

CFAO 9-20 -- RANGE SAFETY OFFICERS

PURPOSE

1. This order prescribes the policy and procedures governing the qualification, appointment, and responsibility of range safety officers (RSOs).

DEFINITION

2. For the purposes of this order, "exercise" means any range firing or demolition exercise, training, or practice.

GENERAL

3. An RSO is a person specifically appointed by the commanding officer (CO) to ensure that exercises are conducted safely.

4. If the officer in charge of an exercise (OIC Exercise), sometimes referred to as a range officer, is a member of the Canadian Forces (CF), that person must be a commissioned officer or, subject to paragraph 10, a member other than an officer who holds the rank of sergeant or above. An OIC Exercise shall be appointed, if that person is a member of the CF, by the CO. If it is proposed that a person other than a member of the CF be appointed as OIC Exercise, that person may only be appointed only in accordance with paragraph 10 or 11, as applicable. An OIC Exercise is responsible for the conduct of all aspects of the exercise. An RSO is responsible to the OIC Exercise for all range safety aspects of the

exercise.

5. An OIC Exercise and RSO must be specifically appointed for each exercise. However, depending on the scope and extent of the exercise and on the types of weapons being used, the OIC Exercise and the RSO may be the same person.

6. To ensure maximum safety of personnel and protection of property, an RSO shall be in attendance and shall supervise the safety of all exercises whenever weapons are fired or demolitions are used. The qualifications required for an RSO are detailed in paragraph 8.

7. An RSO shall employ assistant RSOs as dictated by the exercise.

QUALIFICATIONS

8. To be qualified for appointment as RSO, a person must:
- a. be qualified on the weapons or weapon systems being used in the exercise by virtue of either a formal CF course or a combination of unit on-job training and experience that meets with the approval of the CO, and be familiar, in the case of air weapons ranges, with the relevant aircraft air ordnance delivery techniques and associated safety parameters;
 - b. have a comprehensive and current knowledge of the orders and procedures for ranges and range practices; and
 - c. have demonstrated the ability to supervise and control the

applicable range practice.

APPOINTMENT

9. Authorization for a person's appointment as an RSO shall be made in

writing by the CO and shall be published in Routine Orders or other local

orders, specifying the type and calibre of weapons for which that person is

qualified. Officers of the Cadet Instructors List and civilian instructors

are to be appointed by the RCO/SSO Cadets and their names published in

Regional Cadet Supplementary Orders. For air weapons ranges, the

authorization shall specify the types of aircraft for which the person is

qualified to act as RSO. If the person is a member of the CF, the

appointment shall be recorded in the member's Unit Employment Record (UER).

10. The appointment of RSOs is governed by the type and intended use of

the range as follows:

a. **Small Arms Ranges -- Military Training.** The following applies --

(1) Subject to sub-paragraphs (2) and (3), appointment is restricted to commissioned officers and members other than officers who hold the rank of sergeant or above, and who are currently qualified for the appointment in accordance with paragraph 8. The knowledge required by a member for

course
to
that

qualification as an RSO may be obtained from a formal
at a CF school, or from local training by the unit
concerned, but the written authorization for the member
act as an RSO must contain a certification by the CO
the CO is satisfied that the member is qualified;

an
not

(2) A CO may appoint a qualified master corporal to act as
RSO when a member described in sub-subparagraph (1) is
available; and

and

(3) For exercises involving cadets, an RSO must --

(a) meet the qualifications prescribed in paragraph 8,

(b) be an officer of the Cadet Instructors List or a
civilian instructor.

of

b. **Small Arms Ranges** -- Recreational Shooting. The appointment
RSOs is restricted to --

military
club,

(1) members of the CF who are members of an authorized
rifle association, rifle club, pistol club or skeet
and

Other

(2) civilians who are members of a non-military organization
authorized to use DND facilities in accordance with
[CFAO 29-1](#), Temporary Use of Works and Buildings for
than Military Purposes.

Note -- In respect of subparagraph b, to be appointed as an RSO, a
person
must both be qualified for the appointment in accordance with paragraph
8
and be nominated by the chairperson of the association, club or
organization. No more than 25 per cent of any association, club or
organization shall be qualified as RSOs at any one time.

c. **Small Arms Ranges** -- Weapon Testing. The appointment of RSOs is restricted to Weapons Technicians (Land) or (Air) who are master corporals or above, and who have successfully completed a formal Weapons Technicians Course at the Canadian Forces School of Aerospace and Ordnance Engineering.

d. **Land Force Direct and Indirect Fire Support Weapons Ranges.** The following applies --

(1) Subject to subparagraphs (2) and (3), appointment is restricted to members who are commissioned officers and members other than commissioned officers who hold the rank of sergeant or above, and who are currently qualified for the appointment in accordance with paragraph 8. Additional restrictions by rank or qualification are applicable to some ranges and weapons; these restrictions are given in B-GL-304-003/TS-001 (see paragraph 15 of this CFAO); and

(2) For artillery firing, the RSO must --

(a) be a commissioned officer in the Artillery classification, or a member other than an officer who holds the rank of sergeant or above and who is qualified TQ 6A (field artillery) and as a basic artillery Technician (TSQ 021.08),

(b) have successfully completed a unit artillery safety officer's course, and

(c) be certified as a qualified RSO in writing by the CO.

e. **Demolition Ranges (Land).** The appointment of RSOs is restricted to commissioned officers and to members other than officers who hold the rank of sergeant or above, and who are currently qualified for the appointment in accordance with paragraph 8. Additional restrictions related to qualifications (such as maximum size of charge) are detailed in Chapter 9 of B-GL-304-003/TS-001.

f. **Aircraft Firing In Ranges 1000 Inch and 1000 Foot.** The following applies --

(1) the appointment of RSOs is the responsibility of the CO of the base or unit at which the aircraft firing is to take place. Appointment is restricted to commissioned officers of the Aerospace Engineering classification and, subject to sub-subparagraph 2, to members who hold the rank of sergeant or above in the Weapons Technician (Air) trade who are qualified on the aircraft weapon system involved. RSOs shall appoint their senior crewmen to serve as aircraft firing officers; and

(2) a base commander may appoint a qualified master corporal of the Weapons Technician (Air) trade to perform the duties of an RSO, but only when a member described in sub-subparagraph (1) is not available.

g. **Air Weapons Ranges.** The appointment of RSOs is the responsibility

of the CO of the base or unit at which the aircraft firing is to take place. Appointment is restricted to aircrew and trained officers of the air weapons controller classification except as specified in subparagraph h below; however, student aircrew shall not be appointed. The RSO appointed --

exercises (1) for air-to-ground or air-to-water weapon firing

shall be --

or (a) for a manned range -- a qualified aircrew officer
air weapons controller officer, and

the (b) for an unmanned range -- the captain of the firing
aircraft, or in the case of two or more aircraft,
designated formation leader, and

(2) for air-to-air weapon firing exercises shall be --

(a) for towed targets -- the captain of the towing
aircraft, and

(b) for drone targets -- the captain of the firing
aircraft.

h. **Primrose Lake Evaluation Range.** The appointment of RSOs is
the

responsibility of the CO Aerospace Engineering Test
Establishment

and is restricted to qualified commissioned officers in the
Air

Weapons Control classification. Firing safety officers,
responsible to RSO, shall also be appointed as follows --

(1) for air-firing operations -- the captain of the firing
aircraft; and

(2) for ground-firing operations -- a qualified commissioned
officer of the Aerospace Engineering classification or a
member other than an officer who holds the rank of
sergeant

or above in the Weapons Technician (Air) trade.

i. **Demolition Ranges (Sea).** The appointment of RSO is
restricted to

officers of the Maritime Surface and Sub-Surface (MARS)
rank classification and to non-commissioned members who hold the
rank of Petty Officer Second Class or above, who are currently
qualified for the appointment in accordance with paragraph 8.

j. **Surface Weapons Ranges (Sea).** The appointment of RSOs is
restricted to qualified officers of the MARS classification.
For

naval gunfire support ranges, a suitably qualified officer of the land environment may be appointed.

- k. **Proof, Experimental and Test Establishment (PETE).** The appointment of RSOs is restricted to commissioned officers, members other than officers who hold the rank of sergeant or above, and civilian personnel, who are qualified on the respective weapons, explosives, or devices to be tested.

- l. **Canadian Forces Maritime Experimental and Test Ranges (CFMETR).**

The appointment of RSOs is restricted to commissioned officers

of the United States Navy (USN) or Canadian Navy, and appropriate

qualified US or Canadian civilian personnel. The RSO is responsible to the CO CFMETR for the safe conduct of ranging operations. If the range officer is a USN officer or US civilian

employee the RSO will be Canadian, and vice-versa. The range officer and RSO may not be the same person for CFMETR exercises.

VISITING FORCES AND EXCHANGE PERSONNEL

- 11. Military personnel of other countries on duty in Canada may act as

RSOs for exercises conducted on Canadian ranges for their own personnel,

provided that they:

- a. are qualified to do so in their own country;
- b. hold qualifications equivalent to those specified in paragraphs 8 and 10, as appropriate;
- c. comply with Canadian Range Standing Orders applicable to the range in use; and
- d. are briefed by the CO of the range on the characteristics of the range, particularly where the possibility of injury to third persons exists.

12. Exchange or visiting personnel of other countries shall not be permitted to supervise exercises for members of the CF unless they hold Canadian qualification as specified in paragraphs 8 and 10. If it is essential for them to serve as RSOs in Canada, they must first be given training to Canadian RSO standards before they can act as RSOs on any Canadian facility.

13. Military personnel of other countries do not have an automatic right

to use Canadian ranges; the use of Canadian ranges by visiting or exchange

personnel shall be subject to separate agreements unless such use is already contemplated by an existing agreement.

RESPONSIBILITIES

14. In conjunction with instructions and regulations specified for range

operations, as promulgated by National Defence Headquarters (NDHQ), command

headquarters, base headquarters, or the CO, the RSO is responsible for:

- a. ensuring the safety of all personnel and members of the public;
- b. implementing the safety policy, and ensuring the observance of the safety regulations contained in appropriate orders;
- c. safely conducting all activities that take place on a range during an exercise;
- d. stopping the firing or demolitions when conditions arise that in the RSO's opinion would constitute a hazard;
- e. appointing a sergeant or above, or a master corporal if a sergeant is not available, to command the butt party on an outdoor small arms range, when applicable;
- f. inspecting the range when it is intended to employ a butt party, to ensure that --
 - (1) arrangements are adequate for the safety of the markers and persons on or near the range butts, and
 - (2) no metal portions of the targets or butt mechanisms are so situated that they may be struck by bullets fired from the firing point;
- g. reporting all unsafe equipment or practices to the CO of the appropriate base or unit and recommending changes to existing orders in the interest of safety; and

h. ensuring unexpected ammunition has safety devices replaced and is repacked into its original inner and outer containers for return to the issuing facility.

Note -- If the ammunition vehicle must travel via public roads, the consignee copy of the original DND 690, Consignment Authorization and Receipt Form (CARF), is to be signed by the RSO indicating the ammunition is safe to move. The Consignor, Consignee and Quantity blocks are to be amended to reflect the actual addresses and amounts. Normally the vehicle should be the same one that delivered the ammunition since it must be placarded correctly, loaded by an ammunition compatibility group and driven by a Dangerous Goods qualified driver.

ADDITIONAL ORDERS

15. Additional orders and instructions governing land weapon ranges and

RSOs are contained in: B-GL-304-003/TS-001, Operational Training, Volume

3, Ranges and Training Safety; B-GL-304-003/TS-003, Operational Training,

Volume 3, Part 3, Range Clearance Handbook; and CFTO C-09-008-002/FP-000,

Ammunition and Explosives Procedural Manual, Destruction of Dud and Misfired Ammunition.

16. Additional orders and instructions governing air weapons ranges and

RSOs are contained in CFTO C-07-010-011/TP-000, CF Air Weapon Ranges.

17. Additional orders and instructions governing naval ranges and RSOs

are contained in Maritime Command Orders (MARCORD).

18. All suggestions for amendments to this CFAO shall be forwarded to

NDHQ/J3 Trg/NBC (J3 Training and Nuclear, Biological and Chemical).

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