

RANGE OPERATIONS

HSSA DC -1

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Page 1 of 14

TABLE OF CONTENTS

1.0 PURPOSE..... 2

2.0 REQUIREMENTS..... 2

3.0 PROCEDURE..... 2

 3.1 DUTIES2

 3.1.1 Range Master 2

 3.1.2 Range Safety Officer..... 3

 3.1.3 Range Officer..... 3

 3.1.3.1 Range Opening Procedure 5

 3.1.3.2 Range Closing Procedure..... 5

 3.1.4 Shooter 5

 3.2 HSSA RANGE SAFETY RULES6

 3.3 BYSTANDERS8

 3.4 RANGE OPERATIONS DURING INCLEMENT WEATHER.....8

 3.4.1 High Wind Conditions 8

 3.4.2 Outside Temperature..... 9

 3.5 RANGE FLAGS.....9

 3.7 Injuries 9

 3.8 Fire on the Range or Target Area 9

FIGURE 1. HEAT STRESS INDEX..... 9

FIGURE 2. U.S. CUSTOMARY WIND CHILL TEMPERATURE CHART 12

APPENDIX A – RANGE 1 HSSA PRECISION MARKSMANSHIP RANGE 13

RANGE OPERATIONS

1.0 PURPOSE

This procedure establishes a method for safe operation of HSSA Range. It also establishes requirements for operating Range 1.

2.0 REQUIREMENTS

When applicable, operation of HSSA Ranges is subject to the requirements and standards of the National Rifle Association (NRA) Action Pistol Association Rule Book and Courses of Fire; NRA Police Pistol Combat Rule Book and Courses of Fire; International Practical Shooting Confederation Rule Book and Courses of Fire; NRA Range Manual, military guidelines (reference Army Regulation AR-385-63, Safety With Firearms Handbook);

3.0 PROCEDURE

A hazard analysis is required prior to implementing new training or evaluation methods that involve firearms and non-routine tactical operations.

3.1 Duties

3.1.1 Range Master

The Range Master regulates overall operation, maintenance, and use of HSSA Ranges. The Range Master will:

1. Identify, analyze, and evaluate hazards that involve the use of ammunition, explosives, or chemical devices used for live-fire training exercises.
2. Verify range safety data and/or protective containment construction requirements through inspections, interpretations, and use of range areas, as required by the DOE Range Design Criteria 2014.
3. Enforce procedures for safe use of firearms.

RANGE OPERATIONS

Ensure that a hazard analysis is completed for the firearms activities conducted on HHSA Ranges.

4. Ensure range safety rules and regulations are posted.
5. Review and approve lesson plans pertaining to firearms.
6. Review policies pertinent to firearms and the HHSA Ranges and recommend necessary changes.
8. Confirm a medical emergency response plan is in place.

3.1.2 Range Safety Officer

The Range Safety Officer (RSO) certified firearms instructor and responsible for weapon safety on HHSA Ranges. The RSO is not assigned instructional duties, except as approved by the Range Master. When the instructor-to-shooter ratio is such that only one RO is required, the RSO will also assume the duties and responsibilities of the RO. The RSO will:

1. Provide safety direction and guidance for the transportation, storage, handling, and operation of weapons and munitions used on the range.
2. Manage all personnel and activities when firearms are introduced on the range.
3. Assess risk to personnel, conduct range operations, and recommend safety measures consistent with training requirements.
4. Provide for range safety briefings and ensure proper safety precautions are used and in place before shooting. The RSO may contact the PFSO for assistance regarding this or any safety related item that arises
5. Inspect the condition of Personal Protective Equipment (PPE) for serviceability and compliance prior to training activities.

3.1.3 Range Officer

RANGE OPERATIONS

The RO is certified Firearm Instructor and qualified on all weapons under his/her supervision. When the instructor-to-shooter ratio is such that only one RO is required, the RO will also assume duties and responsibilities of the RSO. The RO shall:

1. Ensure use of authorized weapons and ammunition, only.
2. Ensure all range equipment (e.g., target systems, radios, public address equipment, and telephones) is working properly and report equipment problems to the Range Master.
3. Ensure all first aid and safety equipment is available (first aid kits on live-fire ranges are required to have a gunshot wound kit in them).
4. Inspect the range, range backstops, and target frames to prevent potential ricochets.
5. Inspect and ensure that the shooter(s) gear does not present a hindrance to the shooter from drawing, presenting, or re-holstering the pistol. Shooter(s) may be asked to demonstrate the draw with unloaded weapon(s).
6. Accept responsibility for the safe operation of the ranges, and exercise authority to dismiss shooters not complying with instructions.
7. Align shooters with shoulder holsters on the outside lines during firing.
8. Ensure the proper instructor-to-student ratio is maintained for each course of fire.
 - One-to-one for any firearms training
 - One-to-four for shooters that have demonstrated proficiency
9. Evacuate all non-essential personnel from behind all shooting points before initiating courses of fire.
10. Collect any unused rounds, misfire rounds, or damaged rounds and give to the HSSA Range Master for disposal. Damaged or misfire rounds are to be stored in the red "damaged ammunition" container located in the Range 1 ammunition safe pending disposal.

RANGE OPERATIONS

11. Maintain a current First Aid/Cardio Pulmonary Resuscitation (CPR) certification.
12. Ensure placement of steel targets is according to DOE steel target guidelines.
 - Before using steel targets, the RSO inspects all steel targets and verifies safe condition.
 - The baseball cap is not required if impact-resistant goggles or gas mask is worn.
13. Ensure all students are instructed on the arc-of-fire limits before firing. Targets will not be engaged (fired at) that exceed the arc-of-fire limits.

3.1.3.1 Range Opening Procedure

1. Prior to opening a range for use, Range Officer will:
 - Verify no activities are occurring near the range.
 - Conduct an inspection of the range, backstops, all steel targets, target frames, and target supporting structures to prevent potential ricochets.

3.1.3.2 Range Closing Procedure

1. Ensure that firearms are unloaded and clear before leaving the range.
2. Secure firearms, ammunition, and range equipment.
3. Lock buildings and secure alarms.

3.1.4 Shooter

Shooters are responsible for their own actions; horseplay is not tolerated on any HSSA Range.

1. Wear the required duty equipment/uniform and other protective equipment.

RANGE OPERATIONS

2. When handling weapons, keep the weapon pointed down range at all times.
3. At the command of cease-fire, stop any movement, take finger off the trigger, and wait for further instructions.
4. Knowledgeable and compliant with the Range Safety Rules when using HSSA Range(s)..

3.2 HSSA Range Safety Rules

All shooters must be knowledgeable of and comply with the following when using the HSSA Range(s):

1. Check to ensure no one has an injury they need to report that might hinder their ability to train.
2. Follow the four (4) General Firearms Safety Rules. They are;
 - i. Treat all Firearms as if they are always loaded,
 - ii. Never let the muzzle cover anything you are not willing to destroy,
 - iii. Keep your finger off the trigger until your sites are on target,
 - iv. Be sure of your target and what is beyond,
3. Discipline must be maintained at all times, and personnel must obey range commands immediately.
4. At no time is firing allowed unless a certified HSSA RO Instructor is present.
7. While on the range, it is mandatory to use impact resistant eye protection with side shields, sound barrier type ear protection and other protective equipment as required by the RSO. The eye protection must meet OSHA standards and must be marked "Z-87 or Z-87.1".
8. Actual or potential safety hazards shall be immediately reported to the RO/Firearms Instructor or Range Master.
9. A firearm shall only be exchanged at the direction of the Instructor, who before the exchange shall verify that the cylinder or action of the firearm is open and the chamber is empty. If the firearm is exchanged, both parties shall check it for safety.

RANGE OPERATIONS

10. All firearms shall be carried in a safe manner.
11. Firearms and ammunition shall not be left unattended or unsecured.
12. Finger(s) shall not be placed on a firearm's trigger or in the trigger guard until the firearm is pointed at the target.
13. Firearms loading and firing shall commence only on command.
14. During a firing exercise, shooters are not permitted to talk on the firing line unless replying to an Instructor as part of the exercise, or to shout, "Cease fire" in an unsafe situation.
15. Until the firearms instructor has declared the firing line safe, shooters will not bend over or move off or over the firing line.
16. All shooters shall be instructed as to what constitutes an unsafe condition and to shout, "Cease fire" if such a condition is observed.
17. Smoking, eating, or drinking is prohibited while on the firing line, and in other designated locations on HSSA ranges.
18. Alcoholic beverages and drugs are prohibited on HSSA firing range. If the Firearms staff detect the presence of alcohol or drugs on a shooter or a shooter is believed to be under the influence of either, the Firearms staff shall remove the shooter from the range and appropriate follow-up action shall be taken in accordance with established directives. Shooters will notify staff, prior to reporting to the firing line, of any medication they are taking and any pre-existing physical injuries/conditions. The staff shall be responsible for determining whether a shooter is safe to use the range. The staff shall consult a medical doctor, if necessary.
19. When a training session is completed, each firearm shall be physically examined by the shooters and a designated RO to ensure it is unloaded and in a safe (clear) condition before leaving the range. A shooter using a duty weapon on the range may reload that weapon at the range if returning directly to a duty station.
20. After each shooting session, ROs will ensure that shooters collect brass for proper disposal and check for live rounds. Shooters shall collect unexpended ammunition and return it to an RO/Instructor to assure proper accounting and disposition.

RANGE OPERATIONS

21. Shooters shall ensure that their firearms and magazines are properly cleaned, stored, and secured after firing. Cleaning material shall be properly stored or disposed of.
23. Dry firing is permitted on the firing line only, and under the direction of the RO/Firearms Instructor.
24. ROs are responsible for the safe operation of the ranges and have the authority to relieve any shooter that does not comply with instructions.
25. Any injury/illness sustained during firearms training shall be reported immediately to an instructor.
24. Students and Instructors participating in classroom firearms training activities may not possess duty firearms or ammunition of the same caliber as those firearms being taught.

3.3 Bystanders

Bystanders comply with the following range safety procedures. Violations of rules or regulations are reported to the Range Master.

1. Unless a verbal safety briefing is given prior to or upon entering a live-fire range, read the range safety rules posted at the range entrance.
2. ROs will ensure that all bystanders receive a briefing regarding range boundaries, restricted areas, and designated bystander-viewing areas.
3. When ranges are in operation, don ear and eye protection before entering the shooting facility.

3.4 Range Operations During Inclement Weather

The RSO is responsible for monitoring weather conditions when HSSA Ranges are occupied, suspending all range operations when safety limits are reached, and stopping range operations at own discretion before reaching safety limits if other safety concerns exist.

3.4.1 High Wind Conditions

RANGE OPERATIONS

1. The RSO monitors wind velocity on the weather station consul located in the Range 1.

3.4.2 Outside Temperature

- During warm weather conditions, the Heat Stress Index will be monitored.

3.5 Range Flags

Red Flag When raised on the range flagpole indicates the range is open and currently in use for live-fire activities.

No Flag No flag on the range flagpole indicates that the range is closed but available for use.

3.7 Injuries

- Discontinue the activity that caused the injury.
- For a minor injury such as a cut or scrape, allow the individual to self-treat.
- For all other minor injuries, perform first aid and transport individual to the hospital if needed.

3.8 Fire on the Range or Target Area

During the summer months and as needed throughout the year, 5-gallon water fire extinguishers are positioned

Figure 1. Heat Stress Index

RANGE OPERATIONS

Fluid replacement and work/rest guidelines for warm weather training conditions (applies to average size and heat-acclimatized personnel wearing the battle dress uniform).

WBGT INDEX/WORK-REST REGIMEN/ACTIVITY WORK LEVELS TABLE							
		EASY WORK (~250 W)		MODERATE WORK (~425 W)		HARD WORK (~600 W)	
HEAT CATEGORIES	WBGT 1, 2 INDEX (°F)	WORK/REST 3, 4	WATER INTAKE (QT/HR) 5, 6	WORK/REST	WATER INTAKE (QT/HR)	WORK/REST	WATER INTAKE (QT/HR)
1	78- 81.9	NL 7	½	NL	¾	40/20 MIN	¾
2 (GREEN)	82- 84.9	NL	½	50/10 MIN	¾	30/30 MIN	1
3 (YELLOW)	85- 87.9	NL	¾	40/20 MIN	¾	30/30 MIN	1
4 (RED)	88- 89.9	NL	¾	30/30 MIN	¾	20/40 MIN	1
5 (BLACK)	>90	NO OUTSIDE TRAINING. CONTINUE WATER INTAKE OF ¾ QUART/HR FOR THE FIRST 30 MINUTES AND TAPER WATER INTAKE DOWN TO ½ QT/HR.					

¹ If wearing Tactical Vest, add 2° F to WBGT Index. If wearing body armor, add 5° F to WBGT index. If wearing the Gilley Suit, add 5° F to WBGT index.

² If wearing NBC clothing (mission-oriented protective posture (MOPP/Tyvek®)), add 10° F to WBGT index for easy work, and 20° F to WBGT index for moderate and hard work. All NBC/MOPP wear times will not exceed sustained wear times of greater than 1-hour at least a 30 minute rest regimen.

³ The work/rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hours of

RANGE OPERATIONS

work in the specified heat category. Fluid/hydration needs can vary based on individual differences ($\pm 1/4$ qt/hr) and exposure to full sun or full shade ($\pm 1/4$ qt/hr).

⁴ Rest means minimal physical activity and should be accomplished in the shade with adequate air circulation and without additional clothing or protective equipment.

⁵ CAUTION: Fluid intake should not exceed 1 1/2 quart per hour (qt/hr).

⁶ Daily fluid intake should not exceed 12 quarts.

⁷ NL equals no limit to work time per hour (up to 4 continuous hours).

ACTIVITY WORK LEVELS		
EASY WORK	MODERATE WORK	HARD WORK
<ul style="list-style-type: none"> • WEAPONS MAINTENANCE <ul style="list-style-type: none"> ▪ CLEANING ▪ INVENTORY • SAFETY WALK-DOWNS • WEAPONS QUALIFICATIONS ON SQUARE RANGES • WALKING HARD SURFACES AT 2.5MPH, <30 POUND (LB) LOAD • MANUAL OF ARMS • MARKSMANSHIP TRAINING • DRILL AND CEREMONY 	<ul style="list-style-type: none"> • WALKING LOOSE SAND AT 2.5 MPH, NO LOAD • WALKING HARD SURFACE AT 3.5 MPH, <40 LB LOAD • CLASS PEP • CALISTHENICS • FOOT PATROLLING • INDIVIDUAL MOVEMENT TECHNIQUES THAT IS LOW CRAWL, HIGH CRAWL • DEFENSIVE POSITION CONSTRUCTION • SPOIII SHOOTER MOVEMENTS COURSES • COMBAT TRAILS • TEAM TACTICAL OBSTACLE TRAINING • DYNAMIC ENTRY/LIVE-FIRE HOUSE TRAINING AND TESTING • SHOOTING STATIONARY QUALIFICATION COURSES WHILE WEARING BODY ARMOR AND/OR RESPIRATORS 	<ul style="list-style-type: none"> • WALKING HARD SURFACE AT 3.5 MPH, ≥ 40 LB LOAD • WALLING LOOSE SAND AT 2.5 MPH WITH GEAR LOAD • FIELD ASSAULTS (I.E., ACTUAL FORCE-ON-FORCE, ADVERSARY ENGAGEMENTS) • OBSTACLE COURSE • TACTICAL OBSTACLE COURSE • EXTENDED LOW CRAWLING

RANGE OPERATIONS

Figure 2. U.S. Customary Wind Chill Temperature Chart

U.S. Customary Wind Chill Chart												
Estimated Wind Speed in MPH	Actual Thermometer Reading (F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	Equivalent Temperature (F)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-21	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-36	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-124
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
(Wind speeds greater than 40 mph have little additional effect)	LITTLE DANGER* (for properly clothed person)				INCREASED DANGER* (for properly clothed person)				GREAT DANGER*			
	*DANGER FROM FREEZING OF EXPOSED FLESH											

RANGE OPERATIONS

APPENDIX A – RANGE 1 HSSA PRECISION MARKSMANSHIP RANGE

1. The primary firearms types allowed on Range 1 are:
 - Handguns
 - Rifles
 - Sub-machineguns
 - Shotguns
2. The primary ammunition types allowed on Range 1 are:
 - Handgun caliber ammunition of .44 magnum or smaller and having a maximum range of ≤ 2300 meters.
 - 5.56mm or .223 caliber Ball and Tracer rifle ammunition having a maximum range of ≤ 3100 meters.
 - 7.62mm or .308 caliber Ball and Tracer rifle ammunition having a maximum range of ≤ 4100 meters.
 - 12-gauge shotgun pellets and slugs
3. The arc-of-fire limits for Range 1 is defined as the corners of the range where the side berms intersect the impact berm..
 - When firing handguns and 5.56mm/.223 caliber rifles, the arc-of-fire limits are 32 degrees right and 37 degrees left of the centerline of the range.
4. Steel Targets are used on Range 1.
5. Talking is not allowed during range commands or while shooters are fir

