

RANGE AND TRAINING REGULATIONS

| | | | |
|---|-------------------------------|--|---|
| Range: R-130H | Type: Demolition Range | Range Facilities: Observation bunker, port-a-johns; Demo Pit; Ammo Table | |
| Location: 62134 85865 | | | |
| Troop Penetration Line: For target placement only | Impact Area: X-Ray | Allowable Wpns: Demolitions, not to exceed forty (40) lbs. NEW ; claymore; Shotgun (Breacher Round Only) | Assigned to: CO, MCB Date Revised: 16 April 2009 |

Scheduling

1. MSOB & SMTB Sponsored Units Must Submit Request through MSOB.
2. SOTG Sponsored Units Must Submit Request through SOTG.
3. LEA submit requests through O&T operations and must be approved by RCB Range Manager.
4. Final approval & scheduling of this range must be submitted to Range Scheduling.

| Scheduling Conflicts | Conflict Notes |
|----------------------|----------------|
| R130F | 1 |
| R130I | 2 |
| R130J | 3 |
| R130L | 1 |
| R130K | 1 |
| Aircraft | 4 |

GENERAL INSTRUCTIONS

1. **A safety Brief will be conducted prior to each live fire event to all participants.**
2. **All personnel shall wear required PPE during all training events.**
3. **OIC & RSO Requirements -**
 - a. **Live Fire Demolitions**
 - i. **OIC Requirement – GySgt or Above**
 - ii. **RSO Requirement - SSgt or Above**
 - b. **No Munitions**
 - i. **OIC Requirement – None**
 - ii. **RSO Requirement - Sgt or Above**
 - iii. **LASER (If Used) LSSO Requirement - Sgt or Above**
4. 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.**
5. IOT go into a **hot status** on range unit must have the following personnel/equipment:
 - a. OIC
 - b. RSO
 - c. **LSSO – If using Laser**
 - d. Corpsman & Safety Vehicle
 - e. Positive Communication with LONGRIFLE
6. **POVs are authorized to park in parking lot area without a POV pass.**
7. The RSO & OIC will personally observe each event.
8. **A non-participating Corpsman will be stationed with safety vehicle outside the SDZ.**
9. Ammunition will only be issued per event and accounted for on NAVMC 11381.
10. After each event, unit leaders will conduct a line out.
11. 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.

All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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SPECIAL INSTRUCTIONS

1. **At no time will more than 40 lbs total NEW ever be placed in the demo area.**
2. **All time fuses will be cut to a minimum time of 3 minutes (verified by RSO).**
3. All charges will be dual primed and utilize a dual initiation system.
4. **Minimum of 30 seconds between charges.**
5. A range guard shall be posted at 61835 85645 with two-way radio communication with the RSO and a "demolition in progress" sign at grid 61780 85895. No traffic/personnel shall enter the range without permission from the RSO
6. **All tactical and government vehicles will be parked behind the bunker with the windshields facing south west Range 130F. NO POV'S are permitted on this range!**
7. The RSO shall check each shot hole, looking for unconsumed explosives prior to departing the range. **The RSO shall also ensure all shot holes are filled and the debris is policed-up.**
8. ALL unconsumed explosives shall be policed-up and consolidated for one last clean-up shot prior to the range going cold (**Not to exceed 40 lbs NEW**).
9. ALL unused blasting materials shall be retrieved upon completion of training, and shall be returned to the Las Pulgas ASP.
10. ALL target materials which were used (blown) during training shall be policed-up and taken back with the unit.
11. **During general demolition training personnel shall be outside the surface danger area (SDZ) depicted on graphic or in the Observation Bunker 62025 85750 when firing is in progress.**
12. **Claymore Operations:**
 - a. Only one (1) claymore at a time
 - b. All personnel that are not part of the firing team shall remain inside the observation bunker while claymore is detonated.
 - c. Only the RSO and the firing team shall be forward at the FP.
 - d. RSO will verify to OIC:
 - e. Personnel will not be allowed within 16 meters to the rear of the mine.
 - f. Firing personnel may occupy an area between 16 and 100 m to the rear of the mine if they are located in a covered position, lying prone in a depression, or behind a physical barrier.
 - g. When there is a secondary missile hazard (i.e. tied to a tree or gravel present) personnel may occupy an area between 16 and 50 m if in a covered position.
 - i. All personnel will wear approved PPE.
13. **Charges placed on steel**
 - a. If a steel-cutting charges are to be fired they will be fired in an excavated pit that is at least 1m deep and a mat made of a hemp type material must cover the charge. Steel-cutting charges **will not exceed 5 lbs.**
 - b. Personnel must be in a missile-proof shelter.
14. **Charges placed on concrete**
 - c. Charges placed on concrete **will not exceed 40 lbs** and shall be placed on the side nearest observers.
15. **Shaped charges**
 - d. Shaped charges will be oriented so that gas jets will be directed toward the target. Charges shall be placed on the side of the target nearest observers and directed away from observers
16. **Bangalore torpedoes**
 - e. Bangalore torpedoes will only be fired in a horizontal position on the ground.
 - f. If a field-expedient bangalore torpedo is used the explosive weight shall not exceed the standard issued torpedo.
17. **Cratering charges**
 - g. The maximum charge to be fired in training **will not exceed 40 lbs.**
 - h. All cratering charges will be dual primed with detonating cord. Blasting caps will not be placed underground. Electric or non-electric caps will be attached to the detonating cord above ground.
18. A total of three (3) radios are needed to safely use this range.
19. The RSO is responsible for all charges, and ensuring all misfire procedures are in compliance with current directives.

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20. During breaching operations:

- a. The breach will consist of a field expedient urban breaches (duel primed) at no more than 15 lbs.
- b. Max Ord is 809 feet for vertical or fragmentation hazard.
- c. A maximum K – Factor of 18 (3.5 PSI) will be utilized and all personnel are to follow the below unshielded safety standoffs.
- d. If shielded, RSO may reduce standoff by 50%.
- e. Double hearing protection required for all PSIs at or above 1.68.
- f. Only breacher rounds shall be used for shotguns.

21. All demolitions shall be detonated in the demo pit.

Flaks and Helmets Required in Addition to the Below PPE

| | Double Hearing Protection and Eye Protection | Single Hearing Protection and Eye Protection | Eye Protection | |
|-----------------------------------|--|--|--|------------------------------|
| NEW OF CHARGE (TNT EQUIVALENT) | Safe Distance in Feet for Over Pressure (3.5 PSI) | Safe Distance in Feet for Over Pressure (1.2 PSI) | Safe Distance in Feet for Over Pressure (0 PSI) | Missile hazard in feet |
| In Pounds | K-Factor = 18 | K-Factor = 40 | K-Factor = 300 | |
| 0.025 | 5.3 | 11.7 | 87.7 | 95.9 |
| 0.050 | 6.6 | 14.7 | 110.5 | 120.8 |
| 0.075 | 7.6 | 16.9 | 126.5 | 138.3 |
| 0.100 | 8.4 | 18.6 | 139.2 | 152.2 |
| 0.125 | 9.0 | 20.0 | 150.0 | 164.0 |
| 0.150 | 9.6 | 21.3 | 159.4 | 174.3 |
| 0.175 | 10.1 | 22.4 | 167.8 | 183.5 |
| 0.200 | 10.5 | 23.4 | 175.4 | 191.8 |
| 0.225 | 10.9 | 24.3 | 182.5 | 199.5 |
| 0.250 | 11.3 | 25.2 | 189.0 | 206.6 |
| 0.275 | 11.7 | 26.0 | 195.1 | 213.3 |
| 0.300 | 12.0 | 26.8 | 200.8 | 219.6 |
| 0.325 | 12.4 | 27.5 | 206.3 | 225.5 |
| 0.350 | 12.7 | 28.2 | 211.4 | 231.2 |
| 0.375 | 13.0 | 28.8 | 216.3 | 236.5 |
| 0.400 | 13.3 | 29.5 | 221.0 | 241.7 |
| 0.425 | 13.5 | 30.1 | 225.6 | 246.6 |
| 0.450 | 13.8 | 30.7 | 229.9 | 251.3 |
| 0.475 | 14.0 | 31.2 | 234.1 | 255.9 |
| 0.500 | 14.3 | 31.7 | 238.1 | 260.3 |
| 0.525 | 14.5 | 32.3 | 242.0 | 264.6 |
| 0.550 | 14.7 | 32.8 | 245.8 | 268.7 |
| 0.575 | 15.0 | 33.3 | 249.5 | 272.7 |
| 0.600 | 15.2 | 33.7 | 253.0 | 276.6 |
| 0.625 | 15.4 | 34.2 | 256.5 | 280.4 |
| 0.650 | 15.6 | 34.6 | 259.9 | 284.1 |
| 0.675 | 15.8 | 35.1 | 263.2 | 287.7 |
| 0.700 | 16.0 | 35.5 | 266.4 | 291.2 |
| 0.725 | 16.2 | 35.9 | 269.5 | 294.7 |
| 0.750 | 16.4 | 36.3 | 272.6 | 298.0 |
| 0.775 | 16.5 | 36.7 | 275.6 | 301.3 |

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| In Pounds | K-Factor = 18 | K-Factor = 40 | K-Factor = 300 | |
| 0.800 | 16.7 | 37.1 | 278.5 | 304.5 |
| 0.825 | 16.9 | 37.5 | 281.4 | 307.6 |
| 0.850 | 17.1 | 37.9 | 284.2 | 310.7 |
| 0.875 | 17.2 | 38.3 | 286.9 | 313.7 |
| 0.900 | 17.4 | 38.6 | 289.6 | 316.7 |
| 0.925 | 17.5 | 39.0 | 292.3 | 319.6 |
| 0.950 | 17.7 | 39.3 | 294.9 | 322.4 |
| 0.975 | 17.8 | 39.7 | 297.5 | 325.2 |
| 1.000 | 18.0 | 40.0 | 300.0 | 328.0 |
| 1.250 | 19.4 | 43.1 | 323.2 | 353.3 |
| 1.500 | 20.6 | 45.8 | 343.4 | 375.5 |
| 1.750 | 21.7 | 48.2 | 361.5 | 395.3 |
| 2.000 | 22.7 | 50.4 | 378.0 | 413.3 |
| 2.250 | 23.6 | 52.4 | 393.1 | 429.8 |
| 2.500 | 24.4 | 54.3 | 407.2 | 445.2 |
| 2.750 | 25.2 | 56.0 | 420.3 | 459.5 |
| 3.000 | 26.0 | 57.7 | 432.7 | 473.1 |
| 3.250 | 26.7 | 59.2 | 444.4 | 485.8 |
| 3.500 | 27.3 | 60.7 | 455.5 | 498.0 |
| 3.750 | 28.0 | 62.1 | 466.1 | 509.6 |
| 4.000 | 28.6 | 63.5 | 476.2 | 520.7 |
| 4.250 | 29.2 | 64.8 | 485.9 | 531.3 |
| 4.500 | 29.7 | 66.0 | 495.3 | 541.5 |
| 4.750 | 30.3 | 67.2 | 504.3 | 551.4 |
| 5.000 | 30.8 | 68.4 | 513.0 | 560.9 |
| 5.250 | 31.3 | 69.5 | 521.4 | 570.1 |
| 5.500 | 31.8 | 70.6 | 529.6 | 579.0 |
| 5.750 | 32.2 | 71.7 | 537.5 | 587.6 |
| 6.000 | 32.7 | 72.7 | 545.1 | 596.0 |
| 6.250 | 33.2 | 73.7 | 552.6 | 604.2 |
| 6.500 | 33.6 | 74.7 | 559.9 | 612.1 |
| 6.750 | 34.0 | 75.6 | 567.0 | 619.9 |
| 7.000 | 34.4 | 76.5 | 573.9 | 627.4 |
| 7.250 | 34.8 | 77.4 | 580.6 | 634.8 |
| 7.500 | 35.2 | 78.3 | 587.2 | 642.0 |
| 7.750 | 35.6 | 79.2 | 593.7 | 649.1 |
| 8.000 | 36.0 | 80.0 | 600.0 | 656.0 |
| 8.250 | 36.4 | 80.8 | 606.2 | 662.8 |
| 8.500 | 36.7 | 81.6 | 612.2 | 669.4 |
| 8.750 | 37.1 | 82.4 | 618.2 | 675.9 |

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| In Pounds | K-Factor = 18 | K-Factor = 40 | K-Factor = 300 | |
| 9.000 | 37.4 | 83.2 | 624.0 | 682.3 |
| 9.250 | 37.8 | 84.0 | 629.8 | 688.5 |
| 9.500 | 38.1 | 84.7 | 635.4 | 694.7 |
| 9.750 | 38.5 | 85.5 | 640.9 | 700.7 |
| 10.000 | 38.8 | 86.2 | 646.3 | 706.7 |
| 10.250 | 39.1 | 86.9 | 651.7 | 712.5 |
| 10.500 | 39.4 | 87.6 | 656.9 | 718.2 |
| 10.750 | 39.7 | 88.3 | 662.1 | 723.9 |
| 11.000 | 40.0 | 89.0 | 667.2 | 729.5 |
| 11.250 | 40.3 | 89.6 | 672.2 | 735.0 |
| 11.500 | 40.6 | 90.3 | 677.2 | 740.4 |
| 11.750 | 40.9 | 90.9 | 682.0 | 745.7 |
| 12.000 | 41.2 | 91.6 | 686.8 | 750.9 |
| 12.250 | 41.5 | 92.2 | 691.6 | 756.1 |
| 12.500 | 41.8 | 92.8 | 696.2 | 761.2 |
| 12.750 | 42.1 | 93.4 | 700.8 | 766.3 |
| 13.000 | 42.3 | 94.1 | 705.4 | 771.2 |
| 13.250 | 42.6 | 94.7 | 709.9 | 776.2 |
| 13.500 | 42.9 | 95.2 | 714.3 | 781.0 |
| 13.750 | 43.1 | 95.8 | 718.7 | 785.8 |
| 14.000 | 43.4 | 96.4 | 723.0 | 790.5 |
| 14.250 | 43.6 | 97.0 | 727.3 | 795.2 |
| 14.500 | 43.9 | 97.5 | 731.5 | 799.8 |
| 14.750 | 44.1 | 98.1 | 735.7 | 804.4 |
| 15.000 | 44.4 | 98.6 | 739.9 | 808.9 |

62

39° 36' 00.00m N

86

"Stop -
Demo In Progress"
Sign
61780 85895

Demo Pit
62134 85865

Bunker
62025 85750

Range Guard
61835 85645

Range 130H

462° 00.00m E

