

RANGE AND TRAINING REGULATIONS

Range/Facility: Infantry Immersion Trainer	Lateral Limits: As Briefed Below		Range Facilities: Classroom; Mock Iraqi Village; SESAMS M16A3 9mm upper receivers; SESAMS M9 conversion kits; Mil-Sim-Fx IED simulators. (CO2 and powder); Laser modules that fire same as ISMT technology; Commercial off the shelf shoot back cannon which uses nylon balls.	
Location: 46873 96301	Boundaries: As Briefed Below			
Type: Scenario Development				
Troop Penetration Line: N/A	Impact Area: None	Phone #: None	Allowable Wpns: Blanks; Practice Grenades; 9mm FX Marker; Battlefield Effects (BFX) (As listed below); Flash Bangs	Assigned to: CO, MCB Date Revised: 12 November, 2008

Scheduling

1. Scheduling of this range/facility is accomplished through MCB Camp Pendleton Range Scheduling.
2. Unit will utilize RFMSS to schedule range.

General Instructions

1. A safety Brief will be conducted prior to each live fire event to all participants.
2. RSO shall brief and conduct at least two emergency evacuation rehearsals prior to conducting any training.
3. All personnel shall wear required PPE during all training events.
4. OIC & RSO Requirements -
 - a. SESAMS, Flash Bangs & BFX
 - i. OIC Requirement – GySgt or Above
 - ii. RSO Requirement - SSgt or Above
 - b. Blanks
 - i. OIC Requirement – SSgt or Above
 - ii. RSO Requirement - Sgt or Above
 - c. No Munitions
 - i. OIC Requirement – None
 - ii. RSO Requirement - Sgt or Above
 - iii. LASER (If Used) LSSO Requirement - Sgt or Above
5. IOT occupy this range unit must have the following personnel/equipment:
 - a. RSO
 - b. Corpsman & Safety Vehicle
 - c. Positive Communication with LONGRIFLE
 - d. An ORM reviewed and signed by the Command, RSO and OIC.
6. IOT go into a hot status on range unit must have the following personnel/equipment:
 - a. OIC
 - b. RSO
 - c. LSSO – If calibrating Laser
 - d. Corpsman & Safety Vehicle
 - e. Positive Communication with LONGRIFLE
7. POVs are authorized to park in parking lot area without a POV pass.
8. The RSO & OIC will personally observe each event.
9. A non-participating Corpsman will be stationed with safety vehicle.
10. At no time will any unit go from live fire to blank or SESAMS force-on-force within a 24 hour
11. period
12. Ammunition will only be issued per event and accounted for on NAVMC 11381.
13. After each event, unit leaders will conduct a line out.
14. Each RSO/PSO will certify to the OIC that all weapons are in Condition 4 prior to exiting the range/facility and all ammunition is accounted for.
15. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

Special Instructions Continued on Next page

RANGE AND TRAINING REGULATIONS

SESAMS

1. A “SESAMS training In Progress” Sign shall be posted at each the entrance outside the building by the unit.
1. All participating Marines will be required to wear flak, Kevlar, throat/groin protector, contact gloves, utilities, hearing protection, and approved masks.
2. All personnel will wear the specified gear when inside the safety perimeter.
3. You shall have a minimum of two NCOs or higher act as safety controllers.
 - a. These Marines will ensure that there are no intentional headshots and no engagements closer than **5 feet**.
4. All Marines will be lined out before any SESAMS rounds are distributed.
5. All SESAMS magazines will be clearly marked, as will the barrels.
6. Following the completion of the training, all Marines will be lined out again
7. **Ensure all training is conducted IAW SOUM 1-02.**

Blank Ammunition

1. The following precautions will be observed during the use of blank ammunition:
 - a. AK-47 Blank firing weapons & AK-47 blanks DoDIC A103.
 - b. Blank Firing Attachment (BFA) shall be used on all weapons.
 - c. **5 meter safe separation distance** (SSD) will not be reduced.
 - d. This distance includes a dispersion angle of 10 degrees left and right of the GTL.
 - e. Hearing protection (ear plugs) should be worn while firing blank ammunition.
 - f. **Encapsulating Eye Protection shall** be worn by all personnel.
2. A violation of the SSD could result in serious injury. If the SSD is decreased to within .9m, fatal injuries may occur.

LASER

1. A “LASER training In Progress” Sign shall be posted at each the entrance outside the building by the unit.
2. Calibration
 - a. A LSSO is required when calibrating the Laser.
 - b. Precautions associated with direct-fire weapons shall be applied to all lasers operated on military ranges. **No personnel shall be allowed “down range” during calibration.**
 - c. **Appropriate Laser Eye Protection (LEP) will be worn by all personnel during calibration.**
 - d. LSSOs shall establish boundaries for laser range operations and strictly control laser use in training to conform to the provisions of this brief and applicable TMs.
 - e. A laser safety orientation will be given to all personnel who use or work with laser devices to include an explanation of hazards and safety requirements before they commence laser operations.
 - f. **Personnel suspected of experiencing potentially damaging eye exposure from laser radiation will be evacuated immediately to the nearest medical facility and undergo an eye examination.**
 - g. Intrabeam viewing of either direct or reflected beams from a flat mirror-like (specular) surface from lasers can expose the unprotected eye to a potential hazard and must be prevented. Flat specular surfaces shall be removed from prior to calibration.
 - h. If is not feasible to remove all specular surfaces from the target, these surfaces must be covered with a diffuse material prior to use as a target.
 - i. Personnel will not deliberately view direct laser radiation with optical instruments within NOHD-O and NOHD-M unless optical devices are considered “laser safe” for the type of laser being used. The resulting amplification of laser energy significantly increases the probability of eye injury.
 - j. Night vision devices will not be used for laser eye protection. These devices are not “cover-all” goggles. Laser energy may enter the eye from reflections or from around the tubes.
3. **Force-on-Force**
 - a. Minimum engagement distance shall be as follows –
 - i. Unaided viewing – 10 meters
 - ii. Aided viewing – 50 meters

Special Instructions Continued on Next page

RANGE AND TRAINING REGULATIONS

Battlefield Effects (BFX) & Flash Bangs

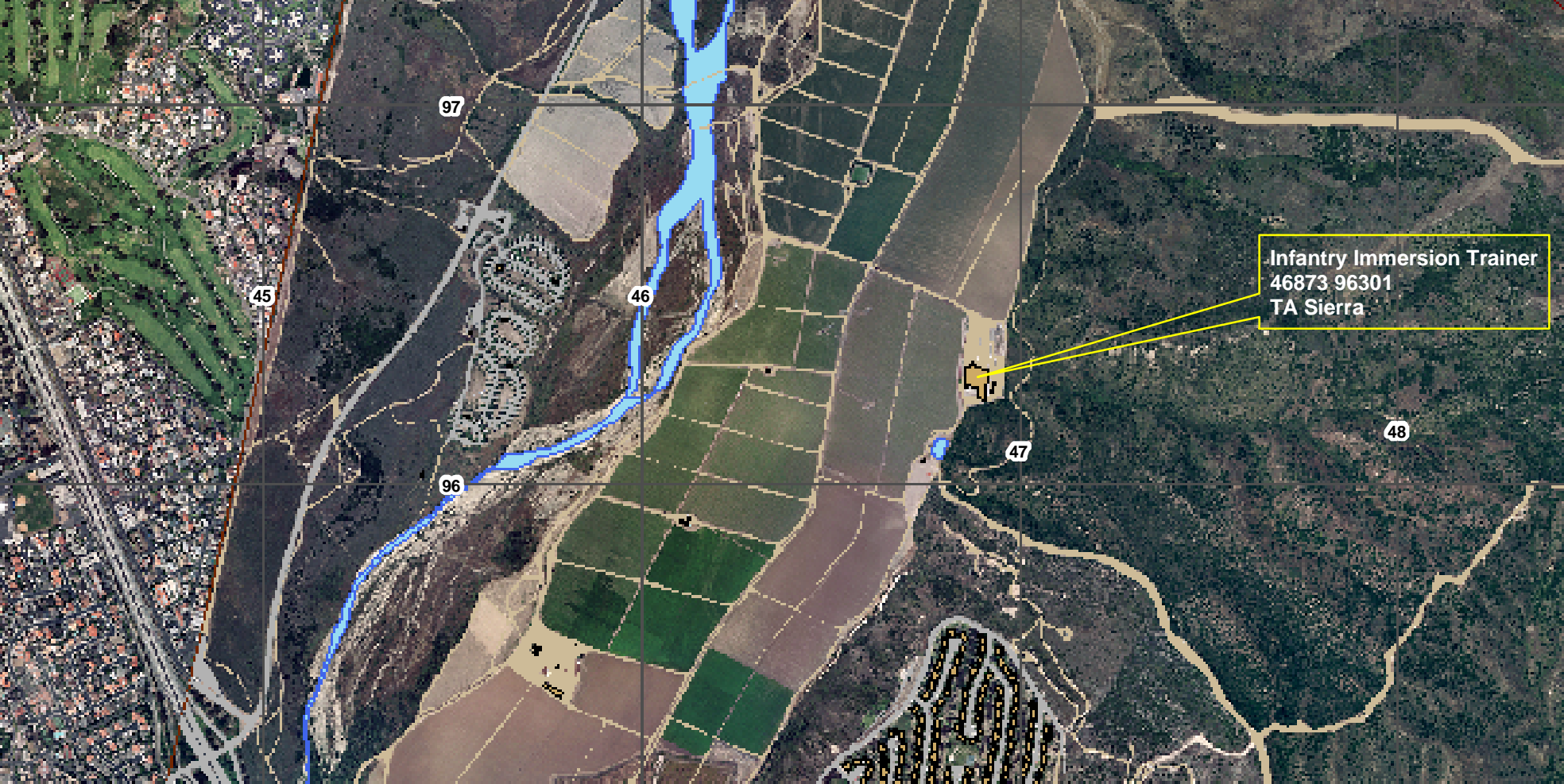
1. The site supervisor shall hold a current state 1st Class or Theatrical card holder. All other operators shall hold a current state pyrotechnics card as outlined in the license scope for pyrotechnic operators. Personnel that are not card holders may assist only. At no time shall a non-card holder operated/fire BFX devices other than AK-47 with blanks.
2. Suspension or revocation of any individual listed on this letter shall occur on the basis of incorrect, inaccurate, or incomplete information or violation of any ordinance or regulation or of any other directive given by the RCO or his designated representative.
3. The maximum Net Explosive Weights (NEW) listed in most current BFX letter shall be final. At no time shall any BFX Operator exceed the maximum NEWs and/or utilize any other medium other than what is listed under this certification. The BFX operator, upon request by OIC, RSO, RCO or his designated representative, shall verify the NEWs utilizing a scale, provided by the BFX operator. Violation will result in immediate revocation of their certification to operate any BFX device in or on any Camp Pendleton Range, Training Facility or Training Area.
4. The following Pyrotechnics & Special Effects devices are the only devices/munitions authorized for use on Camp Pendleton ranges & training areas:
 - a. Black Powder, Pentaerythrite Tetranitrate (PETN) and Propane IED Simulators not to exceed maximum NEWs listed in most current BFX letter.
 - b. Rocket Propelled Grenade (RPG) simulators:
 - 1) RPGs shall travel captured on a wire. At no time are "free fight" RPGs allowed.
 - 2) The engines of all RPGs shall be extinguished prior to termination of flight.
 - c. Propane with Black Powder initiator not to exceed maximum NEWs listed in most current BFX letter.
5. All the listed Pyrotechnics & Special Effects devices shall be initiated by command detonation only.
6. Unit OICs & RSOs:
 - a. The OIC shall be a GySgt and the RSO shall be an SSgt.
 - b. All BFX devices shall be listed on the unit ORM
 - c. The OIC shall conduct a joint inventory of all BFX devices with the site supervisor utilizing the NAVMC 11381 prior to break out or prior to any OIC change over.
 - d. OIC & RSO shall be present prior to any break out or placement of any BFX device.
 - e. All Unit OICs & RSOs shall participant in a walk through of all intended uses and locations of all BFX devices.
 - f. OIC shall ensure that Only BFX listed and approved by the RCO are used.
 - g. OIC shall ensure that all activities/devices are included on the units ORM matrix.
 - h. OIC shall give final authorized the firing of each BFX IED or RPG.
 - i. OIC shall visually approve the location of all BFX and approved the designation of the minimum safety distances.
 - j. OIC shall ensure that reflective over pressures are calculated and minimum safety distances are adhered to.
 - k. RSO shall visually verify the location of all BFX and approved the designation of the minimum safety distances approved by the OIC.
 - l. OIC shall conduct a "spot" check of IEDs to ensure that charges are in accordance with enclosure (1).
10. At no time shall any BFX be used in any enclosed space (Single Exception is IIT Facility).
11. At no time shall any BFX be used with out "eyes on".
12. All the listed Pyrotechnics & Special Effects devices shall be initiated by command detonation only.
13. "Suicide Vest" BFX devices are not authorized for use within the Camp Pendleton Range & Training Areas (RTA) at any time.
14. Flash Powder is NOT authorized in any quantity.
15. All CO² IMESS & TIED-2 devices shall be used is accordance with most current BFX letter.
16. Use of all authorized devices shall be consistent with current Fire Danger Rating (FDR).
17. **Diversionsary Charges (Flashbangs) duds shall be handled IAW SOUM 2-03.**
18. **At no time will any Flash Bang be throw directly at any participant or into any occupied room.**

STOPS: AREA 62 :: 15th Revision, 26 OCT 07



STRATEGIC OPERATIONS

STOPS: Area 62 VR Training Facility



Infantry Immersion Trainer
46873 96301
TA Sierra

Safe Distance & Vertical Hazard for IED Simulators

		Personel Protection Equipment (PPE) Requirements			Missile hazard in feet
Black Powder Grams	Equivalent TNT RE Factor .55 In Pounds	Double Hearing Protection and Eye Protection	Single Hearing Protection and Eye Protection	Eye Protection	
		Safe Distance in Feet for Over Pressure (3.5 PSI) K-Factor = 18	Safe Distance in Feet for Over Pressure (1.2 PSI) K-Factor = 40	Safe Distance in Feet for Over Pressure (0 PSI) K-Factor = 300	
1	0.001	1.9	4.3	32.1	35.1
1.5	0.003	2.7	6.0	44.8	49.0
2	0.004	3.0	6.6	49.3	53.9
2.5	0.006	3.2	7.1	53.1	58.1
3	0.007	3.4	7.5	56.5	61.7
3.5	0.008	3.6	7.9	59.4	65.0
4	0.009	3.7	8.3	62.1	67.9
4.5	0.010	3.9	8.6	64.6	70.7
5	0.011	4.0	8.9	66.9	73.2
5.5	0.012	4.1	9.2	69.1	75.6
6	0.013	4.3	9.5	71.1	77.8
6.5	0.014	4.4	9.7	73.1	79.9
7	0.016	4.5	10.0	74.9	81.9
7.5	0.017	4.6	10.2	76.6	83.8
8	0.018	4.7	10.4	78.3	85.6
8.5	0.019	4.8	10.7	79.9	87.4
9	0.020	4.9	10.9	81.4	89.0
9.5	0.021	5.0	11.1	82.9	90.7
10	0.022	5.1	11.2	84.3	92.2
10.5	0.023	5.1	11.4	85.7	93.7
11	0.024	5.2	11.6	87.1	95.2
11.5	0.026	5.3	11.8	88.4	96.6
12	0.027	5.4	12.0	89.6	98.0
12.5	0.028	5.5	12.1	90.9	99.3
13	0.029	5.5	12.3	92.1	100.6
13.5	0.030	5.6	12.4	93.2	101.9
14	0.031	5.7	12.6	94.4	103.2
14.5	0.032	5.7	12.7	95.5	104.4
15	0.033	5.8	12.9	96.5	105.6
15.5	0.034	5.9	13.0	97.6	106.7
16	0.036	5.9	13.2	98.6	107.9
16.5	0.037	6.0	13.3	99.7	109.0
17	0.038	6.0	13.4	100.7	110.1
17.5	0.039	6.1	13.6	101.6	111.1
18	0.040	6.2	13.7	102.6	112.2
18.5	0.041	6.2	13.8	103.5	113.2
19	0.042	6.3	13.9	104.5	114.2
19.5	0.043	6.3	14.0	105.4	115.2
20	0.044	6.4	14.2	106.3	116.2

Double Hearing Protection Required for PSI Above 1.68 lbs

2/4/2008

Safe Distance & Vertical Hazard for IED Simulators

Personel Protection Equipment (PPE) Requirements					
Black Powder Grams	Equivalent TNT RE Factor .55 In Pounds	Double Hearing Protection and Eye Protection	Single Hearing Protection and Eye Protection	Eye Protection	Missile hazard in feet
		Safe Distance in Feet for Over Pressure (3.5 PSI) K-Factor = 18	Safe Distance in Feet for Over Pressure (1.2 PSI) K-Factor = 40	Safe Distance in Feet for Over Pressure (0 PSI) K-Factor = 300	
20.5	0.046	6.4	14.3	107.1	117.1
21	0.047	6.5	14.4	108.0	118.1
21.5	0.048	6.5	14.5	108.9	119.0
22	0.049	6.6	14.6	109.7	119.9
22.5	0.050	6.6	14.7	110.5	120.8
23	0.051	6.7	14.8	111.3	121.7
23.5	0.052	6.7	15.0	112.1	122.6
24	0.053	6.8	15.1	112.9	123.5
24.5	0.054	6.8	15.2	113.7	124.3
25	0.056	6.9	15.3	114.5	125.2
25.5	0.057	6.9	15.4	115.2	126.0
26	0.058	7.0	15.5	116.0	126.8
26.5	0.059	7.0	15.6	116.7	127.6
27	0.060	7.0	15.7	117.4	128.4
27.5	0.061	7.1	15.8	118.2	129.2
28	0.062	7.1	15.9	118.9	130.0

Double Hearing Protection Required for PSI Above 1.68 lbs

2/4/2008

Safe Distance & Vertical Hazard for IED Simulators

Personel Protection Equipment (PPE) Requirements					
PETN Grains (1 Foot)	Equivalent TNT RE Factor 1.66 In Pounds	Double Hearing Protection and Eye Protection	Single Hearing Protection and Eye Protection	Eye Protection	Missile hazard in feet
		Safe Distance in Feet for Over Pressure (3.5 PSI) K-Factor = 18	Safe Distance in Feet for Over Pressure (1.2 PSI) K-Factor = 40	Safe Distance in Feet for Over Pressure (0 PSI) K-Factor = 300	
10	0.002	2.4	5.3	40.0	43.7
12	0.003	2.6	5.7	42.5	46.5
14	0.003	2.7	6.0	44.8	48.9
16	0.004	2.8	6.2	46.8	51.2
18	0.004	2.9	6.5	48.7	53.2
20	0.005	3.0	6.7	50.4	55.1
22	0.005	3.1	6.9	52.0	56.9
24	0.006	3.2	7.1	53.6	58.6
26	0.006	3.3	7.3	55.0	60.1
28	0.007	3.4	7.5	56.4	61.6
30	0.007	3.5	7.7	57.7	63.1
32	0.008	3.5	7.9	59.0	64.5
34	0.008	3.6	8.0	60.2	65.8
36	0.009	3.7	8.2	61.3	67.0
38	0.009	3.7	8.3	62.4	68.3
40	0.009	3.8	8.5	63.5	69.4
42	0.010	3.9	8.6	64.5	70.6
44	0.010	3.9	8.7	65.6	71.7
46	0.011	4.0	8.9	66.5	72.7
48	0.011	4.0	9.0	67.5	73.8
50	0.012	4.1	9.1	68.4	74.8
52	0.012	4.2	9.2	69.3	75.8
54	0.013	4.2	9.4	70.2	76.7
56	0.013	4.3	9.5	71.0	77.7
58	0.014	4.3	9.6	71.9	78.6
60	0.014	4.4	9.7	72.7	79.5
62	0.015	4.4	9.8	73.5	80.4
64	0.015	4.5	9.9	74.3	81.2
66	0.016	4.5	10.0	75.0	82.0
68	0.016	4.5	10.1	75.8	82.9
70	0.017	4.6	10.2	76.5	83.7
72	0.017	4.6	10.3	77.3	84.5
74	0.018	4.7	10.4	78.0	85.2
76	0.018	4.7	10.5	78.7	86.0
78	0.018	4.8	10.6	79.3	86.7
80	0.019	4.8	10.7	80.0	87.5

Double Hearing Protection Required for PSI Above 1.68 lbs

2/4/2008