USMC Contractor Operation and Maintenance of Training Systems (COMTS) Program supports certain ranges aboard Camp Pendleton. This program places civilian contractors under contract to operate and maintain live-fire ranges. The Commander, Marine Corps Systems Command (COMMARCORSSYSCOM) is responsible for funding COMTS contracts. COMMARCORSSYSCOM has authorized the Program Manager for Training Systems (PM TRASYS) to enter into contracts with civilian contractors to provide COMTS support at Marine Corps installations. At the time of publication of this Order, Ranges 111, 132, 210G, 215A, 216, 218A, 223B, 314C, and 409A are COMTS-supported ranges. As new ranges are built or modified, they may be covered under the COMTS umbrella.

2. Scheduling. Units desiring to train on COMTS ranges will schedule their training as described in paragraph 3002 in this Chapter. All requests for COMTS ranges must include contractor times or specifically state that contractors are not needed. Requests that do not include either contractor times or the "none needed" statement will be disapproved. After a unit's scheduling request is approved, the unit shall contact the Training Support Division (TSD) at (760) 725-4444 at least fourteen (14) working days prior to the planned training to coordinate their scenarios and arrange contractor time for training scenario development. The RCO is the final approval authority on all COMTS range training scenarios (not the contractor). TSD will reconfirm support requirements with the unit a minimum of two (2) working days prior to the unit actually using the range. The range contractor will provide range operators for the number of hours requested on the RFMSS request, up to a total of eighteen (18) hours per day per range. Units shall list the times they desire to go hot and cold in the CNTR Times box and annotate range occupation times in the Start Time and End Time boxes in the RFMSS request. Requests to extend training time on a COMTS range, received by the Range Scheduling Office less than forty-eight (48) hours prior to actual range usage cannot be approved due to contractual limitations.

3. Costs. Units must understand that using contractors on a range incurs a cost borne by the Commanding Officer, MCB, CamPen. Scheduling contractors for times that will not be used is a waste of an asset. In addition, canceling a COMTS range less than forty-eight (48) hours prior to the scheduled usage will also incur a cost. If you need to cancel a COMTS range you must e-mail and phone BOTH the Range Scheduling Office at (760) 725-3510/4219 and the TSD at (760) 725-4444.

4. Questions. Questions regarding the scheduling and training of COMTS ranges shall be referred to the Range Scheduling Office. Questions and comments related to COMTS contractor performance shall be referred to the TSD Contract Administrator at (760) 725-5105.

3006. AUTOMATED TARGET AND SIMULATOR SUPPORT

1. General. Units desiring automated target and simulator support on non-COMTS ranges shall contact the TSD Targets Section at (760) 725-4805 after the requested training dates have been approved. Coordination for training scenarios must be submitted at least fourteen (14) working days prior to the training event. The Targets Section will reconfirm support requirements with the scheduled unit a minimum of two (2) working days prior to the planned training event.

2. Portable Infantry Target System (PITS) Targets. The TSD Targets Section can provide operator support for units desiring to use PITS targets and artillery, or machine gun noise simulators after the unit has properly requested their requirements through the Range Scheduling Office. PITS operators are not normally provided to units who have already been issued PITS targets through TSD. However, the Targets Section can provide PITS operator support to these units if their operator requirements exceed their internal capability to provide PITS operators. The Targets Section can also provide PITS operator instruction for these units through a civilian contractor at the unit's request. Requests for PITS operator instruction may be coordinated directly with the Targets Section at (760) 725-4805. The placement of all PITS targets will be pre-approved by the RCO.

Chapter 4

Airspace and Aviation Operations

4000. GENERAL

1. This Chapter describes airspace and aviation facilities at MCB, CampPen. A graphic depiction of specific areas designated for aviation use can be found in the Aviation Special Instructions (SPINS) under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>. Hard copies are available upon request from the Range Operations Division. This Chapter also addresses Marine Corps Air Station, Camp Pendleton; Camp Pendleton Special Use Airspace (SUA); Helicopter Landing Zones (LZs); Confined Area Landing Sites (CAL Sites); Terrain Flight (TERF) Routes/Areas; Drop Zones (DZs); and the Helicopter Outlying Landing Field (HOLF). The instructions in this Chapter are based upon current Department of Defense (DoD), Department of the Navy (DoN), and Federal Aviation Administration (FAA) policies and regulations. Nothing in these instructions shall prevent the exercise of sound judgment to preserve lives and property, or to ensure the safety of personnel.

2. Air Range Safety Certification

a. Pilots must receive an air range safety certification prior to routine operations within Camp Pendleton SUA. Certification may be accomplished as a squadron or on an individual basis. All pilots must be certified annually or upon return from deployment. The certification process will be implemented and tracked by the Camp Pendleton Range Operations Division. Aircrews not in compliance with this policy must individually coordinate a one-time event brief and receive an associated event number at least three (3) days in advance. The one-time event brief must be conducted face-to-face or through teleconference by the aircrew conducting the event. Contact the Range Control Officer DSN 365-0355/4219 or commercial (760) 725-0355 to schedule an Air Range Safety Brief.

b. Prior to entering the SUA, aircrew will be required to check-in with Camp Pendleton Range Control, "LONGRIFLE." Aircrew not listed as certified, or in possession of an event number, will be limited to transition only, and operations within the SUA will not be authorized.

4001. SPECIAL USE AIRSPACE (SUA)

1. General. Restricted Area R-2503 has been authorized and established by the FAA to support hazardous training activities at Camp Pendleton. MCB, CampPen has been designated as the using agency for this restricted area. Camp Pendleton maintains sole approval and scheduling authority for all users and activities to include ground, sea, and aviation operations taking place within this airspace.

2. R-2503. The R-2503 SUA is subdivided into R-2503A, R-2503B, R-2503C and R-2503D. R-2503A overlies Camp Pendleton's coastal area and extends offshore one nautical mile, surface to 2,000' MSL. Its eastern boundary coincides with the western boundary of R-2503B. R-2503B is the airspace from the surface to 15,000' MSL overlying Camp Pendleton's impact areas. R-2503C

overlies the northern two-thirds of R-2503B from 15,000' MSL to 27,000' MSL. R-2503C is for use by artillery units only to facilitate high angle, high altitude firing. R-2503D overlies R-2503A from 2,000 to, but not including 11,000' MSL. Camp Pendleton SUA is depicted in the Aviation SPINS.

3. Hours. The published hours of operation for R-2503A and R-2503B are 0600 - 2359 (local) daily, seven (7) days per week, and other times by NOTAM (Notice to Airmen). Units desiring to conduct hazardous training activities from 0000 - 0559 must notify the Camp Pendleton Range Scheduling Office at least five (5) working days in advance to extend training operations past 2359 (local time). R-2503C is an "on-call" portion of R-2503 activated via NOTAM. In order to activate R-2503C, requests must be submitted to the Range Scheduling Office at least twenty (20) working days in advance. Designated use of R-2503D in support of military training is limited to twenty (20) days per year between the hours of 0600-2359 hours local time, and no more than ninety (90) days per year between 0001 and 0559 local time. Exercise planners shall notify the Range Scheduling Office thirty five (35) days in advance of R-2503D activation dates.

4002. FEDERAL AIRWAY STRUCTURE. Camp Pendleton's restricted airspace and training ranges are surrounded by highly congested airspace recognized by the FAA as the busiest and most complex in the country. Numerous Federal Airways surround Camp Pendleton, but are most predominant on the western border of the SUA. (Please refer to FLIP/L-3.) Military users of Camp Pendleton SUA should be extremely cautious and vigilant when operating in the vicinity of the Federal Airway structures surrounding the Base. Unintentional intrusions by civil aircraft into Camp Pendleton SUA take place routinely. Unauthorized civil aircraft observed within Camp Pendleton's restricted airspace shall be reported to LONGRIFLE.

4003. NO OVER FLIGHT AREAS

1. San Onofre Nuclear Generating Station. The San Onofre Nuclear Generating Station (SONGS) is located at grid coordinate 482 925; latitude 33 22' 10"N, longitude 117 33' 20"W. SONGS shall not be overflown at any time.

2. Endangered Species Nesting Areas. During the period from 1 March through 15 September, certain airspace within R-2503A is off-limits to all aircraft to protect the nesting and feeding habitat of endangered bird species (Least Tern/Snowy Plover Nesting Areas). This off-limits airspace has been identified as surface - 300' AGL and 300 meters laterally from the following areas.

a. Beach Section G. Margarita or Blue Beach, inland to the I-5 Freeway, and from the bluffs north of the Santa Margarita River to the bluffs south of the river near the 21 Area.

b. Beach Section E. Aliso or White Beach, inland to the I-5 Freeway, between the bluffs enclosing the posted nesting area at 587 809.

c. Riparian Areas. During the period of 15 March through 15 September, aircraft will not fly below 300' AGL over riverbeds and streams, other than established landing sites and TERF routes.

d. Estuaries/Lagoons. During the period of 15 March through 15 September, aircraft will not fly below 300' AGL over river mouths.

3. Other Areas. A minimum altitude of 500' AGL shall be maintained when flying over personnel, housing areas, camps, including San Onofre State Beach, Capistrano TRW Complex, MCB Golf Course, Range 401 (669 802), Naval Hospital (695 891), and Ammunition Supply Point (596 917).

4004. MARINE CORPS AIR STATION (MCAS), CAMP PENDLETON

1. General

a. MCAS, Camp Pendleton is under the command of the Commander, Marine Corps Installations West (MCIWEST). Requests for use of this air station for any reason must be coordinated and approved by the Commanding Officer, MCAS, Camp Pendleton.

b. MCAS, Camp Pendleton facilities, aircraft, personnel, support capabilities, and hours of operation are listed in current FLIP Planning and enroute IFR Supplement Publications and StaO 3710.1.

2. MCAS, Camp Pendleton Airspace

a. MCB, Camp Pendleton has, by Letter of Agreement, delegated certain airspace to MCAS, Camp Pendleton for its operation and control (as depicted in Aviation Special Instructions). The MCAS Air Traffic Control Facility controls operations within this delegated airspace when the air station is open. When the air station is closed, this airspace reverts back to the control of Camp Pendleton Range Control (LONGRIFLE) or the FAA, as appropriate.

(1) MCAS Class D Airspace. Airspace extending from the surface to 2,600' MSL extending from the airport reference point to the MCAS, Camp Pendleton (NFG) VORTAC 010R at 4NM arc clockwise to the NFG 227R at 4 NM direct to NFG 240R at 2.6 NM arc clockwise to NFG 335R at 2.6 NM direct to NFG 010R at 4 NM.

(2) MCAS Class E Airspace. Airspace extending from the surface up to and including 2,600 feet extending from the 010R at 4NM direct to 018R at 6.9NM direct to 050R at 4NM arc northwest to the 010R.

b. When the air station is open, all aircraft operating within these areas must contact the MCAS Air Traffic Control Tower for clearance.

3. Arrival and Departure Routes. The MCAS, Camp Pendleton VFR arrival/departure points listed below have been established within Camp Pendleton SUA.

a. VFR Runway (Rwy) 21 Departure Routes

(1) VORTAC Departure Route. Proceed direct to MASS-3. Pass south of MASS-3, proceed to Stuart Mesa Housing. Pass south of the housing complex and proceed to OCN VORTAC at or below 800' MSL. Report OCN VORTAC clear.

(2) Intersection Departure Route. Depart from right downwind to Basilone Road. Turn left and fly along west side of Basilone Road to the Basilone/Roblar intersection. Report the intersection clear. Aircraft shall transit outbound the intersection at 800' MSL.

(3) Pt. Canyon Departure Route. Depart from right downwind direct to Pt. Canyon (Margarita/DeLuz Rivers). Report Pt. Canyon clear. Aircraft shall transit outbound Pt. Canyon at 800' MSL.

b. VFR Rwy 21 Arrival Routes

(1) LCAC Arrival Route. Report the LCAC Facility inbound at or above 1000' MSL, proceed to MASS-3. Pass south of Edson Range and north of MASS-3 to enter a right downwind for Rwy 21.

(2) Intersection Arrival Route. Report the Basilone/Roblar intersection inbound, fly along the east side of Basilone Road to enter a right base for Rwy 21. Aircraft shall transit inbound the intersection at 1,000' MSL.

(3) Pt. Canyon Arrival Route. Report Pt. Canyon in-bound and proceed to Lake O'Neill passing to the north of O'Neill Base Housing. From Lake O'Neill make straight in to Rwy 21. Aircraft shall transit inbound Pt. Canyon at 1,200' MSL.

(4) North Initial Arrival Route. Report the North Initial inbound. Proceed direct to Lake O'Neill and make straight in to Rwy 21.

c. VFR Rwy 3 Departure Routes

(1) VORTAC Departure Route. Depart via the right downwind direct MASS-3. Pass south of MASS-3, proceed direct to Stuart Mesa Housing. Pass south of the housing complex and proceed to OCN VORTAC at or below 800' MSL. Report OCN VORTAC clear.

(2) Intersection Departure Route. After departure, proceed direct Basilone Road. Turn left and fly along east side of Basilone Road to the Basilone/Roblar intersection. Report the intersection clear. Aircraft shall transit outbound the intersection at 800' MSL.

(3) North Initial Departure Route. Depart direct Lake O'Neill to North Initial. Report North Initial clear.

(4) Pt. Canyon Departure Route. Depart from right downwind direct to Pt. Canyon (Margarita/DeLuz Rivers). Report Pt. Canyon clear. Aircraft shall transit outbound Pt. Canyon at 800' MSL.

d. VFR Rwy 3 Arrival Routes

(1) LCAC Arrival Route. Remain 1 NM offshore until turning inbound to the LCAC Facility to avoid VORTAC departures. Report the LCAC Facility inbound at or above 1000' MSL, and proceed to MASS-3. Pass south of Edson Range and north of MASS-3, make straight in to Rwy 3.

(2) Intersection Arrival Route. Report the Basilone/Roblar intersection inbound, fly along the west side of Basilone Road to enter a left downwind for Rwy 3. Aircraft shall transit inbound the intersection at 1,000' MSL.

(3) Pt. Canyon Arrival Route. Report Pt. Canyon inbound, pass to the west of hospital for a left downwind entry to Rwy 3. Aircraft shall transit inbound Pt. Canyon at 1,200' MSL.

e. SVFR Arrival and Departure Routes. Weather minimums for SVFR routes are listed below.

ROUTE	CEILING/VISIBILITY
LCAC Arrival Rte	800-1
VORTAC Departure Rte	800-1
Intersection Arrival/Departure Rte	800-1
Pt. Canyon Arrival/Departure Rte	800-1
North Initial Arrival Rte	500-1
Pattern	500-1

f. Arrival Routes

(1) LCAC Arrival Route. Arriving aircraft remain one (1) mile off-shore until turning inbound for the LCAC Facility. Fly north of the LCAC Facility and contact tower prior to crossing the I-5 Freeway for SVFR clearance into Class D Surface Area. With clearance, fly south of Edson Range to MASS-3. (Rwy 3 - make straight in. Rwy 21 - enter right downwind.) Aircraft not in receipt of a SVFR clearance will remain outside of Class D surface area to the northwest of the LCAC Facility, until a clearance is received.

(2) Intersection Arrival Route. Report the Basilone/Roblar intersection for SVFR clearance into Class D Surface Area. With clearance, fly over Basilone Road for pattern entry. (Rwy 3 - enter a left downwind. Rwy 21 - enter right base).

(3) North Initial Arrival Route. Report North Initial for SVFR clearance into Class D Surface Area. With clearance, proceed direct Lake O'Neill. (Rwy 3 - enter a left downwind. Rwy 21 - make straight in).

g. Departure Routes

(1) VORTAC Departure Route. Pass south of MASS-3 direct to Stuart Mesa Housing. Pass south of the housing complex and proceed to OCN VORTAC. Report leaving Class D Surface Area.

(2) Intersection Departure Route. Proceed direct to Basilone Road. Turn left to Basilone/Roblar intersection. Report the intersection clear.

(3) Pt. Canyon Departure Route. Proceed to Pt. Canyon remain west of the hospital. Report Pt. Canyon clear

4. Temporary Alternate Landing Area. The Temporary Alternate Landing Area (TALA), established in the Ysidora Basin (65631 79722) for helicopter operations only, is active only when MCAS, Camp Pendleton is open. Use of the TALA shall be minimized between 0600 and 1100 during the endangered Least Bells Vireo Nesting season (15 March to 15 September).

4005. LOCAL FLYING NOTICES

1. General. A Local Flying Notice is used to notify all local military aviation units and users of Camp Pendleton SUA about the presence of any high volume or unusual aviation activities in this airspace. Local Flying Notices are published via message. They are disseminated for unusual or non-routine training evolutions requiring extra vigilance or precautions by all Camp Pendleton airspace users.

2. Dissemination. Local Flying Notices will be disseminated a minimum of 48 hours in advance of the particular activity or event that is being advertised. Any unit desiring to conduct high volume or unusual training activities within Camp Pendleton airspace shall schedule the airspace (and required ranges) as early as possible prior to the desired training period.

4006. AIRSPACE AND AVIATION FACILITY SCHEDULING

1. General. All users of Camp Pendleton airspace and training ranges, including inland training areas, amphibious beach training areas and aviation training facilities, must schedule the training area in advance. Scheduling requests for the use of any of these areas or other Base training facilities, including aviation training facilities, will be submitted to the Range Scheduling Office per the provisions contained in paragraph 3002 in Chapter 3 of this Order.

2. Cancellation. Once ground ranges, training facilities, airspace, and/or sea space have been scheduled, it is the responsibility of the unit scheduled to use the facility to conduct its training during the allotted time period. Should there be a requirement to modify a scheduled range time, or a need to cancel a range request, the unit shall notify the Range Scheduling Office at the earliest opportunity.

3. Close Air Support Requests. Close Air Support (CAS) scheduling requests shall include type/number of aircraft, ordnance, impact area, IP, mark type, and supporting facilities (e.g., MP, AFA, etc.). Unless utilizing the standard Range 220 or Range 440 brief, units conducting rotary wing CAS TACP training shall brief the RCO 7 days prior to the scheduled training. The briefing will include the locations of all holding areas, battle positions and ingress routing. Units will provide a copy of the LOI, ORM, start fire line, stop fire line, maneuver box, and egress instructions.

4007. AIRSPACE CONTROL PROCEDURES

1. General. All aircraft operating within Camp Pendleton Special Use Airspace (SUA) shall check in and out with Range Control (LONGRIFLE) prior to entry/departure of the airspace. Aircraft must maintain communication with LONGRIFLE at all times while operating within Camp Pendleton airspace. Alternate discrete range safety frequencies may be requested and will be assigned to support individual training activities on an as available basis. (NOTE: Due to the mountainous terrain within Camp Pendleton, some low altitude communication blind spots exist in areas around the Base. Therefore, aircraft may have to climb to obtain positive communication with LONGRIFLE). Aircraft checking in with LONGRIFLE shall provide call sign, location, unit, number and type aircraft, planned activity, and ordnance (if applicable).

2. Check-In/Out. Once an aircraft has checked in with LONGRIFLE, and received clearance to enter the SUA, aircraft/flights working with Tactical Control Agency [e.g., Tactical Air Control Party (TACP), Air Liaison Officer (ALO), etc.] to conduct CAS, Simulated CAS (SIMCAS), or para-drop operations will be switched to the appropriate controlling frequency. All aircraft shall check out with LONGRIFLE when departing the SUA. Aircraft checking out shall provide call sign, ordnance expended (if applicable), and departure direction.

3. Traffic Advisories. The Camp Pendleton Range Complex is a VFR (Visual Flight Rules) operating area. The requirement to "see and avoid" other aircraft rests solely with the pilot. All aircraft operating in Camp Pendleton airspace shall remain alert to LONGRIFLE advisory calls. LONGRIFLE will provide traffic advisories to the extent possible for the presence of other aircraft, the location of hot impact areas, or any other appropriate situational awareness advisories. All aircraft cleared into Camp Pendleton airspace must remain in Visual Meteorological Conditions (VMC). All aircraft must exercise extreme vigilance for unauthorized intrusions by civil aircraft. All aircraft must also be vigilant in their employment of VFR "see and avoid" criteria to ensure avoidance of other aircraft operating in Camp Pendleton SUA.

4. Airspace Control. Camp Pendleton is unable to support exclusive use of our airspace unless extraordinary circumstances exist. On a day to day basis, LONGRIFLE will serve as the primary airspace control agency and serves in a "Host Nation" capacity during major exercises. Portions of Camp Pendleton airspace may be delegated to exercise control agencies, provided sufficient advance coordination is accomplished. R-2503D is additional airspace adjacent to R-2503A/B/C that can be activated in support of exercises at Camp Pendleton. Refer to paragraph 4001 of this Chapter for activation requirements.

5. Radio Frequencies. LONGRIFLE utilizes three (3) UHF, one (1) VHF, and two (2) FM frequencies for control of operations within Camp Pendleton airspace.

- a. UHF - 301.9 (primary)/255.2/249.9
- b. VHF - 123.2 (primary)
- c. FM - 49.00 (primary)/30.35

#### 4008. SIMULATED CLOSE AIR SUPPORT/CLOSE AIR SUPPORT (SIMCAS/CAS) OPERATIONS

1. General. No dropping of live or inert ordnance shall be allowed unless under the direct positive control of a Joint Tactical Air Controller (JTAC), Tactical Air Control Party (TACP), Forward Air Controller (FAC) or a rotary-wing Forward Air Controller Airborne [FAC(A)], and the target has been positively identified and marked. Only Type 1 CAS training may be conducted during live ordnance delivery. SIMCAS training may simulate Types 2 and 3 CAS profiles. Positive two-way communication must be established and maintained between the aircraft, the JTAC/TACP/FAC/FAC(A), and LONGRIFLE prior to conducting any SIMCAS/CAS operations. Operations will be suspended if air-ground communication is lost. Non-standard SIMCAS/CAS training shall be briefed to the RCO a minimum of seven (7) days prior to the scheduled training event.

2. Forward Air Controller/Airborne. Only rotary-wing FAC(A) operations are authorized at Camp Pendleton.

3. CAS/SIMCAS Operations. CAS/SIMCAS operations may be scheduled in Range 440 (Zulu Impact Area), Range 220 (Whiskey Impact Area), and Range 409A.

a. CAS. Rotary-wing CAS operations may be conducted in the Whiskey (R-220) and Zulu (R-440) Impact Areas, and Range 409A. Fixed-wing CAS operations may be conducted in the Zulu (R-440) Impact Area only, unless approved by LONGRIFLE. All aircraft shall release ordnance per SPINS established for each range. The standard SPINS for CAS operations are located under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>. Hard copies are available upon request from the Range Operations Division. For non-standard events, JTACs/TACPs/FACs/FAC(A)s shall provide LONGRIFLE with a copy of event SPINS and an event brief sheet no later than seven (7) working days prior to conducting CAS operations at Camp Pendleton. Units conducting Rapid Response Planning Process (R2P2) training and operations have unique conditions that require prior coordination with LONGRIFLE no later than seven (7) days prior to conducting operations.

b. SIMCAS. SIMCAS operations are allowed on any range or training area within Camp Pendleton. Units desiring to conduct SIMCAS shall submit an overlay of intended SIMCAS routings and areas to LONGRIFLE no later than seven (7) working days prior to the planned event. SIMCAS operations conducted per procedures described in the standard CAS SPINS for R-440 do not require submission of an overlay. Additionally, JTACs/TACPs/FACs/FAC(A)s shall provide LONGRIFLE with a copy of event SPINS and an event brief sheet no later than seven (7) working days prior to conducting SIMCAS operations at Camp Pendleton. All SIMCAS aircraft shall be cleared with the report, "continue dry." All command and control procedures, FAC/JTAC/FAC(A) certification, as well as the requirement to establish and maintain two-way radio communication, are applicable to SIMCAS operations in the same manner as they are for CAS missions.

4. Ordnance. CAS operations at Camp Pendleton are limited to rotary-wing aerial gunnery and fixed-wing bombing. No live ordnance exceeding 500 pounds (MK82 series) may be dropped within the Camp Pendleton aviation ordnance impact area without prior approval of the AC/S, O&T. Maximum ordnance authorized per each fixed-wing aircraft pass on the target is one bomb. Unless specifically authorized by the RCO, all ordnance and their effects shall impact within the aviation ordnance impact area as described in Appendix B. Effects of ordnance include the resulting fragments, debris, and components of ordnance such as shell casings, links, expendables, chaff, and flares. (Please note "No Fire Areas" within the aviation ordnance impact area.) Aerial gunnery operations without ground or airborne control are separate and unique training events that are addressed in paragraph 4009 of this Chapter.

5. Weather Minimums. Pilots must maintain positive identification of the target and visual reference to the surrounding area for clearance of terrain and other hazards.

6. No Over Flight Areas. All aircraft shall avoid over flying the Naval Hospital (695 891), the Ammunition Supply Point (596 917), SONGS (482 925), all family housing areas, and environmentally sensitive areas per paragraph

4003 in this Chapter. Aircraft with live ordnance should also avoid, to the maximum extent possible, the over flight of cantonment areas or large groups of assembled personnel.

7. Safety Training. All FACs/JTACs/FAC(A)s shall attend the Camp Pendleton FAC/JTAC/FAC(A) Class and be certified by the RCO prior to conducting SIMCAS/CAS operations. The class can be scheduled by contacting the RCO at (760) 725-0355. FAC/JTAC/FAC(A) certification requires completion of the class and notification from the individual's unit commander stating he/she is authorized by the unit commander to act as a FAC/JTAC/FAC(A) for that unit. The certification will remain in effect for two (2) years. An experienced Camp Pendleton FAC/JTAC/FAC(A) shall supervise any first time FACs/JTACs/FAC(A)s controlling aircraft at Camp Pendleton. A separate, non-participating, qualified RSO must also be present in order to conduct training. Unit classes may also be scheduled by contacting the RCO at (760) 725-0355.

8. Target Marking. All targets shall be marked by laser, mortar, artillery, or helicopter, prior to conducting CAS operations. Marking targets with direct fire weapons requires prior approval by the RCO. If laser marking is used, CAS aircraft shall not over fly the laser designator location. "Talk-ons" are authorized in R-440 (Zulu Impact Area) during daylight with MAG-39 CAS helicopters only.

9. Clearing Hot. FACs/JTACs/FAC(A)s shall not call "cleared hot" until the FAC/JTAC/FAC(A) has the aircraft in sight, and the CAS aircraft has reported wings level and entered the aviation ordnance impact area. Orange and white barriers are in place in the Zulu Impact Area to mark the border of the aviation ordnance impact area.

10. FAC(A) Firing Areas. Designated firing areas are available for FAC(A) marking activities if FAC(A) aircraft do not desire to fire from within the Zulu Aviation Ordnance Impact Area. These firing areas are Ranges 227, 407, and 407A and must be scheduled through the Range Scheduling Office at least seven (7) days prior to use. FAC(A) aircraft shall not enter these ranges without authorization from LONGRIFLE. FAC(A) aircraft shall also make a visual sweep of areas adjacent to these ranges to verify areas are clear of personnel and equipment.

11. FAC(A) Lasing. Rotary-wing FAC(A) standoff lasing in support of SIMCAS/CAS is authorized only from the Laser Training Areas listed in Chapter 8 of this Order. Lasing operations may be conducted from only one location at a time.

12. Briefing. The controlling JTAC/TACP/FAC/FAC(A) shall conduct a MANDATORY "Hot Brief" with LONGRIFLE via radio or land-line prior to the scheduled SIMCAS/CAS mission to provide LONGRIFLE with the correct brief number and to conduct any final coordination. The JTAC/TACP/FAC/FAC(A) shall also be notified of the occupancy status of adjacent ranges during the "Hot Brief" from LONGRIFLE.

13. SIMCAS/CAS Routing. Fixed-wing aircraft conducting SIMCAS/CAS training shall avoid over flight of cantonment areas at less than 1,500' AGL for noise abatement purposes. Fixed-wing aircraft shall operate no lower than 1,000' AGL at all times (or higher as assigned by LONGRIFLE) unless within the assigned impact area. All aircraft shall remain within the confines of Camp Pendleton SUA at all times while conducting SIMCAS/CAS operations.

a. Following check-in with LONGRIFLE, fixed-wing aircraft arriving for SIMCAS/CAS operations within Camp Pendleton Restricted Airspace will normally be directed to hold over the Case Springs area at an assigned altitude. LONGRIFLE will retain SIMCAS/CAS aircraft in holding over Case Springs until the JTAC/TACP/FAC/FAC(A) is ready to accept control of the aircraft, and all conflicting ground range operations have been put in a check-fire status. Rotary-wing aircraft shall transit SUA per routing in paragraph 4010 of this Chapter. Rotary-wing aircraft requesting access to impact areas shall hold outside impact areas until LONGRIFLE and the JTAC/TACP/FAC/FAC(A) authorize entry.

b. LONGRIFLE shall ensure all ground range activity and the necessary airspace blocks have been de-conflicted. LONGRIFLE will then pass control of SIMCAS/CAS aircraft to the appropriate JTAC/TACP/FAC/FAC(A). The JTAC/TACP/FAC/FAC(A) shall verify they have information on authorized ingress and egress routes, friendly troop locations, prohibited over flight areas, or any other special instructions prior to beginning the SIMCAS/CAS operation. Finally, the JTAC/TACP/FAC/FAC(A) will provide the standard nine (9)-line/six (6)-line brief to all aircraft in the flight prior to commencement of the first run-in to the target. All fixed-wing aircraft must make at least one cold (no drop) pass on the target prior to clearance for an actual drop of either live or inert ordnance. Rotary-wing aircraft shall conduct a sweep of the impact area prior to conducting live-fire.

c. All fixed-wing aircraft shall return to CP Case Springs at the assigned altitude prior to conducting follow-on runs. No fixed-wing re-attacks are authorized without prior approval from LONGRIFLE.

d. Units controlling the SIMCAS/CAS aircraft shall provide a designated Fire Support Coordinator for all ground firing units involved in the SIMCAS/CAS mission. They shall ensure ground units provide supporting fire only when aircraft are safely out of the impact area or when the aircraft has reached an altitude that is above the maximum ordinate of the ground weapon fired.

14. Fixed-Wing Routes for Zulu Impact Area. Changes to the standard SIMCAS/CAS routes may be made only after advanced coordination is made and approval obtained from the Director, Range Operations Division. An overlay tailored to the Camp Pendleton Military Installation Map [reference (d)] shall be delivered to the Director, Range Operations Division a minimum of seven (7) working days prior to the planned training. It shall depict the requested non-standard SIMCAS/CAS operation areas. The standard routing is listed below.

a. Within R-2503B. Depart holding at CP Case Springs (615 005) and proceed in a clockwise or counter-clockwise racetrack pattern to the Zulu Impact Area. Aircraft shall remain at or above assigned altitude until passing the ridgeline between the Whiskey and Zulu Impact Areas. Aircraft shall remain within R-2503B throughout the route into Zulu. After pulling off target, aircraft should make a climbing turn back to the Case Springs holding point. Aircraft shall climb to assigned altitude prior to passing the ridgeline between the Zulu and Whiskey Impact Areas. It is important to note when flying this SIMCAS/CAS route that V-23 abuts the southern boundary of R-2503B.

b. Within R-2503A/2503D. Ingress to the Zulu Impact Area may be made via the authorized routes through R-2503A or R-2503D listed below. This route shall be scheduled, coordinated, and approved in advance with the Range Scheduling Office. Routing must be de-conflicted from the numerous aviation facilities and live-fire ranges existing beneath the airspace.

(1) From Control Point (CP) Case Springs, proceed via Jardine/Talega/San Mateo Canyons using CP SONGS \*(a point on the coast one mile south of SONGS at 480 919). Aircraft shall not over fly SONGS. Proceed into the Zulu Impact Area via Las Pulgas Canyon using IP Bridge (567 845).

(2) R-2503A. Aircraft utilizing R-2503A airspace for ingress to the Zulu Impact Area must remain within the designated airspace boundaries for this restricted area. Aircraft shall maintain an altitude between 1,000 and 2,000' MSL until crossing into R-2503B airspace, unless coordinated with LONGRIFLE. Flights through Talega/San Mateo/Jardine Canyons must be planned to ensure cantonment areas, administrative LZs, and ground training ranges are not over flown. Aircraft utilizing Talega/San Mateo/Jardine Canyon/CP SONGS shall avoid flight within one (1) NM and below 2,000' MSL of SONGS. Aircraft shall not arm prior to entering the impact area.

(3) R-2503D. Aircraft utilizing R-2503D airspace for ingress to the Zulu Impact Area must remain within the designated airspace boundaries for this restricted area. Aircraft shall maintain an altitude between 2,000 and 11,000' MSL until crossing into R-2503B airspace, unless coordinated with LONGRIFLE. Aircraft utilizing Talega/San Mateo/Jardine Canyon/CP SONGS shall avoid flight within one (1) NM of SONGS. Aircraft shall not arm prior to entering the impact area.

15. Fixed-Wing Routes for Whiskey Impact Area. Only fixed-wing SIMCAS is allowed in the Whiskey Impact Area. Changes to the standard SIMCAS route may be made only after advance coordination is made and approval obtained from the Director, Range Operations Division. An overlay tailored to the Camp Pendleton Military Installation Map [reference (d)] shall be delivered to the Director, Range Operations Division a minimum of seven (7) working days prior to the planned training. It shall depict the requested non-standard SIMCAS routing. The standard routing is listed below.

a. Within R-2503B. Use CP Case Springs (615 005) as the ingress point and egress point for a counter-clockwise flow through the Whiskey Impact Area. When working SIMCAS missions in the Whiskey Impact Area, aircraft shall avoid over flight of the Zulu Impact Area unless pre-approved by LONGRIFLE. All aircraft must remain inside the R-2503B airspace.

b. Within R-2503A/2503D. Ingress to the Whiskey Impact Area through R-2503A or R-2503D airspace shall use established ingress and egress routes discussed in paragraph 4008.14.b. Ensure entry into R-2503B is conducted at sufficient altitude to avoid all live-fire operations in the Zulu Impact Area.

#### 4009. HELICOPTER OPERATIONS

1. General. Helicopters shall not over fly or land within any designated impact area without approval by the RCO, except in an actual emergency.

During emergencies, pilots are expected to exercise sound judgment and advise LONGRIFLE of their intentions at the earliest opportunity.

2. Prohibitions. Helicopters are prohibited from operating and/or landing within 100 meters of any range, firing line, artillery position, or mortar position when firing is in progress, or whenever troops or ammunition occupy the position. Coordination shall be made with LONGRIFLE for helicopters transporting VIPs who wish to land within or near ranges or AFAs/mortar positions. LONGRIFLE will, in turn, coordinate with the unit's Range Safety Officer (RSO) to accommodate the helicopter's landing request as quickly as possible.

3. Altitudes. Unless otherwise specified in Chapter 2 of this Order, or paragraph 4003 in this Chapter, helicopters operating outside established aerial gunnery ranges and TERF routes/areas shall maintain an altitude at or above 200' AGL. All flights conducting TERF operations shall have a "high bird." Helicopters transiting over TERF routes/areas shall transit at or above 1,200' AGL.

4. Weather Minimums. Weather minimums required for helicopter operations within Camp Pendleton's Restricted Airspace are as follows.

- a. Ceiling. 500' AGL or greater.
- b. Visibility. One (1) nautical mile (NM) or greater.
- c. Clouds. Remain clear of clouds.

5. MEDEVAC. Any helicopter engaged in an actual MEDEVAC mission shall immediately contact LONGRIFLE, giving its call sign and stating, "This is an actual MEDEVAC mission." LONGRIFLE will immediately place all applicable ranges, artillery firing areas, or mortar positions in a check-fire status and allow the helicopter to proceed via the most direct route to the scene. This suspension of operations will remain in effect until the MEDEVAC aircraft commander informs LONGRIFLE that the MEDEVAC mission is completed, and the aircraft is clear of all ranges and impact areas.

6. External Operations. Helicopters shall not conduct external operations, to include SPIE rigging, across the I-5 Freeway without authorization from the AC/S, O&T. Helicopters conducting external operations over Base public roads shall coordinate operations, in advance, with the Base Airspace Manager at (760) 725-8183.

7. Aerial Gunnery. For the purposes of this directive, aerial gunnery refers to helicopter ordnance delivery operations. Independent of CAS or TACP training exercises, aerial gunnery training may be conducted in the Whiskey (R-220) and Zulu (R-440) Impact Areas, and Range 409A.

a. The information in this Chapter concerning aerial gunnery is not complete. Detailed information for conducting aerial gunnery on R-220 and R-440 is located in the Aviation SPINS. All aircraft shall release ordnance per the Aviation SPINS established for each range. All aircrew must acknowledge reading and understanding applicable Aviation SPINS prior to clearance onto the associated range. They can be found under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>. Hard copies are available upon request from the Range Operations Division.

b. Range 409A is an automated range that can support aerial gunnery training. The range is designed to provide feed back to the aircrews. Use of this range for aerial gunnery training requires a detailed brief be submitted to the RCO, fourteen (14) days prior to the event.

c. Aerial gunnery is limited to door gunnery and air-to-ground machine gun, cannon, rocket, and TOW missile firing. TOW missile firing shall be coordinated a minimum of seven (7) days prior to the training event, and approved by the RCO. Unless specifically authorized by the RCO, all ordnance and their effects shall impact within the Aviation Ordnance Impact Area as described in Appendix B (blue-dotted line on the Camp Pendleton Military Installation Map). Effects of ordnance include the resulting fragments, debris, and components of ordnance to include shell casings, links, expendables, chaff, and flares. Unless specifically authorized by the Range Control Officer, aircrew shall not release ordnance until the aircraft has entered the aviation ordnance impact area.

d. The Mission Commander shall conduct a MANDATORY "Hot Brief" with LONGRIFLE via radio or land-line prior to all aerial gunnery missions to provide LONGRIFLE with the correct brief number and to conduct final coordination. The mission commander shall also be notified of the occupancy status of adjacent ranges during the "Hot Brief" from LONGRIFLE.

8. Chaff and Flares. Chaff and flares may be dropped at or below 500' AGL within the aviation ordnance impact area and within one (1) nautical mile offshore of Camp Pendleton. Chaff and flares shall NOT be dropped without approval from LONGRIFLE. Aircraft shall make a range sweep prior to the use of expendables to ensure the area is clear. Flares may NOT be dropped when the FDR is EXTREME, during high wind conditions or when a high wind advisory has been issued by NFG METRO (three (3)-letter identifier for MCAS, CampPen). The following locations are approved sites for loading chaff and flares.

- a. LZ View Point.
- b. LZ Red Beach.
- c. CALSITE 20.
- d. VTOL Pad 2.

#### 4010. HELICOPTER TRANSIT ROUTES

1. General. Unless coordinated with LONGRIFLE, helicopters not engaged in specific training activities shall transit using the routes listed below. Grid coordinates based on the Camp Pendleton Military Installation Map [reference (d)] are provided for each point. Helicopter transit routes are depicted in the Aviation SPINS.

#### 2. Offshore

- a. Recommended altitude. At or below 500' AGL (right side right of way).
- b. Route of flight. One (1) NM offshore.

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c. <u>Checkpoints.</u> (Abeam)	San Clemente Pier	429 966
	San Mateo Point	439 932
	Power Plant	469 912
	CALSITE 20	535 877
	OCN VORTAC	589 772

d. Aircraft Transiting the Beach. Aircraft transiting the beach, unable to transit via the Offshore Route, shall be directed to transit the coast or I-5 Freeway at/or above 1,500' AGL whenever beach aviation facilities are in use. Call LONGRIFLE for transit to beach training facilities. Landing lights should be on.

### 3. Basilone Route

a. Recommended Altitude. At or below 500' AGL (right side right of way).

b. Route of Flight. Follow Basilone Road from the intersection of Interstate 5 to the intersection of Basilone and Roblar Roads. Due to the large number of ranges located along Basilone Road, remain as close to the road as possible.

c. <u>Checkpoints.</u>	I-5 and the Northern Base Boundary	449 952
	Ammo Supply Point	604 917
	Basilone/Roblar Roads	662 902

### 4. Case Springs Route

a. Recommended Altitude. At or below 500' AGL (right side right of way).

b. Route of Flight. Follow Talega Canyon power lines to Pt. Devil, turn right to parallel power lines, proceed southeast to CALSITE 10, CALSITE 8, and CALSITE 5.

c. <u>Checkpoints.</u>	LZ 64	479 017
	Devil	539 040
	CALSITE 10	595 018
	CALSITE 8	630 986
	CALSITE 5	719 959

### 4011. NIGHT VISION GOGGLE (NVG) OPERATIONS

1. General. Aircraft operating within Camp Pendleton airspace on night vision devices shall be lighted as described below.

2. Single Aircraft Operations. Anti-collision lights shall be on; navigation lights shall be on at the highest intensity consistent with NVG compatibility.

ENCLOSURE (1)

3. Multiple Aircraft Operations. All aircraft in the flight shall have navigation, anti-collision, formation and blade tip lights on at intensity levels in keeping with safe flight. Aircraft in the flight, except the last aircraft, may turn off the anti-collision light if deemed in the best interests of safety by the pilot in command/flight leader. Separation between the lead aircraft and last aircraft in the flight shall not exceed one (1) NM.

4. See and Avoid. The requirement to "see and avoid" shall take priority over NVG tactical training. Modification, taping, and/or cat eyeing of external lighting are not authorized.

5. NITEX. Designated nights each month are set aside to conduct MAG-39 and MAG-16 NVG block training. MCAS, Camp Pendleton is "NOTAMed" open during scheduled training periods to participating aircraft only.

4012. HELICOPTER TERRAIN FLIGHT (TERF) ROUTES/AREAS

1. General. Camp Pendleton airspace includes designated TERF routes/areas for helicopter low altitude navigation and pilot training proficiency. TERF operations outside the designated areas and aerial gunnery ranges are not authorized. Helicopters conducting TERF operations shall have a "high bird."

2. Scheduling. TERF routes/areas must be scheduled through the Range Scheduling Office prior to their use. Upon completion of TERF operations, flight leaders shall contact LONGRIFLE and report, "mission complete" prior to departing Camp Pendleton Restricted Airspace.

NOTE: Use of the Mike TERF route/area requires coordination and approval from MCAS, Camp Pendleton's Air Traffic Control Tower when the Air Station is open. Aircraft on the Mike TERF route shall remain 1,000 meters from R-401 when it is in a hot status. This route lies within the air station's delegated airspace. Contact the MCAS, Camp Pendleton Tower on 382.2, 340.2 UHF or 128.775 VHF for clearance into the MIKE TERF route/area.

3. TERF Routes. The following helicopter TERF routes are depicted in the Aviation SPINS. They can be found under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>. Hard copies are available upon request from the Range Operations Division.

Case Springs  
DeLuz Canyon  
Devils Canyon  
Mike  
Pulgas

4. Caution. The Case Springs and DeLuz TERF routes appear continuous on the Camp Pendleton Military Installation Map [reference (d)]. When both TERF routes are in use, aircraft operating on the Case Springs TERF route shall transit no further east than CALSITE 7. Aircraft on the DeLuz TERF route shall transit no farther west than the eastern boundary of Range 409A. Pilots should refer to the Aviation SPINS for current depictions of the TERF routes/areas.

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5. TERF Areas. The following helicopter TERF areas are depicted in the Aviation SPINS. They can be found under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>. Hard copies are available upon request from the Range Operations Division.

Case Springs  
DeLuz Canyon  
Mike  
Pulgas

#### 4013. HELICOPTER OUTLYING LANDING FIELD (HOLF) OPERATIONS

1. General. The Camp Pendleton HOLF is located in San Mateo Canyon, in the vicinity of 504 994/OCN R360/13.0 DME. The HOLF provides one 3,000-foot grass runway (Rwy 22L/04R) and one 3,000-foot concrete runway (Rwy 22R/04L). The HOLF field elevation is approximately 350' MSL. The HOLF is uncontrolled and unlit.

2. Scheduling. 3D MAW aircraft shall have priority use of the HOLF. 3D MAW/MAG-39 shall provide a monthly HOLF operations plan to the Range Scheduling Office no later than the 10<sup>th</sup> day of the previous month. Individual squadrons may also submit scheduling requests for the HOLF per procedures outlined in paragraph 3002 in Chapter 3 of this Order. The HOLF schedule will be finalized by the Range Scheduling Office per the priorities established in this Order. HOLF operations will not be authorized unless the HOLF has been scheduled.

3. General Operations. The HOLF can support right and left patterns at both parallel runways as follows.

a. Rwy 22L/R

(1) Single Runway Operations. Aircraft operating Rwy 22L or Rwy 22R may fly a left or right pattern. The first aircraft arriving in the pattern shall establish pattern direction. Aircraft flying left patterns shall remain north of the riverbed to remain clear of live-fire operations in the Quebec Impact Area when the Quebec Impact Area is active. No more than three (3) aircraft may operate at one runway at the same time. Aircraft shall operate at or below 1,400' MSL (1,000' AGL), unless instructed by or coordinated with LONGRIFLE. Nominal pattern altitude will normally be 800' MSL when operating on Rwy 22L and 1,000' MSL when operating on Rwy 22R.

(2) Parallel Runway Operations. When operations are in progress at both right and left runways, aircraft at Rwy 22L shall fly a left pattern, and aircraft at Rwy 22R shall fly a right pattern. Rwy 22L aircraft shall fly north of the riverbed to remain clear of live-fire operations in the Quebec Impact Area when the Quebec Impact Area is active. No more than three (3) aircraft may operate at a time, for a maximum of six (6) aircraft [three (3) at Rwy 22L; three (3) at Rwy 22R] operating at the HOLF at one time. Aircraft shall operate at or below 1,400' MSL, unless instructed by or coordinated with LONGRIFLE. Nominal pattern altitude will normally be 800' MSL when operating on Rwy 22L, and 1,000' MSL when operating on Rwy 22R.

ENCLOSURE (1)

(3) Runway change procedures. When prevailing conditions (wind, moon, etc.) require a runway change, the following procedures will be affected.

(a) All aircraft will land on the runway or depart the HOLF operating area.

(b) All aircraft will transmit, "Ready for runway change."

(c) The aircraft closest to the new departure threshold will call for take off on the new runway. As an example, when a change from runway 22 left to runway 04right has occurred: "Atlas 06, take off (new) runway 04 right."

(4) Procedures for transitioning from one parallel runway to another parallel runway. Aircraft wishing to transition from one parallel runway to the other runway may do so if they are the only aircraft in the pattern. Aircraft desiring to transition from one parallel runway to the other while other aircraft are operating at the HOLF shall depart the pattern and reenter via established reporting points (52 Area Crossroads/Pt. Yankee).

(5) Departure procedures. Aircraft departing the HOLF shall broadcast intentions and ensure they give way to pattern aircraft as they effect transition to the designated departure point (52 Area Crossroads/Pt. Yankee).

b. Rwy 04R/L

(1) Single runway operations. Aircraft operating Rwy 04L or Rwy 04R shall fly a left or right pattern. The first aircraft arriving in the pattern shall establish pattern direction. Aircraft flying right patterns shall remain north of the riverbed to remain clear of live-fire operations in the Quebec Impact Area when the Quebec Impact Area is active. No more than three (3) aircraft may operate at one runway at the same time. Aircraft shall operate at or below 1,400' MSL (1,000' AGL), unless otherwise instructed by or coordinated with LONGRIFLE. Nominal pattern altitude will normally be 800' MSL when operating on Rwy 04R and 1,000' MSL when operating on Rwy 04L.

(2) Parallel runway operations. When operations are in progress at both right and left runways, aircraft at Rwy 04R shall fly a right pattern and aircraft at Rwy 04L shall fly a left pattern. Rwy 04R aircraft shall fly north of the riverbed to remain clear live-fire operations in the Quebec Impact Area when the Quebec Impact Area is active. No more than three (3) aircraft may operate at a time for a maximum of six (6) aircraft (3 at Rwy 04L; 3 at Rwy 04R) operating at the HOLF at one time. Aircraft shall operate at or below 1,400' MSL, unless otherwise instructed by or coordinated with LONGRIFLE. Nominal pattern altitude will normally be 800' MSL when operating on Rwy 04R and 1,000' MSL when operating on Rwy 04L.

(3) Runway change procedures. When prevailing conditions (wind, moon, etc.) require a runway change, the following procedures will be affected.

(a) All aircraft will land on the runway or depart the HOLF operating area.

(b) All aircraft will report, "Ready for runway change."

(c) The aircraft closest to the new departure threshold will call for take off on the new runway. As an example, when a change from runway 04 left to runway 22 right has occurred: "Atlas 06, take off (new) runway 22 right."

(4) Procedures for transitioning from one parallel runway to another parallel runway. Aircraft wishing to transition from one parallel to the other runway may do so if they are the only aircraft in the pattern. Aircraft desiring to transition from one parallel runway to the other while other aircraft are operating at the HOLF shall depart the pattern and reenter via established reporting points (52 Area Crossroads/Pt. Yankee).

(5) Departure procedures. Aircraft departing the HOLF shall broadcast intentions and ensure they give way to pattern aircraft as they effect transition to the designated departure point (52 Area Crossroads/Pt. Yankee). Aircraft departing from Rwy 04L at night for 52 Area will transit downwind, south of Camp San Mateo, and clear of the pattern before turning toward 52 Area Crossroads.

4. Night Operations. Night operations are authorized at the HOLF. Patterns shall be flown as described above; however, no more than two (2) aircraft may operate at one runway at a time between sunset and sunrise. No more than four (4) aircraft may operate at HOLF parallel runways (2 at Rwy 22L/04R; 2 at Rwy 22R/04L) at a time. Night Vision Goggle (NVG) operations at the HOLF are authorized. However, simultaneous night aided and unaided operations are not authorized. Aided operations will have priority use. Aircraft shall be lighted per paragraph 4011 in this Chapter.

5. HOLF Transitions. HOLF transitions have been developed to facilitate transit from established transit routes (Offshore, Basilone, and Case Springs to the HOLF). The following transitions, as described below shall be flown by all aircraft transiting to the HOLF.

a. Ocean HOLF Transition. Transit from the Offshore Route to a point on the shoreline one (1) NM south of the San Onofre Nuclear Generating Station (vicinity of 495 915), north to Basilone Road, east along Basilone Road to San Mateo Road (52 Area Crossroads), and north along San Mateo Road to the HOLF. Aircraft shall transit from 52 Area Crossroads, which is the established communication switch point to HOLF common (249.9), inbound to the HOLF at 1,400' MSL. Aircraft departing the HOLF shall depart at or below 900' MSL via 52 Area Crossroads. CAUTION: CROSS R-207A AND R-300 AT OR ABOVE 1,000' AGL.

b. Basilone HOLF Transition. Transit from the Basilone Route to LZ 53 (vicinity of 559 932), west to San Mateo Road (52 Area Crossroads), and north along San Mateo Road to HOLF. Aircraft shall transit from 52 Area Crossroads, which is the established communication switch point to HOLF common, inbound to the HOLF at 1,400' MSL. Aircraft departing the HOLF shall depart at or below 900 ft MSL via 52 Area Crossroads. CAUTION: CROSS R-207A AND R-300 AT OR ABOVE 1,000' AGL.

c. Case Springs HOLF Transition. Transit from the Case Springs Route to Pt. Yankee at the intersection of the Charlie, Delta, and Yankee Training Areas (vicinity of 557 035), then southwest via San Mateo Canyon to HOLF. Aircraft shall transit from Pt. Yankee, which is the established communication switch point to HOLF common (249.9). After crossing Pt. Yankee,

transit at 1,400' MSL inbound to the HOLF. Aircraft departing the HOLF shall depart at or below 900' MSL via Pt. Yankee.

NOTE: Unless otherwise instructed by LONGRIFLE, aircraft shall fly right side right-of-way while flying the HOLF transitions (i.e., left to left aircraft pass).

6. Communications Procedures. Aircraft shall employ the following communication procedures when operating at the HOLF.

a. Aircraft shall report the following points to LONGRIFLE for communication switch to HOLF common frequency of UHF 249.9.

(1) 52 Area Crossroads is defined as the intersection of Basilone Road and San Mateo Road (vicinity of 508 955).

(2) Pt. Yankee is located at 557 035.

b. HOLF pattern position calls shall be made as required, dependent upon the numbers, types, and operations being conducted. However, a mandatory call shall be made on HOLF common under the conditions listed below.

(1) When entering from an entry point, report position and intentions. For example, "HOLF traffic, Atlas 06, at 52 Area Crossroads inbound for HOLF Rwy 22L."

(2) When departing the HOLF for an exit point, report intentions and direction of departure. For example, "HOLF traffic, Atlas 06 is departing via the Rwy 22L downwind for Pt. Yankee."

(3) When abeam for landing, report abeam and intended runway. For example, "Atlas 06 is abeam for an autorotation to Rwy 22L."

7. Concurrent HOLF/HLZ/CALSITE/TERF Route Operations. When simultaneous operations are in progress at the HOLF and the HLZ, the following deconfliction procedures will be effected.

a. Runway 22 L/R. Aircraft flying a right pattern shall remain clear of, and give way to aircraft operating at the HLZ.

b. Runway 04R/L. Simultaneous RWY 04R/L and HLZ operations are not authorized.

c. HLZ. Aircraft shall monitor HOLF common (UHF 249.9) when HOLF operations are in progress. HOLF and HLZ position calls shall be made as required. Expect HLZ aircraft to fly a northwest pattern to remain within Base boundaries. Non-participating aircraft are restricted from operating at CALSITES 13 and 14, LZs 62 and 63, DZ San Mateo, and in the Bravo One and Two Training Areas, unless scheduled through LONGRIFLE.

d. Night simultaneous HLZ/HOLF operations are not authorized.

e. LONGRIFLE will inform HOLF traffic when the Case Springs TERF Route is in use.

8. Aircraft Transit Routes. Helicopters transiting or operating in the vicinity of the HOLF, when HOLF operations are in progress, shall transit via

Talega Canyon, or remain at or above 1,900' MSL when transiting San Mateo Canyon. LONGRIFLE will provide advisories to HOLF aircraft for all conflicting traffic.

9. Concurrent HOLF/Fixed-Wing Operations. HOLF helicopter operations will be restricted to, at or below 1,400' MSL when fixed-wing aircraft are operating in the vicinity of San Mateo Canyon. Fixed-wing aircraft will operate at or above 2,500' MSL. HOLF operations are not authorized when the IP Bridge fixed-wing CAS route is in effect.

10. Weather Minimums. The following weather minimums are in effect during HOLF operations. Using these guidelines, aircraft commanders will determine acceptable weather.

- a. Day/unaided. 800/2
- b. Simultaneous operations at HOLF and HLZ. 800/2
- c. Night/Aided. 1000/3

11. Visual Reference Points. For visual reference, the points listed below may be used to help determine weather conditions.

- a. The lighted Northern Impact Area Control (NIAC) Tower at 513 975 is one (1) mile from the HOLF.
- b. The 62 Area Camp San Mateo is two (2) miles from the HOLF.
- c. The power lines in San Mateo Creek, grid 4696, are three (3) miles from the HOLF.

#### 4014. HELICOPTER LANDING ZONES

1. Administrative Landing Zones. Each cantonment and major command area on Camp Pendleton will maintain a standard administrative helicopter Landing Zone (LZ) for use by MEDEVAC, VIPs, command, or routine administrative flights. Specific LZ descriptions and instructions can be found in the Aviation Training Facilities Survey. Please note that certain LZs can support UH-1 operations only.

2. Administrative Landing Zone Marking. Each LZ shall be marked by an equilateral segmented triangle with 58" sides, and the letter "H" which will point to magnetic north. The area number will be centered on or below the base. The triangle, letter "H", and numbers shall be composed of white painted concrete or of white paint on permanent concrete, asphalt, or grass surface at least 100 feet in diameter, if possible.

3. Administrative Landing Zone Maintenance. Area Commanders are responsible for the marking and maintenance of helicopter LZs in their areas. Special attention should be directed toward keeping the concrete painted white, the numbers clearly visible, and the surrounding vegetation well trimmed.

4. Obstructions. Tall poles, wires, or other elevated obstructions will not be erected in the vicinity of Camp Pendleton's helicopter LZs without prior approval of the Camp Pendleton Airspace Manager at (760) 725-8183. LZs should also be kept clear of tents, vehicles, or other objects easily moved or damaged by rotor wash.

5. Restrictions. Helicopters are authorized to land in training areas, as required, to support tactical operations and exercises; however, the using unit shall comply with the restrictions depicted on the Camp Pendleton Military Installation Map [reference (d)], and per Chapters 1 and 2 of this Order.

6. Landing Zones (LZs). The routine use of any Camp Pendleton administrative helicopter LZ shall be coordinated with the Area Commander prior to submitting a request to the Range Scheduling Office. Listed below are the current administrative helicopter LZs located on Camp Pendleton. Camp Pendleton's LZs are depicted in the Aviation Training Facility Survey can be found under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>.

ADMINISTRATIVE LANDING ZONE	LOCATION	DESCRIPTION
LZ-11	712 852	East side of 11 Area Parade Field adjacent to 1 <sup>st</sup> MarDiv HQ (BLDG 1133); unmarked
LZ-12	706 863	Knoll east of BLDG 1244 adjacent to tennis court; limited to UH-1 only; unmarked
LZ-14	715 861	Located near BLDG 1491 in front of 1 <sup>st</sup> MLG HQ; limited to UH-1 only
LZ-16	701 845	H&S (MCB) Motor Pool parking lot, south of the 13 Area BOQ (BLDG 1341); unit requesting use shall coordinate with PMO and provide security to ensure the area is clear of POVs prior to operations
LZ-17 VIP	722 836	North of San Luis Rey VIP Quarters; limited to VIP use only
LZ-21	624 765	North end of football field; over flight below 300' AGL of Least Tern/Snowy Plover nesting area (north of football field) is prohibited during nesting season, 1 March - 15 September; unmarked. Helicopter landings shall be minimized to the maximum extent possible during the period of 1 March to 15 September.
LZ-22	678 837	Northeast side of BLDG 22172; across from chapel

ADMINISTRATIVE LANDING ZONE	LOCATION	DESCRIPTION
LZ-27	698 891	East side of Naval Hospital
LZ-31	606 804	Blacktop in front of Edson Range Receiving Barracks; west of Alpha Range
LZ-33	655 854	Camp Margarita Football Field; east side of BLDG 33458
LZ-41	590 832	South of football field; next to Stuart Mesa Road
LZ-43	620 896	1/4 mile northeast of gas station on East side of Las Pulgas Road; limited to UH-1s only
LZ-52	520 949	Lower parade grounds, west side of Basilone RD; unmarked
LZ-53	556 937	Blacktop 1/4 mile north of "E" Club
LZ-62	489 980	100 m southwest of the rappel tower
LZ-63	469 991	Located near gas station; unmarked
LZ-64	479 017	North side of hardtop road; near Camp Talega main entrance

7. Tactical Landing Zones. Camp Pendleton has 21 tactical helicopter LZs to support training. They shall be scheduled in advance through the Range Scheduling Office, just as any other range or training asset. The description and locations of Camp Pendleton's tactical LZs can be found below and in the Aviation Training Facilities Study under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>.

TACTICAL LANDING ZONE	LOCATION	DESCRIPTION
LZ Red Beach	565 842	Beach area between LHA Pad and VSTOL Pad #1; unmarked
LZ Viewpoint	544 868	Concrete pad in vicinity of Horno Canyon; west of I-5 Freeway
HLZ Heavy Lift Pad	480 994	<p>Hilltop adjacent to San Mateo Water Tank, lighted pad (with windsock), LHA (lighted) and LPD markings, marked external weight return areas. Keys to open building to operate lights are maintained by MAG-16 and MAG-39 Operations. The master keys are maintained at Range Operations, MCB, CamPen. After completion of training, lights shall be switched off and the building door secured.</p> <p>NOTE: Aircraft shall return weights to the designated external weight area.</p>
LZ Pelican	67905 88354	This zone is located in the middle of 25 Area Combat Town. CH-46 and smaller.
LZ Toucan	68016 88148	This site is not confined and can support CH-53 and smaller.
LZ Vulture	50967 94829	52 Area Combat Town 45m north. Supports CH-53 and smaller.
LZ Cardinal	49525 96578	This site is situated in a box canyon. Supports CH-53 and smaller.
LZ Ostrich	64168 88977	The zone is located between the 500-yard and 600-yard firing Supports CH-53 and smaller.
LZ Peregrine	61838 85738	Used to support SOTG Training at R-130. Supports CH-46 and smaller.
LZ Eagle	61843 84679	This zone is associated with the MOUT facility (R131). Supports CH-53 and smaller.
LZ Sparrow	68166 93622	This zone is associated with R409. Supports CH-53 and smaller.

<b>TACTICAL LANDING ZONE</b>	<b>LOCATION</b>	<b>DESCRIPTION</b>
LZ Turkey	68086 93685	This zone is associated with R409. Supports CH-53 and smaller.
LZ Canary	62660 00454	This zone supports assault landings in the vicinity of OP Mike (LFAM 711). Supports multiple A/C simultaneously
LZ Gnatcatcher	63080 98680	This zone supports assault landings in the vicinity of OP Mike (LFAM 711). Supports CH-53 and smaller.
LZ Swallow	62052 99057	This zone supports the simulated or actual medical evacuation of personnel in the vicinity of OP Mike (LFAM 711). Supports CH-46 and smaller.
LZ Blue Bird	62900 99651	This zone supports assault landings in the vicinity of OP Mike (LFAM 711). Supports CH-53 and smaller
LZ Robin	60345 00317	This zone supports assault landings in the vicinity of R800. Supports CH-53 and smaller
LZ Buzzard	61467 00682	This zone supports assault landings in the vicinity of R800. Supports CH-53 and smaller
LZ Hawk	61104 01266	This zone supports assault landings in the vicinity of R800. Supports CH-53 and smaller
LZ Falcon	60294 99921	This zone supports assault landings in the vicinity of R800. Supports CH-53 and smaller
Starling	62031 91260	This zone supports assault landings between R225 and R223A. Supports CH-53 and smaller

4015. CONFINED AREA LANDING SITES (CALSTITES)

1. General. Camp Pendleton maintains a variety of CALSTITES for helicopter pilot training and landing practice. Units exercising in the vicinity of any CALSITE will ensure sites are not disturbed, no obstruction is left in the area, and no foxholes or other entrenchments are constructed at these locations. Pilots are requested to report CALSITE maintenance conditions to LONGRIFLE.

2. Reference. Specific descriptions and CALSITE depictions are provided in the Aviation Training Facilities Survey. The Aviation Training Facility

Survey can be found in the Aviation Training Facilities Study under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>.

3. Scheduling. Helicopter use of CALSITES shall be scheduled in advance with the Range Scheduling Office, and will be strictly controlled by LONGRIFLE. Clearance will be granted by LONGRIFLE to use available CALSITES. Helicopters flying frag missions in support of ground units will be cleared to contact their supported unit after initial call-up and check-in with LONGRIFLE. Upon completion of mission frag requirements (or pilot landing practice) at CALSITE locations, the helicopter flight leader shall report, "mission complete" to LONGRIFLE (prior to departing Camp Pendleton Restricted Airspace).

4. Location. Camp Pendleton CALSITE locations and descriptions are provided below and in the Aviation Training Facilities Study [reference (f)] under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>.

SITE	COORDINATES	LAT/LONG	REMARKS
1	64465 81080	33° 16'05", 117° 22'54"	CH-53 and smaller
2	67738 81213	33° 16'10", 117° 20'47"	CH-46 and smaller
3	69931 92658	33° 22'22", 117° 19'24"	CH-46 and smaller
4	70246 94112	33° 23'09", 117° 19'12"	CH-46 and smaller
5	71991 95970	33° 24'10", 117° 18'04"	CH-53 and smaller
7	66544 97881	33° 25'11", 117° 21'35"	CH-46 and smaller
8	63080 98680	33° 25'37", 117° 23'50"	CH-53 and smaller
9	61104 01266	33° 27'00", 117° 25'07"	CH-53 and smaller
10	59517 01662	33° 27'13", 117° 26'08"	CH-46 and smaller
13	49549 00002	33° 26'18", 117° 32'24"	CH-53 and smaller
14	48689 99782	33° 26'10", 117° 33'07"	CH-53 and smaller
15	47817 99531	33° 26'02", 117° 33'41"	CH-53 and smaller
16	48845 96718	33° 24'31", 117° 33'01"	CH-53 and smaller
17	52251 92236	33° 22'06", 117° 30'48"	CH-46 and smaller
18	57592 90383	33° 21'07", 117° 27'21"	CH-53 and smaller
19	58347 88537	33° 20'07", 117° 26'51"	CH-53 and smaller
20	53591 87798	33° 19'42", 117° 29'55"	CH-53 and smaller
21	57614 82702	33° 16'57", 117° 27'17"	CH-53 and smaller
22	55786 86418	33° 18'58", 117° 28'30"	CH-53 and smaller
23	58032 83962	33° 17'38", 117° 27'03"	CH-53 and smaller

4016. VERTICAL TAKEOFF AND LANDING (VTOL) SITES

1. General. Camp Pendleton VTOL pads for VTOL operations are listed below. Both are constructed of AM-2 matting. The matting at VTOL 2 is scheduled to be replaced with a concrete pad. Aviation Training Facilities Survey provides specific descriptions and depictions of Camp Pendleton VTOL pads for supporting VTOL operations.

SITE	COORDINATES	LAT/LONG
VTOL Pad 1	57548 83035	33° 17'08", 117° 27'13"
VTOL Pad 2	60078 82014	33° 16'35", 117° 25'08"

2. Scheduling. Training operations on these VTOL pads by either AV-8 Harriers or rotary wing aircraft shall be scheduled in advance with the Range Scheduling Office.

4017. STOL 101 ROAD OPERATIONS. A designated section of old Highway 101 is available for AV-8 and helicopter road operations. The Highway 101 AV-8 roadway operation area is located at midpoint 56064 85508.

4018. SIMULATED FLIGHT DECKS. Simulated Flight Decks that are available for training are depicted in the Aviation Training Facilities Study. It can be found under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>.

FLIGHT DECKS	DESCRIPTION	COORDINATES
Extended LPD	Marked on HLZ	48060 99495
LPD	Marked	56346 84646

4019. PARACHUTE OPERATIONS

1. General. Parachute and paradrop operations include dropping or releasing personnel, cargo, vehicles, illumination, or any item from an aircraft for descent to the ground.

2. Scheduling and Briefing. Prior to conducting any parachute or paradrop operations, the unit desiring to conduct such training shall coordinate and schedule (in advance) the airspace and the appropriate DZ requirements needed to support the operation. Scheduling of airspace and DZ requirements shall be done through the Range Scheduling Office. Due to the complexity and number of conflicts involved, both the Air Space and DZ should be scheduled PRIOR to attending the Air Frag conference. Attempting to schedule after aircraft are assigned often results in conflicts that interfere with training. An aircrew Airspace and Range Safety Brief is mandatory prior to conducting parachute operations aboard MCB, CamPen. POC for briefing is the RCO at 760 725-0355 (DSN 365).

3. Restrictions. The following restrictions and safety precautions apply to all parachute and paradrop operations at Camp Pendleton.

a. All parachute operations will be conducted in accordance with MCWP 3-15.7, Static Line Parachuting Techniques and Training [reference (g)]. The RSO will have the final approval authority for drops based on the wind condition. The RSO will suspend or cancel drop operations if, in his judgment, wind direction or wind gusts in combination with aircraft position make the drop unsafe.

b. During static-line parachute operations, the winds on the surface will not exceed 13 knots, or 30 knots through the jump altitude. When utilizing Ram-Air parachutes, either static-line deployed or manually deployed, the winds on the surface will not exceed 18 knots; the winds through the jump altitude are unlimited.

c. The RSO must maintain two-way radio communication with the drop aircraft, and with LONGRIFLE. In the event of radio communication failure, operations shall be suspended until air-ground LONGRIFLE communication is reestablished.

d. No drops will be made from altitudes exceeding the height restrictions of Camp Pendleton Restricted Airspace, unless coordinated in advance with the Base Airspace Manager at (760) 725-8183. Within R-2503B, the maximum drop altitude is 15,000' MSL; in R-2503A, the maximum drop altitude is 2,000' MSL. If a training requirement exists for parachute/paradrop operations above these altitudes, advanced coordination and approval authority will be required from the Federal Aviation Administration (FAA). In this case, notification and coordination with the Camp Pendleton Airspace Manager shall be made at least ten (10) working days prior to the desired paradrop operation.

e. All high altitude high/low opening paradrops shall be conducted in VFR conditions to include aircraft transit/pattern and jumper descent to DZ.

f. Cargo drops will not be made at an altitude above 3,000' AGL in R-2503B or 2,000' MSL in R-2503A, unless coordinated with the Base Airspace Manager at (760) 725-8183. A cold pass is required prior to dropping cargo.

g. Units conducting cargo drops at DZ Basilone shall provide road guards to stop traffic while the A/C is conducting its cargo drops. Operations shall not require a road to be closed for more than ten minutes.

h. Parachute and paradrop operations will be conducted in designated DZ areas only as established by the Director, Range Operations Division. Requests for parachute/paradrop operations in areas other than established DZs will require advance approval from the Director, Range Operations Division; and shall be coordinated in advance with the Range Scheduling Office, and Airspace Manager.

4. Hazards. The Commander and RSO perform the following actions to reduce the risks associated with hazards.

a. Commander

(1) Ensure a risk assessment analysis has been conducted to determine the risk level for jumpers. If a high risk exists, select (if possible) an alternate DZ that allows mission conduct at a lower risk level.

(2) Ensure a follow-on assessment has been made to determine whether the jumpers' risk level has changed.

b. The RSO shall complete a survey of the DZ no less than 24 hours prior to conducting live parachute operations in order to validate the DZ survey and identify any potential hazards in and around the DZ. The results of the DZ assessment shall be included in the ORM prepared by the unit conducting the parachute training.

5. Procedures. The following control procedures will apply to all parachute and paradrop operations conducted on this Base.

a. The RSO shall be physically located within the DZ. Prior to occupying the DZ, the RSO shall contact LONGRIFLE to receive a safety brief and provide LONGRIFLE with a brief scenario of the training to be conducted. The scenario shall include type aircraft, proposed start/stop times, and the type of personnel and type of cargo to be dropped.

b. All aircraft entering Camp Pendleton Restricted Airspace for participation in parachute/paradrop operations shall first check-in with LONGRIFLE. After clearance into the airspace, LONGRIFLE will pass control of the aircraft to the RSO.

c. Because DZs Basilone and Fallbrook are located within MCAS, Camp Pendleton Class D Airspace, a different control procedure will be used for parachute/paradrop operations scheduled within these DZs. All aircraft conducting drop operations at this site may be directed by LONGRIFLE to contact the MCAS Air Traffic Control Tower, when the MCAS is open, for clearance and positive control prior to beginning DZ operations. The MCAS Air Traffic Control Tower will provide clearance authority for the aircraft to begin drop operations, and pass control of the aircraft to the RSO. When the MCAS is closed, LONGRIFLE will pass control of the aircraft to the RSO. An alternate pattern is available for large aircraft (i.e., C-141) conducting paradrops at these DZs designed to avoid over flight of Camp Pendleton impact areas. If this pattern is desired, coordinate with LONGRIFLE in advance.

6. DZs. A listing of all DZs within the Camp Pendleton area is provided in the Aviation Training Facilities Survey. Listed below is a list of DZs available at Camp Pendleton.

DZ Basilone, DZ Case Springs, DZ Catalina, DZ DeLuz, DZ Fallbrook (Helos Only), DZ Horno, DZ Papa Three, DZ Tank Park, DZ Wild Eagle and DZ X-Ray.

#### 4020. AIRCRAFT REFUELING SITES

1. Sites. The sites at established training facilities and/or within training areas, approved aviation refueling sites, are listed below.

SITE	LOCATION	ENVIRONMENTAL CONSTRAINTS
LHD	561 847	Stay on the LHD Pad; vernal pools in close proximity.
LZ-21	624 765	Stay in the landing zone; near a rare plant area.
LZ-53	555 937	Stay on landing site; rare plant area in close proximity.
STOL-101	564 852	No special concerns.
PAD-1	574 834	Stay in the landing zone; vernal pool in close proximity.
PAD-2	601 822	The site is near riparian habitat and rare plant area.
AFA-22	668 880	No special concerns.
AFA-31	667 917	No special concerns.
AFA-40	638 989	No special concerns.
AFA-41	629 993	No disturbance to north; archaeological site.
HOLF	505 995	Limited to mobile refueling trucks; vernal pools, Arroyo Toad, and rare plants in area.
LZ Viewpoint	548 869	Gnatcatcher habitat nearby; no brush removal/disturbance around site.

2. Constraints for all Refueling Sites

- a. Use existing access roads to all sites.
- b. Use only the existing disturbed areas/hard-stand at each site. No brush cutting or disturbance outside of the existing footprint is allowed.
- c. No digging/grading is allowed at any site without approval from the AC/S, ES.

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d. Secondary containment for refueling operations will be constructed using sand bags or some other implement over which impermeable material is draped and secured.

e. No dirt piles or loose soil will be left at any site for any reason. This could present an "attractive nuisance" to the endangered Arroyo Southwestern Toad and/or Pacific Pocket Mouse.

f. All sites are to be left in their original condition after each refueling operation (no permanent tanks, containment berms, etc.).

g. Units choosing to use the designated sites will not be required to seek additional environmental approval.

h. Units shall obtain approval from the AC/S, ES when refueling sites, not listed above, are requested.

i. See Chapter 2 of this Order for HAZMAT spill procedures.

#### 4021. UNMANNED AERIAL VEHICLE (UAV) OPERATIONS

1. General. UAVs operating at Camp Pendleton shall remain within R-2503A and/or R-2503B. All UAV operations at Camp Pendleton shall be coordinated with the RCO at (760) 725-0355, and scheduled per procedures outlined in paragraph 3002 in Chapter 3 of this Order. Any UAV operations conducted outside of established ACAs require coordination with the RCO at least fourteen (14) days prior to the event and a depiction of the maneuver box and route of flight (if not on file) shall be submitted.

2. Communication. UAV operations shall not be conducted at Camp Pendleton unless positive two-way communication is established and maintained between the UAV operator and LONGRIFLE. The RSO shall advise LONGRIFLE prior to launching the UAV and when training is complete. Units conducting UAV operations shall have a radio to monitor the LONGRIFLE Aviation Safety Net (UHF 301.9).

3. Weather Minimums. UAV operations shall be conducted in VMC only during the periods when LONGRIFLE is augmented by surveillance radar.

4. Safety Training. All UAV operators shall attend the Camp Pendleton UAV Operators' Class prior to conducting UAV operations. The class is available upon request by contacting the RCO at (760) 725-0355. UAV operator certification requires completion of the UAV Operators' Class and letter from the individual's unit commander stating he/she is authorized by the unit commander to act as a UAV operator for that unit. The certification will remain in effect for two (2) years. A separate, non-participating, qualified RSO (may be non live-fire) must also be present in order to conduct training.

5. Airspace Coordination Areas. Three Airspace Coordination Areas (ACAs) are on file and can be scheduled for use by units to conduct UAV training. These ACAs are depicted in Aviation SPINS. They can be found under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>. Hard copies are available upon request from the Range Operations Division.

ENCLOSURE (1)

Chapter 5

Maritime Operations

5000. OFFSHORE TRAINING SAFETY. The waters offshore Camp Pendleton are subject to military, government, and civilian vessel operations, as well as recreational water craft activities. Although Marines train as they fight, it is imperative that units operating in any offshore areas, including published restricted waters, take all the precautions necessary to ensure they safeguard personnel and equipment from transiting civilian and other military ships, water craft, and/or recreational equipment.

5001. CAMP PENDLETON AMPHIBIOUS ASSAULT AREA (CPAAA)

1. General. The CPAAA is an ocean area used for amphibious operations, simulated dive, glide, parachute operations, simulated low-level bombing, simulated rocket fire and strafing, and free balloon operations.

a. No live ordnance may be expended in this area without prior approval from LONGRIFLE.

b. CPAAA is not an exclusive military use area.

2. Boundaries. CPAAA is contained within the boundaries listed below.

LATITUDE NORTH	LONGITUDE WEST
33 degrees 30' 00"	117 degrees 45' 00"
Along coastline to	
33 degrees 23' 00"	117 degrees 35' 30"
33 degrees 20' 00"	117 degrees 40' 20"
33 degrees 09' 20"	117 degrees 28' 30"
33 degrees 12' 00"	117 degrees 24' 30"
Along coastline to	
33 degrees 05' 00"	117 degrees 19' 00"
33 degrees 05' 00"	117 degrees 45' 00"
To point of origin	

3. Scheduling. Guidelines for requesting CPAAA use are contained in FACS-FACSINST 3120.1A [reference (u)]. Units anticipating use of CPAAA shall forward requests to the Fleet Area Control & Surveillance Facility (FACSFAC, San Diego).

5002. CAMP PENDLETON AMPHIBIOUS VEHICLE TRAINING AREA (CPAVA)

1. General. The CPAVA is an ocean area adjacent to the shoreline used for amphibious operations and associated training, simulated dive, glide, and low level bombing. It includes the LCAC Transit Lane. No live or inert ordnance may be expended in this area without prior approval from LONGRIFLE.

2. Boundaries. CPAVA is contained within the boundaries listed below.

LATITUDE NORTH	LONGITUDE WEST
33 degrees 23' 00"	117 degrees 35' 30"
33 degrees 12' 00"	117 degrees 24' 30"
33 degrees 09' 20"	117 degrees 28' 30"
33 degrees 20' 00"	117 degrees 40' 20"

3. Scheduling

a. Submit requests for use of the CPAVA to the Range Scheduling Office in accordance with figure 3-1 of this Order.

b. Units desiring to conduct offshore training that may be hazardous to non participants (i.e. mine countermeasures training, underwater demolitions) shall notify the Director, Range Operations Division at least 30 days in advance of planned training. Units must provide a diagram of planned training footprint using the Camp Pendleton Military Installation Map [reference (d)]; diagrams must include a description of training mines or other obstacles. Units desiring to conduct hazardous activities offshore shall also be responsible for publication of a Notice to Mariners via coordination with the US Coast Guard.

c. The Range Scheduling Office shall be notified in writing upon cancellation of training. Verbal cancellations will not be accepted.

5003. LANDING CRAFT AIR CUSHION (LCAC) TRANSIT LANE. Due to the LCACs high speed of advance, a clear LCAC Transit Lane extending a minimum of 4,000 yards seaward from the ACU-5 ramp (33-15.5N/117-26.3W) has been designated for LCAC line-up purposes. This exclusion area (in effect, an LCAC "drive-way") is the only safe access for LCACs departing from and returning to the ACU-5 ramp. The LCAC Transit Lane is contained within the boundaries listed below.

LATITUDE NORTH	LONGITUDE WEST
33 degrees 15' 40"	117 degrees 26' 20"
33 degrees 12' 50"	117 degrees 31' 10"
33 degrees 12' 30"	117 degrees 30' 50"
33 degrees 15' 20"	117 degrees 26' 10"
to point of origin	

5004. LCAC OPERATIONS

1. General. LCACs are restricted in their ability to maneuver when departing from and returning to the ACU-5 ramp. This LCAC maneuverability restriction equates to plus or minus ten degrees from a line perpendicular to the surf zone.

2. Anchoring. For LCAC safety purposes, it is imperative ships do not anchor within the LCAC Transit Lane. This exclusion extends seaward 4,000 yards, bearing 235 to 055 degrees true, from L33-15.5N/117-26.3W.

3. Environmental. LCAC operations ashore and land operations shall be conducted per Chapter 2 of this Order. LCAC operations shall maintain a 1,000-foot seaward buffer zone from the Blue Beach/White Beach Least Tern/Snowy Plover nesting areas between 1 March and 15 September. Direct ingress from the LCAC ramp/facility is not affected by this buffer zone.

5005. DEL MAR BOAT BASIN

1. General. The Commanding Officer, MCB exercises command in all matters pertaining to the Del Mar Boat Basin, the government-owned beaches adjacent to it, the channel and channel entrance, and the restricted sea areas off the Del Mar outer breakwater.

a. The AC/S, O&T exercises general staff cognizance over the Del Mar Boat Basin Complex. The AC/S, O&T shall resolve "Priority Use" conflicts. All requests for use of the Del Mar Boat Basin will be addressed to the Range Scheduling Office.

b. The AC/S, O&T is designated as the authority for administrative control of, and in normal operations, is delegated the prime coordination responsibility for the Del Mar Boat Basin.

c. The maximum speed of a craft operating within the Del Mar Basin and channel waters shall not exceed 5 mph or safe wake speed.

2. Training. Requests for use of the Operations Area, Del Mar Boat Basin, docks, or any other Del Mar Boat Basin facilities will be submitted in accordance with Chapter 3 of this Order.

### 3. Fishing

a. No lobster traps, commercial or otherwise, will be set within the Del Mar Boat Basin or channel; nor within 750 feet of the jetty or groyne.

b. Commercial fishing boats will not be permitted within the Del Mar Boat Basin area.

c. Fishing is permitted from shore and privately owned boats during daylight hours only, except when precluded by military commitments.

d. State of California fishing regulations apply to all users. Both a California fishing license and a Base fishing permit are required for fishing.

e. Violations of these restrictions will be reported to the Base Game Warden at (760) 725-3360.

### 4. Restricted Sea Areas

a. Access to the area west of BLDG 210536 is restricted to authorized personnel only. This includes the south groyne, the north boundary of the Oceanside Harbor, and Staging Area #2. Staging Area #2 may be used, upon written request to the Commanding Officer (AC/S, O&T), for training, and staging cargo and vehicles for exercises.

b. Children under 16 years of age are prohibited from traversing the north jetty unless accompanied by, and under the immediate supervision, of a responsible adult.

c. All navigational aids are off-limits to all personnel, except those personnel authorized to service, inspect, and maintain them.

d. Restricted sea areas include all of the water of the Del Mar Boat Basin entrance channel lying northerly of a line between a light on the north Del Mar jetty at latitude 33 degrees 12' 20", longitude 117 degrees 24' 0", and a light on the north Oceanside Harbor groyne at latitude 33 degrees 12' 30", longitude 117 degrees 23' 0" (Del Mar Recreational Beach). Restricted sea areas are off-limits to all unauthorized personnel.

5. Port of Refuge

a. Use of the Del Mar Boat Basin and channel as a port of refuge by small craft is authorized during periods of hazardous weather conditions.

b. A vessel in distress will be provided all necessary assistance, within the capability of the Base, to prevent loss of life or property.

6. Privately-Owned Boats and Small Craft. All authorized personnel operating a privately-owned boat within the Del Mar Boat Basin and channel waters will ensure boats or craft are properly outfitted and registered per applicable U.S. documentation regulations or state registration procedures, and the most current edition of BO P5000.2J, Base Regulations [reference (h)].

## Chapter 6

### Range Operations

#### 6000. RANGE OPERATIONS

1. Establishment. Ranges are established by the Commanding Officer, MCB, CamPen. This does not prohibit placing approved targets on certain existing ranges after observing all safety precautions and regulations, and coordinating with the Range Control Officer (RCO). Targets will never be placed in any dud-producing impact area without approval from the RCO, and escorted by EOD personnel or other personnel designated by the RCO. Recommendations to improve ranges and facilities should be submitted to the AC/S, O&T.

#### 2. Operations

a. Operations and Training (O&T) range personnel or Contractor Operations and Maintenance of Training Systems (COMTS) contractors are required to operate electrical targets or simulators on ranges equipped for that purpose. Operation times must be included on the range request when operators are required. When electrical targets or simulators are not used, the ranges may be scheduled without operator support.

b. All ranges belong to the Commanding Officer, MCB, CamPen. When units are the primary users of a particular range, they do not inherit title to those ranges, and possess no authority to modify the nomenclature, purpose, or design of any range.

c. AC/S, O&T personnel are authorized access to all ranges and training facilities for the purpose of inspection, operation, or maintenance at all times. These personnel will not disrupt unit training unless necessary to perform their duties. Training units will not interfere with these personnel in the performance of their duties, even if the range or facility is in use.

#### 3. Targets

a. Training Support Division (TSD) provides targets for installed mechanisms on COMTS ranges and for the Portable Infantry Target System (PITS) mechanisms, when TSD provides the equipment operator.

b. Targets for artillery and aircraft will be provided by Training Resources Management Division (TRMD), and positioned in the impact areas, as approved by the Range Operations Division.

c. Other than PITS, Remote Enhanced Target System (RETS) or other targets provided by ROD, TSD or Training Resources Management Division (TRMD), using units will provide their own targets. Targets shall be placed and engaged within the existing lateral limits for that range.

d. All targets utilized in fire & movement/maneuver shall be "knock down stay down" type targets.

e. All targets used for EMP/CQB static "Square Bay" type training shall be mounted on soft wood uprights and shall be made from cardboard or paper.

f. Pallets shall only be used for BZO or 10 meter machinegun qualifications. When engineer stakes are utilized to support pallets, they shall be placed on the outside edges of the pallet.

6001. RANGE CONTROL FEATURES

1. Range Signs and Markers. Range signs and markers are placed on all ranges, mortar positions, and artillery firing areas (AFAs) to indicate firing lines, lateral limits, range number, and other information. Firing lines and lateral limits are not indicated at mortar or artillery firing areas. The signs and markers are described below.

a. Surveyed Monuments. A white concrete monument placed near the center of firing lines and AFAs.

b. Firing Line Markers

(1) Left. Small, white concrete monument.

(2) Right. Small, red concrete monument.

c. Range Limit Signs

(1) Left. 4' x 4' to 12' x 12', white and black checkerboard, square wood sign.

(2) Right. 4' x 4' to 12' x 12', red and black checkerboard, square wood sign.

d. Range Number Signs. A sign bearing the range number for each range.

e. Hearing Loss Signs. A sign warning users hearing protection devices are required.

f. Off Limits Signs. A sign warning the area is off-limits by order of the Commanding Officer, MCB, unless scheduled through the Range Scheduling Office.

g. Impact Area Signs. A sign warning personnel of live-fire impact areas.

h. Additional signs outlining specific instructions or precautionary measures may be posted as deemed necessary by the AC/S, O&T.

2. Barricades and Range Guards. Either barricades or range guards shall block normal approaches to danger areas created by firing. The RCO shall determine specific requirements.

a. Barricades. Barricades, when required, shall be provided by the Range Operations Division for all roads and trails leading into range areas. There are two types of barricades listed below.

(1) Portable barricades consisting of clearly visible sign, will be placed directly across the road. A sign stating, "Live-Firing in Progress, Keep Out" shall be attached to the barricade. The sign shall be clearly visible to anyone attempting to enter the range area.

(2) Permanent barricades consisting of heavy posts embedded on both sides of the road or trail, with a gate, or chain stretched between the posts. The lowest point shall be at least two feet above the ground. The sign (described in (1) above) shall be attached to the chain. Gate shall be locked in place.

(3) Firing units shall ensure barricades with clearly visible signs are in place prior to firing. Specific requirements for each range are listed in the Special Instructions located on each Range.

(4) Firing units are responsible for ensuring that during hours of darkness or limited visibility, barricades shall be lighted with chem-lights or other suitable means.

b. Range Guards

(1) Range guards shall be posted in pairs with positive communications with the RSO to prevent entry into the danger areas that cannot be observed, or which do not lie within the established impact areas. Normally, range access roads are not within this category and do not require a range guard, except as listed in the Special Instructions on the range or as specified by the RCO.

(2) Artillery firing units shall post range guards on established roads when the area "E" of the surface danger zone diagram (refer to directives in the MCO 3570 series) actually covers the road involved. Traffic on these roads shall be halted during actual firing. Delays must not exceed ten (10) minutes at any one time.

(3) OICs/RSOs may post additional range guards, as necessary, to ensure safety. The arbitrary blocking of roads or the denial of access to other than a danger area is not permitted.

(4) Range guards shall be provided with a means of positive communication by the unit posting them. Range guards shall also be provided with some means of illumination for the identification of their positions during hours of darkness.

3. Warning Flags and Warning Lights. During daylight hours, the warning flag shall be raised whenever a unit is on any range. During hours of darkness, a blinking red light, facing to the rear of the range, shall be in place. LONGRIFLE will place the unit in check-fire until flags or lights are in place. The flag is in an ammo can, along with the specific Special Instructions, attached to a pole at each training facility. When Aviation Units are conducting night live-fire operations in the Zulu or Whiskey Impact areas, units on ranges adjacent to the Zulu and Whiskey Impact Areas shall mark their forward position with an Infrared (IR) Strobe, IR chem-light, or a visible light source. Once air assets know of, and have positively identified the forward position, LONGRIFLE may contact the unit to secure the IR light source.

6002. PROCEDURES FOR RANGE CHECK-IN/OUT

1. Briefs. The RSO (including FACs) must participate in a "Hot Brief" with LONGRIFLE via radio on frequencies: UHF 301.9, 249.9, 255.2; VHF 123.2; FM 30.35 or 49.00. Only the Director, Range Operations Division may approve alternate communication methods. The RSO shall identify himself/herself as

the RSO, then confirm numbers of participating personnel, types of weapons to be fired, types of ammunition to be fired, and the presence of a safety vehicle and corpsman.

2. RSO Box. A 60mm ammunition can has been attached to a pole at each range, rappel tower, mortar position, and artillery firing area. In the ammunition can, the RSO will find a red flag and the most current copy of the Special Instructions for that range/facility.

3. Surface Danger Zone Diagrams (SDZs). All SDZs shall be constructed using the 1:50,000 Camp Pendleton Military Installation Map [reference (d)]. The SDZ diagram will be constructed per MCO 3570 series.

#### 4. Clearance

a. Once all regulations and safety requirements have been satisfied, LONGRIFLE will authorize the unit to go hot.

b. Helmets and flak jackets shall be worn for any Live event involving movement or maneuver, High explosives or grenades, Machinegun, or Close Quarters Battle in shoot houses. For all other training, either unit ORM or SOP will determine if helmets and flak jackets will be required.

c. The RSO and OIC of Firing shall be physically present at the range or firing position whenever training is in progress. If it becomes necessary to change RSOs, both old and new RSOs must be physically present at the range or firing position to conduct a face-to-face relief. Prior to requesting a change over, the new RSO will conduct a joint inventory of all ammunition with the old RSO and the OIC/RSO will verify all safety/weapon data.

#### 5. Securing from Firing

a. The unit will notify LONGRIFLE thirty (30) minutes prior to going cold. The RSO is not released from his/her responsibilities until cleared by Range Safety Specialist or the Range Landlord.

b. For Ranges that will be inspected the morning following night firing exercises (FIREXs), the RSO shall coordinate an inspection time with LONGRIFLE. The RSO shall provide a POC & phone number. Inspection times shall not be any earlier than 0700. RSOs will be present and ensure that they have the appropriate personnel at the time of the inspection to conduct police calls if required. The RSO is not released from his/her responsibilities until cleared by the Range Safety Specialist or the Range Landlord.

6003. AUTHORIZATION TO FIRE. Firing shall not be conducted unless it has been scheduled with the Range Scheduling Office and authorized by LONGRIFLE.

#### 6004. CONTRACTOR OPERATIONS AND MAINTENANCE OF TRAINING SYSTEMS (COMTS) RANGES

1. Background. The USMC Contractor Operation and Maintenance of Training Systems (COMTS) Program supports ten ranges (Ranges 111, 132, 210G, 215A, 216, 218A, 223A, 223B, 314C, 409A) aboard Camp Pendleton. For additional information on this program, refer to paragraph 3005.1 of this Order.

2. COMTS Range Scheduling. Refer to paragraph 3005 in Chapter 3 of this Order.

3. Range NCOs. Landlords from the Training Support Division (TSD) have been assigned to the COMTS ranges and the Military Operations in Urban Terrain (MOU) Facility (R-131) to assist RSOs. The Landlords shall check the RSO in and out of the scheduled ranges, provide a range safety brief and ensure the civilian range contractor (if applicable) provides training support per the using unit's scheduling request and scenarios. The presence of a Landlord DOES NOT relieve the RSO of his assigned responsibilities in this Order. The Landlord is not authorized to extend the using unit's training time on any range. Requests for training time extensions shall be forwarded to the Range Scheduling Office, per Chapter 3 of this Order. Questions regarding the scheduling of and training at COMTS ranges should be referred to the Range Scheduling Office. Questions and comments relative to the COMTS contractor performance or TSD Landlords should be referred to the TSD Contract Administrator at (760) 725-5105.

6005. AUTOMATED TARGET AND SIMULATOR SUPPORT

1. Scheduling Units desiring automated target and simulator support on non-COMTS ranges shall submit a TAR to the Range Scheduling Office. When the scheduling request is approved, the unit shall contact the TSD Targets Section at (760) 725-4805 at LEAST FOURTEEN (14) WORKING DAYS prior to the planned training event to coordinate training scenarios. The Targets Section will reconfirm support requirements with the using unit a minimum of two (2) working days prior to the planned training event.

2. Operators. When the unit has properly scheduled its requirements through the Range Scheduling Office, the TSD shall provide operators to use the Portable Infantry Target System (PITS), and artillery or machine gun noise simulators. PITS operators are not normally provided to units who have a PITS through a Combat Camera supply account. However, the TSD may provide PITS operators to these units when their operator requirements exceed their internal capability. Additionally, the TSD will provide PITS operator instruction through a civilian contractor at the unit's request. Requests for PITS operator instruction may be coordinated directly with the TSD Targets Section at (760) 725-4805.

6006. BIVOUACKING ON RANGES

1. Observation Posts. Bivouacking is not permitted on observation posts (OPs).

2. Permitted Areas. Bivouacking is allowed on ranges, training areas, mortar firing areas (MFAs) and in artillery firing areas (AFAs) subject to the conditions listed below.

a. Ranges shall not be scheduled for the purpose of bivouacking only.

b. If scheduled for the following day, units may arrive the night before firing to occupy the range.

c. Units may bivouac after firing, provided they are clear of the range or AFA/MFA before the arrival of the next scheduled using unit.

d. Bivouacking shall take place only behind the firing line or start point, of the range that has been checked out.

e. Bivouacking in training areas shall not impede training at specific facilities unless those facilities have also been scheduled to support the bivouac.

f. Bivouac sites shall remain a minimum of 500 meters clear of all aviation facilities.

g. Bivouac sites in locations within training areas or beaches shall be marked at night.

h. A six-digit grid coordinate shall be provided to LONGRIFLE when bivouacking in training areas or on beaches.

i. A RSO must be present.

3. Environmental. Bivouacking shall comply with the provisions of Chapter 2 of this Order.

#### 6007. MEDICAL REQUIREMENTS

1. Corpsman and Safety Vehicle. Appropriate medical personnel (per figure 1-2) with first aid equipment shall be present on all ranges, unless specifically excluded in this Order. He/She shall not be assigned any additional duties when live-firing is in progress. The term "live-firing" includes any caliber of ammunition (including blanks), hand or rifle grenades, demolitions, rockets, or any other ordnance capable of producing an explosion or high rate of burning. Additionally, a wheeled vehicle designated as a safety vehicle shall be located at all ranges during live-firing. Whenever possible, this vehicle should be an ambulance. POVs shall not be used as safety vehicles. At a minimum, the safety vehicle shall be capable of accepting a litter. During HST or HRST operations, the helicopter involved in the training meets the requirements for a safety vehicle.

2. Training Areas. Appropriate medical personnel (per figure 1-2) and safety vehicle shall be present during unit training activities conducted within training areas and beaches.

3. Range Series/Complexes. When the 116, 130, 210 and 314 range series or the Horno or Wilcox Range complexes are used by the same organization, use of a single appropriate medical personnel (per figure 1-2) and safety vehicle with two-way radio communication is authorized.

#### 6008. TRAINING AREAS

1. Training Areas. Field training and tactical exercises are conducted in the training areas, shown on the Camp Pendleton Military Installation Map [reference (d)].

2. Scheduling. All training areas are assigned to the Commanding Officer, MCB, and will be scheduled through the Range Scheduling Office per Chapter 3 of this Order.

3. Training Area Provisions. Units scheduled to use training areas shall have a Camp Pendleton-certified RSO, a safety vehicle, and appropriate medical personnel (per figure 1-2); and will check in and out by radio with LONGRIFLE upon commencing and terminating training in their assigned area. In the initial contact, the following information shall be provided: unit

identification, RSO's information, type of training, number of troops, type of ordnance by DODIC, and unit's location using a six digit grid coordinate. Maintain and monitor the appropriate LONGRIFLE safety net at all times and make hourly radio checks.

4. Unit Hikes. Units scheduled to do hike or convoy training shall have a Camp Pendleton-certified RSO, a safety vehicle, and appropriate medical personnel (per figure 1-2); and will check in and out by radio with LONGRIFLE upon commencing and terminating training in their assigned areas. Submission of TARs for unit hikes and convoys shall be accompanied by a route overlay no less than seven (7) days prior to the planned hike. Overlays shall be submitted by Email or hand-delivered to the Range Scheduling Office. All training areas needed for the hike or convoy must be scheduled separately via RFMSS; submitting an overlay is NOT as substitute for scheduling the training areas. The Area Commander shall approve any hikes passing through a cantonment area. Hike routes shall remain clear of housing areas by no less than 500 meters. Monitor the appropriate LONGRIFLE safety net at all times and make hourly radio checks. All changes to the hike route, while on the march, shall be approved by LONGRIFLE.

5. Environmental. Individual training exercises and events conducted in Camp Pendleton Training Areas shall comply with the provisions of Chapter 2 of this Order. Training areas containing sensitive environmental resources that must be protected are identified in figure 2-1. In many cases, the sensitive environmental resources are found in a very small portion of the training area. Refer to the most current Environmental Operations Map for specific locations of these resources; and refer to Chapter 2 of this Order for specific environmental restrictions when operating near these sensitive areas.

#### 6009. CONDUCT OF TRAINING

1. General. Assignment to a training area does not include any range, AFA, MFA, OP, CALSITE, LZ, DZ, airspace, or other training facility (including combat towns) located within that area unless specifically requested and approved by the Range Scheduling Office. Therefore, personnel are not authorized access to these areas.

a. Training shall be conducted and supervised in a manner that avoids damage to facilities and utilities located within the training areas. Units exercising in the vicinity of any aviation training facility shall ensure sites are not disturbed, no obstruction is left in the area, and no foxholes or other entrenchments are constructed at these locations.

b. Training shall be conducted in a manner that avoids unnecessary damage to or destruction of natural resources (refer to Chapter 2 of this Order).

2. Housing Areas. Units using the Bravo Three, Hotel, India, Juliett, and Oscar One Training Areas will remain clear of Base housing areas at all times. Entry into the Juliett Training Area will not be made via any 17 Area housing access roads.

3. Aviation Facilities. Unless otherwise scheduled by the Range Scheduling Office and approved by LONGRIFLE, units training in the vicinity of any aviation facility shall remain clear by not less than 500 meters.

4. Fighting Holes. Fighting holes will be filled in upon the completion of each training exercise.
  5. Trash. All trash shall be removed from the training area or range by the using unit. Trash will not be buried. The practice of stockpiling refuse for removal later is not permitted.
  6. Exclusive Use. Training areas are not exclusive use areas unless special coordination with LONGRIFLE has been accomplished. Training areas are assigned based upon the number of personnel, equipment, environmental impact, and type of training conducted. Typically, up to five units or 500 personnel will be scheduled in training areas, up to three units on the beaches and the in the boat basin and only one unit on ranges and training sites (e.g., rap-pel towers, gas chambers).
  7. Training Near the ASP. A prohibited area, marked by signs, exists in the Papa Three Training Area surrounding the Ammunition Supply Point (ASP) maga-zine area. It extends 500 meters out from the perimeter fence. Although troops are permitted in this prohibited area, the use of pyrotechnics of any type is prohibited.
  8. Communication Wire. Any wire strung across ravines, between poles or trees, or at an altitude higher than 15 feet above ground level shall be clearly marked with white engineer tape or other highly visible materials. All communication wire laid by using units in training areas must be retrieved prior to departure.
  9. Livestock. If livestock (e.g., sheep, bison, etc.) are grazing in a location where they interfere with training notify LONGRIFLE.
  10. Cantonment/Built-up Areas. Use of cantonment for live-fire training (e.g., small arms fire, blanks, pyro, smoke, etc.), shall be approved by the Commanding Officer (AC/S, O&T), as well as the appropriate Area Commander.
  11. I-5 Freeway and Railroad Tracks. The I-5 Freeway, the rights-of-way immediately adjacent to I-5 Freeway highway and the North County Transit District rail-road tracks are off-limits to pedestrians, troop training, and all vehicular traffic. Underpasses and overpasses will be used when crossing railroad tracks or the I-5 Freeway. If it is necessary to cross the railroad tracks at ground level, the unit shall make prior arrangements to have a certified flagman at the railroad tracks by contacting the Marine Corps Base Transportation Management Office at (760) 725-8164. Units shall inform the Range Scheduling Office when all coordination has been made. Any fees incurred are the responsibility of the training unit. TMOs notification requirement is 48 hours.
  12. Road Crossings. Regulations pertaining to the use of tank/AAV and other vehicle crossings are contained in paragraph 6029 in this Chapter. Personnel formations and troop movements, of any type, on hard-surface roads are prohibited unless coordinated in advance with LONGRIFLE and the Provost Marshal Office (PMO). PMO's notification requirement is 48 hours [(760) 763-1219].
6010. LIVE-FIRING IN TRAINING AREAS. Live-firing in training areas is limited to established ranges, AFAs, MFAs, LFAMs; and hunting approved per the most current edition of BO P5000.2J, Base Regulations [reference (h)]. LFAM exercises shall be conducted per approved RCO briefs and this Order.

6011. IMPACT AREAS. Detailed descriptions of the R206, R207, R300, R800, Zulu, Whiskey, Quebec, Edson Range, R409A and X-Ray Impact Areas are provided in Appendix B of this Order.

6012. LEASED AREAS

1. Long-Term Lease Areas. Most of the long-term lease areas are available for military training. The long-term lease areas supporting agriculture should be avoided during periods of pesticide/herbicide application for health and safety reasons. The only portion of leased land not available for training is the southeastern portion of the agricultural area at the northern end of the Base. The dirt road around the perimeter of the agricultural area may be used for motorized or foot marches as long as the vehicle speed limit does not exceed 10 MPH. The purpose of this speed limit is to prevent dust clouds, which may cause damage to crops. This road is off-limits to tracked vehicles. Requests for use of this area shall be made in writing to the AC/S, O&T at least thirty (30) days in advance of the desired date (copy to AC/S, ES) in order to coordinate with the tenant.

2. San Onofre State Beach Lease Area. San Onofre State Beach is a long-term lease area. It is available for military training and its use is encouraged. Requests for the use of San Onofre State Beach shall be made in writing to the AC/S, O&T [ROD (Range Scheduling Office)] at least thirty (30) days in advance.

6013. BEACHES. Beach areas are from the low water mark up to the nearest right of way (adjacent to the I-5 Freeway and railroad). Camp Pendleton beach locations are listed below.

BEACH	NORTH LIMIT	SOUTH LIMIT	GEOGRAPHIC CENTER
Section A (Green)	460 938	468 933	463 936
Section B (Gold)	530 883	561 845	546 864
Section C (Red)	561 845	570 831	564 840
Section D	570 831	585 811	578 821
Section E (White)	585 811	593 798	588 806
Section F	593 798	609 775	601 787
Section G (Blue)	609 775	619 762	614 767
Section H (Del Mar Rec)	619 762	624 753	624 752

6014. RAPPEL TOWERS. Requirements for rappel towers are listed below.

1. The RSO shall be a qualified Rappel/HRST Master and the appropriate number of Rappel/HRST Masters shall be present for training.

2. Towers are listed below.

NAME	LOCATION	DESCRIPTION
33 Area	666 859	2 cliff rappelling positions; 1 simulated MOUT window entry; 1 inclined rappelling position, fastrope capable
53 Area	542 942	1 cliff rappelling position; 1 inclined rappelling position; 2 helicopter rappelling positions; 1 inclined rappelling position, fastrope capable

NAME	LOCATION	DESCRIPTION
62 Area	487 981	1 cliff rappelling position; 1 inclined rappelling position; 2 helicopter rappelling positions; 1 inclined rappelling position, fastrope capable

6015. COMBAT TOWNS (MOUT AREAS). There are currently five combat towns (R-131, 25 Area, 52 Area, Bravo 3 and Kilo 2) aboard Camp Pendleton. Refer to special instructions located at each site.

6016. FORTIFIED AREAS/EMPLACEMENTS

NAME	LOCATION	DESCRIPTION
Mech Assault P-3	589 926 (Northern portion of Papa Three)	Mock company-size Soviet (Northern anti-mechanized defensive position)
Mech Assault B-3	473 976 (62 Area)	Fortified emplacements

6017. GAS CHAMBERS

NAME	LOCATION	DESCRIPTION
14 Area	736 869	Concrete structure
31 Area	630 808	Metal structure
33 Area	658 861	Concrete block structure
41 Area	595 838	Concrete block structure
53 Area	545 935	Concrete block structure
62 Area	488 990	Concrete block structure

6018. HEAVY EQUIPMENT TRAINING AREAS

NAME	LOCATION	DESCRIPTION
14 Area	Area enclosed by a line 720 866 to 725 866 to 725 862 to 720 866	An area to be used to train heavy equipment operators, consistent to the maximum extent possible, with the recognized programs of controlling soil erosion
43 Area	Area detailed in CATEX SA04353, WR#9714702, NEPA 040139	An area to be used to train heavy equipment operators, consistent to the maximum extent possible, with the recognized programs of controlling soil erosion (43 Area)

6019. FIELD MEDICAL TRAINING BATTALION (FMTB) FACILITY. The FMTB Facility for training U.S. Navy medical personnel and students is located at grid 651 782. Use of this facility is limited to the FMTB, unless approved by the Commanding Officer, FMTB.

6020. INFANTRY WEAPONS

1. Small Arms

a. Safety precautions will be strictly adhered to as prescribed by appropriate field manuals, directives in the MCO 3570 series, and this Order.

b. Overhead or flanking-fire is authorized only as prescribed by directives in the MCO 3570 series, appropriate firing tables and field manuals, and approved by the RCO.

2. Machine Guns

a. Safety precautions shall be strictly adhered to as prescribed by appropriate field and technical manuals, directives in the MCO 3570 series, and this Order. All personnel are required to wear helmets, flak jackets and hearing protection at all times during firing.

b. Machine guns shall remain in Condition 4 while in a cold status.

c. After machine guns are fired, the RSO shall ensure all weapons are clear, and in a Condition 4 status.

d. The RSO shall ensure proper settings of required headspace and timing on all guns prior to firing.

e. No one is allowed forward of any gun emplacement, for any purpose, until authorized by the RSO. This does not apply to tactical exercises involving overhead or flanking-fire.

f. Machine guns may be fired over unprotected individuals in firing exercises, provided the provisions of directives in the MCO 3570 series, appropriate firing tables, and field manuals are followed and approved by the RCO.

3. Mortars (60mm and 81mm). Refer to Appendix D of this Order and approved SDZs and Data Cards for mortar training requirements.

4. Rockets and Missiles. Safety precautions shall be strictly adhered to as prescribed in appropriate field and training manuals, directives in the MCO 3570 series, and this Order. All ground personnel engaged in the firing of rockets and missiles are required to wear helmets, flak jackets, and hearing protection at all times during firing.

5. Grenades. Grenade encompasses all types of grenades, to include the 40mm grenade family, rifle grenades and hand grenades. Refer to FM 23-30, Grenades and Pyrotechnic Signals, [reference (i)] and the most current edition of directives in the MCO 3570 series [references (a) and (b)].

a. Fragmentation, offensive, and WP hand grenade duds shall be rendered safe or destroyed by qualified EOD personnel. If a dud occurs, the RSO shall order, "cease fire," record the time the dud occurred, keep all troops under cover, and notify LONGRIFLE, who will contact EOD for assistance. EOD will observe a minimum 30-minute waiting period. After the waiting period, the EOD Team will clear the dud and inform the RSO when the range is clear.

b. Hand grenade ranges shall cease training one hour prior to sunset. In the event a dud grenade is not cleared before reduced light conditions, the using unit shall provide a guard force until the grenade can be cleared.

NOTE: EOD's minimum response time to grenade ranges is one (1) hour.

c. Only one high explosive (HE) hand grenade will be thrown at a time. Multiple throwing of HE hand grenades is prohibited. When training on a range with divided walls and a dud occurs, LONGRIFLE can approve training to continue on the side opposite of the dud.

d. All personnel engaged in any type of HE hand grenade, rifle, or 40mm grenade training are required to wear helmets, flak jackets, and hearing protection at all times during firing. Eye protection is required for all personnel within an HE hand grenade SDZ or within twenty (20) meters of the firing point of 40mm grenade launchers.

e. Safety precautions shall be strictly adhered to as prescribed by appropriate field and technical manuals, directives in the MCO 3570 series, and this Order.

f. Live grenades shall not be thrown into standing water and mud.

#### 6021. MINES, BOOBY TRAPS, AND PYROTECHNICS

1. General. The use of live mines and booby traps will be confined to demonstrations of their effectiveness. Demonstrations shall be conducted in an impact area, or on a demolition range of approved size for the quantity of explosives. All personnel within the danger area, as depicted in the SDZ diagram, shall wear helmets, flak jackets, and hearing protection. All personnel shall be clear of the SDZ, and located in a safe area during detonation/functioning of mines and booby traps.

a. Demonstrations in impact areas shall have approval from the RCO, and shall be coordinated with EOD. Live mines shall not be placed under or near any metal object, which could become a missile hazard (e.g., jeeps, 55-gallon drums, etc.).

b. Practice mines and booby traps may be used in all training areas and on all demolition ranges. Their use shall be governed by the FDR (refer to paragraph 1010 and figure 1-4 in Chapter 1 of this Order).

c. No live or practice mines or booby traps with any type of explosive devices shall be left on any range or in any maneuver area. Trip flares shall be counted before issue to ensure all items issued have been retrieved on completion of the demonstration or exercise.

2. Pyrotechnics. Pyrotechnics may be used in all impact areas, training areas, and field firing ranges provided the FDR does not prohibit their use. Units shall request permission from LONGRIFLE prior to using any pyrotechnic device.

a. Pyrotechnics shall be stored in small amounts, away from any firing points, either right or left of, but not directly behind the firing point. They shall be placed to minimize the possibility of ignition or explosion in case of an accident during firing.

b. Use extreme care when handling pyrotechnics so they do not fall onto shooters or other personnel, into boxes of pyrotechnics, or other ammunition. Extreme care shall be exercised when firing through trees or other obstructions.

c. Trip flares shall be fenced or guarded to prevent personnel from approaching within five (5) feet of each installed flare.

d. Trip flares shall be positioned so the hazard pattern or the impacting flare does not endanger personnel.

e. Trip flares shall not be left on any range or in any area. Trip flares shall be counted before issue to ensure all items issued are retrieved on completion of the demonstration or exercise.

f. 40mm illum, star clusters and smoke may be used in all impact areas, training areas and field firing ranges provided the FDR does not prohibit their use. Units shall request permission from LONGRIFLE prior to using any M203 DODICs.

#### 6022. DEMOLITIONS

1. Safety precautions shall be strictly adhered to as prescribed in appropriate field and training manuals, directives in the MCO 3570 series, and this Order.

a. Explosives equivalent to 1/4 pound TNT (1/4 pound blocks of TNT and C4 equivalent) net explosive weight (NEW) may be used on all ranges and training areas.

b. All personnel engaged in demolitions training are required to wear helmets, flak jackets and hearing protection at all times.

2. Demonstrations. Approval to use demolitions larger than 1/4 pound NEW (or equivalent) for demonstrations in training areas shall be requested per paragraph 1006 in Chapter 1 of this Order.

a. Requests for approval of demonstrations shall contain the following information.

(1) Date, time, and location of demonstration.

(2) Exact placement, quantity, and composition of charges.

(3) Measures for control and safety of spectators.

b. Be aware of critical Base utility points that may be located throughout training areas and could be subject to damage. Contact the Director, Facilities Maintenance Division [(760) 725-4820/4743] for more information to coordinate.

c. The AC/S, ES shall be consulted in planning for underwater demolitions to address potential environmental permit requirements.

d. The following safety measures shall be observed when using demolitions in conjunction with maneuvering troops during training exercises and demonstrations.

(1) An officer or staff non-commissioned officer (SNCO) will be appointed as the Demolition Control Officer.

(2) The Demolition Control Officer shall have a functional means of communication and signal flares to halt the exercise in the event of a malfunction or misfire without referral to the OIC of the exercise.

(3) A single centralized controlling position, with a clear view of the demolition area, shall be used and controlled by the Demolition Control Officer.

(4) All demolition pits shall be clearly marked with engineer tape or barbed wire. Charges shall not exceed 1/4 pound NEW explosives.

(5) Troops shall not maneuver in, through, or within the established SDZ (for the particular exercise) of demolition pits during the hours of darkness. Use of demolitions at night is severely limited, and subject to the approval of the RCO. The RSO shall have an unobstructed view of the demolition pit area(s) at all times, and ensure a means of protecting the SDZ of each pit.

### 3. Engineer Demolition

a. Engineer units are authorized to use demolition charges during the performance of engineering work. The size and type of charge shall be dictated by engineering safety requirements, provisions delineated in this Order, and directives in the MCO 3570 series.

b. Units desiring to use demolitions shall submit a request to the Range Scheduling Office at least ninety (90) days prior to the first day of firing. It shall contain the location, nature of work, type and size of charge, times and dates, and the name and telephone number of the OIC of Firing.

### 6023. NON-LETHAL WEAPONS

1. The term, "non-lethal" should be understood as a function of intent. It is a goal, not a guarantee for these weapons. The RCO must approve the concept of employment of any non-lethal weapons not previously addressed in this Order.

2. The use of Special Effects Small Arms Marking System (SESAMS) shall be conducted as outlined in TECOM Safety of Use Memorandum (SOUM) 1-02. The use of SESAMS outside of established combat towns or shooting houses requires an approved brief from the RCO.

### 6024. ARTILLERY AND TANKS/AMPHIBIOUS ASSAULT VEHICLE/LIGHT ARMORED VEHICLE/ARMORED HIGH MOBILITY MULTI-PURPOSE WHEELED VEHICLE(AAV/LAV/ARMORED HMMWV)

1. Field Artillery. Artillery training requirements are outlined in Appendix D of this Order.

#### 2. Tanks/AAVs/LAVs

a. Firing over the heads of personnel from moving vehicles is prohibited.

b. Individual vehicles shall display a red range flag while firing. While on the firing line, each vehicle shall display a green range flag when all weapons have been cleared. A yellow flag shall be displayed when there is a weapon malfunction.

(1) The relationship between firing points and targets must meet the requirements listed in directives in the MCO 3570 series.

(2) Prior to firing, the safety limits for each firing point will be physically marked on the ground only when moving into those positions to fire; ground marks are not required for static fire.

(3) Live rounds shall not be chambered until the firing vehicle has reached the specified point on the range designated as a firing area. LAVs in an uploaded status shall have systems in both manual and electric-safe.

3. Vehicle Crews. No weapons system shall be elevated above the line of sight to target, unless that weapons system has been determined to be clear of ammunition, or is required to be elevated above that line in order to be safely cleared.

a. The clearing of any weapon shall be accomplished per the appropriate operator's manual.

b. Vehicle crews shall use range flags. It is the responsibility of the OIC and RSO to ensure compliance of proper range flag use.

c. Prior to movement of any vehicle from designated firing areas, the RSO shall ensure all weapons systems are clear.

d. The OIC and RSO shall ensure all personnel are thoroughly briefed in the correct procedures, listed below, for immediate action in case a round exits the authorized impact area (refer to paragraph 7010 of this Order).

(1) All weapons systems shall cease-fire immediately.

(2) The Tank/LAV Commander shall not disturb the lay of the gun in either elevation or deflection, unless immediate danger exists to personnel onboard the vehicle.

(3) The OIC and RSO shall determine the magnetic azimuth at which the round was fired, and shall determine the existing elevation on the weapon. These procedures shall be followed so that an approximation of where the round would land can be achieved.

(4) The RSO is required to notify LONGRIFLE immediately when an incident occurs. An approximation of how far the round traveled, and at what azimuth the round was fired, shall be included in the report.

(5) A cease-fire will remain in effect until LONGRIFLE authorizes firing to resume.

#### 6025. POLICE OF TANK/LAV/AAV, AND OTHER VEHICLE CROSSINGS

1. General. Commanding Officers, OICs, or NCOICs of vehicles using authorized tank crossings, or making an emergency crossing of hard-surfaced roads shall ensure crossings are properly policed immediately after use.

Proper police includes removing soil, rocks, debris, and dunnage from the paved surface of the road, leveling the shoulders of the road, and cleaning drainage ditches paralleling shoulders of the road. When it is necessary for tracked vehicles to cross wheeled vehicle access roads in training areas, crossings shall be made at right angles to the road, at low speed, without turns. If it is necessary for tracked vehicles to operate on these roads, the approach shall be made at the minimum angle possible to avoid sharp turns on the road surface. Speeds shall not exceed five miles per hour. Do not hold up traffic for more than ten minutes.

2. Road Guards. Road guards shall be posted a safe distance on either side of crossings to stop traffic while vehicles are crossing, and when police is conducted. Road guards shall wear high-visibility safety vests for all crossings, day and night. For all crossings made during periods of darkness or limited visibility, road guards shall carry operating flashlights, turned on, with plastic signal wands.

3. Road Use. Tracked vehicles are prohibited from using asphalt and macadam roads, and operating on the shoulders of all roads. Old El Camino Real (grids 569 852 to 489 925) and Roblar Road may be used, observing speed restrictions, minimum angle turns on road surfaces, and conditions of entrance and exit. Permission to use paved roads under unusual or emergency conditions shall be requested from LONGRIFLE.

4. Cement Road Crossings. Cement track vehicle crossings are located at grids 593 823, 596 814, 597 811, 625 899, 575 849, 527 948, and 579 833. Units shall contact LONGRIFLE prior to crossing. A proper police shall be conducted after crossing.

6026. TRAINING AREA ROADS. The speed limit on all training roads throughout Camp Pendleton is 25 mph unless otherwise posted, or conditions dictate a lower speed to ensure safe transit. Units should conduct route recons during the planning phase of training to ensure conditions of the roads will safely accommodate the movement of unit vehicles to and from scheduled training sites, and to establish appropriate controlling/safety measures as needed. Route Recons do not need to be scheduled but must be conducted utilizing government vehicles or previously authorized POVs and continuous communication must be maintained with LONGRIFLE. Route recons that are not scheduled may be impeded by training units. Range Control provides a Roads and Rivers Report outlining transiting conditions of major roads and rivers during times of inclement weather.

1. LONGRIFLE may restrict the use of unimproved roads during dry weather months. This restriction is necessary to reduce dust clouds causing traffic hazards on the I-5 Freeway. Tactical movement may be impacted during dry season, when dust will be a problem.

2. Trenching adjacent to the I-5 Freeway is prohibited due to the underground telephone cable/fiber seven (7) feet west of the freeway fence.

3. Be aware of critical Base utility points that may be located throughout training areas and could be subject to damage. Contact the Director, Facilities Maintenance Division [(760) 725-4820/4743] for more information to coordinate.

4. Road Blocks. Temporary roadblocks, fortifications, etc., constructed during training exercises, shall be immediately removed upon completion of

the exercise. Roadblocks will be manned at all times and non-exercise traffic will be permitted to pass through road-blocks at all times, unless coordinated with LONGRIFLE. Obstacle plans shall be submitted to the Range Scheduling Office at least fifteen (15) working days prior to planned training

5. Roblar Road

a. Safe transit of Roblar Road requires a thorough ORM, and compliance with all road sign instructions and speed limits.

b. Access. Unscheduled vehicular traffic transiting along Roblar Road adjacent to Range 409A has a negative impact on Range 409A training evolutions due to check fires to allow passage of vehicles. In order to reduce Range 409A down time, the following Roblar Road access schedule for transiting through Range 409A are in effect.

TIMES	SCHEDULE
0001 - 1000	Open for transit
1000 - 1800	Closed to all through traffic except emergency vehicles (Real time coordination with LONGRIFLE is required)
1800 - 1900	Open for transit
1900 - 2359	Closed to all through traffic except emergency vehicles (Real time coordination with LONGRIFLE is required)

c. Hiking on Roblar Road

(1) Units should follow all scheduling, communication, and safety procedures required for all other hikes; but when on the paved portion of Roblar Road the rules listed below shall apply.

(2) Daylight

(a) The unit shall have at least one lead and one trail vehicle. The uphill vehicle must be at least 100 meters from the nearest Marine on foot and the down hill vehicle must be at least fifty (50) meters. These vehicles will stop ALL traffic before traffic reaches the column.

(b) In addition to communication with LONGRIFLE, communications must be established and maintained between both road guard vehicles and the column.

(c) Vehicle traffic movement through the column will be allowed only after communication and coordination is made between the vehicle driver and the OIC or SNCOIC of the unit on foot.

(d) No vehicles will be allowed to pass any troops that are moving.

(3) Dark

(a) There will be no tactical night movements on Roblar Road.

(b) All the rules above will be followed, additionally:

1. All vehicles will use headlights.

2. Flashlights will be on and spaced throughout the column (at least one every 10<sup>th</sup> person).

3. Lead and trail personnel will each have BOTH a flashlight and a reflective vest.

6027. EXPERIMENTAL WEAPONS AND ORDNANCE. Experimental weapons or ordnance shall not be fired on ranges, MFAs or AFAs at Camp Pendleton without prior approval from the AC/S, O&T.

6028. FORCE-ON-FORCE TRAINING. Units transitioning from live-fire training to force-on-force training shall observe the control measures listed below.

1. No force-on-force will take place within a 24 hour period from the end of the live-fire event.

2. The RSO for force-on-force shall not be the same RSO from the live-fire event.

3. RSO for force-on-force will ensure that he/she takes the following steps prior to issuing blank or SESAMS ammunition and conducting the force-on-force event.

a. Obtain the NAVMC 11381, Expenditure Report [reference (c)] from the live-fire RSO to ensure all ammunition is accounted for.

b. Conduct a "shake down" of every participant prior to conducting the force-on-force event. The shake down shall consist, at a minimum, of the following.

(1) Inspect all weapons to ensure they are in Condition 4.

(2) Inspect all magazines to ensure they are empty.

c. If any live ammunition is discovered during training, the OIC will cease all activities, recover all ammunition, and conduct another shake down.

d. If additional personnel arrive, they shall undergo a shake down.

6029. MARINE CORPS COMMUNITY SERVICES (MCCS)-OPERATED RANGES. Ranges 102A and 107 may be operated by MCCS, without an OIC, corpsman or safety vehicle as long as a qualified Camp Pendleton RSO is present and observing all firing.

Chapter 7

Ammunition And Explosives

7000. TRANSPORTATION OF AMMUNITION AND EXPLOSIVES

1. General. The most current editions of MCO P4400.150E w/ERRATUM, Consumer-Level Supply Policy Manual; MCO P8020.10A, Marine Corps Management and Explosives Safety Policy Manual; and BO P8000.3, Ammunition and Explosives Safety (A&E Safety), [references (j), (k), and (l)] govern polices and procedures associated with the use, storage, and accountability of ammunition and explosives.

2. Qualified Drivers. Drivers of any vehicle transporting ammunition or explosives aboard MCB, CamPen shall meet specific administrative and medical criteria. Drivers shall also complete the Explosives Driver Course. The POC is the Explosive Instructor at Base Safety (760) 725-9065.

3. Privately Owned Vehicles (POVs). Using POVs aboard MCB, CamPen to load, store, or transport ammunition, pyrotechnics, or explosives of any kind, for military training is prohibited. Authorized users of ranges dedicated to recreational firing, and individuals authorized to hunt aboard Camp Pendleton, are permitted to transport a reasonable amount of small arms ammunition when enroute to and from those activities.

4. Ammunition Handling Facilities. Operations at ammunition handling facilities (e.g., LZ Red Beach, VSTOL Pad 1, CALSITE 21, VSTOL Pad 2 Aliso Canyon, and LZ Viewpoint) shall be conducted in the same manner as any other range during ammunition operations. It shall be scheduled, checked in and out by a qualified RSO, and communication shall be established and maintained with LONGRIFLE. Notify the Explosive Safety Office when an ammunition handling site has been scheduled [Base Safety Center (Explosive Safety Officer), MCB, CamPen or at (760) 763-4817. All operations are subject to BO P8000.3 and directives in the MCO 3570 series.

7001. AMMUNITION HANDLING AND STORAGE

1. General. Ammunition will be supplied as indicated below. Detailed information is contained in MCO P8020.10A, Marine Corps Ammunition Management and Explosives Safety Policy Manual and BO P8000.3, Ammunition and Explosives Safety (A&E Safety) [references (k) and (l)].

2. Ammunition Supply

a. The Marksmanship Training Branch will supply ammunition for requalification firing, required by the most current edition of MCO 3574.2J, Entry Level and Sustainment Level Marksmanship Training with the M16A2 Service Rifle and M9 Service Pistol [reference (b)] for Ranges 102, 103, 213, and 214 (Wilcox and Horno Range Complexes).

b. The firing unit shall supply ammunition for field firing and other training.

c. The firing unit shall supply ammunition for organizational, intramural, and recreational firing.

d. The Marksmanship Training Branch will supply ammunition for semiannual Base and Division intramural tournaments.

### 3. Firing Sites

a. Ammunition at firing sites shall be positioned to minimize the possibility of accidental ignition, explosion, or detonation. Ammunition shall be staged in a dry place; and protected from inclement weather and the direct rays of the sun.

b. Matches, cigarette lighters, or other spark-producing items shall not be in or near an explosive area (within 25 feet of any explosive item).

c. Precautions shall be taken to prevent ammunition from contacting the ground or spark-producing substances (for example, placing the ammo on the pallets provided upon delivery will prevent the ammunition from ground contact).

d. Ammunition may be pre-positioned at firing sites if approved by the RCO and in compliance with the provisions of the most current edition of MCO P8020.10A, Marine Corps Management and Explosives Safety Policy Manual, and BO P8000.3, Ammunition and Explosives Safety (A&E Safety) [references (k) and (l)].

4. Ammunition Control. The following ammunition control procedures shall be observed.

a. Supervisory personnel shall be present with the vehicle/convoy designated to pick up or return ammunition from or to the Ammunition Supply Point (ASP).

b. All ammunition shall be delivered to the OIC of the range/firing site. The OIC shall conduct a joint physical/visual inventory of the ammunition received with the designated personnel delivering the ammunition. The OIC shall compare this against what is reflected on the ASP issue document (DD Form 1348-1A). The OIC shall verify the lot number on every container of ammunition to ensure it matches the lot number on the issue document (DD Form 1348-1A). The OIC shall open all containers which are not factory-sealed, and physically/visually inspect the ammunition to ensure it corresponds with the ammunition type on the issue document.

c. The OIC shall receipt for the ammunition by signing the DD Form 1348-1A; and entering the quantity received by DODIC, document number, and lot number on the NAVMC 11381, Expenditure Report [reference (c)] upon completing the inventory to ensure the quantity matches the corresponding DD Form 1348-1A. A copy of the properly completed Expenditure Report shall remain on the range with the OIC at all times.

d. The OIC is ultimately responsible for the accountability of ammunition and shall supervise the issue and control of the ammunition for the duration of the exercise. The OIC shall ensure ammunition is not removed from the original packing until just prior to firing. Ammunition not containing a factory seal shall be expended first.

e. The OIC shall take measures to prevent ammunition from being rendered unserviceable, in the event the exercise is terminated prematurely, by not removing excessive quantities of ammunition from its original packaging,

losing lot number identity, burning, or otherwise destroying containers, or exposing items to the weather, etc. Ammunition shall not be removed from the confines of the range except as authorized by proper authorities.

f. The OIC shall account for all ammunition as it is expended on the firing range. Upon completion of the exercise, the OIC shall ensure all unexpended ammunition is inventoried, verified, and annotated on the turn-in document (DD Form 1348-1) and the Expenditure Report with the OIC's signature. If any ammunition is found missing during the inventory, the using unit shall submit a Missing, Lost, Stolen, or Recovered (MLSR) Report per BO P8000.3.

g. The OIC shall complete the NAVMC 11381, Expenditure Report [reference (c)] and any turn-in documents (DD Form 1348-1A) prior to securing from the range, per the most current edition of MCO P4400.150E w/ERRATUM, Consumer-Level Supply Policy Manual [reference (j)].

h. Ammunition shall never be abandoned, destroyed, fired indiscriminately, buried, treated, or otherwise disposed of in order to circumvent the inconvenience of returning the items to a storage area. Units discovering abandoned, buried, or treated ammunition shall notify LONGRIFLE immediately.

i. Ammunition that is authorized to be fired on a particular range may be staged on that range. At a minimum there shall be two armed guards at least one of which is an NCO. The guards shall maintain hourly radio checks with LONGRIFLE. The range must be scheduled via Range Scheduling. The OIC shall conduct an inventory of all ammunition prior to departing and upon returning to the range.

j. A checklist for handling and storing ammunition and explosives on ranges is provided in Appendix I of this Order. Use of the Ammunition and Explosives Range Checklist for Range OICs is recommended during ammunition handling and storing activities.

k. All Security Code 1 (or "Category 1") items (e.g., AT-4 and Stingers) shall be positively controlled by an E-6 (or above), from ammunition supply point pick-up to expenditure/return of unused ammunition. The E-6 (or above) shall sign, escort, and observe use while maintaining control at all times. Any unused Category 1 item shall be returned to the Ammunition Supply Point by an E-6 (or above). Per Appendix F of the most current edition of OPNAVINST 5530.13B, Department of the Navy Physical Security Instruction for Sensitive Conventional Arms, Ammunition, and Explosives (AA&E) [reference (m)], Category 1 item control may be turned over to another E-6 (or above) utilizing the DD Form 1907 (Signature Tally Record) which is included with every Category 1 item.

l. Blank and live ammunition shall be never be co-located on any range together. A minimum of 24 hours shall pass before a unit can transition from live to blank ammo training. Refer to paragraph 6028 of this Order.

m. Issuing blank and live ammunition at the same time is prohibited.

n. Storing ammunition in a billeting area is prohibited.

o. Requests for a field ASP must be submitted to the Range Control Officer (RCO) at least seven (7) days prior to the event. A field ASP must be established any time ammunition/explosives are stored or staged on a range or in a training area where it is not authorized to be fired.

#### 5. Modifications

a. Modification or "fixing" ammunition charges before shooting is not authorized. If the charges are not fully ready to fire, return them to the local ASP, and a contact team from Fallbrook (Naval Weapons Detachment) or Crane will make the repairs.

b. Mixing or combining two or more separate DODICs into a single munition is prohibited, unless the DODICs were designed to be integrated (e.g., CS capsules or loose CS powder will not be introduced into smoke grenades in order to generate a smoke/CS cloud).

7002. DEFECTIVE AMMUNITION. Defective ammunition shall not be expended. Every round of ammunition which malfunctions, or does not fire as it is designed shall be reported. The most current edition of MCO 8025.1D w/CH1, Ammunition and Explosive Safe Policies, Programs, Requirements, and Procedures for Class V Material, [reference (n)], establishes reporting requirements and time frames. The CG, I MEF (G-4 Ammo) and CO, MCB [Base Safety Center (Explosive Safety Officer)] shall receive copies of all reports, through the appropriate chain of command, per BO P8000.3.

7003. MALFUNCTION REPORTS. Detailed malfunction reporting requirements and exceptions are contained in MCO 8025.1D. Duds, hang fires and misfires should be considered malfunctions for the purpose of reporting. In the event of a malfunction, training units shall submit a malfunction report by Naval message, within 24 hours of the malfunction if an injury occurs. Report malfunctions within 72 hours if no injury has occurred. Additionally, the malfunction shall be reported to the MCB Explosive Safety Officer [(760) 763-4817], with a copy of the report FAX'd to the Explosive Safety Office as soon as possible [(760) 725-3169]. A copy of the malfunction report form is contained in Appendix G of this Order.

7004. EXPLOSIVE ORDNANCE DISPOSAL (EOD). The mission of EOD is to remove explosive ordnance hazards posing a threat to personnel, equipment, material, and the installation, which are beyond the capability of other MOSs in the Marine Corps. EOD will provide appropriate technical assistance to units requesting assistance. EOD is not available or responsible for the routine transportation of ammunition and explosives. EOD assistance is available on a 24-hour basis. Contact LONGRIFLE for EOD assistance.

7005. DUDS. A dud is ammunition, of any caliber or weight, that has been fired, placed, dropped, thrown or launched, but which fails to function as designed. Duds, (with the exception of hand grenade ranges) occurring within a dedicated impact area do not normally require an EOD response, but shall be reported to LONGRIFLE with the approximate location. Exceptions to this are short rounds, which place the firing unit within the fragmentation radius of the fired munitions. Duds found outside an impact area, or in a training area, shall be reported to LONGRIFLE immediately. An exact, clearly marked location of the dud is required, a guide made available, and all personnel cleared of the immediate area. Do not disturb a dud in any manner.

7006. MISFIRES AND HANG FIRES

1. General. A misfire is defined as the failure of a primer or the projectile propelling charge to function, a line charge or demolition material which fails to function, a Javelin or TOW that fails to launch and that no internal components have initiated, or a failure of a man-portable rocket such as the SMAW, to launch. Misfires will be handled as follows.

a. The firing unit will immediately conduct misfire procedures per the provisions of the appropriate weapons technical manual.

b. All misfire procedures shall be completed on the range. If misfire procedures are unsuccessful, safeties will be reapplied and ammunition will be returned to the ASP as grade three. The only exception to this procedure is the AT-4 which must be destroyed on the range by EOD.

c. Line charges and demolition material like C4 or TNT which fail to function are misfires.

2. Unserviceable Ammunition. Unserviceable ammunition removed from the range, as a result of misfires, including small arms ammunition, will be returned to the ASP and processed in the same manner as any other ammunition and/or explosive item.

3. Hang Fire. A hang fire occurs when a Javelin or TOW fails to launch, but internal components of the missile, such as batteries and gyros, are initiated. If a Javelin or TOW hang fires, contact LONGRIFLE to request EOD assistance. A Javelin or TOW hang fire shall be destroyed on the range by EOD.

7007. IMPROVED CONVENTIONAL MUNITIONS (ICM). Refer to Appendix D of this Order (Artillery Firing Areas) for instructions regarding the use of artillery-delivered ICM.

7008. CHEMICAL MUNITIONS. Chemical munitions are defined as an agent or munitions, which, through its chemical properties, produce lethal or other damaging effects on human beings. Live chemical munitions shall not be used for training purposes. This term does not include riot agents, chemical herbicides, smoke, and other obscuration materials.

7009. RIOT AGENTS, SMOKE, AND OTHER OBSCURATION MATERIALS

1. General. Riot agents, smoke, and other obscuration materials shall be used only during scheduled training, per the provisions in applicable technical manuals and directives. Since improper use may result in serious injury, fatalities, or fires, units shall use appropriate caution.

2. CS. When Chlorobenzylmalonitrile (CS) is used in conjunction with scheduled training, ensure non-toxic vapors are not employed under conditions, which are dangerous to personnel, wildlife, or property in adjacent training areas, or outside the boundaries of MCB, CamPen. The intent to use CS shall be specified when scheduling training areas. Refer to Appendix F of this Order for specifics concerning the use of CS.

7010. ROUNDS FIRED OFF-RANGE. Rounds fired off-range shall be immediately reported to LONGRIFLE. This requirement complies with the 1997 Military Munitions Rule amendments to the Resource Conservation and Recovery Act. If

a munition item lands off-range, and is not promptly rendered safe or retrieved, the munition becomes a solid and hazardous waste, and any imminent and substantial threats shall be addressed. If remedial action is not feasible, the RCO will maintain a record of the event for as long as any threat remains. The record shall include the munitions type (DODIC and nomenclature) and location (to the extent the location is known). Call the ESO at 760-763-4817 ASAP; as he is the only qualified person on the installation to classify an item as a hazardous waste.

7011. OVERHEAD-FIRE

1. Cantonment. Firing shall not be permitted to pass over cantonment areas.
2. Ammunition Supply Points (ASPs) and Field Ammunition Storage Areas (FASPs). Any overhead fire of ASPs or FASPs shall be in accordance with approved deviations issued by Headquarters Marine Corps.

## Chapter 8

### Laser Operations

8000. GENERAL. This Chapter applies to the use of the laser systems. All laser systems approved for use by the Navy Laser Safety Review Board (LSRB) can be used at Camp Pendleton. Questions concerning the use of Multiple Integrated Laser Engagement System (MILES), or any other Class I systems used aboard Camp Pendleton shall be submitted to the Base Laser System Safety Officer (LSSO) at (760) 725-0355. A graphic depiction of Laser Training Areas (LTAs) designated for laser use can be found under the P3500.1N button at <http://158.238.251.13/pendleton/OT/staff/rod/default.aspx>.

#### 8001. DISCLAIMER

1. The safe lasing profiles discussed in this order are not to be construed as mandated aircraft flight paths, but rather as boundary limits at a given location that distinguish between safe and unsafe laser use conditions.
2. This Chapter addresses only those systems approved for general training scenarios by the Navy Laser Safety Review Board (LSRB). A separate evaluation should be done on a case-by-case basis by the Range Laser Safety Specialist (RLSS) on laser systems used in non-traditional modes, research & development applications, and prototype systems.
3. Force-on-force scenarios are not allowed without the expressed consent of the Range Laser Systems Safety Officer (LSSO) using safety measures established by the LSRB.

8002. REQUESTING RANGES/OBSERVATION POSTS FOR LASER USE. Units planning to use lasers at Camp Pendleton shall schedule laser training events as outlined in Chapter 3 of this Order. Scheduling requests shall list type of laser and associated buffer angle. All mounted aircraft laser systems and tripod mounted laser systems are considered to have a five (5) milaradiant divergence (mrad) buffer angle. Hand-held laser systems are considered to have a ten (10) mrad buffer angle.

8003. LASER SYSTEMS SAFETY OFFICER (LSSO). Any unit operating lasers at Camp Pendleton shall assign an LSSO. All LSSOs shall be Camp Pendleton-certified by the Base Laser Systems Safety Officer (LSSO). To receive certification, LSSOs shall provide a certification letter from the command LSSO validating the appropriate training in the operations and safety precautions of the systems to be used has been completed. LSSO shall also be familiar with the most current directives in the MCO 3570 series [references (a) and (b)] and MCO 5104.1B, Navy Laser Hazards Control Program, [reference (o)]. The LSSO may also serve as the RSO after successful completion of the Camp Pendleton Range Safety Certification Course. LSSOs must provide the Range Operations Division with a letter from their Unit Commander stating the LSSO is qualified to operate the laser systems used in the letter.

#### 8004. LASER SAFETY PROCEDURES

1. General. Only personnel authorized by the unit LSSO shall operate ground lasers; and only on approved ranges and observation posts established per the most current edition of MCO 5104.1B, Navy Laser Hazards Control Program, [reference (o)] and those listed in this Chapter.

2. Operators. All operators shall receive training prior to operating any laser on the aspects of laser operations listed below.

a. Operation of the laser system.

b. Hazards and safety precautions relative to laser operations in general.

c. All provisions listed in this Chapter.

3. LSSO Firing Logs. The LSSO will provide a copy of the laser-firing log (Appendix G) to LONGRIFLE. The log will contain the date, time, type of lasers, name of the operators, direction, and distance.

4. Laser Restrictions

a. Positive two-way communication shall be maintained, at all times, between the laser system operator and LONGRIFLE.

b. There shall be no laser firing during rain, fog, or any other inclement conditions.

c. Lasing will cease when the RSO, LSSO, operator, or LONGRIFLE has concerns about target designation or tracking.

d. LSSO responsibilities shall not be delegated.

e. Only authorized targets may be designated or ranged.

f. The laser shall always be pointed down-range (toward the target or impact area).

g. Whenever the laser is in use, all unprotected personnel in the immediate vicinity of the laser firing position shall remain behind the laser operator.

h. Never designate or range aircraft, moving vehicles, personnel, or animals.

i. Personnel without laser eye protection shall not use optical devices (i.e., binoculars) or look down-range during laser operations.

j. Prior to lasing, the target shall be positively identified under the cross hairs of the scope or on the operator's monitor.

k. Never designate water, glass, mirrors, plexiglas, or any other specular reflector. Specular reflector is defined as any shiny surface, which might reflect the laser beam.

l. Prior to commencing airborne lasing operations, a flyover of the range shall be made to ensure no unprotected or unauthorized personnel, or animals are in the laser hazard area.

m. Unprotected personnel shall not be allowed within the beam path and its associated buffer zone without protective laser optics. Eye protection shall have curved lenses and an optical density (OD) appropriate to the wavelength of the laser system being utilized.

n. Lasing shall cease if unprotected or unauthorized aircraft enter the operations area or the buffer zone between the lasing aircraft and the target.

o. Class 3 and 4 lasers shall not be directed above the horizon.

p. Batteries shall be removed from the laser at the completion of each day's use, and whenever the laser is located outside the range area.

q. All personnel authorized to use class 3 or 4 laser systems shall be enrolled in a laser medical surveillance program (at the unit level) per the most current edition of BUMED INST 6470.23, Laser Safety Program Reference Guide, [reference (p)].

r. The LSSO shall post visible markings that indicate the extreme boundaries of the LTAs.

s. When ground positions are laser designating for aircraft, there should be an aircraft exclusion cone that is centered on the heading of the laser position on the target. The exclusionary zone recommended by the Joint Close Air Support Manual 3-09.3 requires a 20° safety cone around the firing position (FP) extending back from the target to the FP. In situations where the aircraft is approaching from a heading that is behind the FP, the pilot should offset when the aircraft is near the FP.

8005. ALLOWABLE LASER SYSTEMS. Camp Pendleton has been certified for the use of the systems approved by the Navy Laser Systems Review Board, which meets the allowable system, maximum allowable buffer, or nominal ocular hazard distance (NOHD) for a requested Laser Training Area.

8006. ALLOWABLE LOCATIONS FOR LASERS. The systems approved by the Navy Laser Safety Review Board may fire from the firing points listed in the Laser Special Instructions if they meet the allowable system, maximum allowable buffer or maximum allowable NOHD.

8007. LOCATION DESCRIPTION. All laser ranges are confined within one of five separate impact areas described in Appendix B.

APPENDIX A

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.
Artillery Firing Area	Area established to support artillery firing activities.
Base	Marine Corps Base, Camp Pendleton (MCB, CamPen).
Camp Pendleton Amphibious Assault Area (CPAAA)	An ocean area used for amphibious training activities and exercises.
Camp Pendleton Amphibious Vehicle Area (CPAVA)	An area contained within CPAAA. It is adjacent to the shoreline and used for amphibious training activities.
Cantonment	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.
Common Impact Area	The impact area created when the surface danger zones (SDZs) of concurrently used ranges overlap.
Confined Area Landing Site (CALSITE)	Helicopter landing areas located in Camp Pendleton training areas used for confined area landing practice, external training, etc.
Consolidated Radar Control Facility (CRCF)	Marine Corps Base and Marine Corps Air Station Camp Pendleton Air Traffic Control and Range Control Facility, BLDG 2399, Marine Corps Air Station, Camp Pendleton. Location of LONGRIFLE.
Controlled Firing Area (CFA)	Airspace established to conduct activities that would be hazardous to non-participating 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.

Dedicated Impact Area	Impact area supporting live-fire of dud-producing ordnance (e.g., Quebec, Whiskey, and Zulu Impact Areas).
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.
FCLP	Field Carrier Landing Practice
Field Training Facilities	Those areas designated for a specific type of training, normally not requiring the use of live ordnance (e.g., rappel towers, combat towns).
Fire and Maneuver Range	Range on which troop movement and live-firing may be conducted simultaneously.
Fire Danger Rating (FDR)	National rating based on weather conditions and fire burning indexes describing the potential for wildland fire ignition, rate of spread, and suppression probability.
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.
Flat Trajectory/ High Velocity Weapons	Recoilless rifles, tank guns, LAV 25mm guns, and artillery (when conducting direct-fire operations).
Formal School	A school or a single course conducted by a school, which produces, as a result of its Program of Instruction (POI), a Marine qualified in a Military Occupational Specialty (MOS). This definition includes Weapons and Field Training Battalion (WFTBN), the Range Coach and Marksmanship Instructor, and Martial Arts Instructor/Trainer Courses conducted by 1 <sup>st</sup> Marine Division.

Forward Air Controller (FAC)	A Naval Aviator designated to serve in the same capacity as an OIC of Firing and/or Range Safety Officer (RSO), but specifically for control of aircraft in support of ground troops.
Forward Air Controller (Airborne) [FAC(A)]	A Naval Aviator/Flight Officer aboard an aircraft designated to serve in the same capacity as an OIC of Firing and/or Range Safety Officer (RSO), but specifically for control of aircraft in support of ground troops while airborne. On board MCB, CamPen, only rotary-wing FAC(A)s are authorized.
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.
High Explosive Impact Area	Impact areas specifically designed for the impact of all types of ordnance, such as high explosive impact areas (Quebec, Whiskey, and Zulu). These areas are also referred to as dedicated or permanent impact areas.
Impact Area	The ground and associated airspace within the training complex used to contain fired, or launched ammunition and explosives, and the resulting fragments, debris, and components from various weapons systems.
Instrument Flight Rules (IFR)	Aircraft flights conducted under instrument conditions.
Landing Zone (LZ)	A pre-designated, numbered helicopter landing zone, which provides major commands ready access to air transportation and MEDEVAC.
Laser System Safety Officer (LSSO)	A designated individual who has attended the Laser System Safety Course, and has been issued an LSSO card. The LSSO is responsible for ensuring compliance with the Range and Training Regulations and the unit standing operating procedures for laser operations and training.
Leased Area	Government property within the confines of MCB, CamPen that is leased to non-military tenants, such as the State Beach and agricultural areas.

Live-Fire	A range on which live-fire exercises, including the use of some types of practice ammunition, may be conducted.
Malfunction	Failure of a munition to function in accordance with design, intent, or expected performance.
Maneuver Area	Two or more contiguous training areas designated and scheduled by a using unit for tactical exercises of battalion level or higher.
Military Munitions Rule (MMR)	Rule that identifies when conventional and chemical military munitions are or are not considered solid hazardous wastes.
Military Operations Area (MOA)	An airspace assignment established to separate or segregate certain military aircraft activities from IFR traffic, and to identify for VFR traffic where these activities are occurring.
Misfire	Temporary failure or delay in the action of a primer, igniter, or propelling charge. A DRAGON, TOW, or other item that fails to launch, but internal components such as thermal batteries and gyros are initiated.
Mortar Firing Area	An area established to support multiple mortar-firing activities from a designated area to a pre-determined target position.
Net Explosive Weight (in pounds) (NEW)	The actual weight of explosive mixture of compound including the TNT equivalent of other energetic material, which is used in the determination of explosive limits and explosive 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	Also known as less than lethal. Pertains to training conducted with munitions not intended to be lethal.
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.

Notice to Mariners (NOTMAR)	A publication to mariners and vessels warning of conditions dangerous to navigation, such as live-firing or amphibious exercises.
NBC	Nuclear, Biological, Chemical
NBC Agents	Devices, biological agents and chemicals that may cause damage, incapacity, injury, sickness, or death.
Observation Post (OP)	A designated area/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.
Overhead-Fire	The firing of projectiles over the heads of personnel, or over areas in which the presence of personnel is suspected (must be approved in advance by the Range Control Officer).
Paradrop	The controlled aerial delivery of personnel or equipment by parachute.
POL	Petroleum, oil, and lubricants
Position Commander	Officer in command of an artillery position.
Pyrotechnics	Non-injury causing smoke or signals, either flares or grenades. White phosphorous is not considered a pyrotechnic.
Range	A training facility designated for live-fire, 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)	A designated individual who has attended the Camp Pendleton Range Safety Certification Course and has been designated by their command to act as an RSO. The RSO is assigned by the OIC of Firing to assist in enforcing all safety measures while operating in Camp Pendleton ranges and training areas.
Restricted Airspace/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 weapon systems to include explosives and demolitions.
Survey Control Point	A permanent or semi-permanent concrete or brass marker placed to denote a topographical reference point.
Terrain Flight (TERF) Route/Area	A Route/Area used for helicopter low altitude navigation training.
TNT Equivalent	Considering the peak overpressure produced by detonation of a given weight of TNT as 100 percent, the TNT equivalency of an explosive is the amount of overpressure produced by detonation of an identical quantity of explosive compound under comparable conditions, expressed as a percentage.
Training Area	All areas on Camp Pendleton outside of cantonment and impact area boundaries.
Visual Flight Rules (VFR)	Aircraft operations conducted under visual flight rules.

APPENDIX B

Impact Areas

A. General

1. Zulu Impact Area. Dedicated impact area bound by grids 6590 9600 to 6590 9270 to 6390 9070 to 6290 9120 to 6090 9270 to 5990 9420 to 6140 9570 to 6240 9550 to 6446 9678 to the beginning.
2. Whiskey Impact Area. Dedicated impact area bound by grids 5770 0000 to 5590 9960 to 5490 9620 to 5890 9420 to 5990 9420 to 6140 9570 to 6240 9550 to 6446 9678 to 6350 9730 to 6150 9940 to the beginning.
3. Quebec Impact Area. Dedicated impact area bound by grids 5370 9600 to 5220 9660 to 5170 9750 to 5130 9860 to 5130 9900 to 5240 0010 to 5520 9940 to 5480 9820 to 5480 9720 to 5450 9660 to the beginning.
4. Edson Range. This range is bound by grids 6060 8060 to 6050 8130 to 6040 8120 to 6010 8110 to 5970 8110 to 5970 8150 to 5990 8170 to 6060 8290 to 6070 8300 to 6080 8320 to 6060 8360 to 6170 8430 to 6350 8300 to 6250 8100 to 6200 8050 to 6120 8020 to the beginning.
5. X-Ray Impact Area. This area is bound by grids 6210 8460 to 6150 8530 to 6130 8600 to 6210 8720 to 6170 8750 to 6130 8850 to 6180 8880 to 6260 8900 to 6330 8880 to 6350 8920 to 6440 8900 to 6490 8950 to 6550 8910 to 6470 8770 to 6520 8550 to 6540 8550 to 6550 8510 to 6530 8490 to 6540 8430 to 6500 8400 to the beginning.
6. Grenade Ranges. The locations listed below are hand grenade ranges, and are encircled by a surface danger zone radius of 150 meters.

GRID	DESCRIPTION
6234 8943	Range 109
5248 9687	Range 202
5027 0152	Range 307

B. Aviation Ordnance Impact Area. A blue-dotted line on the Camp Pendleton Military Installation Map [reference (d)] depicts the impact area for aviation ordnance. All ordnance and effects of ammunition, to include resulting fragments and debris such as shell casings, must be contained in the impact area. The area is bound by grids 5770 0000 to 5596 9920 to 5540 9710 to 5990 9490 to 6090 9270 to 6390 9120 to 6590 9270 to 6590 9600 to 6350 9730 to 6150 9940 to the beginning.

C. Artillery and Mortar Fire Impact Area. A green-dotted line on the Camp Pendleton Military Installation Map [reference (d)] depicts the impact area for artillery and mortar ordnance. The area is bound by grids 5770 0000 to 5590 9960 to 5490 9620 to 5890 9420 to 5990 9420 to 6090 9270 to 6290 9120 to 6390 9070 to 6590 9270 to 6590 9600 to 6350 9730 to 6150 9940 to the begin-

ning. R-210E and the Quebec Impact Area are also authorized to support mortar fire.

D. Ranges not Within Impact Areas. The following ranges (also listed in Appendix C of this Order) are not within the boundaries of the impact areas delineated above: R-107, R-109, R-127, R-206, R-207, R-207A, R-300, R-301, R-302, R-307, R-401, R-403 and R-409A. Surface danger zones for these ranges are depicted on the current edition of the Camp Pendleton Military Installation Map [reference (d)].

E. No Fire Areas (NFAs). The Camp Pendleton NFAs listed below shall be used when conducting live-fire training within the impact areas listed above.

IMPACT AREA	NFA	GRIDS	MANNED RADIUS	UNMANNED RADIUS
ZULU	R-223B	621 925	500 M	100 M
ZULU	R-409A	652 950	500 M	100 M
ZULU	OP I	649 968	500 M	100 M
WHISKEY	R-218A	579 936 to 575 937 to 574 946 to 582 944	N/A	N/A
WHISKEY	OP J	596 995	500 M	100 M
WHISKEY	R-600	621 984	500 M	N/A
WHISKEY	OP M	617 989	500 M	N/A

F. Signs and Entry

1. Signs. Impact area and range boundaries are marked with red warning signs stating, "DANGER - IMPACT AREA - KEEP OUT." Signs are posted at approximately 200-meter intervals in prominent locations.

2. Entry. Entry into these areas, for official business, is accomplished as follows.

(a) Permission to enter an impact area may be granted only by LONGRIFLE. EOD personnel or safety personnel designated by the RCO must accompany anyone entering a dedicated impact area.

(b) Permission to travel established roads (Jardine Canyon, San Mateo Canyon, DeLuz Canyon entrance to R-409A, Aliso Canyon, or Roblar Roads) through impact areas may be granted only by LONGRIFLE.

(c) Entry into the Quebec, Whiskey, and Zulu Impact Areas, and Jardine Canyon for hunting is prohibited.

G. Control. LONGRIFLE controls all firing on ranges, and into the designated impact areas. LONGRIFLE is located at BLDG 2399, MCAS, Camp Pendleton. Telephone numbers are DSN 365-4604/3974 or commercial (760) 725-4604/3974.

H. General Training Use. Units desiring to conduct exercises in non dud-producing impact areas shall submit a TAR, per paragraph 3002 in Chapter 3 of this Order, and coordinate with the RCO no later than two (2) weeks in advance.







APPENDIX D

Indirect Fire

A. General

1. Ammunition Handling. Ammunition shall be handled per the provisions in TM 43-001-28, Technical Data Sheets for Ammunition, [reference (t)] the applicable Weapon Operations Manual, and ammunition handling procedures in the most current edition of BO P8000.3, Ammunition and Explosives Safety (A&E Safety), [reference (l)].

2. Safety Requirement. A corpsman, with first aid equipment and a safety vehicle, shall be present, at all times when firing is in progress.

3. Direct Observation. The impact of all rounds fired shall be under direct observation by personnel or radar. The RSO shall ensure qualified observers are present. RSO shall record and call in the location of all duds upon completion of firing.

B. Procedures for Firing from Artillery Firing Areas

1. General. The Artillery Firing Areas (AFAs), indicated in the 11<sup>th</sup> Marines Survey in paragraph J of this Chapter are authorized for use by units conducting indirect-fire aboard Camp Pendleton.

2. Preparation. All AFAs require reconnaissance by survey, and preparation of a surface danger diagram prior to occupation and live-firing. The geographic center of the AFA is surveyed to fourth order accuracy, and marked by a concrete monument witnessed by a yellow cassonite marker. Each AFA is also marked by a sign, which denotes the AFA number, and a hearing hazard zone.

3. Vehicle Operations. All vehicle operations, in conjunction with the use of AFAs, shall comply with the provisions of paragraph 6030 of this Order.

4. Radar/Registration Points. Radar positions, observation posts for High Burst/Mean Point Impact (HB/MPI) registration, and registration points shall be surveyed to fifth order accuracy.

5. Orienting Station/End of Orienting Line. Firing units must survey an Orienting Station (OS) and establish an End of Orienting Line (EOL) for each firing position per FM 6-2, Tactics, Techniques, and Procedures for Field Artillery Survey, [reference (q)].

6. Artillery Impact Area. The Zulu and Whiskey Impact Areas have been combined into one common impact area and redefined for artillery firing purposes. A green-dotted line on the Camp Pendleton Military Installation Map [reference (d)] depicts the impact area for artillery-delivered ordnance fires. The area is bound by grids 5770 0000 to 5590 9960 to 5490 9620 to 5890 9420 to 5990 9420 to 6090 9270 to 6290 9120 to 6390 9070 to 6590 9270 to 6590 9600 to 6350 9730 to 6150 9940 to the beginning.

7. SDZ Diagram Construction and Safety Cards. Using the surveyed OS as the firing point, firing units shall construct a SDZ diagram per directives in the MCO 3570 series and a Range Safety Card per unit Safety SOPs for each AFA to be used. All SDZs shall be constructed using the 1:50,000 Camp Pendleton

Military Installation Map [reference (d)]. All portions of the SDZ diagram from the up-range edge of Area C and forward must fall within the limits of the artillery impact area as defined in paragraph 2.f. above, and may not impede on established NFAs as defined in Appendix B of this Order. The artillery battalion commander (or his designated representative) shall approve safety cards prior to firing; and all SDZs prior to submitting them to the Range Control Officer (RCO) for final approval.

8. SDZ Diagram Locations. All SDZs are on file with the RCO. Any modifications or additions shall be submitted no less than fourteen (14) days prior to the event.

9. Target Area. The target area, as depicted in the SDZ diagram, will be communicated to LONGRIFLE prior to the unit going into a hot status.

10. SDZ Preclusions. SDZs shall be constructed to preclude firing over Base cantonment areas, Ammunition Supply Points (ASPs) and Field Ammunition Supply Points (FASPs). The diagrams and range cards will remain valid as long as the battery center, determined upon occupation of the AFA, is within 200 meters of the surveyed OS.

11. Non-Designated AFAs. Use of an AFA not designated in this Order shall be made by a special request, accompanied by a SDZ diagram. Forward requests to the Commanding Officer, MCB, Camp Pen (AC/S, O&T) thirty (30) days prior to the proposed firing date. Establishment of an AFA, not described in this Order, shall also require an environmental review. Please refer to Chapter 2 of this Order for environmental documentation requirements.

12. Coordinates. The 11<sup>th</sup> Marines Survey data in paragraph J of this Chapter provides a listing of the coordinates, elevation (to the nearest tenth of a meter), and coordinating instructions for each approved AFA.

13. Consolidated AFA Booklet. The Commanding Officer, 11<sup>th</sup> Marines has prepared a consolidated AFA booklet, with survey data cards, for each AFA. Each data card provides survey data, directions to, and a sketch of each AFA. The AFA booklets are on file with the Range Scheduling Office and 11<sup>th</sup> Marines. Artillery battalion S-3s should also have a copy of the AFA booklet.

14. Surveys. Contact 11<sup>th</sup> Marines Regimental Survey for any information regarding surveys aboard Camp Pendleton.

15. Special Use Airspace. Dimensions and operational characteristics of Special Use Airspace (SUA), required to support artillery live-fire, are discussed in detail in paragraph 4001 in Chapter 4 of this Order.

#### C. Firing Precautions

1. Overhead Fire. When firing over training areas, roadways, maneuver units or occupied positions, ammunition cleared for overhead-fire is required.

2. No Fire Areas. No Fire Areas are listed in Appendix B of this Order, which shall be accounted for in the SDZ diagram construction.

3. Powder Burning

a. Powder burning shall be conducted in AFAs during FDRs of LOW, MODERATE, and HIGH. In order to reduce the potential for costly wildland fires, when the FDR is VERY HIGH or EXTREME, the unit conducting training shall burn powder at AFAs 16, 31 and 43 only, unless coordinated with LONGRIFLE. During all powder burning activities, powder shall be burned in areas cleared to mineral earth, and no closer than 200 feet to vegetation. Powder shall be burned in single or double rows, not to exceed 12 inches in width, and not to exceed a total of 40 bags.

b. Units shall have fire extinguishers, water, and shovels at the burn site. Units shall contact LONGRIFLE for permission prior to burning. Units shall remain at the burn site for 30 minutes after the last burn, ensuring no fires have been started in the surrounding vegetation.

D. Safety Personnel. Safety personnel and their responsibilities are detailed in Chapter 3 of the most current edition of JtRegtO P3570.1C, Marine Corps Artillery Safety Standing Operating Procedures, [reference (r)].

E. Communication

1. FIREXs. When an artillery firing exercise (FIREX) is battalion size or larger, an Exercise RSO from the organization conducting the exercise may check out all the AFAs assigned to the organization conducting the FIREX. Communication shall be established and monitored between LONGRIFLE and each firing unit occupying an AFA, prior to and during all firing. The controlling headquarters shall conduct all normal traffic between the controlling unit and LONGRIFLE. Subordinate units shall monitor the Range Safety Net, entering the net only when called, or in the event of an emergency, MEDEVAC, etc. This procedure is designed to reduce traffic on the Range Control Net, and provide positive communication with each firing unit in case of emergencies. When a unit calls LONGRIFLE, they shall identify themselves as the (unit) Fire Direction Center, and not the alphanumeric unit call sign. The controlling headquarters shall advise LONGRIFLE of the current location of all firing units involved in the FIREX.

2. Check Firing. All personnel shall be briefed to immediately command, "Check-firing" upon observing any unsafe condition, and to state the reason check-firing is announced. Once the problem is corrected, the OIC of Firing shall contact LONGRIFLE for permission to cancel check-firing. Upon approval, he will command, "Cancel check-firing."

F. Special Instructions for Firing Improved Conventional Munitions (ICM)

1. Firing Conditions. ICM shall be fired under the conditions listed below.

a. With the approval of a special request to the AC/S, O&T.

b. From AFAs 10, 31, 32, and 33, unless otherwise authorized.

c. Into the firing box created by the following grids: 62920 93196 to 62920 94196 to 63920 94196 to 63920 93196.

d. When the OIC of Firing has ensured all areas along the gun target line are clear of personnel, he/she shall be granted permission to fire by LONGRIFLE.

2. Firing Procedures and Safety Precautions. Special firing procedures and safety precautions applicable to ICM are contained in directives in the most current edition of MCO 3570 series [references (a) and (b)].

3. EOD Notification. The firing unit shall inform EOD of the designated impact grid when ICM is fired into the impact area.

G. FASCAM. The firing of scatterable mine munitions (FASCAM) is prohibited.

H. Direct-Fire Procedures

1. Direct-Fire Shoots. Direct-fire shoots shall be conducted per current unit safety SOPs, appropriate Weapons Technical Manual and FM 6-50, Tactics, Techniques, and Procedures for field Artillery Cannon Battery [reference (s)]. SDZ diagram construction shall be completed prior to firing. All SDZs shall be constructed using the 1:50,000 Camp Pendleton Military Installation Map [reference (d)]. The SDZ diagram will be constructed per the most current edition of the MCO 3570 series [references (a) and (b)].

2. Direct-Fire Ranges. Ranges 407, 407A and 408 are designated for direct-fire.

3. SDZ Diagrams (SDZs). Prior to conducting a direct-fire shoot, SDZs shall be submitted to the Range Scheduling Office ten (10) working days prior to the event.

I. HIMARs (High Mobility Artillery Rocket Systems). All HIMARS live-fire will be conducted per the established HIMARS SDZs and Data Cards.

J. Artillery Firing Areas (AFAs). The AFAs aboard MCB, CamPen are listed below.

<b>ARTILLERY FIRING AREAS (AFAs) CAMP PENDLETON 11<sup>TH</sup> MARINES SURVEY</b>					
<b>STATION</b>	<b>ORD</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>HEIGHT</b>	<b>REMARKS</b>
AFA 01	4 <sup>TH</sup>	454243.28	3702922.60	175.5	
AFA 02	4 <sup>TH</sup>	453757.86	3702569.94	179.5	
AFA 03	4 <sup>TH</sup>	450731.92	3700849.76	224.8	
AFA 04	4 <sup>TH</sup>	450231.56	3699901.63	169.1	
AFA 06	4 <sup>TH</sup>	449584.98	3699499.62	137	
AFA 07	4 <sup>TH</sup>	447851.75	3699520.30	165.8	
AFA 08	4 <sup>TH</sup>	457860.16	3692884.37	232.6	
AFA 09	4 <sup>TH</sup>	459294.67	3692553.07	199.4	Area E Concerns
AFA 10	4 <sup>TH</sup>	460337.30	3692047.41	205.1	
AFA 11	4 <sup>TH</sup>	459194.70	3691658.99	149.6	Whiskey Only
AFA 12	5 <sup>TH</sup>	457510.2	3691608.1	215.3	DZ Horno/Whiskey Only
AFA 13	4 <sup>TH</sup>	459668.27	3690442.08	138.6	DZ Papa 3/Whiskey Only
(Continued on next page)					

ARTILLERY FIRING AREAS (AFAs) CAMP PENDLETON 11 <sup>TH</sup> MARINES SURVEY					
STATION	ORD	EASTING	NORTHING	HEIGHT	REMARKS
AFA 14	4 <sup>TH</sup>	455725.30	3686786.63	61.2	Whiskey Only Firing requires activation of R2503D. Low angle fire only
AFA 15	4 <sup>TH</sup>	456412.71	3686007.26	43.7	Whiskey Only Firing requires activation of R2503D. Low angle fire only
AFA 16	4 <sup>TH</sup>	457274.22	3685468.93	42.4	Whiskey Only Firing requires activation of R2503D. Low angle fire only
AFA 17	4 <sup>TH</sup>	462361.86	3690437.32	100.9	
AFA 18	4 <sup>TH</sup>	462731.09	3689952.14	90.3	
AFA 19	4 <sup>TH</sup>	464541.19	3689425.98	119.7	
AFA 21	4 <sup>TH</sup>	465008.14	3690303.36	129.7	Area E/R-407/R-407B
AFA 22	4 <sup>TH</sup>	466445.30	3687394.06	61.0	DZ Basilone
AFA 23	4 <sup>TH</sup>	467361.72	3688919.35	105.2	Area E Concerns
AFA 24	4 <sup>TH</sup>	468005.74	3689453.47	131.7	
AFA 25	4 <sup>TH</sup>	466662.19	3690300.02	142.7	Area E Concerns
AFA 26	4 <sup>TH</sup>	466865.98	3690568.13	162.3	
AFA 27	4 <sup>TH</sup>	467375.99	3690465.59	136.9	
AFA 28	4 <sup>TH</sup>	468228.22	3690949.75	208.6	
AFA 29	4 <sup>TH</sup>	467974.15	3691400.75	184.5	
AFA 30	4 <sup>TH</sup>	466224.23	3690839.08	166.2	
AFA 31	4 <sup>TH</sup>	466706.59	3691638.19	221.3	
AFA 32	4 <sup>TH</sup>	466979.99	3692693.85	282.9	
AFA 33	4 <sup>TH</sup>	467384.01	3692463.87	239.2	
AFA 34	4 <sup>TH</sup>	470370.51	3692375.67	105.1	
AFA 35	4 <sup>TH</sup>	470480.55	3693078.03	99.2	
AFA 36	5 <sup>TH</sup>	468262.7	3693648.9	288.5	Special Request
AFA 37	5 <sup>TH</sup>	467244.9	3694427.3	297.2	Special Request
AFA 38	5 <sup>TH</sup>	467784.9	3694457.7	312.8	Special Request
AFA 39	4 <sup>TH</sup>	472135.72	3696225.10	230.7	DZ DeLuz/39 N & S
AFA 40	4 <sup>TH</sup>	463798.93	3698918.91	767.9	
AFA 41	4 <sup>TH</sup>	462828.30	3699311.51	753.8	
AFA 42	4 <sup>TH</sup>	462600.54	3700434.60	748.4	
AFA 43	4 <sup>TH</sup>	460282.32	3700359.75	645.3	
AFA 44	4 <sup>TH</sup>	461097.0	3701602.2	680	

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ARTILLERY FIRING AREAS (AFAs) CAMP PENDLETON 11 <sup>TH</sup> MARINES SURVEY					
STATION	ORD	EASTING	NORTHING	HEIGHT	REMARKS
AFA 45	4 <sup>TH</sup>	461041.75	3702249.00	720.7	
AFA 46	4 <sup>TH</sup>	458793.50	3701803.63	597.9	
AFA 90	5 <sup>TH</sup>	473649.1	3687416.6	144.1	
AFA 91	5 <sup>TH</sup>	474396.7	3685915.9	159.7	
AFA 92	5 <sup>TH</sup>	473045.0	3685158.5	163.9	
AFA 93	5 <sup>TH</sup>	465448.7	3681551.6	18.7	
AFA 94	5 <sup>TH</sup>	467990.0	3680906.9	77.1	
AFA 95	5 <sup>TH</sup>	466431.2	3679501.7	17.6	
AFA A	PADS	455469.3	3703242.9	121.6	
AFA C	PADS	461394.1	3700198.2	718.8	
AFA D	PADS	461614.1	3700935.8	735.6	
AFA F	PADS	471235.9	3694408.5	242.7	
AFA G	PADS	459031.7	3690037.0	126.1	
AFA H	PADS	451874.7	3700085.4	80.1	
AFA I	PADS	452764.0	3701078.6	88.3	
AFA J	PADS	457298.6	3693650.6	148.3	Area E/R-218A

K. Mortars

1. General. The procedures listed below shall be used when firing mortars aboard MCB, CamPen. Mortar firing areas (MFAs) must be scheduled fourteen (14) days prior to the training evolution. Data Cards, SDZs, Concept of Operations, and a signed ORM shall be submitted ten (10) days prior to the training evolution.

a. Ammunition Handling. Ammunition shall be handled per the provisions in TM 43-001-28, Technical Data Sheets for Ammunition [reference (t)] the applicable Weapon Operations Manual, and ammunition handling procedures in the most current edition of BO P8000.3, Ammunition and Explosives Safety (A&E), [reference (1)].

b. Safety Requirements. A corpsman, with first aid equipment and a safety vehicle, shall be present at all times.

c. Communication. Communication with LONGRIFLE shall be conducted per the provisions outlined in this Order.

d. Restrictions. Firing mortars over the heads of unprotected troops is prohibited.

e. Direct Observation. The impact of all rounds fired shall be under direct observation by personnel. The RSO shall ensure qualified observers are present. RSO shall record and call in the location of all duds upon completion of firing.

f. Removal of Increments and Powder Burning

(1) Increments removed before firing shall be placed in a metal or wooden covered container located outside the firing position at a safe separation distance (i.e., 25m).

(2) Powder burning shall be conducted within MPs and MFAs during FDRs of LOW, MODERATE and HIGH. In order to reduce the potential for costly wildland fires when the FDR is VERY HIGH or EXTREME, the unit conducting training shall burn powder at R408 concrete pad, R218A Increment pit, AFA 31, AFA 43, MP 1, MP 6 and MFA 14 (cleared area at R-221) only. During all powder burning activities, powder shall be burned in areas cleared to mineral earth, and no closer than 200 feet to vegetation. Powder shall be burned in single or double rows not to exceed 12 inches in width with no more than 100 increments total per burn.

(3) Units shall have fire extinguishers, water and shovels at the burn site. Units shall contact LONGRIFLE for permission prior to burning. Units shall remain at the burn site for thirty (30) minutes after the last burn to ensure no fires have been started in the surrounding vegetation.

g. Calculated Safety Information. The RSO shall verify to the OIC of the firing unit lay of gun line, FDC fire control (Plotting boards and/or MBC), and each Gun "SAFETY T" for each charge to be fired in that position.

h. Calculated Firing Data. After the Fire Direction Center calculates the firing data from the call for fire requests, the RSO shall check it against the appropriate "SAFETY T," to ensure the data placed on the mortar is safe. Only then will rounds be fired.

2. Procedures for Firing from Mortar Positions

a. Authorized Mortar Positions. The RCO shall catalog the authorized data cards and SDZs for authorized mortar positions use by units conducting mortar fire aboard Camp Pendleton.

b. Scheduling. All mortar positions shall be scheduled through the Range Scheduling Office prior to conducting training. Scheduling requests shall be completed per paragraph 3002 in Chapter 3 of the current BO P3500.1 to include the DODICs of all ammunition to be fired. Ammunition not listed on the approved scheduling request shall not be fired.

c. Special Instructions. Information regarding the conduct of firing is contained in the ammo can attached to a pole at each mortar position/MFA. The ammo can contains a SDZ diagram with appropriate safety data (left-right azimuth, target area, min-max range of the target area), along with RSO instructions, regulations, and a red flag.

d. SDZ Diagram Construction. When firing is desired outside the SDZ provided for each mortar position, firing units shall construct a SDZ diagram per directives in the MCO 3570 series and submit to RCO for approval.

e. Target Area. The target area, as depicted in the SDZ diagram, and the MAX ORD of the ammunition to be fired, will be communicated to LONGRIFLE prior to the unit requesting a hot status.

L. Observation Posts

1. Listed below are the designated and identified observation posts (OPs).

OP LOCATIONS	COORDINATES	REMARKS
A	636 900	Hand-held lasers allowed
B	640 904	Hand-held lasers allowed
C	642 919	Inactive
D	643 906	Hand-held lasers allowed
E	643 921	Marking for southern AFAs
F	666 926	Hand-held lasers allowed
I	649 968	Designation into the Zulu Impact Area is not authorized
J	596 995	Hand-held lasers allowed
K	566 938	Inactive
M	617 989	Marking for northern AFAs
W	545 953	Marking for northern AFAs

2. Procedures for Use

a. OPs being utilized SOLELY for observation of indirect fire do not require a RSO. Positive communication with the RSO of the firing unit is required.

b. Scheduling. OPs shall be scheduled through the Range Scheduling Office prior to conducting training. Scheduling requests shall be completed per paragraph 3002 in Chapter 3 of this Order.

c. Temporary OPs. Special requests to use other terrain for OPs shall be submitted to the Range Scheduling Office. Units shall identify the coordinates, intended purpose, and time periods.

APPENDIX E

Utilization of CS (Chlorobenzalmalononitrile Gas)

A. General. The following procedures shall be used when CS capsules or GS grenades are utilized anywhere on MCB, CampPen.

B. CS Training

1. Authorized CS Chambers. The CS chambers listed below are authorized for use by units conducting Individual Protective Equipment Confidence Exercises (IPECEs) aboard Camp Pendleton.

LOCATION	GRID	DESCRIPTION	SCHEDULED BY
14 AREA	737 859	Concrete Block Structure	Range Scheduling
31 AREA	630 808	Metal Structure	Range Scheduling
33 AREA	658 851	Concrete Block Structure	Range Scheduling
41 AREA	595 828	Concrete Block Structure	Range Scheduling
53 AREA	556 926	Concrete Block Structure	Range Scheduling
62 AREA	487 990	Concrete Block Structure	Range Scheduling

2. Scheduling. All CS chambers shall be scheduled through the Range Scheduling Office prior to conducting training. Scheduling requests shall be completed per Chapter 3 of this Order, to include the DODICs of all ammunition to be utilized during training. Ammunition not listed on the scheduling request shall not be fired.

3. Range Regs

a. Information regarding the conduct of the IPECE is contained in the ammo can attached to the range pole. The ammo cans contain appropriate safety, IPECE procedures along with RSO instructions, regulations, and a red flag.

b. All chemical training OICs and RSOs shall hold an MOS of 5711 or 5702 or equivalent.

c. The individual conducting training must hold an MOS of 5711 or 5702 for the conduct of IPECE training and shall ensure only CS is used in gas chambers, and only in the proper amounts for the structure size being used.

d. CS or tearing agent grenades shall not be used in confined spaces (e.g., chambers, tents, and buildings).

e. Under no circumstances will CS capsules or CS powder be introduced into grenade materials. This action is strictly prohibited per paragraph 1005.1b in Chapter 1 of this Order.

4. Communication. Prior to lighting off the CS chamber, communication with LONGRIFLE shall be established. A request to go hot will be required.

Notify LONGRIFLE approximately thirty (30) minutes prior to securing from the gas chamber.

C. Responsibilities Of the OIC

1. OIC Requirements. The OIC shall be a SSgt or above and must hold an MOS of 5711 or 5702 or equivalent.
2. Safety Brief. Ensure all personnel undergoing training participate in the safety brief.
3. Range and Safety Regulations. The OIC shall be knowledgeable in all local range and safety regulations pertaining to CS and IPECE training.
4. Scheduling. Ensure the IPECE is appropriately scheduled via the Range Scheduling Office.
5. Safety Requirements. Ensure a dedicated safety vehicle with corpsman and non-participating driver are on-site. Safety vehicle personnel shall be familiar with Individual Protective Equipment (IPE) and have IPE to include their issued protective mask in case they have to enter the chamber or exercise area to tend to an emergency.
6. Preparation Supervision. Supervise preparation and conduct of the IPECE to include build-up of CS concentration inside the chamber and ensure the exercise is conducted at a safe distance from any non-participating personnel.
7. Assistant Instructor Brief. Brief assistant instructors on safety requirements.
8. Training Supervision. Supervise all IPECE training.

D. Responsibilities of the RSO

1. RSO Requirements. The RSO will be a staff sergeant or above and must hold an MOS of 5711 or 5702 or equivalent.
2. Munition Modification. Per paragraphs 7008 and 7009 of this Order, modifications or mixing of munitions are prohibited. CS capsules or loose CS shall not be incorporated into smoke producing materials.
3. Hard-Surfaced Roads/Built-Up Areas/Base Boundaries. The RSO shall not allow CS/HC smoke to be used in the areas listed below.
  - a. Anywhere west of the I-5 Freeway.
  - b. Within 1,000 meters east of the I-5 Freeway.
  - c. Within 1,000 meters of any Base boundaries.
  - d. Within 500 meters of any hard-surface roads or built-up areas anywhere aboard Camp Pendleton.

E. IPECE Safety Brief

1. Eligibility to Participate. Personnel with the following specific physical conditions shall be referred to medical providers for determination of eligibility to participate in an IPECE (findings and recommendations will be recorded in the individual's health record).

a. Personnel with respiratory conditions to include histories of asthma.

b. Cardiac conditions.

c. Severe facial acne or any active dermatitis.

d. Open wounds.

e. Pregnancy or suspected pregnancy.

2. Excluded Medical Conditions. The following medical conditions, if applicable, shall exclude personnel from participating in an IPECE. The OIC/on-site corpsmen shall verify the medical condition of all participants.

a. Upper respiratory infection in the last fourteen (14) days that still requires medication.

b. Dental surgery in the past seventy-two (72) hours.

c. Pregnancy.

d. Any unexplained rashes, scrapes, scratches, cuts, or respiratory disorder; or medical condition not covered.

3. Non-Medical Precautions

a. Wearing contact lenses while training with CS or tearing agents is prohibited. Individuals who normally wear contact lenses must remove them and use properly fitted optical inserts.

b. Due to the additional heat stress of an IPECE, ensure an adequate water supply is available and personnel are encouraged to drink plenty of water.

c. Make heads calls prior to entering the chamber.

d. Due to CS causing involuntary eye closure, no person may ride in the cab of a government vehicle, or operate a government vehicle after exposure. Additionally, personnel shall not drive any vehicle (government or personal) for two (2) hours after exposure, or until they take a thorough shower.

e. Personal vehicles shall not be driven to and from an IPECE.

F. IPECE Facility Requirements

1. General. IPECE training is conducted in a chamber, a field tent, or an open area. An enclosure is preferable to an open area, because the desired vapor concentration can be controlled and maintained.

2. Facility and Materials. The chamber or tent should be reasonably airtight and provide an enclosed space of sufficient size with a separate entrance and exit. Tents used as IPECE training facilities should be used exclusively for this purpose.

3. Open Area and Terrain. If the IPECE is to be conducted in an open area, the exercise area selected should be relatively flat, free from ditches, holes, and other possible individual safety hazards. CS or tearing agent grenades may be used. Wind conditions must be considered, and continuously monitored to ensure that downwind drift of CS or tearing agents will not expose non-participating personnel.

4. Safety Standards. The following safety standards must be practiced and enforced to ensure training effectiveness and to prevent unnecessary injuries.

a. Training shall occur at least 100 meters from any other activity, and 1,000 meters from the I-5 Freeway and/or Base boundaries and/or 500 meters from uncontrolled civilian access roads and cantonment areas. Units should provide appropriate government transportation to and from an IPECE. Participating personnel should not be permitted to drive personal vehicles to or from an IPECE.

b. Commanders will approve use of CS or tearing agents during training based on advice from NBC personnel (MOS 5702/5711).

c. CS or tearing agent grenades shall not be used in confined spaces (e.g., chambers, tents, and buildings).

5. Ventilation. At the conclusion of an IPECE, the chamber shall be aired out for a minimum of thirty (30) minutes (doors, windows, flaps open).

#### G. IPECE Conducted in CS Chambers or Tents

1. Allowable Agents. Only M7 series CS or appropriate tearing agent capsules (DODIC K765) shall be used for the conduct of IPECEs.

2. Chamber Clean-Up. Chambers shall be swept and ventilated on a regular basis to prevent crystallized agent build-up and possible over-concentration of CS or tearing agents during IPECEs. Personnel cleaning the chamber or tent shall be in IPE, and practice caution at all times. Non-participating personnel should not be permitted in the immediate area during cleaning.

#### H. IPECE Conducted in an Open Area

1. Safety Briefs. Safety briefings and appropriate exercise orientation briefings remain the same.

2. Weather Conditions. FDR permitting, a smoke grenade can be used to check wind direction and agent cloud formation to assist in positioning troops.

APPENDIX F

Communication

A. General. All personnel shall establish and maintain communication with LONGRIFLE when they are in training areas, off-shore operating areas, beaches, training facilities, ranges and/or operating within Camp Pendleton special use airspace. If at any time, communication with LONGRIFLE is interrupted, that unit will immediately cease training and remain in an inactive or "check-fire" status until positive communication has been re-established.

B. Radio Communication

1. Establishing Communication.

a. Units shall establish communication with LONGRIFLE before leaving their cantonment area and again before entering any Training Area or Range. If communication cannot be established you are not authorized to occupy any Training Areas or Ranges.

b. The frequencies listed below are approved for use by MCB, CamPen Range Operations.

49.00 FM	Primary Base Ground Safety Net
30.35 FM	Alternate Base Ground Safety Net
301.9 UHF	Base Air Safety Net
249.9 UHF	Used By Forward Air Controllers
255.2 UHF	Used By Forward Air Controllers
300.1 UHF	Used By Forward Air Controllers
123.2 VHF	Used By Civilian Aircraft
140.400 VHF	Used By Civilian Aircraft
148.450 VHF	R215A, R218A & R223B Target Systems
143.950 VHF	R409A Target Systems
150.075 VHF	PITS Targets & R501 Target System

2. Communication Requirements

a. All military units that have tactical radio gear shall use that as the sole method of communication with LONGRIFLE.

b. Those military units that do not have tactical radio gear and civilian organizations may use the "Tango Net" to communicate with LONGRIFLE on that net.

c. Cell phones may be used as a secondary means of communication (refer to Special Instructions pertaining to each range).

d. A radio check with LONGRIFLE shall be made every hour by all units conducting training at any Camp Pendleton training facilities.

(1) Non live-fire activities shall call at the top of the Hour.

(2) Live-fire activates shall call at the bottom of the hour.

3. Call Signs

a. Units on ranges shall identify themselves by range number, rather than unit call sign, on range control nets.

b. Units in training areas shall identify themselves by unit and training area.

c. Unit nick-names (i.e. Thunder, Highlander etc.) are not authorized on range control ground nets.

4. CPAAA/CPAVA. Units using the CPAAA are to maintain communication per the most current edition of the FACS FACS DINST 3120.1 series, Amphibious Assault Helo Ops/Bombing and Strafing Regs/Amphibious Assault Area/Amphibious Vehicle Training Area, [reference (u)]. Units training in CPAVA or other training areas controlled by MCB, Camp Pen shall maintain communication with LONGRIFLE. Units that also have approval to train in the CPAAA, shall inform LONGRIFLE of their intention to move into the CPAAA. Units moving from the CPAAA into the CPAVA or other Camp Pendleton training areas shall inform LONGRIFLE of that movement.

5. Administrative Traffic. Administrative traffic shall not be transmitted over the Base Range Safety Nets. Units shall use other organic communication to accomplish administrative matters.

6. Large Exercises. The procedures listed below will be in effect during battalion size or larger exercises (e.g., artillery FIREXs, combined arms exercises, amphibious operations involving air and/or live-fire etc.), where a controlling agency (FDC/FSCC/DASC) or consolidated operations center has been established.

a. Subordinate units shall contact LONGRIFLE for emergency notifications (e.g., MEDEVACS, wildland fires, etc.). Subordinate units shall monitor LONGRIFLE communications at all times.

b. The controlling agency/consolidated operations center shall keep LONGRIFLE advised of all subordinate unit locations and status throughout the exercise.

c. After LONGRIFLE provides the initial approval to commence live-fire, the controlling agency/consolidated operations center shall keep LONGRIFLE informed, at all times, as to which ranges, artillery positions, and mortar positions are actually conducting live-fire operations.

d. The controlling agency/consolidated operations center shall keep LONGRIFLE advised of all air operations taking place.

7. Safety. If at any time, LONGRIFLE feels that a unit's communication is unsatisfactory, LONGRIFLE will put that unit in a "check-fire"/cease training status until satisfactory communication is re-established.

8. Radios. Each training unit shall provide its own radio equipment to support range safety communication requirements

C. Wire Communication. Units may lay wire for temporary intra-unit communication (field telephones) as long as the wire does not interfere with other operations or units in the same area. All wire shall be removed from the area when the using unit secures. Temporary or semi-permanent field wire lines shall not be installed on Base telephone or electrical poles.

APPENDIX G

Forms

# CAMP PENDLETON TRAINING AREA REQUEST

PLEASE RETURN THE COMPLETED FORM VIA E-MAIL TO:

[pndl\\_otrangescheduling@usmc.mil](mailto:pndl_otrangescheduling@usmc.mil)

(There is no space – the underscore doesn't show up in the link)

## DO NOT SEND THIS TO AN INDIVIDUAL

1) ORGANIZATION:	2) POC:	3) PHONE: Comm: DSN: FAX:	4) # of PERSONNEL ATTENDING TRAINING
5) DATE REQUESTED FROM: DD/MM/YR TO:	6) TIME REQUESTED FROM: TO:	7) CONTINUOUS:  FIXED:	8) BIVOUAC:  GRID:
9) RANGE/TRAINING AREA REQUESTED:		10) WEAPONS:	
		11) TYPE OF ORDNANCE/DODIC:	
12) TYPE OF TRAINING:			
13) CONTRACTOR HOURS:		14) VEHICLES:	
15) WAIVER NUMBER:		16) AIRSPACE:	
17) AIRCRAFT:			
18) REMARKS:			
Requester's SIGNATURE			
<p>THE RANGE SCHEDULING OFFICE IS LOCATED ON THE 2<sup>ND</sup> DECK - BLDG 2399 (MCAS, CAMPEN)  OFFICE PHONE NUMBER: Comm: (760) 725-3510/4219 DSN 365-3510/4219  FAX PHONE NUMBER: Comm: (760) 725-4090 DSN 365-4090</p>			
MCPCP 3500/3			

OFFICIAL MCB FORMS MAY BE FOUND AND PRINTED AT WEBSITE: <https://158.238.251.13/pendleton/ACSManpower/Adjutant/BO/Base%20Forms/Forms/AllItems.aspx>

### JTAC-CAS BRIEF SHEET

OP \_\_\_\_\_ DATE \_\_\_\_\_

FAC'S NAME/UNIT \_\_\_\_\_

POC # WHILE AT THE OP \_\_\_\_\_

TGT MARKING UNIT \_\_\_\_\_ LOCATION \_\_\_\_\_ TYPE \_\_\_\_\_

<u>CALL SIGN</u>	<u>A/C-TYPE</u>	<u>TOT</u>	<u>ORDNANCE REQUESTED</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

SUPPORTING SQUADRON'S POC NAME AND NUMBER \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FAC POC/NAME AND NUMBER \_\_\_\_\_

IP TO BE USED IP SONGS IP BRIDGE IP HORNO IP CASE OTHER \_\_\_\_\_

AIRSPACE SCHEDULED TO SUPPORT TRAINING \_\_\_\_\_

BRIEF # USED TO SUPPORT TRAINING (R440, R220, ETC.) \_\_\_\_\_

TACTICS REQUESTED (HIGH/LOW) \_\_\_\_\_

TANKER LOCATION (IF SCHEDULED) \_\_\_\_\_

IF MARKING WITH LASERS, LTA AND FIRING POSITION SCHEDULED \_\_\_\_\_

TAD #1 \_\_\_\_\_ TAD #2 \_\_\_\_\_

FAC'S CALL SIGN \_\_\_\_\_

**AMMUNITION MALFUNCTION REPORT**

MALFUNCTION REPORT ROUGH

Ref: MCO 8025.1

Unit Identification: \_\_\_\_\_

Report Serial Number: \_\_\_\_\_

Point of Contact: \_\_\_\_\_

Telephone # DSN: \_\_\_\_\_ Comm: \_\_\_\_\_

Ammunition Data: \_\_\_\_\_

NSN: \_\_\_\_\_

DODIC: Nomenclature: Lot#: \_\_\_\_\_

(In case of a 155mm where the projectile with fuse, propellant charge, & primer are loaded into the weapons separately, the above blocks must be done for each item).

**Description of Malfunction:**

Provide a narrative of what occurred, whether there were any non-standard conditions:

\_\_\_\_\_  
\_\_\_\_\_

**Indicate the number of casualties:**

Minor Injuries requiring outpatient care: \_\_\_\_\_

Major Injuries requiring hospitalization: \_\_\_\_\_

Fatalities: \_\_\_\_\_

**Prevailing Conditions:**

Time: \_\_\_\_\_

Date: \_\_\_\_\_

Weather Conditions: \_\_\_\_\_

<b>AMMUNITION AND EXPLOSIVES RANGE CHECK LIST</b>		
<b>FOR</b>		
<b>RANGE OFFICERS IN CHARGE</b>		
	<b>YES</b>	<b>NO</b>
1. Ammunition is in a position to minimize the potential for ignition, explosion, and rapid burn?		
2. Ammunition is issued to the firing units immediately before the scheduled training exercise?		
3. Small arms ammunition is distributed to the troops only when they are on the ready or firing lines?		
4. Ammunition is protected with a water-proof cover to guard against inclement weather and direct sun rays?		
5. Proper ventilation (i.e., air circulation) is provided between the water-proof cover and ammunition?		
6. Minimum ammunition (i.e., number of rounds) is unpacked at the firing line for an efficient firing exercise?		
7. Packing material, propellant, and increments are retained until firing complete?		
8. No packing material is burned on the range(s)?		
9. No indiscriminate firing occurred to preclude returning ammunition to the Ammunition Supply Point?		
10. Red range flag is flying at range(s) handling or firing ammunition, with road guards posted to deny access?		
11. Matches, cigarette lighters, or other spark-producing items are not in or near explosive areas?		
12. Precautions taken to prevent ammunition from contacting the ground or spark-producing substances?		

### EOD REQUEST FORM

Please provide the following information:

Range:	Date EOD is Requested:	Time EOD is Needed:	Unit:	POC:  Phone Number:
--------	------------------------	---------------------	-------	---------------------------

Note: If digging or placing stakes in an impact area, requesting unit will supply corpsman and safety vehicle.

Digging YES NO (If applicable)	Safety Vehicle YES NO (If applicable)	Corpsman YES NO (If applicable)
--------------------------------------	---	---------------------------------------

NATURE OF REQUEST	INFORMATION REQUIRED	
EOD ESCORT	DEPARTMENT	
	NUMBER OF PERSONNEL	
RANGE MAINT. OP.	NUMBER OF WORK GROUPS	
	NUMBER OF PERSONNEL IN WORK GROUPS	
	OTHER INFORMATION (Operational Plans can be	
TARGET ESCORT	NUMBER OF WORK GROUPS	
	NUMBER OF PERSONNEL IN EACH GROUP	
	TYPE OF TARGETS	
	APPROVED BY RANGE CONTROL (Signed and Date	
	PLACEMENT OF TARGETS	
	APPROVED BY RANGE CONTROL (Signed and Date	
	DATE/TIME OF REMOVAL	

ADDITIONAL PERTINENT INFORMATION (Continue on reverse side if more space is required):

**MCBCP 3500/4**

OFFICIAL MCB FORMS MAY BE FOUND AND PRINTED AT WEBSITE: <https://158.238.251.13/pendleton/ACSManpower/Adjutant/BO/Base%20Forms/Forms/AllItems.aspx>

**OPERATIONAL RISK MANAGEMENT MATRIX  
MCB CAMP PENDLETON**

TRAINING EVOLUTION:	ORGANIZATION:	ASSIGNED OIC:	ASSIGNED RSO:	WEAPONS SYSTEMS:	DATE:
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OPERATIONAL PHASE	HAZARD	CAUSES	INT RAC	DEVELOP CONTROLS	RES	HOW TO IMPLEMENT	HOW TO SUPERVISE

<p><b>HAZARD SEVERITY</b></p> <p><b>I - CATASTROPHIC</b> - Death, permanent disability, major property damage</p> <p><b>II - SERIOUS</b> - Permanent partial disability, major system or minor property damage</p> <p><b>III - OCCASIONAL</b> - Minor injury, minor system or property damage</p> <p><b>IV - NEGLIGIBLE</b> - 1<sup>st</sup> aid, minor system repair</p> <p><b>MISHAP PROBABILITY -</b></p> <p><b>A - FREQUENT, B - LIKELY, C - OCCASIONAL, D - UNLIKELY</b></p> <p><b>RISK ASSESSMENT CODE (RAC) -</b></p> <p><b>1 - CRITICAL, 2 - SERIOUS, 3 - MODERATE, 4 - MINOR, 5 - NEGLIGIBLE</b></p>	<b>RAC ASSESSMENT CODE</b>					<b>COMMAND REVIEW/APPROVAL</b>	
	<b>MISHAP PROBABILITY</b>					OIC:	
		A	B	C	D	RSO:	
	I	1	1	2	3	S-3:	
	II	1	2	3	4	CO/XO:	
II	2	3	4	5	RCO:		
IV	3	4	5	5	(AS REQUIRED)		

MCPCP 3500/2

OFFICIAL MCB FORMS MAY BE FOUND AND PRINTED AT WEBSITE: <https://158.238.251.13/pendleton/ACSMampower/Adjutant/BO/Base%20Forms/Forms/AllItems.aspx>

### RSO CHECKLIST

Range	Unit	OIC			RSO	
		Rank:			Rank:	
Type of Training		Name:			Name:	
Static	<input type="checkbox"/>	HRST	<input type="checkbox"/>	Last 4:		
LFAM	<input type="checkbox"/>	EMP	<input type="checkbox"/>			
Arty	<input type="checkbox"/>	BZO	<input type="checkbox"/>			
CAS	<input type="checkbox"/>	MOUT	<input type="checkbox"/>			
Mortar	<input type="checkbox"/>	Other	<input type="checkbox"/>			
		Phone:			Phone:	
		Yes	No	N/A	Type of weapon(s) being fired	FDR
ORM		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Approved Brief		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SDZ & Data Card		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Waiver		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Corpsman & safety vehicle		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Range fan limits identified		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Range regs present		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Range guards posted		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Helmet & flak being worn		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Range passes for POVs		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Range flag posted		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Hearing protection Worn		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Proper Targets Utilized		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		Yes	No	Type of Ammunition being fired		
NAVMC 11381 Filled Out		<input type="checkbox"/>	<input type="checkbox"/>			
Ammunition Issue Point Properly Located		<input type="checkbox"/>	<input type="checkbox"/>			
Misfire Pit/Can Properly Located and Marked		<input type="checkbox"/>	<input type="checkbox"/>			
Live Ammo & SESAMS/Blanks Are Being Stored Together		<input type="checkbox"/>	<input type="checkbox"/>			
Remarks						
Inspector		OIC			RSO	
<b>REMEMBER!!!</b>						
<ul style="list-style-type: none"> <li>▪ RSO is required to check all gun settings (Head space and timing, FDC/Gun line etc.)</li> <li>▪ Proper protection is required for all SESAMS and SRT training</li> <li>▪ Safety "T" is required for all indirect fire weapons</li> <li>▪ <b>SESAMS require everyone within safety perimeter to wear protective equipment</b></li> <li>▪ Helmets and flak jackets shall be worn for the following live-fire training events: <ul style="list-style-type: none"> <li>○ Live-fire and movement/maneuver.</li> <li>○ High explosives or grenades.</li> <li>○ Machineguns.</li> <li>○ Close Quarters Battle in shoot houses.</li> </ul> </li> </ul>						



