

FIRING/NONFIRING DATA

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

TO: Chief,
Range Division,
Directorate of Plans, Training, Mobilization and Security
Fort Benning, GA 31905

Date: 04 November 2013
Range: Ware Range
Title: OSUT Gunnery
Problem No:

Log 11-3-13

THRU: 194th AR BDE
S-3

FROM: 1-81 AR, 194th AR BDE
S-3

SECTION I, TYPE OF TRAINING

a. Live Fire b. Non-live Fire CP/Controller Coordinates: GA 0963 9728 (Tower)

SECTION II, DEMOLITIONS/GRENADES/MINES/PYROTECHNICS

Coordinates	Type	Model/DODAC	Size of Charges
N/A	N/A	N/A	N/A

SECTION III, WEAPONS/AMMUNITION REQUESTED

Coordinates of Weapons Position	Type Weapon/Model Number	Type Ammunition	Left Limit	Right Limit
See Weapons & Ammo List	See Weapons & Ammo List	See Weapons & Ammo List	See Weapons & Ammo List	See Weapons & Ammo List

SECTION IV, LIVE FIRE EXERCISES Attach the following:

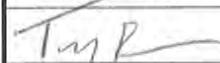
SECTION V, NON-LIVE FIRE TRAINING

- Scenario of training to be conducted:
- Sketch of area:
- Risk Assessment:
- Attach FB Form 350-19-2-E-R if Mortar or artillery is being fired:

- Training area(s) to be occupied:
- Scenario of training to be conducted:
 - Sketch of area(s) to be occupied:
 - Risk Assessment:

Name/rank of requesting officer:

Brown, Troy W. SFC



Name/rank of Major Unit S3/Commander:

Dawson A. Plummer/LTC



SECTION VI, FOR RANGE DIVISION USE

DATE: 15 JAN 14

TO: 1-81 AR, 194th BDE

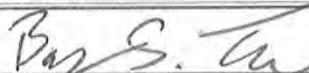
FROM: Range Division,
Directorate of Plans, Training,
Mobilization and Security
Fort Benning, GA 31905

- a. Roadblocks to be closed:
- b. Road(s) to be closed/road barrier locations:
- c. Remarks:

K: 5, 12, 14, 15, 16, 16A, 16B, 17, 20, 21, 41, 43, 44, 47, 50: 9, 18.
Also K-50. see ROADBLOCKS List enclosure.

d. This approval expires: 14 JAN 16

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

14 January 2014

MEMORANDUM FOR Commander 1/81st AR Bn., Attn: SFC Troy Brown, Fort Benning, GA 31905

SUBJECT: 1/81st AR Bn. OSUT Gunnery at Ware Range CONOP and Safety Review

1. References.

- a. 1/81st AR Bn. OSUT Gunnery at Ware Range, 09 January 2014
 - b. Army Regulation 385-10, The Army Safety Program, 27 December 2013
 - c. Army Regulation 385-63, Range Safety, 30 January 2012
 - d. Department of the Army Pamphlet 40-501, Hearing Conservation Program, 10 December 1998
 - e. Department of the Army Pamphlet 385-10, Army Safety Program, 19 January 2010
 - f. Department of the Army Pamphlet 385-30, Mishap Risk Management, RAR 01 February 2010
 - g. Department of the Army Pamphlet 385-63, Range Safety, 30 January 2012
 - h. Field Manual 5-19, Composite Risk Management, August 2006
 - i. MCoE Regulation 350-19, Range and Terrain Regulation, 01 March 2013
 - j. MCoE Policy Memorandum 385-6-14, Composite Risk Management, 22 October 2012.
2. Document received on 14 January 2014.
3. Concur w/comment.

ATZB-SO

SUBJECT: 1/81st AR Bn. OSUT Gunnery at Ware Range CONOP and Safety Review

a. CONOP, paragraph 3a, pg 1. Individual vehicles, tanks, fighting vehicles, and armored personnel carriers must display flags to show the vehicle's weapon status IAW DA Pam 385-63, paragraph 2-2h.

b. CONOP, paragraph 3a, pg 1. Recommend that all "crews" be battle rostered to stabilize the training and mitigate the risk.

c. CONOP, paragraph 3b, pg 2. Cadre will not be qualified in Tables II – V prior to the execution of the gunnery exercise. This is contrary to FM 3-20.21, paragraph 15.84 guidance.

d. CONOP, paragraph 3b, pg 2. Soldiers in training will not be qualified in Tables II – V prior to the execution of the gunnery exercise. This is contrary to FM 3-20.21, paragraph 15.84 guidance.

e. Ware Range Diagram. Posted range speeds are not supported by the CONOP.

f. RMW, Block 6, pg 3. "Students in training engage troop targets and coaxial MG in an offensive tank engagement", recommend that the Initial and Residual risk be elevated to "EXTREMELY HIGH" and "HIGH". The omission of Tables II – V from the train up and plan elevate the risk to a much higher level.

g. RMW, Block 6, pg 3. "Not completing all prerequisites for 120mm live fire as per DA Pam 350-38 and FM 3-20.21 ", recommend that the Initial and Residual risk be elevated to "EXTREMELY HIGH" and "HIGH". The omission of Tables II – V from the train up sequence will elevate the risk to a much higher level.

h. Recommend that the Commanding General endorse this action due to the lack of cadre and crew qualifications.

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


JILL E. CARLSON
Director, MCoE/USAG Safety

Ware Range, 194th AR BDE, 1-81 OSUT Gunnery (Log #11-03-13) Weapons/Ammo And Target List

Firing Positions	Weapons	Ammunition	Left Limit, Mils Grid Azimuth	Right limit, Mils Grid Azimuth
Baseline: (Screening) 0968 9735 to 0968 9724	M256	120mm M831, M865, M1002	1500	1835
Baseline 0968 9735 to 0968 9724	M256 M2 M240B/C	120mm M831, M865, M1002 .50 cal Ball/Tracer 7.62mm Ball/Tracer	1290 1290 1195	1925 1925 2085
Offence Start 0970 9724 Stop 0983 9722	M240B/C	7.62mm Ball/Tracer	1075	1870
BP 1: 0970 9723 BP 2: 0970 9720	M256 M2 M240B/C	120mm M831, M865, M1002 .50 cal Ball/Tracer 7.62mm Ball/Tracer	1245 1245 1075	1830 1830 2065

Firing Positions	Weapons	Ammunition	Targets
Baseline: (Screening) 0968 9735 to 0968 9724	M256	120mm M831, M865, M1002	Panels Located at the North End of M1 And Right of Target 220. See Sketch For Location.
Baseline 0968 9735 to 0968 9724	M256 M2 M240B/C	120mm M831, M865, M1002 .50 cal Ball/Tracer 7.62mm Ball/Tracer	204-212, 214-225, M: 1, 2. 201,203-225, M: 1, 2. C1-C7.
Offence Start 0970 9724 Stop 0983 9722	M240B/C	7.62mm Ball/Tracer	C1, C5, C6, C7, MIT 303
BP 1: 0970 9723 BP 2: 0970 9720	M256 M2 M240B/C	120mm M831, M865, M1002 .50 cal Ball/Tracer 7.62mm Ball/Tracer	201, 203-225. M: 1, 2. 201,203-225. M: 1, 2. C1-C7. Buildings 1-6.

NOTE! BP 1 & BP 2: Buildings 1-6 Will Only be Engaged Through Doors And Windows to Prevent Damage to Structures.

COMPOSITE RISK MANAGEMENT WORKSHEET

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

1. MSN/TASK M1A1/A2 MAIN GUN FIRE/GOLD PHASE FTX	2a. DTG BEGIN 010800OCT13	2b. DTG END 302359SEP14	3. DATE PREPARED (YYYYMMDD) 20130924
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4. PREPARED BY			
a. LAST NAME BROWN	b. RANK SFC	c. POSITION BN Master Gunner 1st Battalion, 81st Armor Battalion, Fort Benning, GA 31905	

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?
	Injuries requiring MEDEVAC with no CASEVAC available.	E	Wheeled CLS vehicle on site with CLS. Evacuation route from range to hospital rehearsed. Map with total driving time and graphic overlay.	H	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Soldiers being hit by moving vehicle in daylight or hours of limited visibility.	E	FRAGO light data determines movement technique. Ground guides have a red lense light source during night operations. Cadre maintains awareness of all vehicle movement/speeds.	H	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Fratricide from Students in Training conducting day/night engagements with main gun and machine guns.	H	MG presents all "targetry" for crews to properly identify. OIC designates targetry during operations. Cadre verifies targets acquired prior to engaging with weapon systems.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Injury from debris, shrapnel, or tank fires.	H	FRAGO requires the wearing of the complete NOMEX uniform and eye pro. Crews rehearse crew evacuation drills. TC takes all commands from the tower NCOIC and/or MG.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Students in Training engaging targets with M2 .50 Caliber HB MG on tripod or modular stand.	H	Qualified cadre per tripod. Sandbags on modular stands limits vibration. Hearing and eye pro worn by all Soldiers. RSO observes all actions.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Weapons orientation outside of range boundaries.	H	FRAGO describes conduct of range. OIC designates range TRPs. Cadre will identify and designate range fan markers and TRPs to the gunner prior to every engagement.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	

Additional space for entries in Items 5 through 11 is provided on Page 2.

13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (Check one)

LOW
 MODERATE
 HIGH
 EXTREMELY HIGH

14. RISK DECISION AUTHORITY			
a. LAST NAME KING	b. RANK COL	c. DUTY POSITION 194th BRIGADE COMMANDER	d. SIGNATURE

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 EFFEC-TIVE?
	Dehydration/ Hot or Cold Weather Illness.	H	Identify water point and ensure all Soldiers are properly hydrated the day prior to and the day of training. Curtail training as needed according to the appropriate work/rest cycle.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Crushing injuries due to main gun recoil/driver moving into and out of the driver's station.	H	Cadre will ensure that the loader have cleared the path of recoil before firing main gun. Turret traverse lock will be engaged while transferring Soldiers into the driver's station.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Ammo fire and flare backs during firing.	H	Cadre will instruct and inspect all Soldiers on proper wear of the NOMEX uniform. All turret guards properly in place during firing. Crews instructed and rehearsed on crew evac drills.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Operating multiple vehicles with personnel on the ground during towing procedures.	M	Cadre gives detailed instruction to all ground guides on hand & arm signals prior to movement. Cadre will emplace ground guides in front and behind vehicle, not between vehicles.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Mechanical failures for vehicles and weapon systems.	M	Proper PMCS/PCI prior to starting and completion of training. Cadre conducts prep-to-fire checks and AAC's prior to gunnery. MG verifies all AAC results with cadre.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Improper wear of NOMEX uniform during engagements.	M	Cadre will instruct and inspect all Soldiers on proper wear of NOMEX uniform. Cadre will enforce training prior to mounting vehicle and engagement of targets.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Misfire of main gun.	M	Crew conducts rehearsal for misfire procedures. Cadre ensures all crew members know and understand crew duties. MG ensures all crews conduct prep-to-fire checks.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Misfire of .50 caliber MG and M240 MG or negligent discharge.	M	Cadre ensures proper headspace & timing, maintains physical control of all ammunition, ensures weapon is placed on safe after engagements, and monitors muzzle awareness.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Inclement weather i.e., cold weather, snow, frost, rain, lightning, wind storms, and tornadoes.	M	FRAGO covers inclement weather site and equipment preparation for warnings from range control. Cadre monitor proper water consumption, food intake, and Solider's uniform.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Mounting/dismounting from vehicles.	M	Cadre will ensure that Soldiers acknowledge all verbal commands. Parking brake will engaged when the vehicle is stationary. Maintain three points of contact when mounted.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	

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?
	Students in Training engaging targets with M9 pistol, the M240 MG, M16A2 rifle, and M4 carbine.	M	Crew performs function check of all weapons before engagements. Tower NCOIC will direct crew to all "targetry". Cadre controls sectors of fire for crew with close ranges.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Laser damage to personnel.	M	OIC ensures that all personnel are out of the NOHAD and specular surfaces are removed or covered from the laser engagement area.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Changing conditions.	M	OIC will have daily written changes to the original risk assessment. These changes are briefed to all cadre and Soldier's prior to the start of training.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Students in Training engaging stationary and moving targets with 120mm main gun.	H	Vehicle Commander maintains control of the turret until target verified. Tower NCOIC will direct crew to all "targetry". Cadre controls sectors of fire for crew.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Students in Training engage troop targets with coaxial MG in an offensive tank engagement.	H	Vehicle Commander maintains control of the turret until target verified. Tower NCOIC will direct crew to all "targetry". Cadre controls sectors of fire for crew.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Not completing all prerequisites for 120mm live fire as per DA PAM 350-38 and FM 3-20.21	H	Vehicle Commanders (VCs) are validated on engagements and meet all prerequisites to live fire. VCs maintain positive control of tank crew, gun tube orientation, and firing.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	

COMPOSITE RISK MANAGEMENT WORKSHEET

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

1. MSN/TASK MIA1/A2 MAIN GUN FIRE/GOLD PHASE FTX	2a. DTG BEGIN 260800AUG13	2b. DTG END 252359JUL14	3. DATE PREPARED (YYYYMMDD) 20130826
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4. PREPARED BY		
a. LAST NAME BROWN	b. RANK SFC	c. POSITION BN Master Gunner 1st Battalion, 81st Armor Battalion, Fort Benning, GA 31905

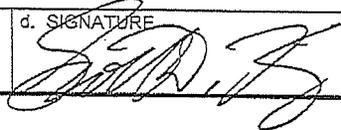
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
	Injuries requiring MEDEVAC with no CASEVAC available.	E	Wheeled CLS vehicle on site with CLS. Evacuation route from range to hospital rehearsed. Map with total driving time and graphic overlay.	H	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Soldiers being hit by moving vehicle in daylight or hours of limited visibility.	E	FRAGO light data determines movement technique. Ground guides have a red lense light source during night operations. Cadre maintains awareness of all vehicle movement/speeds.	H	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Fratricide from inexperienced crews conducting day/night engagements with main gun and machine guns.	H	MG presents all "targetry" for crews to properly identify. OIC designates targetry during operations. Cadre verifies targets acquired prior to engaging with weapon systems.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Injury from debris, shrapnel, or tank fires.	H	FRAGO requires the wearing of the complete NOMEK uniform and eye pro. Crews rehearse crew evacuation drills. TC takes all commands from the tower NCOIC and/or MG.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Inexperienced Soldier engaging targets with .50 Caliber HB MG on tripod or modular stand.	H	Qualified cadre per tripod. Sandbags on modular stands limits vibration. Hearing and eye pro worn by all Soldiers. RSO observes all actions.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Weapons orientation outside of range boundaries.	H	FRAGO describes conduct of range. OIC designates range TRPs. Cadre will identify and designate range fan markers and TRPs to the gunner prior to every engagement.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	

Additional space for entries in Items 5 through 11 is provided on Page 2.

13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (Check one)

LOW
 MODERATE
 HIGH
 EXTREMELY HIGH

14. RISK DECISION AUTHORITY

a. LAST NAME KING, SCOTT D.	b. RANK COL	c. DUTY POSITION 194th BRIGADE COMMANDER	d. SIGNATURE 
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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?
	Dehydration/ Hot or Cold Weather Illness.	H	Identify water point and ensure all Soldiers are properly hydrated the day prior to and the day of training. Curtail training as needed according to the appropriate work/rest cycle.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Crushing injuries due to main gun recoil/driver moving into and out of the driver's station.	H	Cadre will ensure that the loader have cleared the path of recoil before firing main gun. Turret traverse lock will be engaged while transferring Soldiers into the driver's station.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Ammo fire and flare backs during firing.	H	Cadre will instruct and inspect all Soldiers on proper wear of the NOMEX uniform. All turret guards properly in place during firing. Crews instructed and rehearsed on crew evac drills.	M	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Operating multiple vehicles with personnel on the ground during towing procedures.	M	Cadre gives detailed instruction to all ground guides on hand & arm signals prior to movement. Cadre will emplace ground guides in front and behind vehicle, not between vehicles.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Mechanical failures for vehicles and weapon systems.	M	Proper FMCS/PCI prior to starting and completion of training. Cadre conducts prep-to-fire checks and AAC's prior to gunnery. MG verifies all AAC results with cadre.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Improper wear of NOMEX uniform during engagements.	M	Cadre will instruct and inspect all Soldiers on proper wear of NOMEX uniform. Cadre will enforce training prior to mounting vehicle and engagement of targets.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Misfire of main gun.	M	Crew conducts rehearsal for misfire procedures. Cadre ensures all crew members know and understand crew duties. MG ensures all crews conduct prep-to-fire checks.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Misfire of .50 caliber MG and M240 MG or negligent discharge.	M	Cadre ensures proper headspace & timing, maintains physical control of all ammunition, ensures weapon is placed on safe after engagements, and monitors muzzle awareness.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Inclement weather i.e., cold weather, snow, frost, rain, lightning, wind storms, and tornadoes.	M	FRAGO covers inclement weather site and equipment preparation for warnings from range control. Cadre monitor proper water consumption, food intake, and Soldier's uniform.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Mounting/dismounting from vehicles.	M	Cadre will ensure that Soldiers acknowledge all verbal commands. Parking brake will engaged when the vehicle is stationary. Maintain three points of contact when mounted.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	

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?
	Engaging targets with M9 pistol, the M240 MG, M16A2 rifle, and M4 carbine.	M	Crew performs function check of all weapons before engagements. Tower NCOIC will direct crew to all "targetry". Cadre controls sectors of fire for crew with close ranges.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Laser damage to personnel	M	OIC ensures that all personnel are out of the NOHAD and specular surfaces are removed or covered from the laser engagement area.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	
	Changing conditions	M	OIC will have daily written changes to the original risk assessment. These changes are briefed to all cadre and Soldier's prior to the start of training.	L	FM 3-20.21, BDE SOP, TM 9-2350-264-10-1 & 2 with all changes, GTA 5-8-12, Safety brief.	OIC, NCOIC, RSO, Master Gunner, Cadre, Drill Sergeants, Vehicle Commanders.	



RECORD OF ENVIRONMENTAL CONSIDERATION (REC)



Date Submitted: 8/26/2013

EMD Number: 1323808

Project#: Unknown

Project Title: Tank Gunnery

Description of proposed action:

IET Soldiers will be firing 120mm main gun as well as the .50 cal, M240, M4, and M9 weapon systems. Wheeled and tracked vehicles will be maneuvering on the range, but not off road.

Project Location:

Ware Range

Amount, Description, Location of Disturbance/Digging:

None

Number of Personnel:

165

Type of Ammunition:

120mm, .50cal, 7.62mm, 5.56mm, 9mm Live

Number/Types of Trees:

None

Size of Project Area:

Duration of Action: Start: 10/1/2013 Stop: 9/30/2014

Proponent: troybrown

706-626-5030

Organization/Unit: 1-81 AR

Number/Types of Vehicles:

Number of vehicles: 20

Types of vehicles: M1A1/M1A2, HMMWV

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, 2014

Cultural Resources - Archeological

None

Edward Howard (706 545 1898), 9/6/2013

Noise

Conditions:

Ellis Leeder (706 545 2400), 8/27/2013

This is training operations request for training. If there is any operational 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 noise abatement areas. 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 CS gas sites. Please visit the Range Operations website to obtain a list of approved weapons per Range or Firing Points. Leave the training areas, firing range, latrines in a clean condition; contact Range Operations if unclean conditions are found or clean up costs or cleaning endeavors by proponent could occur to last user. 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, range guidance and other materials for your range packet. This 144r must be present at the training site when occupying compartment or ranges.

EMD Number: 1323808

IJO# Unknown

Project Title: Tank Gunnery

CWA - Training

Conditions:

Jessica Taylor (706 604 4572), 8/28/2013

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.

Hazardous Materials/Waste

Conditions:

Ted Williams (706 545 7579), 8/26/2013

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.

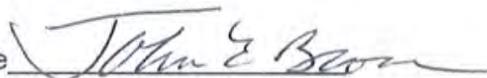
Rubbish, empty containers and other waste (including used smoke/C2 canisters) should be removed from the training area after the training is completed. Contact EPMB for detailed information on the proper disposal of waste products resulting from the exercise. Contact POC below for any questions or additional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

Natural Resources - RCW

None

Michael Barron (706 544 7080), 8/26/2013

Signature



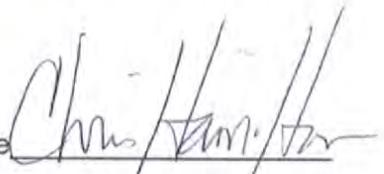
John E Brown

NEPA Program Manager

Date

10 SEP 2013

Signature



Christopher E. Hamilton, PhD

EPMB Chief

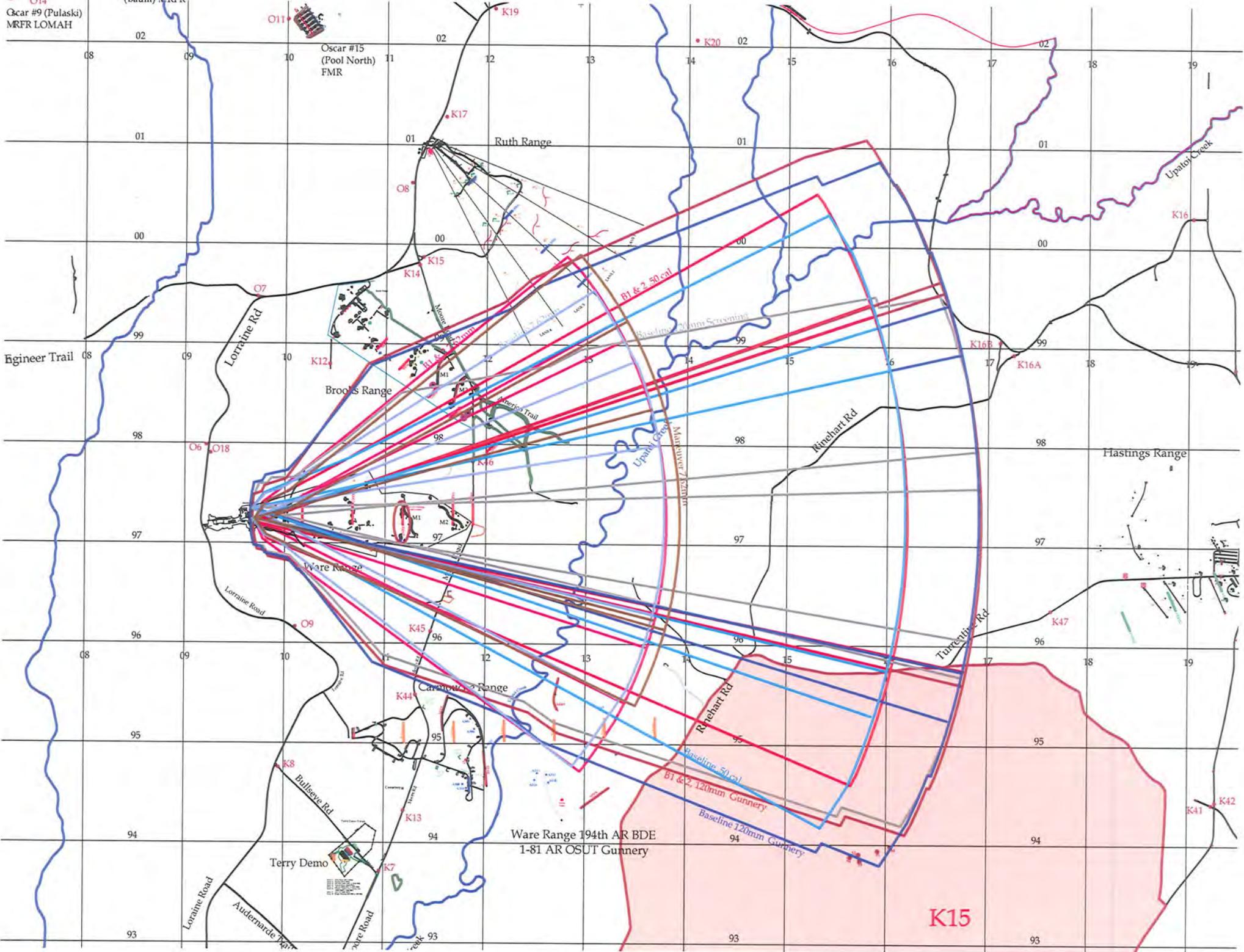
Date

11 Sep 13

Oscar #9 (Pulaski)
MRF LOMAH



Oscar #15
(Pool North)
FMR



Ware Range 194th AR BDE
1-81 AR OSUT Gunnery

K15



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MANUEVER CENTER OF EXCELLENCE
1ST BATTALION, 81ST ARMOR REGIMENT 194TH ARMORED BRIGADE
6998 OLD CUSSETA HWY BLDG 4200
FORT BENNING GA 31905-4500

ATZK-BAA

09 January 2014

MEMORANDUM FOR: CHIEF, RANGE OPERATIONS, FORT BENNING, GEORGIA, 31905

SUBJECT: Ware Range OSUT Gunnery

1. REFERENCES:

- a. FM 10-23, Basic Doctrine for Army Field Feeding and Class I Operations Management, 18 April 1996
- b. AR 385-63, Range Safety, 30 January 2012
- c. Composite Risk Management, July 2006
- d. DA PAM 385-63, Range Safety, 30 January 2012
- e. STP 21-24 SMCT, Soldier's Manual of Common Tasks(SMCT), 09 September 2008
- f. MCOE Regulation 350-19, Installation and Terrain Regulation, March 2013

2. PURPOSE: IAW guidelines identified in DA PAM 385-63 Range Safety, this memorandum explains the scheme of maneuver at Ware Range. This packet will supersede any previously submitted packets.

3. Scheme of Maneuver:

a. (Phase 1)Day 1(screening). This day is Bore sighting and screening of the tanks. This task begins with a non tactical movement from the HETT drop off sight to the range. Once there the gun tubes are oriented down range and the proper flags are displayed. Tanks are ground guided into position. The only time tanks move without ground guides is from the ready line to the firing positions. When 100% of personnel arrive at the range, all personnel will receive a safety brief. The tanks will be uploaded with enough ammo to screen main gun. Ammo will be handled and stored on firing tanks IAW -10 procedures. After upload tanks will move to the baseline and begin bore sighting at 1200 meters. All tanks in the fleet are equipped with eye safe lasers (ESL), and this should take no more than 1 hour. Once all personnel have finished bore sighting, the line will be cleared and all gun tubes will be elevated and the proper flags will be displayed. Movement from this point will be controlled from the tower with two frequencies, the firing push and the admin push. Both controlled at the tower. The tanks will fire one at a time, from the baseline to the standard screening panels at standard/known distance, controlled by the tower. Before leaving the baseline all tanks will be cleared by the RSO. Tanks will then return to the FOB after refueling (tailgate) to conduct after operations PMCS and go to guard status. The guard force will remain at the FOB and the Ammo pad throughout the night.

b. (Phase 2)Days 2-5 Execution. These days begin with identical movement thru bore sighting. After which the tanks will move to the ready line and mount all crew members. From there the tower will

ATZK-BAA
SUBJECT: Ware Range

control the tanks and move them to the firing positions. Each Soldier will first fire 100 rounds of 50 cal from the BP's. The main gun gunnery will commence with the tanks firing two day defensive engagements from the baseline, BP1, or BP2. The tanks, one at a time, will then move to and occupy the course road and conduct one offensive coaxial machine gun engagement completing their day run. Moving targets will be engaged with the 120mm main gun only from the baseline, BP1, or BP2. The night run will be conducted firing one engagement from a defensive position. The night engagement can be fired from the baseline, BP1, or BP2. When the tank commanders are complete with prep the fire checks, they will notify the tower and be placed into a firing order. Each soldier will load (6) 120mm rounds (4) in the day and (2) at night. Unit has the option of firing the .50 cal, 7.62mm coax, and the 120mm from all three positions (BP #1, BP #2, and the Center of the baseline). When firing 120mm from the baseline, BP1, BP2, and misfire pit cannot be occupied. When firing .50 cal, 7.62mm, and 5.56mm, from the baseline, BP1 and BP2 cannot be occupied. Only armored vehicles are allowed on the baseline when 120mm is firing and all vehicles must be buttoned up. There will a second safety brief before night firing.

c. The tanks will move to and occupy the course road and conduct one day offensive coaxial machine gun engagement. Crews will execute offensive engagements from 10mph to 20mph.

d. Stationary and moving targets will be engaged with the 120mm main gun only from the baseline, BP1, or BP2.

e. (Phase 3) Day 5. Once all firing is complete and the training objective has been accomplished, all weapons will be cleared by the RSO and the Tanks will be cleared by the RSO and the Master Gunner. At this time the range clearing procedures will begin so the unit can clear the range and all vehicles will be moved to the next training site.

4. Safety

a. Unit will use the standard 9 line MEDEVAC in case of illness or injury. Call 911 and determine what type of evacuation in the most appropriate for the injury. MEDEVAC will be IAM MCoE Regulation 350-19 and MCOE Regulation 40-2. Landing zone for MEDEVAC aircraft will be established prior to use and will be marked appropriately. Using units higher Headquarters and Range Control will be notified in event.

b. There will be no de-linking or re linking of any ammunition. Any ammunition that has been de-or re-linked in considered nonstandard and is prohibited from the range.

c. Weapons/Ammunition malfunction reports: When a malfunction is experienced, the OIC or Range Safety Officer will suspend all firing and immediately notify Range Control. Retain the weapon and all components and ammunition involved in place. An investigation is required and will be conducted by DOL.

d. In the event of an injury or incident the RSO will immediately call a cease fire until the problem is resolved. The RSO will render reports to Range Control and take action as directed by Range Control. In the event of an injury that could result in the loss of life, limb or eyesight he/she will call E911 and

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SUBJECT: Ware Range

request air/ground evacuation. The following information will be furnished by the OIC/RSO to Range Control:

- (1) Designation of unit.
- (2) Range by location
- (3) Type of weapon involved.
- (4) Type of ammunition involved.
- (5) Brief summary of what happened.
- (6) Personnel injuries and extent.
- (7) Full Name, SS#, Rank and unit of injured personnel.
- (8) Extent of property damage.
- (9) Intentions regarding an AR 15-6 investigation.

e. Unit will maintain continuous contact with Range Control at all times. If communications are lost the unit will go into a self induced check fire until communications are restored.

f. Cease fire will be briefed in the safety briefing and the hand and arm signals will be identified along with other SOP procedures. Tank cadre members will monitor the internal frequency and the cease fire will be sent out over the radio.

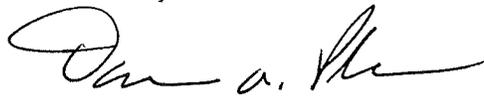
g. Hearing protection will be worn at all times once the range is in a hot status. Additional hearing protection will be provided for personnel missing their own and visitors. Double hearing protection will be worn by firing tank crews.

h. All weapon firers will be monitored closely on the ground and on Tank's to ensure weapons and ammunition stay inside the range fans. Tank firers will be monitored from inside the vehicle. The Cadre member will be in the Commanders seat and the student will be on the gunner's seat, so if there is an altercation the Cadre member can override the gun with the commander's override.

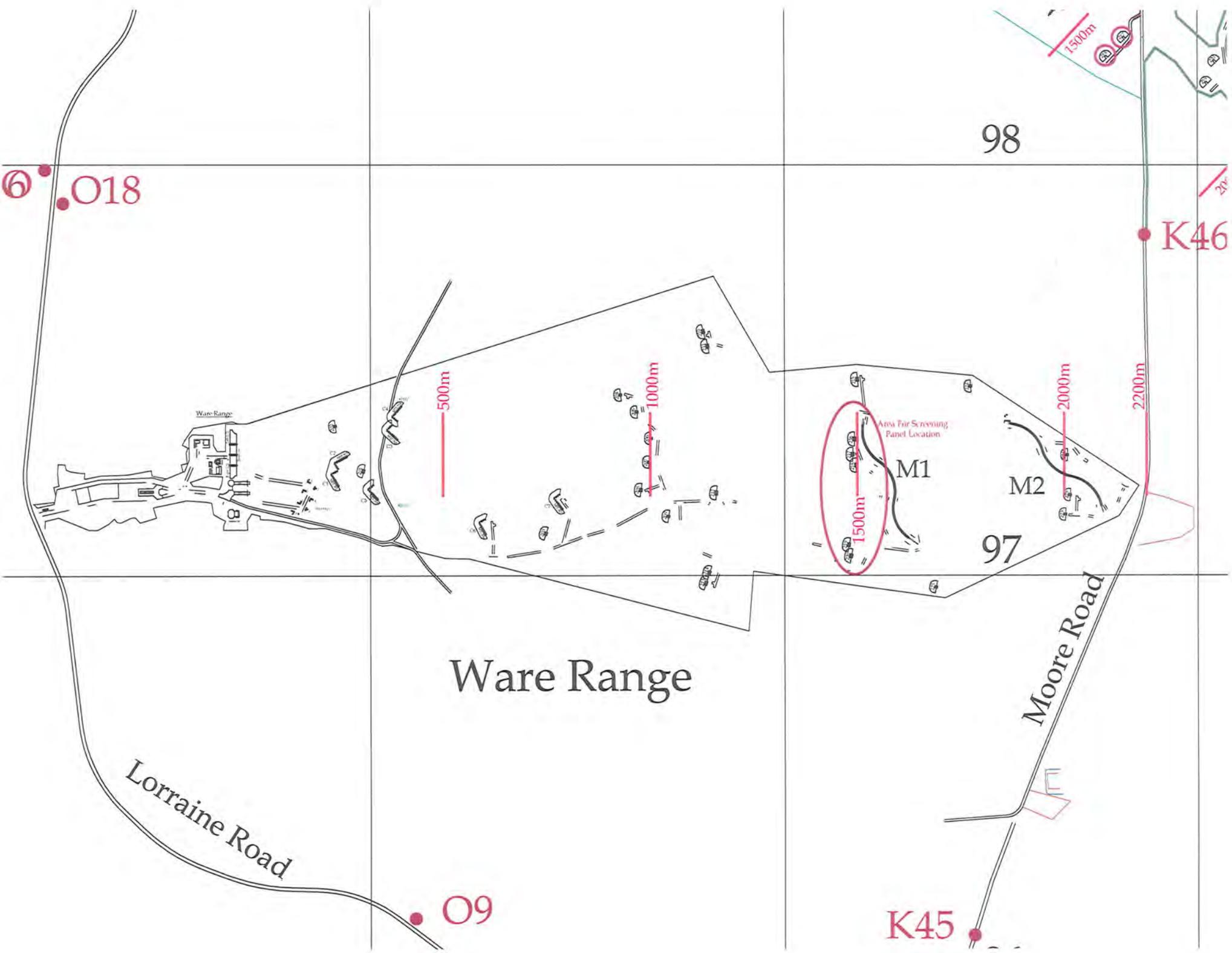
i. Laser Warning Signs will be in place prior to opening range. **Range Safety Briefing will include hazards using lasers and NVD's**

j. Each weapon system will have safeties present to point out specific targets for the soldiers to engage, this will be the control measure to avoid firing at unauthorized targets.

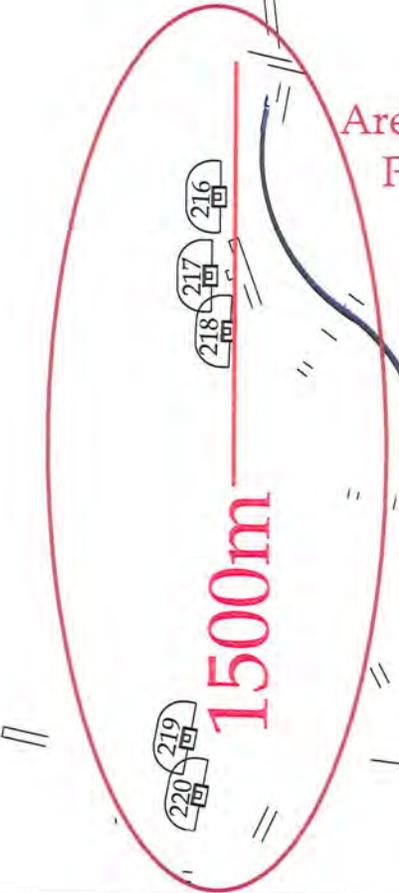
5. Point of contact for this memorandum is the undersigned at (706) 626-5006.



DAWSON A. PLUMMER
LTC, AR
Commanding



Ware Range 1-81
OSUT Gunnery



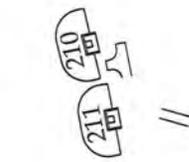
Area For Screening
Panel Location

M1

M2

97

2000m



Ware Range Offensive Engagement Fire Box

Offensive Fire Box

Tanks will engage troop targets with the coaxial machine gun while moving 10-15 MPH through the offensive fire box.



Sabot Petal Hazzard Area

Ware Range

Baseline

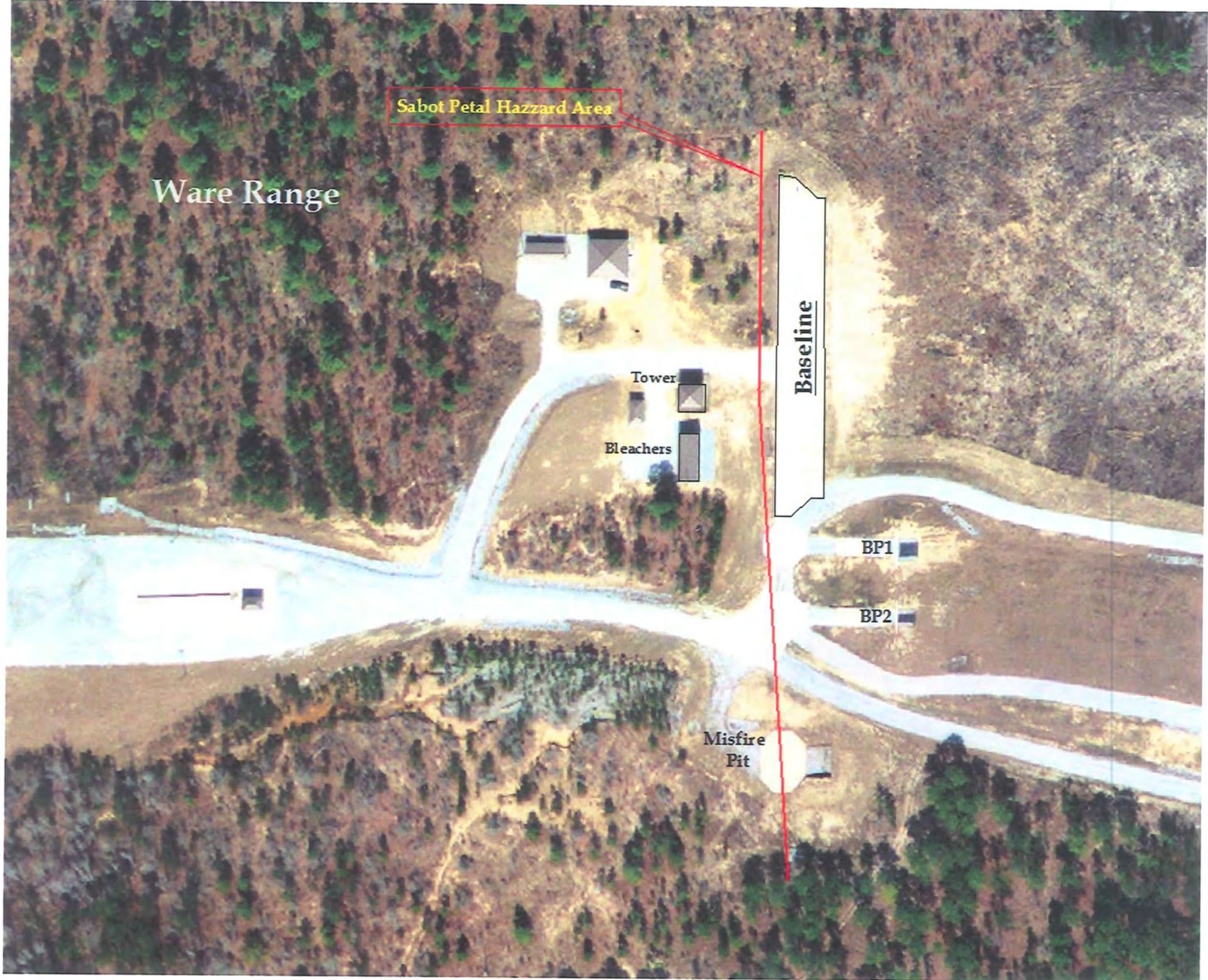
Tower

Bleachers

BP1

BP2

Misfire Pit



Ware 194th AR BDE, 1-81 OSUT Gunnery (Log #11-03-13) Roadblocks 15 Dec 2013

#	GRID	LOCATION	TYPE	#	GRID	LOCATION	TYPE
K-2	GA 163 883	Across Box Springs Rd 125m N. of its intersection with Buena Vista Rd.	Gate	K-26	GA 201 949	Across Boundry Road 1800m S of its intersection with Turrentine Road	Gate
K-3	GA 153 894	Across entrance road leading to Concord OP 250m N. of its intersection with Buena Vista Rd.	Gate	K-27	GA 207 968	Across Turrentine Rd 600m E. of its intersection with Boundary Rd.	Gate
				K-28	GA 191 885	Across Whitson Rd 15m W. of its intersection with Cactus Rd.	Gate
K-5	GA 117 920	Across Shamanski Rd 25m N. of its intersection with Buena Vista Rd.	Gate	K-29	GA 189 888	Across un-named trail on left side of Cactus Range 300m W of Cactus Road	Gate
K-7	GA 109 937	Across Moore Rd 15m N. of its intersection with Bullseye Rd.	Cable	K-30	GA 190 890	Across un-named trail on right side of Cactus Range 250m W of Cactus Road.	Gate
K-8	GA 099 947	Across Bulls Eye Rd 50m E of its intersection with Lorraine Road.	Gate	K-32	GA 192 915	Across Shamanski Road 35m W of its intersection with Cactus Rd.	Gate
K-9	GA 103 921	Across Buena Vista Rd 40m E of the intersection with Moore Rd (Road Guard Location)	Gate	K-36	GA 163 883	Across Buena Vista Rd 50m W. of its intersection with Box Springs Rd. (Road guard location).	Gate
K-9A	GA 106 919	Across tank trail 200m W of the Upatoi Creek ford site.	Gate	K-36A	GA 163 882	Across Tank Trail 50m W. of its intersection with Box Springs Rd.	Gate
K-10	GA 118 920	Across Buena Vista Rd at K-5 road block.	Gate	K-38	GA 201 941	Across unnamed trail 35m W. of its intersection with the east boundary road. Permanently closed.	Gate
K-11	GA 105 927	Across Moore Rd 20m N. of its intersection with Audernarde Trail. Entrance to Terry Demo Rng. (Road guard location)	Gate	K-39	GA 202 949	Across unnamed trail 15m W. of its intersection with the east boundary road. Permanently closed.	Gate
K-12	GA 104 988	Across Old Lorraine Road 600m S of the tower on Brooks Range.	Gate	K-40	GA 174 908	Across Box Springs Rd 30m S. of Pine Knot Creek.	Gate
K-13	GA 112 943	Across Moore Rd 680m N. of its intersection with Bullseye Rd.	Gate	K-41	GA 192 944	Across Kennesaw Trail 30m W. of its intersection with Box Springs Rd.	Gate
K-14	GA 113 998	Across Moore Rd 10m S. of its intersection with Lorraine Rd.	Gate	K-42	GA 193 944	Across Box Springs Rd 10m N. of its intersection with Cactus Rd.	Gate
K-15	GA 114 999	Across course road leading out of Ruth Range 50m E. of its intersection with Moore Rd.	Gate	K-43	GA 203 978	Across the northern boundary range road approx 20m N-W. of the old Hastings Range upper baseline.	Gate
K-16	GB 190 003	Across Rinehart Rd 130m W. of its intersection with Box Springs Rd.	Gate	K-44	GA 113 955	Across Moore Rd on the N. side of Carmouche Range maneuver box.	Gate
K-16A	GA 172 989	Across Rinehart Rd 20m S. of its intersection with the northern boundary range road.	Gate	K-45	GA 115 961	Across Moore Rd 300m S. of its intersection with the old Ware Range course road.	Gate
K-16B	GA 171 990	Across un-named trail 20m S. of its intersection with the northern boundary range road.	Gate	K-46	GA 119 979	Across Moore Rd 725m S. of its intersection with Americo Trail	Gate
K-17	GB 116 013	Across unnamed trail 15m E. of Moore Rd and 300m N. of Ruth Range tower.	Gate	K-47	GA 176 963	Across Turrentine Rd 1000m W. of mover 4 on Hastings Range	Gate
K-19	GB 121 023	Across unnamed trail 220m N-E. of Oscar Range Complex Road and 30m S of the northern boundary range road.	Gate	K-50	GA 195 988	Across Box Springs Rd 60m N. of its intersection with the northern boundary range road.	Cable
K-20	GB 141 021	Across unnamed trail 550m S of the northern boundary range road.	Cable	O-9	GA 101 962	600m N of Carmouche Rng on right side of Lorraine Rd	Gate
K-21	GB 139 027	Across the northern boundary range road Aprox 250m East of Cox Creek bridge.	Gate	O-18	GA 093 979	800m N of Ware Rng Entrance on right side of Lorraine Rd	Gate