

Standing Operating Procedures
for the
Collective Training Range (CTR)
Donnelly Training Area, Alaska

1. References. Appendix H.
2. Purpose. The purpose of this SOP is provides guidance for the safe use and conduct of the Collective Training Range (CTR) by personnel authorized to use this range IAW USARAK Regulation 350-2.
3. Scope.
 - a. Capability. The CTR is located in the Donnelly Training Area to the west of Meadows road in the vicinity of grid WR55168273. It consists of three ranges combined into one facility, and includes two Infantry Platoon Battle Courses (IPBC); one Multi-Purpose Training Range (MPTR); and a Range Operation Center (ROC) to support the entire range. The CTR is capable of supporting Platoon and Company live fire exercises and crew qualifications through Table VIII. It is instrumented with a portable targetry system that is capable of cold weather operations to temperatures of -20. This system is operated with generators and rechargeable batteries and controlled by radio. The range is also instrumented with thermal blankets for all targets and with battle field effects simulators on each objective. A total of 40 Stationary Infantry Targets, (SIT's), eight Stationary Armored Targets (SAT's) and six Moving Infantry Targets (MIT's) are on an IPBC. A total of 30 SIT's, five SAT's, and one Moving Armored Targets (MAT) are on the MPTR. The CTR's operation and maintenance are the responsibility of a civilian contractor. Range Operation Personnel will be the only persons authorized to operate or repair the automated targets. Additional non-automated targets may be utilized on this facility with the prior approval of the Range Safety Officer.
 - 1) The IPBC consists of two maneuvers lanes, each lane has four maneuverable objectives and one counterattack objectives spread over a 1300-meter lane. The objectives consist of stationary and moving infantry targets and stationary armor targets. There is one trench line through out the entire IPBC.
 - 2) The MPTR consists of a course road with two firing points, a moving armor target, stationary armor targets, a building façade, and stationary infantry targets.
 - b. Weapons Authorized: M16A1/A2, M4, M203, M9, M24, M249, M60, M240, M2, MK19, AT-4 Sub-cal, and 60MM/81MM Mortar
 - c. Ammunition Authorized: 5.56mm , 7.62, 9mm, .50 cal, 40mm TPT (M203), 40mm TP (MK19), M18 Claymore Mine, M1A2 Bangalore Torpedo, Practice Hand Grenade with Fuse, 60/81mm Mortar sub-cal., and all simulators. At no time will .50 cal API or dud-producing ammunition be allowed on this range.
4. Applicability: This SOP applies to all military units, organizations, agencies and authorized individuals that use ranges and training area at the Donnelly Training Area, as defined in USARAK Regulation 350-2.

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5. Responsibilities:

a. Medical Support: Medical support is required for this range IAW para 1-7a, USARAK Regulation 350-2. The minimum requirement is a specialty qualified Medic with a litter capable Aid Vehicle with a dedicated driver. MEDEVAC procedures are listed in Annex G.

b. Equipment Requirements:

- | | |
|-----------------------------|-------------------------|
| 1) USARAK Reg. 350-2 | Issued by Range Control |
| 2) Range SOP | Issued by Range Control |
| 3) Range Flags | Issued by Range Control |
| 4) FM and TM's (Appendix H) | Using Unit |
| 5) FM Radio or Brick Radio | Using Unit |
| 6) Hearing Protection | Using Unit |
| 7) Binoculars (2EA) | Using Unit |

c. Personnel Requirements:

- 1) OIC: SFC or above (MAJ or above when the exercise is a battalion or larger)
- 2) RSO: SSG or above
- 3) Observer Controllers (OCs)
- 4) Safety NCO's as Determined by OIC
- 5) Medic and designated Aid Vehicle Driver
- 6) Ammunition NCO
- 7) Radio Operator
- 8) Road Guards

d. Personnel Responsibilities:

- 1) OIC duties are outlined in Annex A of this SOP.
- 2) Range Safety Officer duties are outlined in Annex B of this SOP.
- 3) Observer Controllers are required for each maneuver element on the range. Specific duties are listed in Annex C.
- 4) Safety NCO's must control and move with the maneuvering teams to ensure no unsafe acts occur. Safety NCO's will be briefed on the concepts of the operation. Safety NCO's can perform duties as OCs.

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- 5) The OIC and RSO must be physically present on the range while in a "Hot Status". If an administrative check-fire has been requested, the OIC and RSO may depart the range. Range control must be notified and a "Hot Status" will not be given until they return.
 - 6) The Ammunition NCO will monitor the issue and turn-in of all ammunition on the range. The OIC/RSO will ensure that there are no unauthorized personnel in or around the temporary ASP.
 - 7) A designated Radio Operator will monitor the radio on the range control frequency at all times and will make communication checks every 60 minutes with range control while in a "Hot Status". Should there be a loss of communication between range control and the unit; a check-fire will be issued by the OIC until communication can be re-established.
- e. General Instructions:
- 1) Preparation Phase.
 - i) Planning and preparation for use of this range will be done IAW Memorandum, USARAK APVR-RPTM (385-63), 25 June 2004, subject: Safety and Certification Requirements during Training/Live Fire Exercises. The timelines and tasks for coordination are at Annex F.
 - ii) Documents require for submission and approval are also listed in Annex F.
 - iii) Range walks will be conducted by the OIC/RSO and range personnel to validate the training plan and verify safety requirements.
 - iv) Range control will provide technical expertise in assisting units in developing their scenario, and the associated SDZ's.
 - v) Consider impacts of Fire Weather Indices, and snow cover restrictions in planning for the range.
 - 2) Safety.
 - i) The OIC must establish and brief an emergency Check-fire plan.
 - ii) Participants must be briefed on firing limits and methods to determine firing limits, and participate in a dry-fire walk through on the specific targets appropriate for the weapon systems.
 - iii) At least one dry rehearsal, (as many as deemed necessary by the OIC) will be conducted prior to any live-fire exercise.
 - iv) Safety NCO's for each maneuver element will have a method to signal a cease-fire.
 - 3) Execution Phase.
 - i) The approved plan will be on site with the OIC during training.
 - ii) Prior to requesting a hot time, ensure the USARAK Form 76, Opening/Closing form, issued by range control, has been completed.

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- iii) Should a fire be discovered on the range, the OIC/RSO will contact Range Control, request a check-fire, and if possible, attempt to extinguish the fire. If the fire is too large (more than 100sq ft), contact Range Control for additional support..
 - iv) Movement of troops participating in the firing exercises will be strictly controlled. To ensure this, Observer Controllers/Safeties will participate in the dry-fire walk through to ensure all firers and controllers are familiar with scenarios and control measures.
- 4) Recovery Phase.
- i) OIC/RSO will ensure all equipment issued by Range Control is returned at the completion of training.
 - ii) Any damages or needed repairs are annotated in the remark section of the closing form.
 - iii) Policing the range is the using unit's responsibility. The entire range area, including all buildings will be policed prior to requesting a clearance team from Range Control.
- f. Special Instructions:
- 1) Live Fire.
 - i) No weapons will be loaded until the unit has crossed the Line of Departure (LD). Weapons will remain on safe while individuals are maneuvering.
 - ii) The Line of Departure will be specified in the maneuver concept, and will be briefed during the participants briefing prior to range operations.
 - 2) Demolitions.
 - i) Demolitions will be done IAW FM 5-250, Explosives and Demolitions, and USARAK Regulation 350-2.
 - ii) Demolitions will not be used within 50 feet of any target emplacement or other range equipment.
 - 3) Digging. Digging on the range can only be done in specified areas and with approval of the local Range Manager
 - 4) Communications.
 - i) Live fire maneuver ranges require the operation of three separate radio nets as a minimum to support realistic training. The unit is responsible for maintaining communications on these frequencies as necessary to support the operation
 - (a) Range Control net. This is the basic range frequency for use by all ranges. Units are required to monitor this frequency continually, and conduct hourly radio checks.
 - (b) Tactical net. This net is for all tactical play on the range
 - (c) Controller net.
 - ii) Emergency Signals. Units will ensure all personnel understand the prescribed emergency signals.
- g. Restrictions:

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- 1) Parking of vehicles is only authorized in designated parking areas.
 - 2) A road guard, with communication with the OIC, will be placed at the gate leading to the facility.
 - 3) Seasonal fire hazards may restrict the use of ammunition to include ball, tracer, and pyrotechnics.
 - 4) CS gas will not be used on this facility at any time.
 - 5) No armor piercing ammunition is authorized.
 - 6) Overhead firing of any weapon system is not authorized.
6. Point of contact for this SOP is the undersigned at 873-1447.

Steven B. Thurmond
DTA
Range Facility Manager

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ANNEX A

DUTIES OF THE OFFICER IN CHARGE (OIC)

1. Prior to firing, the OIC will ensure that:
 - a. The range or firing position is scheduled for unit use.
 - b. An authorized RSO has been designated.
 - c. Designated RTO and two Aircraft Spotters have been identified.
 - d. The correct Training Facility is occupied.
 - e. A red flag is flying from the flagpole. For night firing, a blinking red light will be used in place of a flag. In addition, the left and right limits of the range will be marked with blinking red lights.
 - f. Communication has been established with range control.
 - g. All equipment that is required by this directive and the Range SOP are present on the range.
 - h. The danger/impact area is clear of all personnel, vehicles and wildlife.
 - i. All personnel have received a briefing on the safe handling of ammunition and explosives.
 - j. Road guards, signs, and/or barriers have been posted, if required.
 - k. An approved surface danger zone (SDZ) overlay has been approved and is present, if applicable.
 - l. Clearance to fire has been granted by Range Control. When requesting clearance to fire, the OIC will provide the necessary information contained on the opening and closing sheet to Range Control. The OIC will ensure that the Fire Desk Operator's initials are noted on this form as a record of clearance to fire.
 - m. All personnel are aware of the following:
 - 1) The identity and location of range cadre, including the OIC, RSO, Safety NCO's, RTO, Air Spotters, Medic, and Aid Vehicle.
 - 2) The requirements to wear authorized hearing protection while on or near the firing line.
 - 3) The firing limits of the facility being used.
 - 4) The correct procedures for marking and reporting duds, if required.
2. During the use of the range, the OIC will ensure that:
 - a. No firing is conducted when the visibility requirements are not met.
 - b. Down range weapons effects are observed to ensure projectiles land within the prescribed range limits.
 - c. Misfires are removed from the weapon only on command of the OIC.

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- d. Weapons are cleared and checked during temporary suspensions of firing.
 - e. Records are maintained on the type of ammunition fired, number of rounds fired and number of duds (to include their approximate location).
 - f. A cease fire is ordered when:
 - 1) Directed by range control.
 - 2) Communications with range control or road guards is lost.
 - 3) A malfunction of a weapon or ammunition occurs. The OIC/RSO will initiate a check-fire, notify range control, and ensure nothing is disturbed until the investigation is completed and range control lifts the check-fire.
 - 4) A safety violation, accident or incident occurs.
 - 5) A fire is started
 - 6) Wildlife is discovered on the range.
 - 7) Rounds land or detonate outside the approved safety limits for the range.
 - 8) Either the OIC or RSO leaves the range.
3. After training is completed, the OIC will ensure that:
- a. All weapons are cleared of ammunition before departing the firing line.
 - b. All ammunition and/or explosives are removed from personnel before departing the range/training area.
 - c. Ammunition, simulators, explosives, and pyrotechnics are not abandoned, buried, or otherwise disposed of in an unauthorized manner.
 - d. All expended brass is collected for turn-in to the ASP.
 - e. The range/training area is policed.
 - f. All items in section two of the opening and closing procedures are completed.

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ANNEX B

DUTIES OF THE RANGE SAFETY OFFICER (RSO)

1. The RSO is responsible to the OIC and the commander for the safe operation of the range and will have no other duties.
2. The RSO must be thoroughly familiar with applicable portions of AR 385-63, USARAK Reg. 350-2, this directive, and the appropriate FM's and TM's pertinent to the firing and weapon systems being used (SEE Appendix H).
3. The RSO and the Safety Cadre must be actively alert to:
 - a. Personnel movement on and around the firing line or gun line.
 - b. Vehicle and personnel movement on and around the range or firing points.
 - c. Alignment and handling of weapons on and around the firing point.
 - d. Handling of ammunition.
 - e. Clearance of weapons.
 - f. Control of smoking areas.
 - g. Control batteries, filters, and adapters for laser devices.
 - h. Placement and control of guards, barriers, and signs as required.
 - i. Observation of downrange area for unauthorized personnel, vehicles, and wildlife.
 - j. Prevention of cross lane firing or firing at other than authorized targets.
 - k. Aircraft entering the range airspace.

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ANNEX C

RANGE SUPPORT PERSONNEL BRIEF

OBSERVER CONTROLLERS –

ROAD GUARDS

AIR SPOTTERS (As Required)

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ANNEX D

TROOP BRIEFING

1. Troop Briefing: The OIC or RSO will brief all soldiers on the following items prior to requesting a hot status from range control. This is a general list and does not preclude the unit from emphasizing other areas of concern.
 - a. Movement on the range.
 - b. Weapons/ammo malfunction.
 - c. Safe handling of weapons/ammo.
 - d. Duds (reporting and marking).
 - e. Conduct while on the firing line.
 - f. Hearing conservation.
 - g. Firing limits and rounds observed out of approved firing limits.
 - h. Personnel, vehicles, or air craft downrange.
 - i. Range fires.
 - j. Medical emergency procedures.

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ANNEX E

PRE/POST OPERATIONS CHECKLIST

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ANNEX F

INSTRUMENTATION – TARGETRY – SCENARIO DEVELOPMENT

1. **TIMELINES.** Units will coordinate with Range Control their tactical scenario, targetry requirements, Surface Danger Zones, and Operations Support matrix (Figure F-1) IAW the timelines listed below. These timelines are derived from the specified tasks in Memorandum, USARAK APVR-RPTM (385-63), 25 June 2004, subject: Safety and Certification Requirements during Training/Live Fire Exercises.

<u>DATE</u>	<u>AGENCY</u>	<u>ACTION</u>
D-42	UNIT OIC	MEET WITH RANGE FACILITY MANAGER TO DISCUSS LOCATIONS, RESTRICTIONS, AND OTHER REQUIREMENTS
D-28	UNIT OIC	PROVIDE SDZ OVERLAYS AND OPERATIONS SUPPORT MATRIX TO RANGE CONTROL
D-28	UNIT OIC, RANGE REP, POST SAFETY	CONDUCT RANGE WALK TO CONFIRM SDZ AND OTHER LIMITATIONS
D-180	UNIT OIC	PREPARE ENVIRONMENTAL ASSESSMENT - IF REQUIRED
D-10	OIC, RSO, RANGE CONTROL	CONFIRM SCENARIO WITH RANGE WALK
	POST SAFETY, RANGE MANAGER	REVIEW RISK ASSESSMENT
	COMMANDERS	ENSURE PERSONNEL PASSED QUALIFICATION COURSE FOR WEAPON OR SYSTEM THEY WILL USE
D-DAY	OIC, RSO	CONDUCT REHEARSAL UNDER SAME CONDITIONS AS LIVE FIRE
	OIC, RSO	ENSURE OBSERVER CONTROLER PERSONNEL ARE IN PLACE
	OIC, RSO	MAINTAIN COMMUNICATIONS WITH RANGE CONTROL

2. **OPERATIONS SUPPORT MATRIX.** The matrix is the tool used to translate the tactical scenario into an executable program of target presentations. It also provides a base of information for developing SDZ's and other safety checks necessary for range operations. This document should be developed during initial planning and validated during the preliminary range walk. The Operations Support Matrix also serves as the contract for operations between the using unit and Range Control.

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3. RANGE DIAGRAM. The attached range diagram and target list is provided to assist in development of the tactical scenario. A copy of the diagram with an overlay of the tactical graphics should be submitted with the SDZ overlay(s).
4. REQUIRED DOCUMENTS. The following approved documents need to be on file with range control prior to the start of any live fire exercise.

<u>DOCUMENT</u>	<u>APPROVED BY</u>
a. Concept Plan/OPORD	Unit CDR
b. Tactical (maneuver) Overlay	Unit CDR
c. SDZ Overlay	USARAK Range Safety Officer
d. Operations Support Matrix	Range Manager
e. Risk Assessment	Appropriate Unit Commander
f. Live Fire Certification	BN/BDE CDR
g. Participant Qualification Certification	Unit CDR
h. Fire Weather Index Waiver (as required)	G3

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ANNEX G

MEDICAL

1. In the event of serious injury or illness where time may be a factor in saving life, limb, or sight, or to prevent unnecessary suffering, areomedical evacuation can be used. The following procedures will be followed:
 - a. Request MEDAVAC from range Control, FM 38.30 (primary), 39.05 (alternate), or by telephone 873-4714, or 873-4715.
 - b. If unable to contact range control, contact MEDAVAC directly on FM Freq. 40.50.
 - c. The requesting units will provide the following information:
 - Line 1 - Location of pickup site (grid if possible).
 - Line 2 - Radio Freq. Call Sign and suffix.
 - Line 3 - Number of patients, by precedence.
 - Line 4 – Special equipment required.
 - Line 5 – Number of patients by type, (litter or ambulance).
 - Line 6 – Number and type of wounds.
 - Line 7 – Methods of marking site.
 - Line 8 – Patients nationality and status, military or civilian.
 - Line 9 – Terrain description.
2. NOTE: If the information for lines 6 thru 9 are not immediately available, lines 1 thru 5 should be transmitted first so the MEDAVAC unit is able to begin its mission. When the complete MEDAVAC request is transmitted and received, the requestor will monitor the frequency specified in line 2 and wait for additional instructions or contact the MEDAVAC helicopter.

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ANNEX H

REFERENCES

1. AR 385-63, Range Safety, dated 19 May 2003.
2. DA Pam 385-63, Range Safety, 10 April 2003.
3. USARAK Regulation 350-2, Training, USARAK Range Regulation, dated 15 July 2004.
4. Memorandum, USARAK APVR-RPTM (385-63), 25 June 2004, subject: Safety and Certification Requirements during Training/Live Fire Exercises.
5. FM 3-23.9, Rifle Marksmanship M16a1, M16A2/3, M16A4, and M4 Carbine (incl Chg 1 & 2), dated 22 January 2004.
6. FM 3-22.27, MK 19, 40mm Grenade machine Gun, Mod 3, dated 28 November 2003.
7. FM 3-22.31, 40mm Grenade Launcher, M203, dated 13 February 2003.
8. FM 3-22.68, Crew-Served Machine Guns, 5.56mm and 7.62mm; M249, 5.56mm Machine Gun; M60, 7.62mm Machine Gun; M240B, 7.62mm Machine Gun, dated 31 January 2003.
9. FM 3-23.25, Light Anti-Armor Weapons, dated 30 August 2001.
10. FM 3-23.30, Grenades and Pyrotechnic Signals, dated 1 September 2000.
11. FM 3-23.35, Combat Training with Pistols, M9 and M11, dated 25 June 2003.
12. FM 5-250, Explosives and Demolitions, dated 30 June 1999.
13. FM 23-10, Sniper Training, dated 17 August 1994.
14. FM 23-23, Anti-Personnel Mine M18A1 and M18 (Claymore)(incl Chg 1), dated 30 March 1973.
15. FM 23-65, Browning Machine Gun Caliber .50 HB, M2 (incl Chg 1 & 2), dated 19 June 1991.
16. FM 23-90, Mortars (incl Chg 1), dated 1 March 2000.