

**FIRING/NONFIRING DATA**

*For use of this form see USAIC Regulation 350-19; the proponent agency is DPTMS*

<b>TO:</b> Chief, Range Division, Directorate of Plans, Training, Mobilization and Security Fort Benning, GA 31905	<b>Date:</b> 18 September 2012 <b>Range:</b> Red Cloud <b>Title:</b> Mortar LFX <b>Problem No:</b>
<b>THRU:</b> Commandant	<b>FROM:</b> S3, NCOA

LOG# 9-3-12

**SECTION I, TYPE OF TRAINING**

a. Live Fire     
  b. Non-live Fire     
 CP/Controller Coordinates: 9487 8178

**SECTION II, DEMOLITIONS/GRENADES/MINES/PYROTECHNICS**

Coordinates	Type	Model/DODAC	Size of Charges

**SECTION III, WEAPONS/AMMUNITION REQUESTED**

Coordinates of Weapons Position	Type Weapon/Model Number	Type Ammunition	Left Limit	Right Limit
9495 8175 to 9487 8172	81mm	HE,WP,ILL,RP	2650	3045

**SECTION IV, LIVE FIRE EXERCISES Attach the following:**

**SECTION V, NON-LIVE FIRE TRAINING**

<input checked="" type="checkbox"/> Scenario of training to be conducted: <input checked="" type="checkbox"/> Sketch of area: <input checked="" type="checkbox"/> Risk Assessment: <input checked="" type="checkbox"/> Attach FB Form 350-19-2-E-R if Mortar or artillery is being fired:	<b>Training area(s) to be occupied:</b>  <input type="checkbox"/> Scenario of training to be conducted: <input type="checkbox"/> Sketch of area(s) to be occupied: <input type="checkbox"/> Risk Assessment:
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Name/rank of requesting officer: Matthew Toulouse, GS-7 	Name/rank of Major Unit S3/Commander: Mark Fair, S3, GS-11 
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**SECTION VI, FOR RANGE DIVISION USE**

DATE: 21 SEP 12

<b>TO:</b> NCOA	<b>FROM:</b> Range Division, Directorate of Plans, Training, Mobilization and Security Fort Benning, GA 31905
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a. Roadblocks to be closed: b. Road(s) to be closed/road barrier locations: c. Remarks: d. This approval expires:	A: 38, 39 See Roadguard Enclosure  Indef
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Chief, Range Division  
 Directorate of Plans, Training, Mobilization and Security



**DEPARTMENT OF THE ARMY**  
HEADQUARTERS UNITED STATES ARMY MANEUVER CENTER OF EXCELLENCE  
1 KARKER STREET  
FORT BENNING, GEORGIA 31905-5000

REPLY TO  
ATTENTION OF  
ATZB-SO

19 September 2012

MEMORANDUM FOR Commandant, Non-Commissioned Officer Academy, Attn: Mr. Matthew Toulouse, Fort Benning, GA 31905

SUBJECT: Live Fire Exercise (Mortar LFX) (IN ALC 11C) (Red Cloud) Concept and Safety Review

1. References:

- a. Live Fire Exercise (Mortar LFX) (IN ALC 11C) (Red Cloud) Concept, 19 September 2012
  - b. Army Regulation 385-10, The Army Safety Program, 24 August 2007,
  - c. Army Regulation 385-63, Range Safety, 19 May 2003
  - d. Department of the Army Pamphlet 385-10, Army Safety Program, RAR 19 January 2010
  - e. Department of the Army Pamphlet 385-30, Mishap Risk Management, RAR 01 February 2010
  - f. Department of the Army Pamphlet 385-63, Range Safety, RAR 12 May 2009
  - g. Field Manual 5-19, Composite Risk Management, August 2006
2. Document received on 19 September 2012.
3. CONCUR.
4. Point of contact is Mr. Michael W. Risher II, MCoE/Fort Benning Safety Office, Comm. (706) 545-8278, Govt. Cell. (706) 604-7249, [michael.w.risher.civ@mail.mil](mailto:michael.w.risher.civ@mail.mil)

  
JILL E. CARLSON  
Director, MCOE Safety  
Fort Benning Safety Office

## ARTILLERY/MORTAR SAFETY RECORD

*For use of this form, see USAIC Regulation 350-19; the proponent is DPTMS, Range Division.*

DATE: 18 Sep 2012 UNIT: Red Cloud NCOA Mortar LFX

FIRING POINT #:  WEAPONS: 81mm Mortars

COORDINATES: FA 9495 8175 to FA 9487 8172

Weapon Projectile	Left Limit Mils	Right Limit Mils	Minimum Range Meters	Maximum Range Meters	Minimum Charge	Maximum Charge	Maximum Ordnance Meter
81mm HE M374/A2	2650	3045	950	2000	2	4	1283
WP M375/A2	2650	3045	950	2000	2	4	1283
HE M374A3	2650	3045	950	2000	1	2	1401
HE M821	2650	3045	950	2000	1	2	1760
HE M889	2650	3045	950	2000	1	2	1731
RP M819	2650	3045	950	2000	1	2	1476
HE M821A1/A2	2650	3045	950	2000	1	2	1752
HE M889A1	2650	3045	950	2000	1	2	1747
ILL M301A3	2650	3045	950	2000	4	6	1541
ILL M853A1	2650	3045	950 950	2000	1	2	1761
IR ILL M816	2650	3045		2000	2	2	1783

SPECIAL INSTRUCTIONS: This FB Form 350-19-2-E-R must accompany the corresponding FB Form 350-19-1-E-R.

81mm Targets= 12-22

Name/rank/signature of requesting officer



Chief, Range Division  
Directorate of Plans, Training, Mobilization and Security

**DEPARTMENT OF THE ARMY**  
**HEADQUARTERS UNITED STATES ARMY MANEUVER CENTER OF EXCELLENCE**  
**HENRY CARO NONCOMMISSIONED OFFICER ACADEMY**  
**FORT BENNING, GEORGIA 31905**

ATSH-NCH-O

21 September 2012

MEMORANDUM FOR: Chief, Range Division, Fort Benning, Georgia, 31905

THRU: COMMANDANT, Noncommissioned Officer Academy, Fort Benning, Georgia, 31905

SUBJECT: Live Fire Exercise (Mortar LFX) (IN ALC 11C) (Red Cloud)

MISSION: NCO Academy (IN ALC) conducts Live Fire Exercise (Mortar LFX) on Red Cloud range in order to train Soldiers.

**EXECUTION:**

1. **Commandant's Intent:** The intent is for Soldiers from the NCO Academy (IN ALC) to conduct training in operating quickly and effectively in accomplishing its mission, mortar squad members must be proficient in individually assigned duties. Correctly applying and performing these duties enables the mortar section to perform as an effective fighting team.

2. **Concept of the Operation:** The NCO Academy (IN ALC) will conduct Live Fire Exercise (Mortar LFX) IAW unit FM 23-90 Mortars, and FB Form 350-19-1R (Firing/NonFiring Data) and FB Form 350-19-2. All firing will be done from the approved firing lines with mortars mounted on base plates. Training will include the following tasks:

a) In the premount checks, the squad must check the baseplate, check the bipod, check the barrel, and ensures the blast attenuator device is secured correctly.

b) The mounting of the mortar consist of picking up the sight case and the two aiming posts, and moves to the exact position where the mortar is to be mounted, places the sight case and aiming posts to the left front of the mortar position, then points to the exact spot where the mortar is to be mounted and indicates the initial direction of fire by pointing in that direction and commands ACTION.

**NOTE: The squad leader indicates the direction of fire when mounting.**

c) Dismounting of the mortar requires the soldier to remove the sight and place it in the case, holds the barrel and removes it from the mount (This task requires two soldiers), disengages the barrel clamps and moves the bipod from the immediate area, recovers the baseplate to the area designated, and picks up the aiming posts and sight.

d) Remedial training will be conducted in any of the phases of training where the soldier does not meet the standard. The instructor will identify any soldier having trouble with the task and must retrain the soldier as soon as possible. This will allow the soldier to maintain the same level of proficiency as the other soldiers.

3. **End state:** 100% of the Soldiers attending training safely trained to standard and all equipment and personnel accounted for.

4. These operations will be divided into phases listed below:

a) Phase I: The unit will occupy the selected training area and establish communications with range control. The range will be opened by emplacing the following control measures, medical support, and safety brief.

b) Phase II: Training begins according to the approved FB 350-19-1-R (Firing/NonFiring Data) and FB Form 350-19-2.

c) Phase III: The recovery phase that will consist of recovery of all equipment, personnel, clean up, after action review and closure with range control.

5. Safety/Service Support: Will be outline in the approved FB 350-19-1-R (Firing/NonFiring Data), FB Form 350-19-2 and unit SOP. However, at a minimum the following will occur.

- a) Uniform: As per unit SOP.
- b) Ammunition will be stored at the ammunition holding area (AHA) off the firing line.
- c) Combat Life Saver will be on-site at all times, with a dedicated vehicle.
- d) Range book, tracking map, markers, and communication equipment.
- e) Weapons will be oriented down range while on the firing line.
- f) No one allowed forward of the firing line.
- g) Signal to fire is verbal, bullhorn, or whistle.
- h) During firing anyone on the range, observing an unsafe act can call a ceasefire by using the hand and arm signal and/or a vocal command of ceasefire. No one is allowed forward of the firing line.
- i) All unused ammo will be turned into the AHA upon completion of firing.
- j) In the event of a short round or a round fired out of safe, a "CHECK FIRE" status will immediately go into effect and range control will be notified.
- k) See photo enclosures for firing positions
- l) When Duds are found on the range or Duds are created when firing, Range Control and EOD will be notified.
- m) Only one firing line will be occupied/ used at a time

#### **SAFETY CHECKS BEFORE FIRING**

##### **81mm Mortar**

The gunner ensures that—

- (1) The cannon is locked to the baseplate, and the open end of the socket points in the direction of fire.
- (2) The firing pin recess faces upwards.
- (3) The bipod locking latch is locked, securing the cannon clamps.
- (4) The leg-locking handwheel is tight.
- (5) Mask clearance and overhead clearance are sufficient.

#### **REMOVAL OF A MISFIRE**

##### **81mm Mortar**

- (1) When a misfire occurs, any member of the squad immediately announces, "Misfire."
- (2) All personnel, except the gunner, move 50 meters or farther to the rear of the mortar. Ensuring that he does not stand directly behind the cannon, the gunner kicks the cannon several times with

his heel in an attempt to dislodge the round. If the round fires, the mortar is re-laid on the aiming point and firing continues. If the round does not fire, the gunner joins the squad members behind the mortar and waits one minute (in case of a cookoff). After waiting one minute, the gunner returns to the mortar.

- (3) The gunner checks for heat by starting from just below the muzzle and working down to the base with his fingertips. If the cannon is too hot to be handled, he cools it with water (or snow) and checks it one minute later. If no water (or snow) is available, the cannon is air-cooled until it can be easily handled with bare hands. Liquids must never be poured into the cannon. The gunner signals the squad to come forward once the cannon is cool.
- (4) When the mortar is cool enough to handle, the gunner removes the firing pin by turning the firing pin wrench counterclockwise. Removing the firing pin ensures that the mortar will not fire should the round slip down the cannon during the subsequent drill. If necessary to provide easier access to the firing pin, the gunner depresses the cannon until the firing pin can be completely removed from the breech cap.
- (5) After removing the firing pin, the gunner shouts, "Firing pin is removed," and hands the firing pin to the squad leader. The gunner locks the data down on the sight, then removes the sight and places it in a safe location. Then, the gunner unlocks and loosens the cannon clamp just enough to rotate the cannon to unlock the breech plug from the rotating socket of the baseplate. He then relocks the cannon clamp.
- (6) The gunner grasps both ends of the traverse screw assembly and supports the mortar during the subsequent drill. The assistant gunner places his right hand palm up (1 inch from the muzzle end) under the Blast Attenuator Device and his left hand palm down (1 inch from the muzzle end) on top. He places his thumbs alongside the forefingers, being careful to keep both hands away from the muzzle. The ammunition bearer puts both hands on the cooling fins under the cannon and slowly lifts the cannon until it is horizontal. He must not stand directly behind the mortar. Once the cannon is horizontal, the rear of the cannon must not be lowered back down until the round is extracted. If the round slips down the cannon before extraction, it could ignite, causing death or personal injury.
- (7) When the cannon reach the horizontal position, the assistant gunner moves both thumbs over the muzzle. When the fuze of the misfired round reaches the Blast Attenuator Device, the assistant gunner stops the round with his thumbs (without touching the fuze) and carefully removes it from the cannon. The ammunition bearer shakes the cannon to dislodge any remnants of the last round fired and lowers the cannon into the rotating socket of the baseplate.
- (8) The assistant gunner passes the round to the ammunition bearer, who inspects it for the cause of the misfire. If the primer of the ignition cartridge is dented, the ammunition bearer attempts to replace the safety wire and places the round in a marked, safe location for disposal by ordnance personnel. If the primer is not dented, the round may be used again. Before attempting to fire, the firing pin must be replaced and the bore swabbed. The sight unit must then be replaced. The gunner will ensure that the correct firing data is indexed on the sight and that the mortar is relayed on the aiming posts. If the above procedure fails to remove the misfire, the cannon must be kept horizontal, removed from the bipod, and laid horizontally on the ground in the dud pit and notify range control.

## **REMOVING A MISFIRED CARTRIDGE USING THE BARREL TIP METHOD**

Follow these steps to remove a misfired cartridge if the extractor assembly is unserviceable or if extractor methods have failed.

- (1) The gunner and assistant gunner carefully lower the bipod assembly into the lowest position in low range.
- (2) The assistant gunner supports the bipod assembly, with his left hand grasping the left side of the traversing mechanism and his right hand grasping the right side of the traversing mechanism.
- (3) The gunner cradles the barrel with his right arm near the muzzle.
- (4) The ammunition bearer cradles the barrel with his right arm above the buffer housing assembly and unlocks the clamp handle assembly with his left hand, releasing the buffer housing assembly.
- (5) The gunner and ammunition bearer lift (approximately 60 degrees) and then rotate the barrel so that the white line is in the down position and the breech cap can be removed from the socket. Then, they carefully remove the barrel from the breech cap socket and raise it to the horizontal position. Once the cannon is horizontal, the rear of the cannon must not be lowered back down until the round is extracted. If the round slips down the cannon before extraction, it could ignite, causing death or personal injury.
- (6) Keeping the barrel horizontal and pointed in the direction of fire, the gunner, ammunition bearer, and crewmembers hold the barrel.
- (7) The assistant gunner places the meaty portions of his thumbs over the edges of the muzzle, grasping the barrel with his fingers. When removing the cartridge, do not touch the primer, and do not stand directly in front of the barrel. Care must be taken to ensure that the extractor catches are not depressed while removing the round from the barrel.
- (8) At the assistant gunner's command, crewmembers lift the cannon's breech cap assembly, causing the cartridge to slide down to the assistant gunner's hands.
- (9) The assistant gunner removes the cartridge, inspects the cartridge to see if the primer has been dented, attempts to replace the safety wire (if applicable), places the cartridge in the dud pit, and tags the cartridge. The safety officer notifies range control.
- (10) The assistant gunner swabs the bore; the gunner inserts the firing pin into the breech cap; and the barrel is returned to action.

### **Disposal of unused propellants**

Do not fire unused propellant charges. They should be removed to a storage area, preferably 30 to 40 feet from the nearest weapon, until they can be burned. The procedures for burning are:

- a) Select the nearest approved propellant burn pit according to MCoE Reg. 350-19 (table 5-1).
- b) Determine the wind direction.
- c) Place propellant/charge increments in a single layered row not more than 12 inches wide.
- d) Arrange the row so that the propellant will burn into the wind.

- e) Lay a train of combustible material about 15 feet long and perpendicular to and at the downwind side of the row of propellant increments. Light this train at the end farthest from the increments. Burning propellant creates a very large flash and a lot of smoke. In a tactical environment, the platoon leader/OIC must ensure that burning powder does not compromise the camouflage and concealment effort.
- f) Burning of unused propellants must be done as a part of training.

6. **Medical:** In the event of an accident, injury or illness, the OIC/RSO will immediately call a cease fire then call 911 using the standard 9 Line MEDEVAC to determine what type of evacuation is the most appropriate for the injury (loss of life, limb or eyesight). MEDEVAC will be IAW MCoE Regulation 350-19 and USAIC 40-2. Landing zone for MEDEVAC aircraft will be established prior to use and will be marked appropriately. Range Control will be notified in this event. The cease fire will remain in effect until cleared through Range Control.

- a) Location of pickup site
- b) Radio frequency call-sign and suffix
- c) Number of patients by precedence
- d) Special Equipment required
- e) Number of patients by type
- f) Number and types of wounds injury or illness
- g) Method of marking pickup site
- h) Patient nationality and status
- i) Terrain Description

- LZ will be marked
- Range Control % higher will be notified

**Incident:** When an incident occurs on the range, regardless of injury or not, the OIC/RSO will immediately call a cease fire and report it to Range Control and the using unit's higher headquarters. OIC/RSO will take action as directed by Range Control. The cease fire will remain in effect until the problem is resolved and cleared through Range Control. If the incident results in an injury, the OIC/RSO will use the procedures outlined in the medical paragraph. The following information will be furnished by the OIC/RSO to Range Control:

- a. Designation of unit.
- b. Range and location
- c. Type of weapon involved.
- d. Type of ammunition involved.
- e. Brief summary of what happened.
- f. Personnel injuries and extent.
- g. Full Name, SS#, Rank and unit of injured personnel.
- h. Extent of property damage.
- i. Intentions regarding an AR 15-6 investigation.

**Weapons/Ammunition Malfunction Reports:** When a malfunction is experienced, the OIC/RSO will suspend all firing and immediately notify Range Control. The weapons and all components and ammunition involved will remain in place. The cease fire will remain in effect until cleared through Range

Control. An investigation is required and will be conducted by the ammunition and weapons inspection personnel and DOL.

7. Command and Signal:

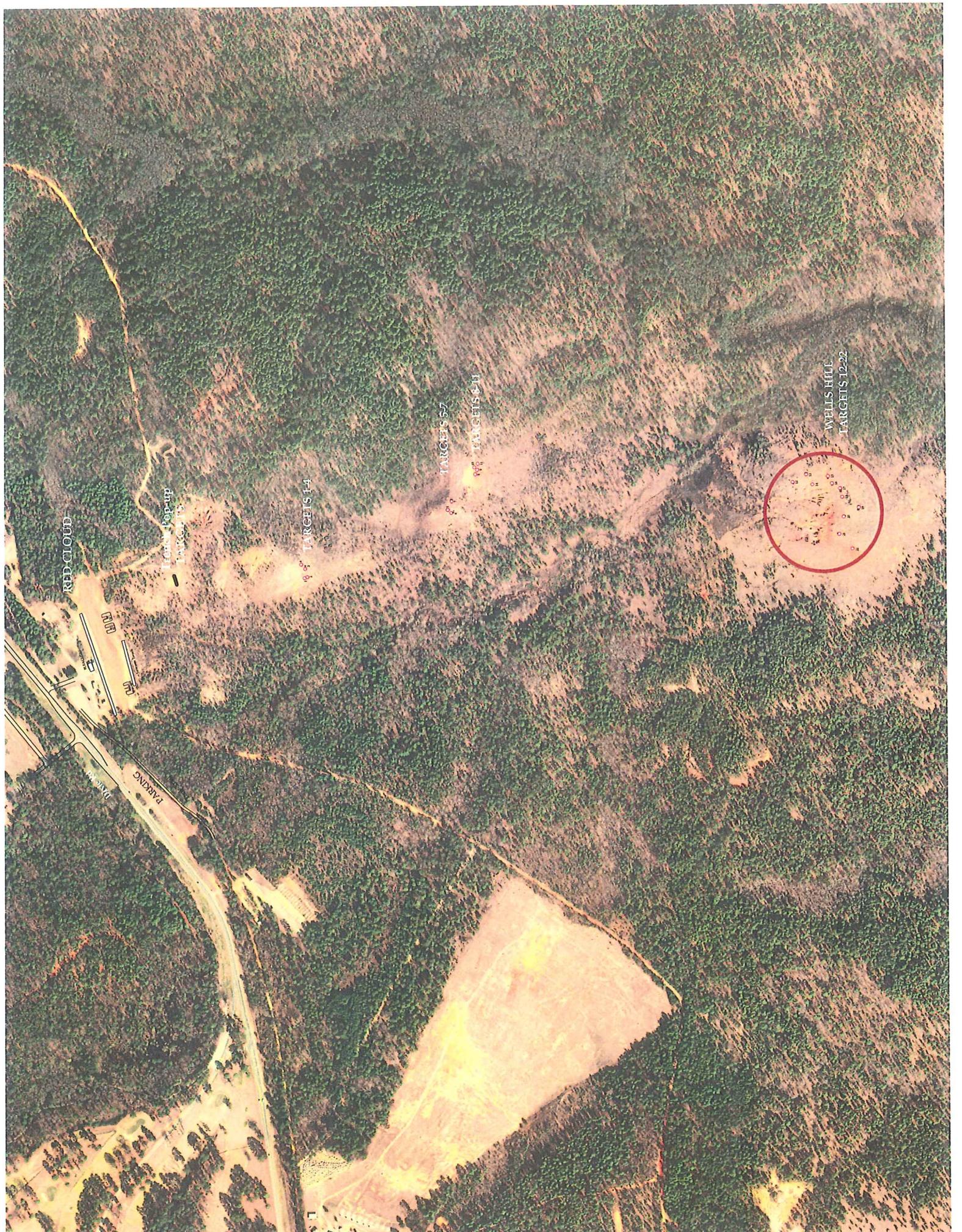
a) The RSO will maintain communication with range control via a Brick radio at all times; if communications are lost the unit will go into a self induced check fire until communications are restored.

b) Backup communication will be by Cell phone

8. POC for this exercise is the undersigned at 545-491.



Matthew Toulouse  
GS-7  
Training Technician



RED CLOUD

rental pop-up  
TARGETS 1-6

TARGETS 14

TARGETS 5-7

TARGETS 8-11

WELLS HILL  
TARGETS 12-22



PARKING



9-3-12

Red Cloud Range NCOA Mortar LFX (Log #7-07-11) Roadblock List , 15 March 2011

BLOCK	GRID	LOCATION	TYPE
A-1	911 792	Across firebreak 200m down Fiske Range at right end of KD berm. Permanently closed.	Cable
A-2	910 783	Off Sightseeing Rd on unnamed trail opposite of entrance to LRC.	Gate
A-4	925 766	Off Sunshine Rd 1,200 m W. of entrance to Grandstaff range.	Gate
A-5	936 762	Across entrance road to Grandstaff Range. 10m N. of Sunshine Rd.	Gate
A-6	939 763	Off Sunshine Rd 100m W. of Oswichee Creek. Permanently closed.	Cable/ Berm
A-8	968 740	Across unnamed trail 30m N. of Sunshine Rd and 800m N.W. of entrance to Griswold Range.	Gate
A-10	018 730	Across entrance road to Flint Range. 50m N. of Sunshine Rd.	Gate
A-11	019 731	Across Lumpkin Trail 30m N. of its intersection with Sunshine Rd.	Gate
A-11A	032 729	Rd guard pos # 2 for Garnsey Rng Obj 'E' (intersection Jamestown/Sunshine Rd's	Rd Grd # 2
A-12	033 742	Across Garnsey Rd 50m W. of its intersection with Jamestown Rd.	Gate
A-12A	029 744	Across Garnsey Rd 400m W. of A-12 Roadblock.	Gate
A-12B	028 741	Across trail 150m SW of A-12A Roadblock. 50m W. of Range Bldg.	Gate
A-12C	036 746	Road guard position # 3 for Garnsey Rng Objective 'E' (Jamestown at Lightning Rd)	Road Guard # 3
A-13	936 762	Across Sunshine Rd 10m E. of the entrance to Grandstaff Range. (Road guard location)	Gate
A-14	974 733	Across Sunshine Rd 10m W. of the entrance to Griswold Range. (Road guard location)	Gate
A-15	021 799	Across entrance road to Buchanan Range.	Gate
A-15A	021 798	Gate Across Good Luck Rd	Gate
A-15B	022 796	Road guard position # 1 for Garnsey Rng Objective 'E' (Jamestown road SW corner of Engineer building)	Road Guard # 1
A-18	993 828	Across Buckeye Rd 225m S. of its intersection with 1st Div Rd. and 50m E. of entrance to Duke Range	Gate
A-19	973 825	Across entrance road to Patton Range 400m S. of its intersection with 1st Div Rd.	Gate
A-20	974 827	Across entrance road to Dianda Range. 300m S. its intersection with 1st Div Rd.	Gate
A-22	015 817	Across unnamed trail 50m N. of Brinson Range and 10m off Jamestown Rd.	Gate
A23	983 756	Across Lumpkin Trail 200m E. of Griswold Range	Gate
A-23A	005 748	On Lumpkin trail 50m NW of Objective 'E' on Garnsey Range.	Gate
A-23B	005 747	Adjacent to A-23A gate on trail near intersection of Lumpkin trail	Install Gate
A-24	015 811	10m inside entrance gate of Brinson Rng south of entrance road.	Gate
A-25	016 789	Across fire break 10m W. of its intersection with Good Luck Rd.	Gate
A-26	013 798	On L/S of Buchanan Range 50 meters W. of chow area across entrance to fire break.	Cable
A-27	018 805	Across unnamed trl 175m N of intersection of Hourglass and Jamestown roads	Gate

BLOCK	GRID	LOCATION	TYPE
A-28	012 774	20 meters off Yankee road on south side of Galloway range.	Gate
A-28A	011 776	30 meters south of Range Tower	Gate
A-30	026 758	Across fire break leading to Garnsey Range. 140m SW of Brann Flat Range.	Gate
A-30A	027 758	Across trail leading to Garnsey Range 50m E. of A-30 Roadblock	Gate
A-31	020 745	Across fire break leading to Brann	Cable
A-32	989 724	Across entrance road to Kunzig Range.	Gate
A-33	974 734	Across entrance to Griswold Range.	Gate
A-33A	979 739	150 meters west of Target Systems bldg on trail leading to move to contact site	Gate
A-33B	982 739	20m N of Target Sys bldg on trail running on west side of bldg.	Install Gate
A-34	947 760	Across entrance to Minter Hill 700m E. of Oswichee Creek.	Gate
A-38	952 816	Across fire break 300m down range of firing line on Red Cloud Range on L. side of range.	Cable
A-39	956 822	Across unnamed trail 100m S. of bldgs on Buckner Range on L. side of range	Cable
A-40	967 823	Across fire break 50m down range on the left side of Pierce Range.	Gate
A-41	972 820	Across fire break located on the right side of the firing line on Patton Range.	Cable
A-42	978 820	Across fire break located on the left side of the firing line on Patton Range.	Cable
A-43	983 823	Across fire break located on the right side	Cable
A-44	986 823	Across fire break 100m E. of the 25m flat	Gate
A-45	990 827	Across fire break located on the right side of the firing line on Duke Range.	Gate
A-45A	991 829	Across Booker Breach site entrance road 200m past Duke Rng entrance gate	Gate
A-46	984 832	Across unnamed trail 100m W. of the intersection of 1st Div Rd and Ivy Rd.	Gate
A-47	990 833	Across unnamed trail 500m W. of the intersection with 1st Div & Buckeye Rd's	Gate
A-48	995 827	Across fire break located on the right side of the firing line on Porter Range.	Cable
A-49	998 827	Across fire break located on the left side of the firing line on Porter Range.	Cable
A-50	000 830	Across unnamed trail 200m W. of entrance to Maertens Range.	Gate
A-51	031 791	Barrier on Furman Rd	Barrier 1
A-52	034 776	Barrier on Yankee Rd	Barrier 2
A-53	035 776	Gate to Cole Range	Barrier 3
A-54	046 749	Barrier off Lightning Rd on unnamed trail	Barrier 5
A-55	057 759	Barrier off Lightning Rd on unnamed trail	Barrier 4

### COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK MORTAR LFX		2a. DTG BEGIN 140010CT12	2b. DTG END 132359OCT13	3. DATE PREPARED (YYYYMMDD) 20120904
4. PREPARED BY				
a. LAST NAME CAREY		b. RANK SFC		c. POSITION ASST. BRANCH CHIEF
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL
Mortar LFX	Range / General Situational Awareness	H	Range OIC or Safety Officer will: 1. Review the Composite RMWS prior to the training.	M
			2. Prepare a daily risk assessment worksheet and factor in current weather and range conditions.	IAW FM 5-19, Composite Risk Management
			3. Ensure a dedicated evacuation vehicle and combat lifesaver with aid bag are available. Inventory combat lifesaver's first aid bag.	IAW FM 3-22.90, Mortars
			4. Identify soldiers with medical problems having a potential to impact training to include minor illnesses, allergies, previous heat and/or cold weather injuries, or environmental sensitivities. Soldiers with medical problems will place a stripe of tape in the colors indicated, at least one inch wide around the upper left shoulder strap of LBE and also around the ear plug case: Hot weather injury = Red tape, Cold weather injury = Blue tape, Allergies/Bee Stings = Yellow tape, Medications = White tape	IAW NCOA Safety SOP IAW MCOE PM 350-6-6  Licensed Driver, DDG Card
Additional space for entries in Items 5 through 11 is provided on Page 2.				
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (Check one)				
<input type="checkbox"/> LOW <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH				
14. RISK DECISION AUTHORITY				
a. LAST NAME HAIN	b. RANK CSM	c. DUTY POSITION Commandant		d. SIGNATURE 

DA FORM 7566, APR 2005

Page 1 of 11  
APD PE V3.00ES

**Received**  
14 SEP. 2012

ITEMS 5 THROUGH 12 CONTINUED:

5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Mortar LFX			5. Review evacuation procedures and reporting procedures for serious incidents. Plan to evacuate Soldiers with allergic reactions, anyone within 25 meters of a lightning strike, cold / hot weather injuries, snakebite, or anyone showing symptoms beyond the range OIC's experience and the combat lifesaver's ability to treat. The OIC/RSO will direct MEDEVAC when the danger of loss of life, limb, or eyesight exists. 6. Transporting to/from training area.				
	Negligent Discharger/Fratricide	H	Range OIC or Safety Officer will: 1. Cadre will supervise Soldiers while they are firing. 2. RSO will brief all Soldiers on cease fire procedures. Any Soldier can call cease fire if unsafe act is observed. 3. Range OIC/RSO ensure that all Soldiers on the firing line are in the proper uniform (ACU's, LBE, ACH, Eye Protection, & Ear Protection) before and Soldier starts dropping rounds. 4. Gun safeties will closely supervise Mortar crews. Mortar crews will only handle rounds after the command of fire has been given. 5. All fires will be cleared by the Gun Safety. 6. RSO will ensure minimum safe distance is enforced. 60mm/81mm: 35 meters 120mm: 60 meters 7. Range OIC and RSO will go to a self imposed check-fire during accidents or injuries. If there is an injury, Range Control will be notified so that the safety inspectors can inspect the weapon and ammunition.	M	IAW MCoE 350-19, Range & Terrain	OIC/RSO, Gun Safeties	
	Soldier Exposed to Radioactive Materials	M	1. Brief Soldiers on dangers of exposure to Tritium (H3) gas sealed in the glass tubes of the M64/67 Sight unit and the M58/59 aiming post sights.	L	IAW FM 3-22.90, Mortars	OIC/RSO, Gun Safeties	

ITEMS 5 THROUGH 12 CONTINUED:											
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (M/HO)	12. WAS CONTROL EFFECTIVE?				
			<ul style="list-style-type: none"> <li>2. Brief students on the proper handling of sights and aiming posts.</li> <li>3. Remove damaged or leaking sights with rubber gloves and place in double plastic bags and label.</li> <li>4. Turn in damaged sights to the weapons pool.</li> <li>5. Soldiers exposed to tritium gas will be evacuated to hospital for observation.</li> </ul>								
	Primer or Charge Ignites Due to Mishandling of Mortar Ammunition	M	<ul style="list-style-type: none"> <li>1. Brief Soldiers on proper handling of mortar ammunition.</li> <li>2. All rounds will be inspected by the Gun Safety for proper settings and damage.</li> <li>3. Gun Safeties on firing line only allow soldiers to handle ammunition after command of fire has been given.</li> </ul>	L	IAW MCoE 350-19, Range & Terrain IAW FM 3-22.90, Mortars	OIC/RSO, Gun Safeties					
	Round Fires From Tube During Misfire Procedures	H	<ul style="list-style-type: none"> <li>1. Misfire procedures will be briefed and rehearsed.</li> <li>2. Any Soldier can call misfire.</li> <li>3. Only Gun Safety and Cadre will handle a misfire as outlined in FM 3-22.90. Mortars, page 4-11. All Soldiers will move 50 meters behind the gun for 60mm &amp; 81mm, and 100 meters for the 120mm. Misfire rounds will be kept separate from all other ammunition.</li> <li>5. The safety pin will be replaced in the round for turn-in to the ASP. The ASP will be informed the round was a misfire at turn-in.</li> <li>6. Range Control will be notified if the safety pin cannot be replaced.</li> <li>7. Misfires are removed only on the command of the OIC.</li> </ul>	M	IAW FM 3-22.90, Mortars IAW MCoE 350-19, Range & Terrain	OIC/RSO, Gun Safeties					
	Body Part Not Clear of the Muzzle	H	<ul style="list-style-type: none"> <li>1. Brief Soldiers on the proper techniques for hanging a mortar round.</li> <li>2. Actions will be rehearsed prior to live fire.</li> </ul>	M	IAW FM 3-22.90, Mortars IAW MCoE 350-19, Range & Terrain	OIC/RSO, Gun Safeties					
	Round Lands Outside the Impact Area	H	<ul style="list-style-type: none"> <li>RSO and the Gun Safeties will:</li> <li>1. RSO will inspect all set up and safety data on the M32 LHMBC and the M16 Plotting Board.</li> </ul>	M	IAW FM 3-22.90, Mortars IAW MCoE 350-19, Range & Terrain	OIC/RSO, Gun Safeties					

ITEMS 5 THROUGH 12 CONTINUED:

5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Mortar LFX			<ol style="list-style-type: none"> <li>Declinate the M2 Aiming Circle.</li> <li>Inspect bore sight on all firing mortars for deflection and elevation and that bubbles are level.</li> <li>Ensure the correct charge is on the firing round.</li> <li>Ensure safety "T" is placed on each firing mortar.</li> <li>Ensure the correct time setting is on the time fuze.</li> <li>Ensure baseplates are settled.</li> <li>Immediately notify Range Control of a round out of the impact area.</li> <li>Freeze all data until Range Control has completed their investigation.</li> </ol>				
	Hearing Loss	M	<ol style="list-style-type: none"> <li>Ensure Soldiers are wearing hearing protection when firing.</li> <li>Ensure extra hearing protection is available.</li> </ol>	L	IAW MCoE 350-19, Range & Terrain IAW NCOA Safety SOP	OIC/RSO, Gun Safeties	
	Soldier Bitten/Stung by Snakes or Insects	M	<p>Range OIC or Safety Officer will:</p> <ol style="list-style-type: none"> <li>Inform the students of the various types of wildlife that are hazardous and warn them not to handle or harass the wildlife during training.</li> <li>Identify and ensure personnel with medical problems such as allergic reactions to insect bites are monitored and supervised.</li> </ol>	L	IAW MCoE 350-19, Range & Terrain IAW NCOA Safety SOP IAW MCoE PM 350-6-6	OIC/RSO, Gun Safeties	
	Fires	M	<p>RSO/Tower Operator:</p> <ol style="list-style-type: none"> <li>Observe down range for any fires that have started due to the Soldiers firing.</li> <li>Call a cease fire if fire has the potential to cause a hazard or damage to Soldiers' and/or range equipment.</li> <li>Notify Range Control of any fires that cannot be extinguished and requires outside support.</li> </ol>	L	IAW MCoE 350-19, Range & Terrain	OIC/RSO, Gun Safeties	
	Burning Charges	M	<p>OIC/RSO will:</p> <ol style="list-style-type: none"> <li>Identify a suitable location to burn charges.</li> <li>Have a fire extinguisher and supervise the burning.</li> </ol>	L	IAW MCoE 350-19, Range & Terrain	OIC/RSO	

ITEMS 5 THROUGH 12 CONTINUED:

5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Mortar LFX	Lightning	M	OIC/RSO will: 1. Cease all outside activity and , if possible, move personnel into building. 2. Ensure weapons are stacked at least 50 meters away from all personnel. If time is not available, leave weapons on the ground/firing line within view of Soldiers. 3. Soldiers will ground all metal objects, to include dog tags, helmet, LBE, and weapon in an area away from personnel. 4. If a building is not available, move personnel into an open, low area, or to the base of a hill. 5. Ensure all personnel are away from fences, electrical wiring, vehicles, masses of metal, or other conductors. 6. Ensure all personnel remain in buildings or other safe areas until the lightning danger has ceased. 7. When marching in formation, Soldiers will increase the minimum distance and interval to twice that normally maintained. 8. Do not use radios, nor will Soldiers carry radios. 9. Restrict the use of telephones and other electrical devices. 10. Soldiers will evacuate from areas containing television antennas, relay antennas, or vehicles with whip antennas. 11. Personnel will dismount from vehicles and move to a safe distance (Approximately 100 meters, depending on terrain and conditions). 12. Personnel will not huddle together if unavoidably caught in flat, open space, or on bare hilltops. Instead, they will disperse to reduce the potential attraction of lightning.	L	IAW MCoE 350-19, Range & Terrain, IAW NCOA SOP, Annex I, Appendix 4  IAW TRADOC Guide for Lightning protective measures for personnel	OIC/RSO, Gun Safeties	
			13. When lightning is within eight miles or lightning is observed				

ITEMS 5 THROUGH 12 CONTINUED:

5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Mortar LFX	Heat Illness	H	<p>1. Cadre will monitor wet bulb for heat category. Previous heat injuries will be monitored through the buddy system and cadre. Update daily risk assessment if unit road march</p> <p>marches to training. Brief all Soldiers on signs of heat injuries.</p> <p>2. Heat Categories will be enforced as follows * See Heat Category Chart</p> <p>Easy Work - Weapon Maintenance - Walking Hard Surface at 2.5 mph, 30lb Load - Manual of Arms</p> <p>- Marksmanship Training - Drill and Ceremony</p> <p>This Training Event is Categorized as Easy</p> <p>Other Consideration: 1. Daily water consumption not to exceed 12qts 2. Evacuate heat casualties IAW serious incident guidelines/post requirements</p> <p>3. Identify previous heat injuries 4. Monitor eating of meals and record water consumption with card or cord system 5. Brief all soldiers on signs of heat injuries</p> <p>6. Heat injury has a cumulative effect. Cadre need to take into account the previous 72 hour heat/temperatures and training events. 7. Leaders have the authority to relax the uniform as appropriate. 8. Rehearse man-down drills.</p>	M	<p>IAW NCOA SOP, Annex I, Appendix I</p> <p>IAW TRADOC Reg. 350-29, 2.2 Heat Injury Prevention and Treatment</p> <p>Enforce Buddy System</p>	OIC/RSO, Gun Safeties, Enforce Buddy System	
	Cold Weather Injuries	H	<p>1. All Soldiers with previous cold injuries will be identified and closely monitored through the buddy system, cadre, and instructors.</p> <p>2. Immersion foot, cause: prolonged immersion in cold water, usually in excess of 12 hours at temperatures below 50 degrees Fahrenheit.</p>	M	<p>IAW TRADOC Reg. 350-29, RSO/OIC 3.2, Cold Injury Prevention and Treatment</p> <p>1. Safety brief to students and leaders. 2. Direct supervision throughout event.</p>		





# RECORD OF ENVIRONMENTAL CONSIDERATION (REC)



Date Submitted: 8/20/2012

EMD Number: 1223318      Project#: Unknown      Project Title: HEAVY WEAPONS LEADER COURSE

Description of proposed action:

USED FOR CONDUCTING OF HEAVY WEAPONS LEADERS COURSE LIVE FIRE EXERCISE. INERT TOW WARHEADS WILL BE FIRED. TOW/ITAS(WH05, M2 .50 CAL BALL AND TRACER(A555), MK19(B584)

Project Location:

COOLIDGE, COOLIDGE LEFT, RED CLOUD

Amount, Description, Location of Disturbance/Digging:

None

Number of Personnel:

160

Type of Ammunition:

50 CAL MK 19 INERT  
TOW, Live and Blank

Number/Types of Trees:

None

Size of Project Area:

Duration of Action: Start: 10/1/2012      Stop: 9/30/2013

Proponent: christopher.m.morse 545-8594

Organization/Unit: E CO 2-29 IN S-3

Number/Types of Vehicles:

Number of vehicles:7  
Types of vehicles:HUMMV  
No-Vehicles will be going off road.

\*\*\*\*\*  
DECISION: Concur with conditions

This Action is adequately covered in the Existing EA titled: 'Ongoing Mission and siting Activities, USAIC, FT.Benning, GA.'

(NA): Training involving LIVE FIRE and tracked vehicles has NO CATEX -- "Ongoing Mission and Siting Activities, USAIC, Ft. Benning, GA."

## REC APPROVED THROUGH 30 SEPTEMBER, 2013

Hazardous Materials/Waste

Conditions:

Ted Williams (706 545 7579), 8/21/2012

Appropriate precautions must be taken to prevent hazardous material spills. Have adequate quantities of spill response supplies on hand. If a spill occurs use notification procedures as outlined in the Fort Benning Hazardous Waste Management Plan. Contain and clean up spill according to guidance provided by the Environmental Protection Management Branch. Any waste generated must undergo a waste stream analysis to determine appropriate management requirements. If any hazardous waste is generated it must be managed in accordance with Federal, State, Army and Fort Benning regulations.

Defective, misfired, or otherwise unserviceable munitions must be managed IAW/MCOE Reg.350-19-5-10, Para 9-2 (Proper management of Misfired munitions). All excess, munitions must be returned to the Ammunition Supply Point after the field exercise is completed. A dud shall not be removed from the range; it will be marked, called into range control and will be properly disposed of by EOD personnel IAW/MCOE Reg. 350-19, 23 Jul 2010.

Rubbish, empty containers and other waste (including used smoke/C2 canisters) should be removed from the training area after the training is completed. Contact EPMB for detailed information on the proper disposal of waste products resulting from the exercise. Contact POC below for any questions or additional guidance.

Noise

Conditions:

Ellis Leeder ( 706 545 2400), 8/20/2012

This is training operations that must be conducted. If there is any noise complaints received, the Environmental Management Division Installation Operational Noise Monitoring Program (IONMP) and or Public Affairs Office (PAO) programs will investigate and then recommending operational noise mitigation actions to the appropriate personnel for the training actions. In accordance with the Army's policy on environmental noise management, all efforts shall be made to minimize noise annoyances to the highest extent practicable with training operations without interfering with the proposed missions. Please follow the fly friendly program avoiding no fly zones. Please follow good smoke management practices not allowing smoke or dust to travel off Installation boundary into public areas or roads. Please increase distance between vehicles when dust conditions are extreme, see Table 5-3. CS gas use should be utilized in designated areas only, contact Range Control for a listing of approved sites. If any assistance or a copy of MCoE Regulation 350-19 or the IONMP noise plan is needed for review, please feel free to contact Ellis Leeder at 706.545.2400 or email ellis.p.leeder.civ@mail.mil or visit the Range Control Website for the updated version of MCoE Regulation 350-19

CWA - Training

Conditions:

Jessica Taylor (706-604-4572), 8/20/2012

Environmental Review: Caution within training areas and motor pools should be taken to protect all nearby waterways (including perennial, intermittent streams and wetlands); as well as ground surfaces and any other sensitive areas in the vicinity of the training areas. Potential spills/releases from this activity that may occur before and/or during the FTX include: 1. Discharge and/or improperly disposal of oil or hazardous substances into or upon land, water, or into ground water areas from storage, handling and/or transportation of hazardous materials/waste; 2. Vehicle/equipment/generators leaks; 3. Fuel loading/unloading/refueling operations; 4. Field mess facilities/equipment/operations, and/or 5. Ammunitions /explosives (as applicable, before and/or during the FTX).

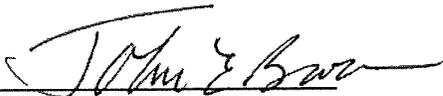
General SPCC Requirements: Ensure all hazardous materials are properly storage to prevent spill/discharges, to meet safety requirements for storage, and that containers are not exposed to the weather. Have adequate spill response supplies available during exercise for any spills that may likely occur. Use drip pans under vehicles and provide secondary containment for any fueling activities and hazardous material/waste storage. Locate all refueling operations and storage of hazardous materials/waste away from waterways and sensitive areas. See attached section on prevention procedures and CHECKlist (Example Unit/Activity SOP for Training and Deployment) to be used during training exercise to comply with SPCC plan requirements. Ensure all wastewater from field mess equipment/operations particularly those involving oil/grease are collected and dispose properly. Do not discharge any wastewater into storm drains or dispose of oil/grease waste directly into land.

General ISCP Requirements: In the event of a spill/discharge -- notify Range Control by radio or call 544-6291, and they will notify E-911 for Fire Department/HAZMAT Team assistance and/or notification of the EMD office (Spill Beeper 706-317-6584). As appropriate, and if personnel are trained -- REACT to minimize spill damages. Submit a spill report to the EPMB Spill Program Manager (use Spill Response Report attached). All spills reaching navigable water must be reported immediately. The unit is responsible for the final cleanup of any spill during this exercise. Coordination with this office is required for clearance of the site.

Natural Resources - RCW

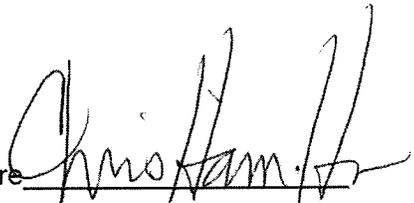
None

Michael Barron (706 544 7080), 8/20/2012

Signature 

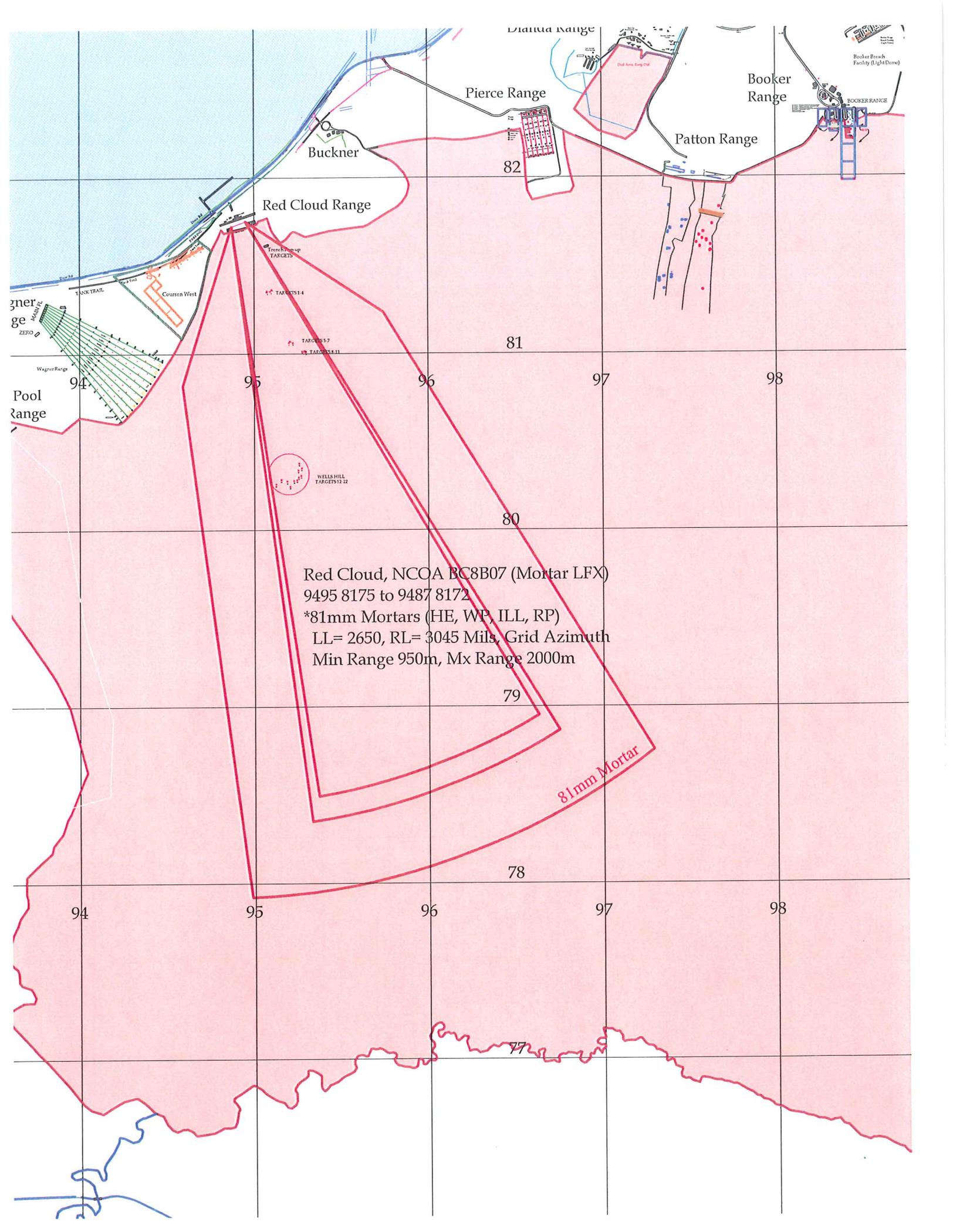
John E Brown  
NEPA Program Manager

Date 21 Aug 2012

Signature 

Christopher E. Hamilton, PhD  
EPMB Chief

Date 21 Aug 12



Red Cloud, NCOA BC8B07 (Mortar LFX)  
9495 8175 to 9487 8172  
\*81mm Mortars (HE, WP, ILL, RP)  
LL= 2650, RL= 3045 Mils, Grid Azimuth  
Min Range 950m, Mx Range 2000m

81mm Mortar