RANGE AND TRAINING REGULATIONS

Maximum of 5 POVs are authorized to park in parking lot area with or without a POV pass
Road & River Report or Weapon Dependent

Range: R-108	**Lateral Limits**: **See Special Instructions**	**Allowable Wpns:** **Rifles** - .50 Caliber & Below (Ball Only) **Pistols** - .45 Caliber & Below **Demo** – As Listed In Special Instructions Bare Charges Up to 225 lbs. NEW (Tamped)	**Assigned to**: CG, MCB **Date Revised:** 12 March, 2015
Location: 62966 89064	**Impact Area:** X-Ray Impact Area		
Elevation: 410' AMSL	**Troop Penetration**: 1200 Meters		
Type: Demo, BZO, Sniper Rifle Range (Unk- Distance), EMP	**Engagement Distance:** **Min** - 3 meters **Max** - 1200 meters	**Range Facilities:** Bleachers, Ammo tables, & Gates	

Scheduling

1. Unit will utilize RFMSS to schedule range.
2. Initial scheduling of this facility must be done through Base EOD at 725-5498.
3. Final scheduling of this facility must be approved by MCB Camp Pendleton Range Scheduling.
4. Scheduling of this range for the firing of Service Pistols & EMP Box must be done concurrently with the use of Sniper Weapons.

Scheduling Conflicts	Conflict Notes
R-IMP X-RAY	LIVE FIRE @ R108 CLOSES GROUND ACCESS X-RAY IMPACT AREA
AIRCRAFT	NO OVER FLIGHT ALLOWED – MAX ORD 225 LBS 2448' AGL
LZ Ostrich	LIVE FIRE @ R-108 CLOSES AV OPS @ LZ OSTRICH

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OIC/RSO Requirement

1. **A safety Brief shall 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. **Explosives**
      i. **OIC Requirement - GySgt or Above**
      ii. **RSO Requirement - SSgt or Above**
   b. **Small Arms- .50 Caliber & below**
      i. **OIC Requirement - SSgt or Above**
      ii. **RSO Requirement - Sgt or Above**
   c. **No Munitions**
      i. **OIC Requirement - None**
      ii. **RSO Requirement - Cpl or Above**
      iii. **LASER (If Used) LRSO Requirement - Sgt or Above**
   d. **EOD Operations**
      i. **OIC Requirement – Sgt or Above (Qualified EOD Tech)**
      ii. **RSO Requirement - Sgt or Above (Qualified EOD Tech)**

Special Instructions

Base EOD is the primary user of this facility.

If an emergency destruction of ordnance is required, units using this range shall place all weapons in Condition 4 and move to the designated safe area.

Demo Rocket tube 62687 88509 for EOD USE ONLY

1. EOD Range OIC or RSO shall contact LONGRIFLE for any emergency destruction conducted on 108.
2. All EOD demolition activities will be conducted in accordance with the provisions of NAVSEA OP5 and EODB 60 series publications.
3. All Charges shall be Tamped.
4. All emergency destruction shall go in Demo Pit 4
5. At the end of month EOD will conduct a cleanup of Demo Pit 4 of all debris and range maintenance shall fill in all holes.

Explosive Ordnance Disposal (EOD) Inerting Facility

1. The approved explosives limits for the Inerting facility is 182 grams (0.4 pounds) net explosive weight (NEW) of Hazard Division (HD) 1.1 The inhabited building distance (IBD) is 236 feet (ft.), based on the HD 1.1 hazardous fragment distance.
2. The Inerting facility will be used exclusively by EOD personnel for EOD disassembly/inerting operations
3. Per references (a) and (B):
   a. There are no unrelated structures within IBD, and the inerting facility will be outside of IBD from other potential explosion sites.
   b. No personnel, other than the EOD personnel working in the inerting facility, will be inside the 236-ft IBD arc when explosives operations are conducted in the facility.
   c. The inerting facility and the demolition sites on Range 108 will not be used concurrently, and personnel will not occupy the inerting facility during any detonation on the range.
   d. Explosives will not be stored in the inerting facility.
   e. Only small fuzes and ordnance items, which contain 182 grams or less of explosives, will be disassembled or inerted in the facility.
   f. Incoming conductors will be run underground for a minimum of 50 ft. from the facility and surge suppression will be installed per paragraph V2.E3.6 of reference (c).
   g. An integral lightning protection system meeting the requirements of paragraph V2.E4.2. of reference (c) will be installed.

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Range Guards & Gate

1. Gate: Units shall supply their own lock and use the Range Safety lock as a link and secure their lock from the Range Safety lock to a link in the chain on the gate.
2. Range Inspectors shall contact Longrifle from the gate to inform the RSO they are on site to conduct a safety inspection. Upon confirmation from the RSO, the Range Inspector shall unlock the Range Safety lock and proceed onto the range to meet the RSO.
3. Units that do not have a lock shall be required to post Range Guards. Range Guards shall be posted in pairs of two with two-way radio communication with the RSO to prevent entry into the impact area.

Range Gate 62798 89306

Sniper Unknown Distance Firing Line

LLL: 62955 89065 181° mag
RLL: 62924 89072 198° mag

1. Prior to conducting any firing the RSO shall:
   a. Ensure the SDZ is free of any personnel or wild life.
   b. Close and secure gate.
2. Only Government Vehicles are allowed on the hill near the firing line.
3. All other vehicles shall be parked at the designated parking area.
4. 5.56mm & 7.62mm steel targets shall be placed with a forward cant (head forward 20 degrees).
5. All targets shall be placed no higher than the LLL & RLL Signs.
6. All targets utilized must be emplaced within the listed lateral limits.
7. **Sniper firing line cannot be used concurrent with Demo Pits.**
8. **Targets shall not be placed any higher than the lateral limit markers.**

BZO/EMP Firing Line

LLL: 62795 89272 161° mag
RLL: 62781 89275 180° mag

1. BZO 7.62 and below only.
2. Prior to conducting any firing the RSO shall:
   a. Ensure the SDZ is free of any personnel or wild life.
   b. Close and secure gate.
3. **No Steel targets.**
4. **For all CM Training:**
   a. All CM targets must be of softwood uprights, cardboard backing paper or cardboard targets.
   b. Any metal bases used must be of soft metal and covered with sandbags.
   c. No Cross-firing.
5. **BZO firing line cannot be used concurrent with Demo Pits.**

Demolitions

Demo Pit 1	Demo Pit 2	Demo Pit 3	Demo Pit 4	Demo Pit road
Bare Charge: .25 lbs. Max NEW Demo Pit Boundaries 62931 88999 to 62946 88996 to 62946 88984 to 62929 88988	Bare Charge: 2 lbs. Max NEW Demo Pit Boundaries 62940 88943 to 62886 88954 to 62884 88943 to 62936 88929	Bare Charge: 27 lbs. Max NEW Demo Pit Boundaries 62875 88794 to 62825 88856 to 62806 88803 to 62863 88777	**EOD ONLY** Bare Charge: 225 lbs. Max NEW Demo Pit Boundaries 62605 88437 to 62550 88432 to 62549 88423 to 62597 88417	Bare Charge: 3 lbs. Max NEW Demo Pit Boundaries 62882 88985 to 62868 88896 to 62863 88896 to 62878 88984

RANGE AND TRAINING REGULATIONS

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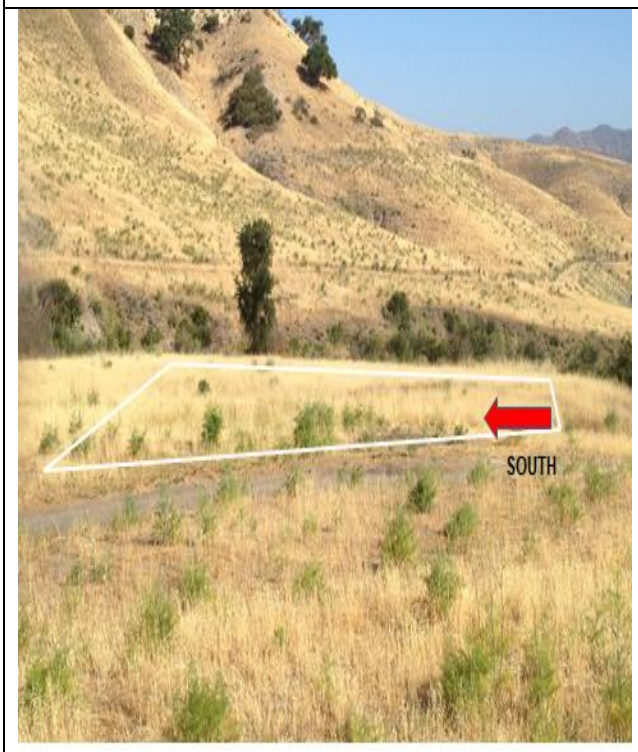
Demo Pit 1

Demo Pit 2



Demo Pit 3

Demo Pit 4

RANGE AND TRAINING REGULATIONS

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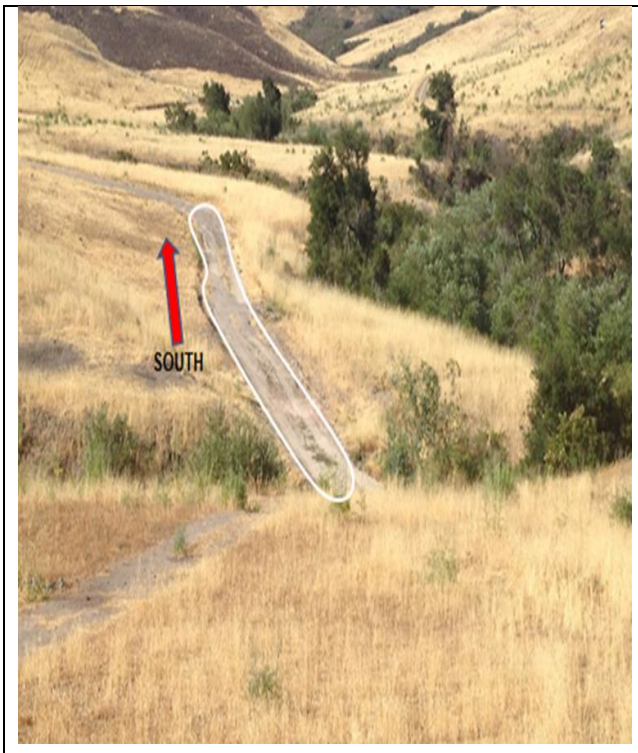

Demo Pit Road

Demo Rocket Tube - EOD Only

BZO/CMP BOX

RANGE AND TRAINING REGULATIONS

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Steel Cutting Charges
1. Charges placed against steel, during training or demonstrations will be emplaced on the side nearest observers so that major fragments are propelled away from the observers. 2. Charges will be fired in an excavated pit that is at least 1m deep. 3. Charges will not exceed 0.9kg (2lbs). 4. Personnel must be a minimum of 100m from the charge at detonation in a missile-proof shelter, 300m in defilade, or 1,000m if in the open.
Concrete Charges
1. Charges placed on concrete will not exceed 18kg (40lbs) and should be placed on the side nearest observers. 2. Observers must be at least 100m away in a missile-proof shelter, 300m away in defilade, or 900m away in the open.
Shaped Charges
1. Shaped charges will be oriented so that gas jets will be directed down toward the target. 2. Observers will be at least 100m away in a missile-proof shelter, 275m in defilade, or 1,000m for unprotected personnel, from shaped charges when fired. 3. The MK47 demolition shaped charge, Mod 1, requires a safe separation distance of 300m for protected personnel. 4. For unprotected personnel, the stand-off distance is 1,610m.
Bangalore Torpedoes
1. Bangalore torpedoes will only be fired while on the ground in a horizontal position. 2. Personnel will be in a missile-proof shelter 100m from the charge, or 200m away in defilade. For unprotected personnel in the open, the minimum safe distance (MSD) is 1,000m at right angles to axis of the Bangalore torpedo, 200m for personnel in the line of axis. 3. If a field expedient Bangalore torpedo is used. The explosive weight shall not exceed the standard issued Bangalore.
APOBS
1. Anti-Personnel Obstacle Breaching System firing personnel shall be at least 50m from the launch point and 75m from the deployed grenades and in a prone position. 2. In the event of a catastrophic detonation at the launch point, the rear exclusion area will protect personnel provided that they are in the prone position and use hearing protection. 3. Personnel without hearing protection shall not be permitted within 1,187m of the launch point.
Claymore Mine
1. Range OIC will ensure mines are installed correctly and facing into the impact area. 2. All mines will be secured until the range OIC directs their issue. 3. Emplaced mines will not be disarmed except by order of the range OIC. 4. Firing devices will only be connected at the command of the range OIC. 5. When more than one mine is to be fired, the range OIC will ensure that previous firings have not dislodged the other mines in the impact area. 6. After firing, the impact area will be inspected to ensure that all mines have detonated. 7. Misfires will be handled in accordance with FM 23–23. 8. Personnel will not be allowed within 16m to the rear of the mine. 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. All personnel will wear approved protective helmets, IBA and single hearing protection.
Explosive Entry Techniques
1. Stand-off distance for personnel will be determined using the formula D(ft) = K x W1/3 where D = distance, K = a constant (the K factor for explosive entry techniques is set at 18) and the W1/3 = cube root of weight of the explosives in pounds. 2. This stand-off distance is related to blast pressure and does not reflect fragmentation damage. When a barrier is used, the safe overpressure standoff distance may be divided by 2. 3. Fragmentation standoff will equal the blast standoff when a protective barrier is provided between the explosive and the personnel. This barrier may be in the form of wood, cement, metal, or a ballistic blanket barrier. The barrier must be able to absorb all fragmentation. 4. Personnel conducting the detonation will also wear fire-resistant hoods, coveralls, and gloves. Clothing with short sleeves is not authorized when conducting this training.

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GREM Firing Line

LLL: 62863 88805 187° mag
RLL: 62838 88816 195° mag

1. No personnel shall be within 15 meters of target.
2. Single ear protection must be worn by all personnel within 40 meters from target.
3. **Gunner must**:
    a. Wear helmet, BLPS (Ballistic Laser Protective Spectacles), body armor, gloves, and rolled down sleeves.
    b. Gunner will stay behind cover after firing.
    c. All personnel within 40 meters of target must wear same protective gear and be under or behind cover.
4. Use only M855 ball to fire GREM on single shot (semi-automatic) mode.
    a. Use of any other ammunition may cause premature function/detonation of GREM or weapon, causing serious injury or death to gunner.
    b. **DO NOT mix GREM ammunition with GREM-TP ammunition.**
5. Use only M16A2/M16A4 rifles or M4 series weapons to fire munitions.
6. These are high recoil munitions.
    a. Recoil pad must be properly installed on M4 carbines and pressed against shoulder prior to firing, or personal injury or buttstock damage may occur.
7. Weapon must be in SAFE position and loaded before installing munition.
8. **Gunner and GREM must be at least 15 meters from target**.
9. Before squeezing weapon trigger, standoff rod must be installed, munition must be fully seated against weapon muzzle, and weapon must be properly aimed.
10. Due to high recoil, extended eye relief from optics or iron sights is required to prevent injury to eyes, nose or face. Keep a minimum of 3 inches away from charging handle.
11. Maintain a minimum of 15 meters from unexploded ordnance (UXO). Contact EOD for disposal. An air sentry will be posted by the RSO. Any time an aircraft is observed within the SDZ, a cease-fire will be called by the RSO.

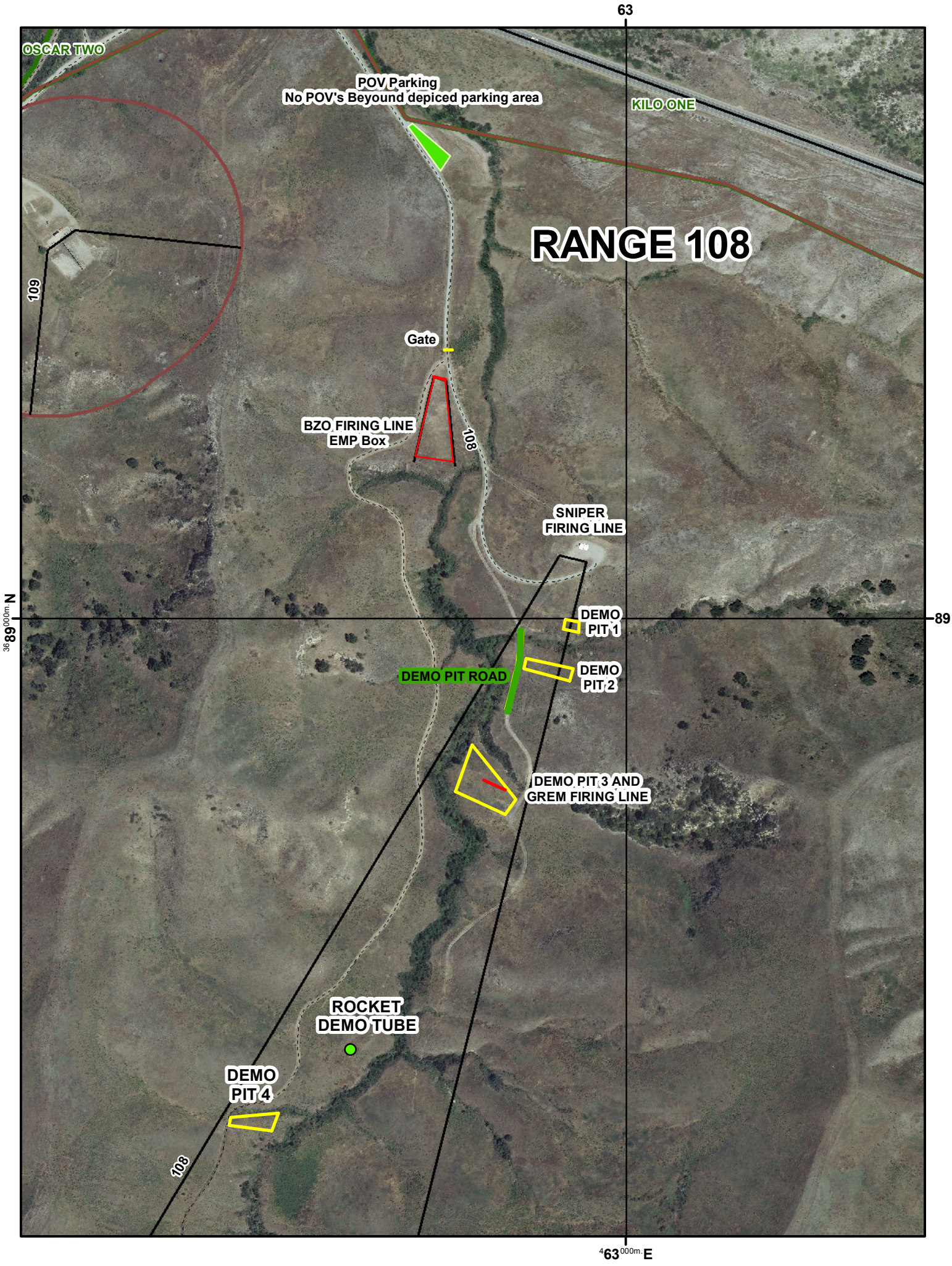
NEW	Missile Hazard in Meters	Missile Hazard in Yards	Missile Hazard in Feet
27lbs or less Note 1	300.0	327.0	981.0
27	300.0	327.0	981.0
28	303.7	331.0	993.0
29	307.2	334.9	1004.6
30	310.7	338.7	1016.1
31	314.1	342.4	1027.2
32	317.5	346.1	1038.2
33	320.8	349.6	1048.9
34	324.0	353.1	1059.4
35	327.1	356.5	1069.6
36	330.2	359.9	1079.7
37	333.2	363.2	1089.6
38	336.2	366.5	1099.4
39	339.1	369.6	1108.9
40	342.0	372.8	1118.3
41	344.8	375.9	1127.6
42	347.6	378.9	1136.7
43	350.3	381.9	1145.6
44	353.0	384.8	1154.4
45	355.7	387.7	1163.1
46	358.3	390.6	1171.7
47	360.9	393.4	1180.1
48	363.4	396.1	1188.4
49	365.9	398.9	1196.6
50	368.4	401.6	1204.7
51	370.8	404.2	1212.7
52	373.3	406.8	1220.5
53	375.6	409.4	1228.3
54	378.0	412.0	1236.0
55	380.3	414.5	1243.6
56	382.6	417.0	1251.1
57	384.9	419.5	1258.5
58	387.1	421.9	1265.8
59	389.3	424.3	1273.0
60	391.5	426.7	1280.2
61	393.6	429.1	1287.2
62	395.8	431.4	1294.2
63	397.9	433.7	1301.2
64	400.0	436.0	1308.0
65	402.1	438.3	1314.8
66	404.1	440.5	1321.5
67	406.2	442.7	1328.1
68	408.2	444.9	1334.7
69	410.2	447.1	1341.2
70	412.1	449.2	1347.7
71	414.1	451.3	1354.0
72	416.0	453.5	1360.4
73	417.9	455.5	1366.6
74	419.8	457.6	1372.9
75	421.7	459.7	1379.0

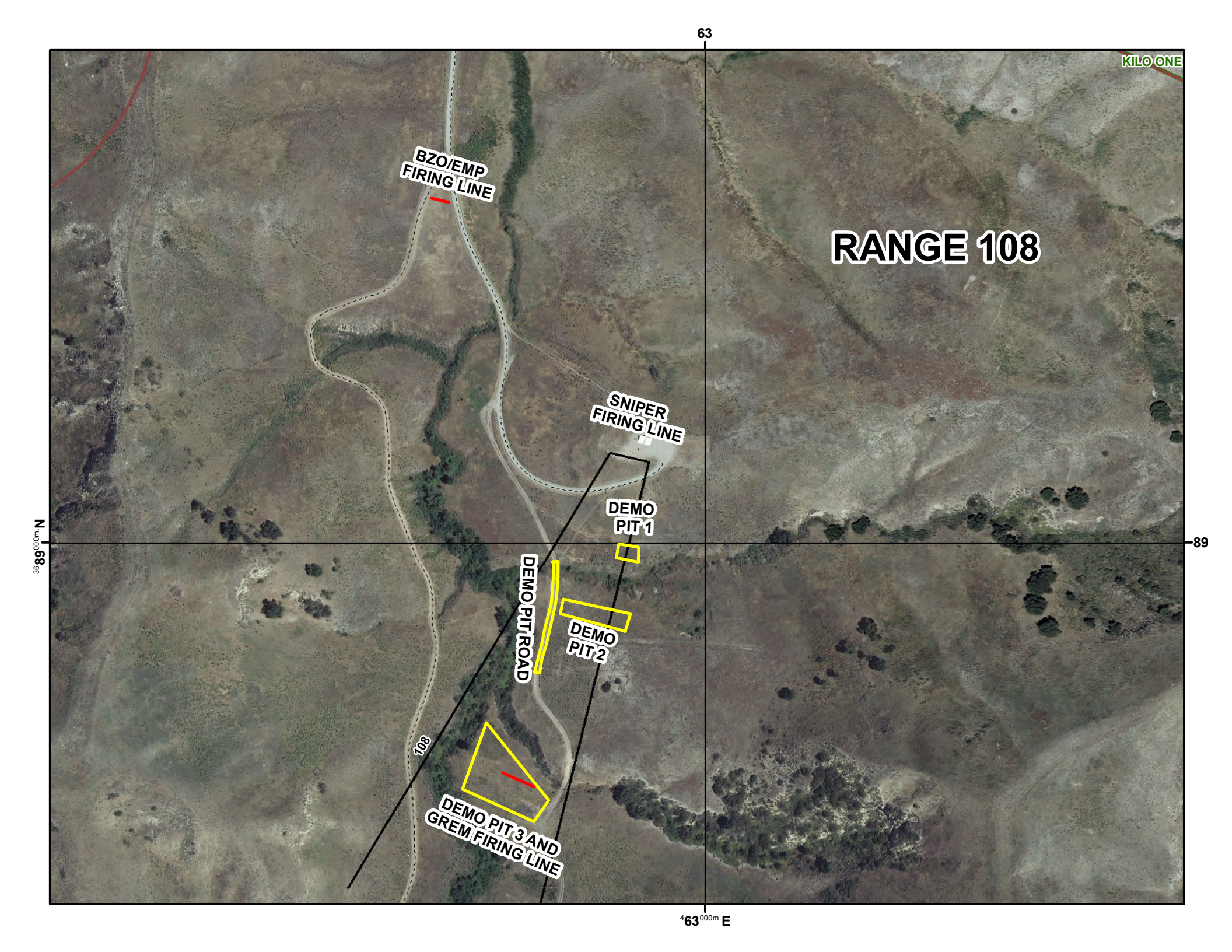
NEW	Missile Hazard in Meters	Missile Hazard in Yards	Missile Hazard in Feet
76	423.6	461.7	1385.1
77	425.4	463.7	1391.2
78	427.3	465.7	1397.2
79	429.1	467.7	1403.1
80	430.9	469.7	1409.0
81	432.7	471.6	1414.8
82	434.4	473.5	1420.6
83	436.2	475.5	1426.4
84	438.0	477.4	1432.1
85	439.7	479.3	1437.8
86	441.4	481.1	1443.4
87	443.1	483.0	1449.0
88	444.8	484.8	1454.5
89	446.5	486.7	1460.0
90	448.1	488.5	1465.4
91	449.8	490.3	1470.8
92	451.4	492.1	1476.2
93	453.1	493.8	1481.5
94	454.7	495.6	1486.8
95	456.3	497.4	1492.1
96	457.9	499.1	1497.3
97	459.5	500.8	1502.5
98	461.0	502.5	1507.6
99	462.6	504.2	1512.7
100	464.2	505.9	1517.8
101	465.7	507.6	1522.8
102	467.2	509.3	1527.9
103	468.8	510.9	1532.8
104	470.3	512.6	1537.8
105	471.8	514.2	1542.7
106	473.3	515.9	1547.6
107	474.7	517.5	1552.4
108	476.2	519.1	1557.2
109	477.7	520.7	1562.0
110	479.1	522.3	1566.8
111	480.6	523.8	1571.5
112	482.0	525.4	1576.2
113	483.5	527.0	1580.9
114	484.9	528.5	1585.6
115	486.3	530.1	1590.2
116	487.7	531.6	1594.8
117	489.1	533.1	1599.3
118	490.5	534.6	1603.9
119	491.9	536.1	1608.4
120	493.2	537.6	1612.9
121	494.6	539.1	1617.4
122	496.0	540.6	1621.8
123	497.3	542.1	1626.2
124	498.7	543.5	1630.6
125	500.0	545.0	1635.0

NEW	Missile Hazard in Meters	Missile Hazard in Yards	Missile Hazard in Feet
126	501.3	546.4	1639.3
127	502.7	547.9	1643.7
128	504.0	549.3	1648.0
129	505.3	550.8	1652.3
130	506.6	552.2	1656.5
131	507.9	553.6	1660.8
132	509.2	555.0	1665.0
133	510.4	556.4	1669.2
134	511.7	557.8	1673.3
135	513.0	559.2	1677.5
136	514.3	560.5	1681.6
137	515.5	561.9	1685.7
138	516.8	563.3	1689.8
139	518.0	564.6	1693.9
140	519.2	566.0	1697.9
141	520.5	567.3	1702.0
142	521.7	568.7	1706.0
143	522.9	570.0	1710.0
144	524.1	571.3	1714.0
145	525.4	572.6	1717.9
146	526.6	574.0	1721.9
147	527.8	575.3	1725.8
148	529.0	576.6	1729.7
149	530.1	577.9	1733.6
150	531.3	579.1	1737.4
151	532.5	580.4	1741.3
152	533.7	581.7	1745.1
153	534.8	583.0	1749.0
154	536.0	584.3	1752.8
155	537.2	585.5	1756.5
156	538.3	586.8	1760.3
157	539.5	588.0	1764.1
158	540.6	589.3	1767.8
159	541.8	590.5	1771.5
160	542.9	591.7	1775.2
161	544.0	593.0	1778.9
162	545.1	594.2	1782.6
163	546.3	595.4	1786.3
164	547.4	596.6	1789.9
165	548.5	597.8	1793.5
166	549.6	599.0	1797.1
167	550.7	600.2	1800.7
168	551.8	601.4	1804.3
169	552.9	602.6	1807.9
170	554.0	603.8	1811.5
171	555.0	605.0	1815.0
172	556.1	606.2	1818.5
173	557.2	607.4	1822.1
174	558.3	608.5	1825.6
175	559.3	609.7	1829.1

NEW	Missile Hazard in Meters	Missile Hazard in Yards	Missile Hazard in Feet
176	560.4	610.8	1832.5
177	561.5	612.0	1836.0
178	562.5	613.1	1839.4
179	563.6	614.3	1842.9
180	564.6	615.4	1846.3
181	565.7	616.6	1849.7
182	566.7	617.7	1853.1
183	567.7	618.8	1856.5
184	568.8	620.0	1859.9
185	569.8	621.1	1863.3
186	570.8	622.2	1866.6
187	571.8	623.3	1869.9
188	572.9	624.4	1873.3
189	573.9	625.5	1876.6
190	574.9	626.6	1879.9
191	575.9	627.7	1883.2
192	576.9	628.8	1886.5
193	577.9	629.9	1889.7
194	578.9	631.0	1893.0
195	579.9	632.1	1896.2
196	580.9	633.2	1899.5
197	581.9	634.2	1902.7
198	582.8	635.3	1905.9
199	583.8	636.4	1909.1
200	584.8	637.4	1912.3
201	585.8	638.5	1915.5
202	586.7	639.6	1918.7
203	587.7	640.6	1921.8
204	588.7	641.7	1925.0
205	589.6	642.7	1928.1
206	590.6	643.7	1931.2
207	591.5	644.8	1934.4
208	592.5	645.8	1937.5
209	593.4	646.9	1940.6
210	594.4	647.9	1943.7
211	595.3	648.9	1946.7
212	596.3	649.9	1949.8
213	597.2	651.0	1952.9
214	598.1	652.0	1955.9
215	599.1	653.0	1959.0
216	600.0	654.0	1962.0
217	600.9	655.0	1965.0
218	601.8	656.0	1968.0
219	602.8	657.0	1971.0
220	603.7	658.0	1974.0
221	604.6	659.0	1977.0
222	605.5	660.0	1980.0
223	606.4	661.0	1983.0
224	607.3	662.0	1985.9
225	608.2	663.0	1988.9

Note 1: When charges less than five pounds are placed on specially prepared or selected sites, per DA PAM 385-63, to eliminate a missile hazard, distance may be reduced to not less than 50m.


63
OSCAR TWO
POV Parking
No POV's Beyound depiced parking area
KILO ONE
RANGE 108
109
Gate
BZO FIRING LINE
EMP Box
108
SNIPER
FIRING LINE
3689000m N
89
DEMO
PIT 1
DEMO PIT ROAD
DEMO
PIT 2
DEMO PIT 3 AND
GREM FIRING LINE
ROCKET
DEMO TUBE
DEMO
PIT 4
108
4630000m E


63
KILO ONE
RANGE 108
BZO/EMP
FIRING LINE
SNIPER
FIRING LINE
DEMO
PIT 1
DEMO PIT ROAD
DEMO
PIT 2
108
DEMO PIT 3 AND
GREM FIRING LINE
3689000m N
89
89
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RANGE 108
EOD ONLY
ROCKET
DEMO TUBE
DEMO
PIT 4