FIRING/NONFIRING DATA

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

log 4-3-13

TO: Chief, Range Division, Directorate of Plans, Training, Mobilization and Security Fort Benning, GA 31905	**Date:** 26 June, 2013 **Range:** Brooks Range **Title:** Stryker Gunnery **Problem No:**
THRU: S-3 197th IN BDE FT Benning, Ga 31905	**FROM:** S-3, 1-29th IN BN FT. Benning Ga 31905

SECTION I, TYPE OF TRAINING

☑ a. Live Fire ☐ b. Non-live Fire CP/Controller Coordinates: GA 1057 9937 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 and Ammo list	See Weapons and Ammo list	See Weapons and Ammo list	See Weapons and Ammo list	See Weapons and Ammo list

SECTION IV, LIVE FIRE EXERCISES Attach the following:

- ☑ **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:**

SECTION V, NON-LIVE FIRE TRAINING

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: For Pye, Brandon, CPT, 1-29TH IN SBIC CDR	Name/rank of Major Unit S3/Commander: Olearnick, Clint, MAJ, 1-29TH BN, XO

SECTION VI, FOR RANGE DIVISION USE DATE: 15 October 2013

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

a. Roadblocks to be closed: K: 5, 12, 14, 16A, 16B, 41, 47, 45 O: 9, 18

b. Road(s) to be closed/road barrier locations:

c. Remarks: Laser warnings will be posted prior to use.

d. This approval expires: Indef

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

Brooks Range 197th, 1- 29 IN, Stryker Gunnery (Log #4-3-13) Weapon, Ammo And Target List				
Coordinates of Weapons Position	**Type Weapon/Model Number**	**Type Ammunition**	**Left Limit Mils, Grid Az**	**Right Limit Mils, Grid Az**
Baseline: GA 1064 9939 to 1055 9929	M2	.50 cal Ball/Tracer/Link	1965	2630

Coordinates of Weapons Position	Type Weapon/Model Number	Type Ammunition	Targets
Baseline: GA 1064 9939 to 1055 9929	M2	.50 cal Ball/Tracer/Link	204, 206-223; M: 1, 2.

DEPARTMENT OF THE ARMY
1st Battalion 29th Infantry Regiment
Fort Benning, Georgia 31905

ATSH-INA-I 26 June 2013

MEMORANDUM FOR: Range Division

SUBJECT: Stryker Qualification/Maneuver, Stryker Branch SBIC 1/29 Infantry

1. **PURPOSE**: The purpose of this Range is to conduct Stryker Qualification/Gunnery at Brooks Range in order to train Stryker Soldiers on the capabilities of the infantry Carrier Vehicle and gunnery process

2. **TRAINING OBJECTIVES**: Weapons and Ammunition used.
   a. M2 mounted on Stryker RWS .50 Cal Ball/TCR link
   b. Lasers- STORM LRF

3. **LASER SAFETY**: Class III A lasers are not eye safe on dual low mode within 25 meters. PEM – 1A is not a tactical laser and must be used within 25 meters. Laser Warning Signs will be in place prior to opening the range. **Range safety briefing will include hazards using Lasers and NVD's.**

4. **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 MCoE 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.

5. **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

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

7. **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.

8. **COMMUNICATIONS**: 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.

9. **CONCEPT OF TRAINING**: The operation will be conducted in three phases.

a. **Phase I – PREPARATIONS**: The Soldiers will be trained on the Embedded Trainer Computer and Remote Weapon Station Skills Test prior to going to the range. All platoon equipment will be inspected for serviceability and safety prior to training. All vehicles will be properly dispatched, and all support requests will be completed and confirmed. Coordination will also be made with Range Control to ensure all issues are addressed before the training is conducted.

b. **Phase II –Gunnery**: The Qualification/Modified will be conducted in three parts:

(1) Occupation of the Range - The Branch will conduct movement to Brooks Range and move to the designated assembly areas. Soldiers will first move to the Stryker's to start live fire. Upon completion of firing Soldiers will move to the range shack for the AAR as shown in the range sketch. The BN S-3 will ensure targets are in working order. The OIC will coordinate with target systems to inspect all targets and ensure they are protected from any firers. The OIC/RSO will ensure there is good communications with the target operator, and that he fully understands the desired scenario. Medical assets will also be pre-positioned according to the range sketch. Movement from and to firing points will only be conducted once cleared by range safety at the firing point and the tower. Zero will be conducted once the crew and vehicle are given permission from the safety at the firing point they are assigned. The M2 .50 Cal HBMG will be used on this range and only approved targets will be engaged.

(2) Gunnery Training: Each crew will conduct qualification Gunnery IAW Stryker qualification gunnery FM 3-22.3. The Gunnery will begin and end on the baseline, there will be two vehicles firing from the baseline. Only authorized targets will

be shot (see attachment target list). No Soldier will load any ammo without Cadre, all loading will be done under Cadre supervision. Crews will take all commands from Cadre. When the crews have engaged their last target, they will place all weapon systems on safe. Once cleared by Cadre/RSO, the next crews will begin their iteration.

(3) Clear the Range- A detailed clean up of the range will be conducted once all training is completed. All equipment and trash brought to the range will be removed, and the proper closing codes will be obtained from Range Control. Any unexploded ordinance that is found will be marked and immediately reported to EOD and Range Control. A 100% sensitive items check will be done prior to leaving the Range.

c. **Phase III- RECOVERY**: Once the unit has been cleared from the range, the unit will return to the battalion area. A closing report must be submitted at the completion of training. A detailed recovery will be conducted as per the SOP. A detailed after actions review will be conducted as well.

10. **CONTROL MEASURES**: The cadre will ensure all personnel are clear of the SDZ prior to engagement. All training will be in accordance with the appropriate FM's, Battalion standards and SOP's, and Fort Benning regulations.

11. **RANGE CONSIDERATIONS**: The following will be employed while conducting training.

a. The range OIC and RSO will be present for all training.

b. All VEHICLE CREWS participating in the Gunnery will adhere to MCOE 350-19, and proper display of colored flags to signal weapons/ammunition status.

c. All weapons will remain on safe unless actively engaging targets. Only authorized targets will be used.

d. All ammunition will be discharged down range and within the designated limits. All unused ammunition will be turned in to the Ammo Supply Point, to the Ammunition NCO.

e. The range OIC and RSO will ensure that all Soldiers receive a detailed safety brief and that all training is conducted to standard.

f. All Soldiers will be briefed that any Soldier observing an unsafe act can immediately call a check/cease fire. Emergency cease fire signal will be briefed

g. All Soldiers will be checked for brass and ammunition before the ASP issues ammunition to the section, and the OIC and RSO will ensure the proper ammunition is being issued. The RSO or safety will also ensure everyone is properly cleared on and off the lanes.

h. At no time will ammunition be fired over the heads of Soldiers.

i. Any UXO discovered will be reported to Range Control and EOD, and will be cleared prior to allowing maneuver through the area in which the UXO was found. All vehicles and personnel may have to leave the firing line.

j. All misfire procedures will be rehearsed before starting the lane. The O/C will ensure that the section fully understands the proper misfire procedures and safety checks before allowing them to start the lane.

k. Any issues during training will immediately be reported to Range Control and/or the chain of command.

l. All environmental considerations will be enforced.

m. Headspace and Timing for M2 will be checked and set prior to firing. (Enhanced M2 not required)

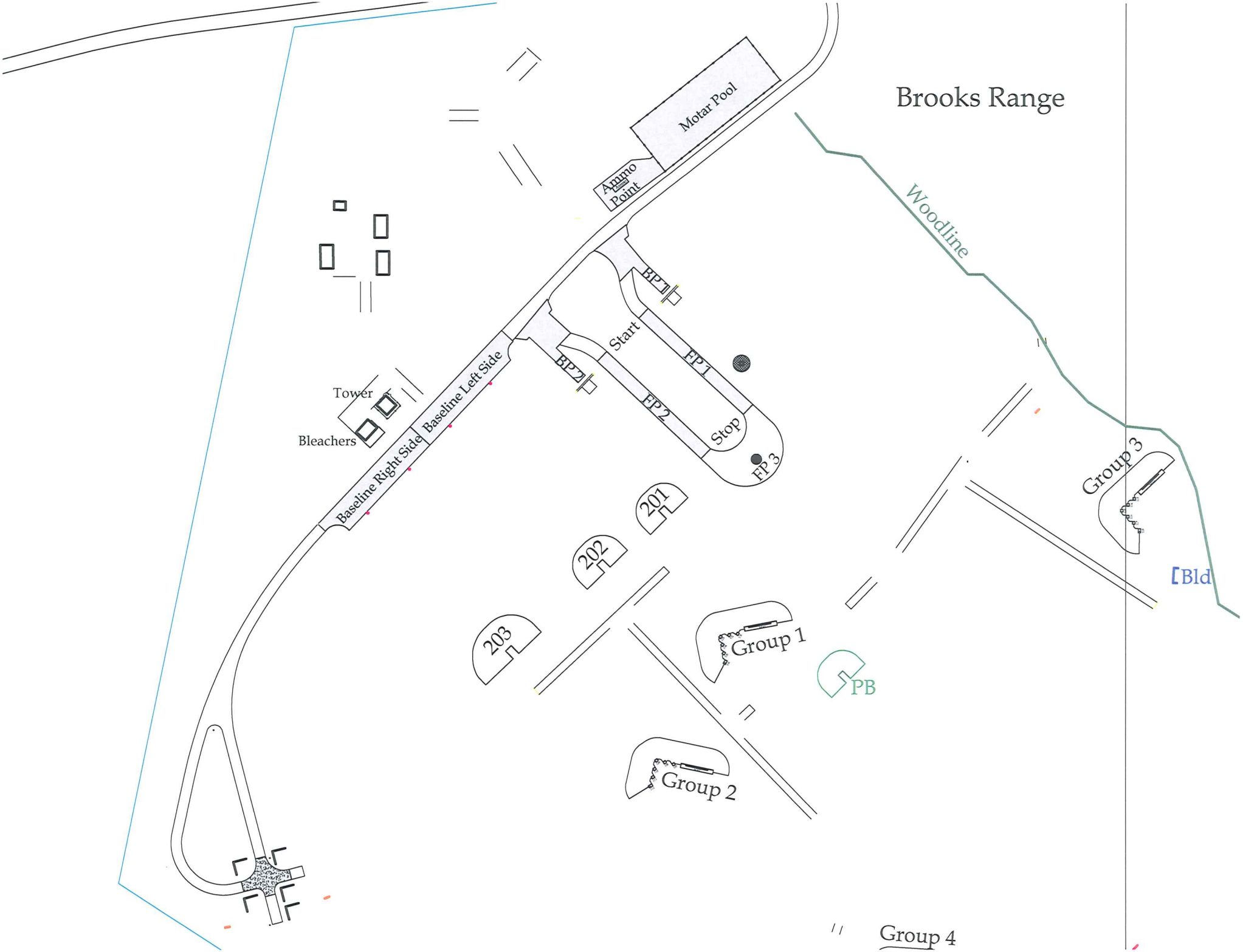
n. Personnel movement from the bleachers to the vehicles and back to the bleachers will be handled by the range NCOIC, Soldiers will proceed in a straight line from the rear of the vehicle on and off the firing line.

o. No personnel are authorized forward of the firing line at any time during the conduct of the range.

p. All Soldiers will be in proper range uniform; Kevlar/ Mich, Eye protection, Ear protection, Gloves and LBE/ molle /kit

12. The POC for this memorandum is SSG (P) Stegemann, Travis, SBIC 1/29 IN Stryker Branch Chief 544-7394

Travis B. Stegemann
SSG (P), US Army
Stryker Branch Chief


Brooks Range
Motar Pool
Ammo Point
Woodline
BP 1
BP 2
Start
FP 1
FP 2
Stop
FP 3
Tower
Bleachers
Baseline Left Side
Baseline Right Side
201
202
203
Group 1
Group 2
Group 3
Group 4
PB
Bld

RECORD OF ENVIRONMENTAL CONSIDERATION (REC)

Date Submitted: 10/24/2012

EMD Number: 1230402 **Project#:** Unknown **Project Title:** Tank Range Training

Description of proposed action:

M1A1/M1A2 and MGS live fire gunnery familiarization training. This will be two days of live fire training where the tanks and MGS will be stationary from the battle positions, firing points or from the concrete pad in front of the tower. They will be firing the 120mm, 105mm main guns and small caliber machine gun at the targets down range. All movement on the range will be on gravel that is around the concrete firing line and down the hill to the ammunition point. The other environmental concerns are re-fueling operations which will be conducted on the concrete base line. A Spill kit and a hazmat certified NCO will be present on the range in the event of a vehicle leak or spill occurs during refueling operations. The Hazmat NCO will take any required actions to ensure compliance with local regulations in the event of a spill or leak. Ammo used: 120mm=M831, M865, M1028. 105mm=M490A1, M467A1, M1040; .50 Cal=M962, A621; 7.62mm A131

Project Location:

Brooks Range

Amount, Description, Location of Disturbance/Digging:

None

Number of Personnel:

40

Type of Ammunition:

120mm, 105mm, .50 Cal and 7.62mm Live

Number/Types of Trees:

None

Size of Project Area:

Duration of Action: Start: 11/30/2012 Stop: 9/30/2013

Proponent: Joshua Ramirez 7192916049

Organization/Unit: M Troop 3-16 Cav

Number/Types of Vehicles:

Number of vehicles:2
Types of vehicles:TMP, LMTV
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

Noise Conditions: **Ellis Leeder (706 545 2400), 10/31/2012**

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

Cultural Resources - Archeological **None** **Edward Howard (706 545 1898), 10/31/2012**

Natural Resources - RCW **None** **Michael Barron (706 544 7080), 10/30/2012**

EMD Number: 1230402 **IJO#** Unknown **Project Title:** Tank Range Training

****

Hazardous Materials/Waste Conditions: **Joe Iverson (706 545 1857), 11/5/2012**

Considerations for Field Training Exercises and Range Operations

1. Ensure personnel know the correct procedure for handling misfires at the range:

-Closed containers (ammunition can marked 'MISFIRES") will be used for the collection of misfires at each firing range.
-The MISFIRE container will stay closed except to add or remove misfires.
-Misfires SHALL NOT BE COLLECTED in any open container or cardboard box.

All excess, unused munitions (including smoke canisters) must be returned to the Ammunition Supply Point (ASP) after the range operation is complete. Defective, misfired, or otherwise unserviceable munitions may be destroyed on the range, as part of the training exercise, in coordination with EOD.

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/USAIC Reg 210-4 -5-8, May 05 and or MCOE 350-19.

2. Patches and swabs collected from weapons cleaning must be double bagged and turned into the Unit Hazardous Waste Manager for proper disposal.

3. Rubbish, empty containers and other waste shall be removed from the training area after the exercise. Contact EPMB for detailed information on the proper disposal of waste products resulting from the exercise, to include MRE Heaters.

4. 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. Contact Ted Williams, 706-545-7579 for questions or additional guidance.

CWA - Training Conditions: **Jessica Taylor (706 604 4572), 10/30/2012**

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.

SPECIAL NOTE: See attached Unit/Activity SOP for Training and Deployment with recommendations during training exercise. For refueling, maintenance and/or hazardous material/waste storage areas - recommended a distance of approximately 100 (30 meters) from any water ways.

Signature

John E Brown
NEPA Program Manager
Date 12 NOV 12

Signature

Christopher E. Hamilton, PhD
EPMB Chief
Date 13 Nov 12

DEPARTMENT OF THE ARMY
STRYKER BRADLEY INSTRUCTIONAL COMPANY, 1ST BATTALION, 29th INFANTRY REGIMENT
UNITED STATES ARMY INFANTRY SCHOOL
6708 BRADLEY DRIVE, BUILDING 5500
FORT BENNING GEORGIA 31905-5594

REPLY TO
ATTENTION OF

ATSH-INA-S

24 September 2013

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Assumption of Command Orders

By authority of Paragraph 2-5, Army Regulation 600-200, the undersigned assumes command of SBIC, 1st Battalion, 29th Infantry Regiment, Fort Benning, Georgia 31905-5594 (W2L58A), from 24 September 2013 to 26 Sep 2013.

JAMES S. SHAVER III
1SG, USA
Commanding

DISTRIBUTION:
Individual Concerned
S-1
S-2
S3
S-4/S-6
BN Legal
CDR, 197th IN BDE
CDR, 1-29th IN Regt
CDR, 2-29th IN Regt
CDR, CRC

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

11 September 2013

MEMORANDUM FOR Commander 1/29th IN Bn., Attn: SFC Travis Stegemann, Fort Benning, GA 31905

SUBJECT: 1/29th IN Bn Stryker Gunnery on Brooks Range Concept and Safety Review

1. References.

a. 1/29th IN Bn Stryker Gunnery on Brooks Range, 26 June 2013.

b. Army Regulation 385-10, The Army Safety Program, 04 October 2011

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, RAR 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 10 September 2013.

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

for JILL E. CARLSON
Director, MCoE/USAG Safety

COMPOSITE RISK MANAGEMENT WORKSHEET

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

1. MSN/TASK	2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED *(YYYYMMDD)*
SLC Brooks Range	110900SEP2013	110900SEP2014	20130825

4. PREPARED BY

a. LAST NAME	b. RANK	c. POSITION
Moses,	SSG	Stryker Master Trainer Course Instructor/Writer

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?
Range Operations	Daily Range Operations	H	1. Read and review risk assessment Update the risk assessment daily with consultation between cadre and chain of command. 2. Ensure CLS and medevac vehicle are	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			present. a. On-site coverage. Inventory CLS Bag and check operational readiness prior to 1st day of range operation. Ensure medics have a bee		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			sting kit. Request and restock as necessary. b. Area coverage. Make face-to-face coordination with CLS. Review route to range (issue strip map if needed), conduct a commo				
			check (FM or handheld), and follow guidelines in paragraph a. CLS will brief route to next higher care. c. Review strip map to care facility AXP.				
			Review "9 Line Medevac Procedures". Brief all personnel where the helicopter landing site. 3. RSO will identify Soldiers with medical problems that have the potential to impact				
			training. This includes minor illesses, allergies, previous heat or cold weather injuries, or any other problems. Previous heat or cold weather injuries or those with severe allergies				

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	b. RANK	c. DUTY POSITION	d. SIGNATURE
SUROWIEC	LTC	BATTALION COMMANDER	

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?
			will be marked with engineer tape on the left IR Velcro cover on the left shoulder of ACU top.				
	1. Soldier Suffers a Heat Illness Durning Training	H	1. NCOIC will monitor the wet bulb and keep OIC and Range MT informed of heat category. Previous heat injuries will be marked with red tape or engineer tape on the left sleeve of the	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			ACU. 2. Once in the vehicle; the crew will not exceed the work limits dictated by the Heat Category.		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			Heat Categories will be enforced as follows: Heat Category 1 WBGT Index: 78-81.9 F Water intake: 1/2 quart/hour (minimum)				
			"Easy work: 1/2 qt./hr. no limit to work/rest ratio." "Moderate work: 1 qt./hr. no limit." "Hard work: 1 qt./hr, 40 min work/20 min rest."				
			Heat Category 2 WBGT Index: 82.0-84.9 F "Easy work: 1qt./hr, no limit." "Moderate work: 1 qt./hr, no limit."				
			"Hard work: 1 qt./hr, 30 min work/30 min rest." Heat Category 3 WBGT Index: 85.0-87.9 F "Easy work: 1 qt./hr, no limit."				
			"Moderate work: 1 qt./hr, no limit." "Hard work: 1 qt./hr, 30 min work/30 min rest." Heat Category 4 WBGT Index: 88.0-89.9 F				
			"Easy work: 1 qt./hr, no limit." "Moderate work: 1.25 qt./hr, 30/30." "Hard work: 1.25 qt./hr, 20/40." Heat Category 5				
			WBGT Index: 90 F and above. "Easy work: 1 qt./hr, no limit." "Moderate work: 1.25 qt./hr, 30/30." "Hard work: 1.25 qt./hr, 15/45."				

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?
			3. Heat casualties will be treated as needed by the medic on site and may be evacuated via evac vehicle or air MEDEVAC. During Heat Cat 3 and above all firing vehicles hatches				
			(except the driver) will be in the pop lock position and safety-locking lever will be in the lock position.				
			4. VCE's will have water with them while evaluating a crew. Before the crew begins the course, the VCE will maximize his time in the shade.				
			VCE's will refill during AAR periods. VCE's will eat 3 meals each day 5. Students in the turret will have water accessible to them at all times while they are				
			waiting to go downrange. As crewmembers wait, the ramp will remain down and the driver's hatch will be open. Each crewmember will have a minimum of one qt of water at all				
			times. In addition, each crew will have a minimum of one five gallon jug of water on the back of each firing vehicle.				
			6. The NCOIC of the range will be responsible for verifying that the crews are adhering to the guidelines as stated above. When a vehicle is down range the VCE will ensure all members				
			on the vehicle are consuming water at all times and report any heat situations to the tower. Students and crew members waiting to enter the vehicles will stay in the shade and drink				
			water. A water buffalo will remain accessible at all times. In the event that a water buffalo is not present, there will be additional water stored at the control vehicle				
	2. Soldier Suffers a Cold Illness During Training	H	1. NCOIC will monitor the cold weather conditions and keep OIC and Range MG	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	

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?
			informed of cold weather situations. Previous cold weather injuries will be marked with red tape on the left sleeve of the ACU. 2. Cold weather casualties will be treated as		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			needed by the CLS or Medic on site and may be evacuated via evac vehicle or air MEDEVAC. There will be a warming tent setup; the tent will be usedfor rotating				
			personnel in and out to keep warm IAW the weather report.				
			RANGE NCOIC OR SAFETY OFFICER WILL:				
	3. Soldier Suffers a Hearing or Eyesight Injury	H	1. Brief Soldiers on the dangers of low-hanging branches. 2. Ensure all Soldiers wear single hearing protection (CVC or earplugs).	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			3. Ensure extra hearing protection is available. 4. CADRE/VCE will ensure Soldiers are wearing hearing protection while maneuvering downrange.		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
	4. Soldier Struck by Lightning	H	OIC OR SAFETY OFFICER WILL: 1. Suspend all training during eletrical storms or IAW the Battalion Storm Plan	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			2. Brief Students on electrical storm plan and point out location for evacuation and accountability 3. Ensure instructors understand their		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			individual responsibilities in case of an electrical storm. INSTRUCTORS WILL: 1. Ensure that Students ground their individual				
			equipment and don their wet weather gear. 2. Ensure that all Students move IAW the electrical storm plan. Take accountability of all Students once there.				

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?
	5. Soldier bitten or stung by snakes or insects	H	1. Brief Students of the various types of hazrdous wildlife and instruct Students not to handle or harass the wildlife 2. Identify Soldiers who are allergic to insects.	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			Ensure that those soldiers have equipment to remedy themselves (bee sting kits, etc.) . Soldiers with severe allergies are marked with white engineer tape with red X.		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			3. Brief All Wildlife to be left alone				
	6. Soldier injured by falling, tripping off a Vehicle	H	1. Brief Students on tripping hazards, i.e. rocks, branches, etc.	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			2. Brief Students to maintain 3 points of contact while on the vehicle. 3. CADRE will ensure Students will maintain 3 points of contact while on the vehicle		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
	7. Soldier injured lifting ammunition or equipment	H	1. Range OIC/RSO will identify the hazard during the safety briefing. 2. Personnel will work in groupd and use proper lifting techniques.	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
	8. Soldier injured by a Negligent discharge of weapon or weapon malfunction		Limit on weapon system orientation to reduce effects. 1. Safety briefing will address possibility of accidental discharge or weapon malfunction		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			2. Range OIC will designate an RSO who will ensure that all weapons are cleared prior to leaving the firing position and range. 3. All cadre will be weapon system				
			qualified. 4. Cadre will ensure proper maintenance and services of weapons are conducted.				
			.5. Cadre will be on site during all firing. 6. FLA and CLS will be on site at all times during firing.				

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?
			7. Cadre (SCE) will ensure weapons are oriented downrange at all times. 8. Personnel trained on new MEDEVAC procedures.				
			9. Brief procedures on negligent discharge 10. Crew will be directed by line safety when to upload weapons systems				
	9. Soldier hit by a vehicle during training	H	1. RSO will identify the hazards during the safety briefing. He will point out areas where ground guides are required. 2. Soldiers will adhere to the posted speed limit	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			at all times. 3. Front and rear ground guides will be used in designated areas of the range.		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			4. VC's will ensure correct following distances are maintained. 5. Ground guides during darkness will use chemlights or flashlights to guide vehicles.				
			Ground guides will remain appropriate distances from vehicle. day or night.				
	10. Soldier injuried by hatches or ramp	H	1. Range OIC will address the hazards during the safety briefing. 2. All Soldiers will be familiar with hatch operation prior to deploying to the range	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			3. SCE's will ensure that hatches have all required safety pins and that they are operational. Additional instruction and supervision		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
	11. Vehicle rolls over and Soldier is injuried	H	Utilize permanent roads and tank trails. Limit speeds. Route recon to verify road conditions 1. Range OIC will address the hazard in his	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			safety briefing and will reiterate the rolloever drill. 2. Vehicles will be only driven on flat range surfaces. These must be cleared by the RSO.		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	

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?
			3. All students will have rehearsed rollover drills prior to the range IAW the BN rollover policy. 4. Range OIC will ensure students and drivers				
			are familiar with the course road. 5. Range OIC or RSO will recon the entire course road to ensure suitability and identify the hazards.				
			6. VC will have commo at all times with the driver				
	12. Vehicle runs into another Vehicle	M	1. Range OIC or RSO will identify the hazards in his safety briefing. 2. Soldiers will ground guide vehicle. 3. Cadre will ensure vehicle seperation is	L	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			maintained at all times. 4. Barrels will be placed to 3 elevation when passing another vehicle. 5. Vehicles will keep a minimum distance of 50		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			meters between each other while on miovement during periods of clear/unrestricted visibility. 6. Vehicles will keep a minimum distance of 100 meters between each other during periods				
			of limited visibility. 7. Cadre, VC's or Drivers will halt movement when visibility conditions are severely restricted, and service drives will be used.				
	13. Firing incorrect ammuntion for the Stryker		(DUST/WHITEOUT CONDITION) 1. Match actual ammuntion on the ground by DODIC to DA-581 and range requirement. 2. Ensure all ammuntion fired is annotated on				
			FB Form 465 Firing/Non-Firing Data: .50 cal Ball/Tracer Link 40mm TP Link				
	14. Ramp crushed Soldier		1. Range OIC will address the hazard during the safety briefing.				

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?
			2. All Soldiers will be familiar with ramp operations prior to deploying to the range. 3. Ground guides and VC's, or Drivers will ensure that ramp is clear before raising and				
			lowering. 4. Drivers will only raise and lower when directed. Additional instruction and supervision				
	15. Soldier hits head or is struck by equipment in crew compartment.	H	1. Range OIC or RSO will cover safety procedures during safety briefing. 2. VC's will ensure all equipment is properly stowed and secured.	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			3. VC's will ensure that all Soldiers wear seatbelts and ACH/CVC at all times. ADDITIONAL INSTRUCTION AND INCREASED SUPERVISION		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
	16. Soldiers crushed by vehilcle.	H	Use of reflective markers and lights to control movement. 1. RSO will identify the hazard during the safety briefing. He will point out areas where	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			Use of reflective markers and lights to control movement. 1. RSO will identify the hazard during the safety briefing. He will point out areas where		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			ground guides are required. 2. Soldiers will adhere to course speed limits at all times. Instructors will ensure this occurs. 3. Front and rear ground guides will be used				
			in designated areas of the range. 4. VC's will ensure correct following distances are maintained. 5. Ground guides during darkness will use				
			chemlights or flashlights to guide vehicles. Ground guides will remain appropriate distances from vehicles, day and night. 6. Admin areas will be away from vehicle				
			lines and movement areas. 7. Mark troop areas with engineer tape, day and night. Proper clearing and remedial action for .50 cal/				

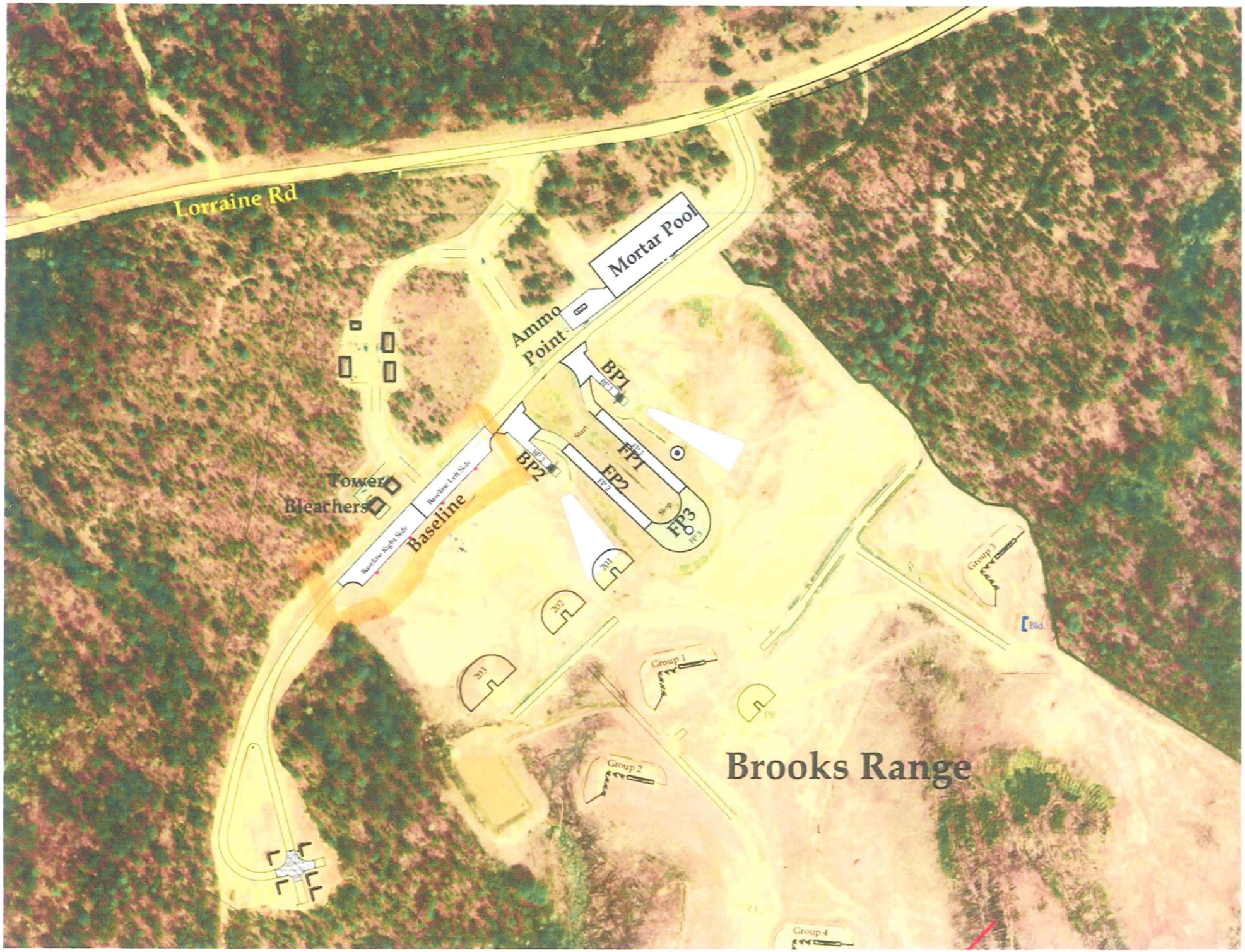
ITEMS 5 THROUGH 12 CONTINUED:

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?
			MK19.				
	17. Student shooting a round outside the range fan.	H	1. There will be an instructor in the Stryker with the students at all times. a. Before firing any weapon system the instructor will ensure that the student is on the	M	MCoE Reg 350-19 Range and Terrain AR 385-10 MCoE PM 385-6-14	RSO OIC CLS Medics	
			target. b. Instructor will put the student through vigorous crew checks which include identifying the left and right range markers in both day		FM 5-19 1/29 IN Unit SOP	Battle Buddy Individual	
			and night sights. c. Master Trainer, along with the RSO will verify that range limits are identifiable from both the Stryker and by the naked eye from each				
			and night sights. c. Master Trainer, along with the RSO will verify that range limits are identifiable from both the Stryker and by the naked eye from each				
			firing point. d. Master Trainer will work with Range Control to ensrue that the range markers have thermal panels that are working correctly.				
			e. The Stryker will be marked at night using a blue chemlight on the front of the RWS to show proper RWS orientation.				

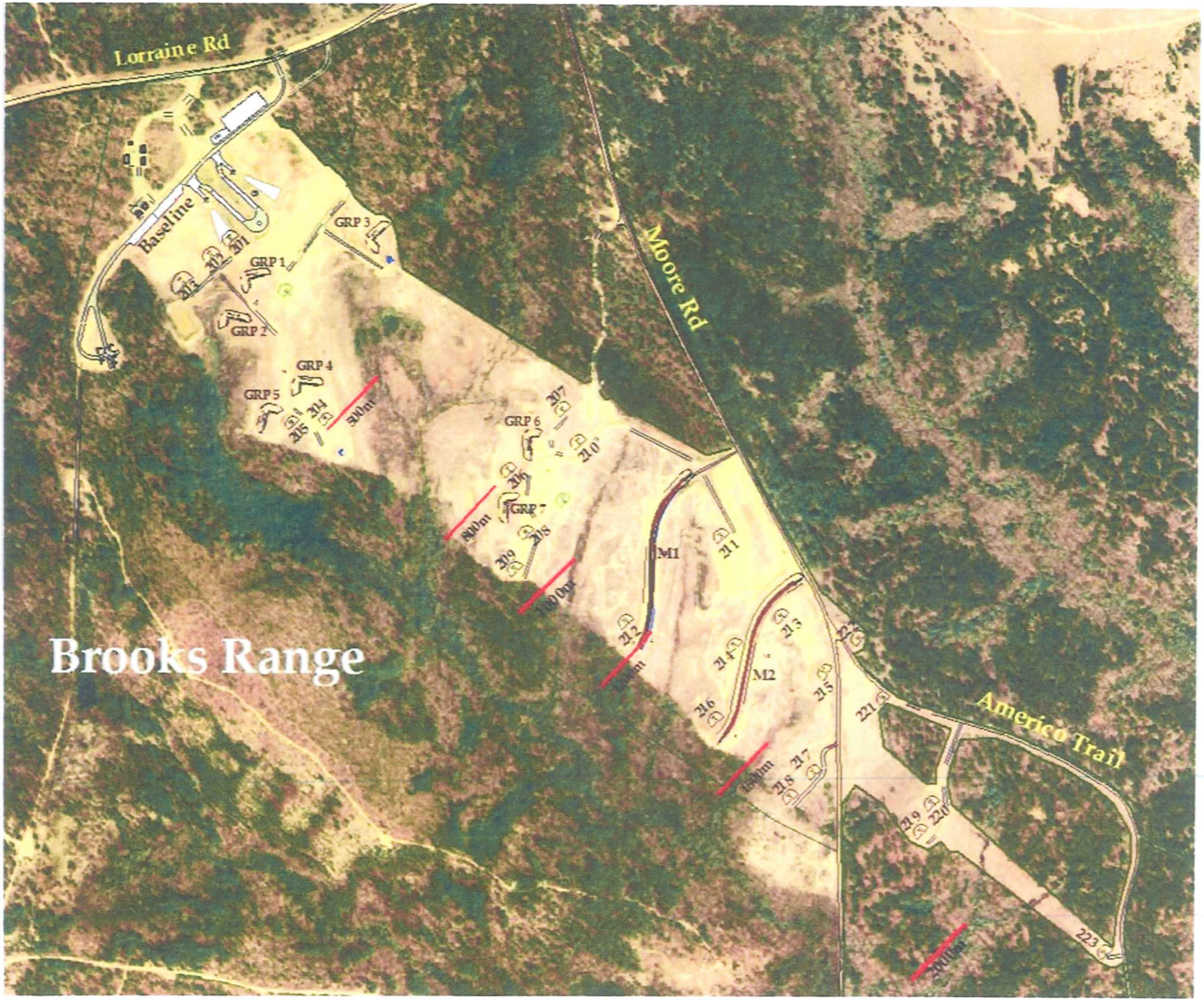
Brooks Range 197th, 1-29 IN Stryker Gunnery (Log #4-3-13) Roadblock List 20 Aug 2013

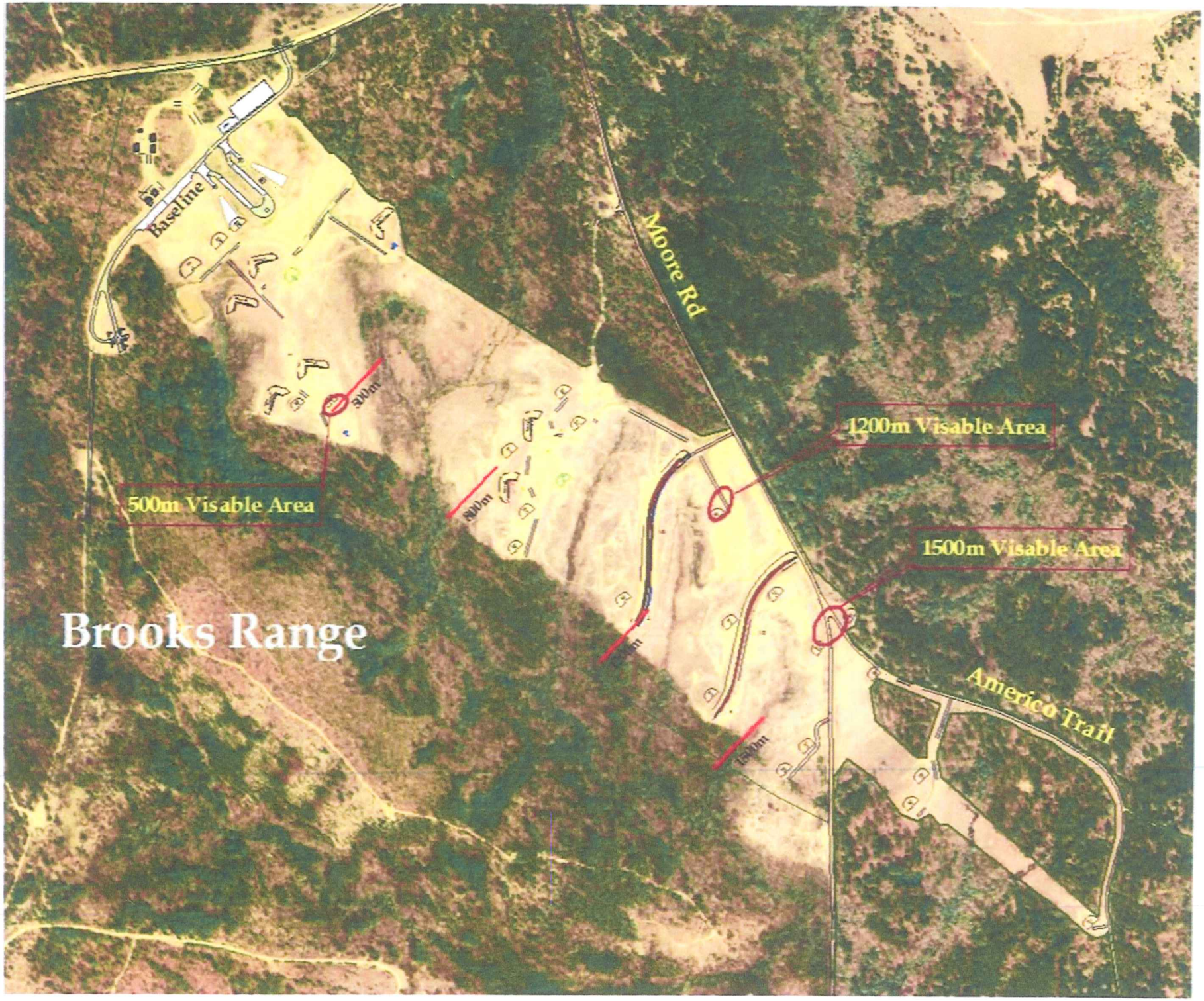
#	GRID	LOCATION	TYPE
K-2	GA 163 883	Across Box Springs Rd 125m N. of its intersection with Buena Vista Rd.	Gate
K-3	GA 153 894	Across entrance road leading to Concord OP 250m N. of its intersection with Buena Vista Rd.	Gate
K-5	GA 117 920	Across Shamanski Rd 25m N. of its intersection with Buena Vista Rd.	Gate
K-7	GA 109 937	Across Moore Rd 15m N. of its intersection with Bullseye Rd.	Cable
K-8	GA 099 947	Across Bulls Eye Rd 50m E of its intersection with Lorraine Road.	Gate
K-9	GA 103 921	Across Buena Vista Rd 40m E of the intersection with Moore Rd (Road Guard Location)	Gate
K-9A	GA 106 919	Across tank trail 200m W of the Upatoi Creek ford site.	Gate
K-10	GA 118 920	Across Buena Vista Rd at K-5 road block.	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-12	GA 104 988	Across Old Lorraine Road 600m S of the tower on Brooks Range.	Gate
K-13	GA 112 943	Across Moore Rd 680m N. of its intersection with Bullseye Rd.	Gate
K-14	GA 113 998	Across Moore Rd 10m S. of its intersection with Lorraine 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-16	GB 190 003	Across Rinehart Rd 130m W. of its intersection with Box Springs Rd.	Gate
K-16A	GA 172 989	Across Rinehart Rd 20m S. of its intersection with the northern boundary range road.	Gate
K-16B	GA 171 990	Across un-named trail 20m S. of its intersection with the northern boundary range road.	Gate
K-17	GB 116 013	Across unnamed trail 15m E. of Moore Rd and 300m N. of Ruth Range tower.	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-20	GB 141 021	Across unnamed trail 550m S of the northern boundary range road.	Cable
K-21	GB 139 027	Across the northern boundary range road Aprox 250m East of Cox Creek bridge.	Gate

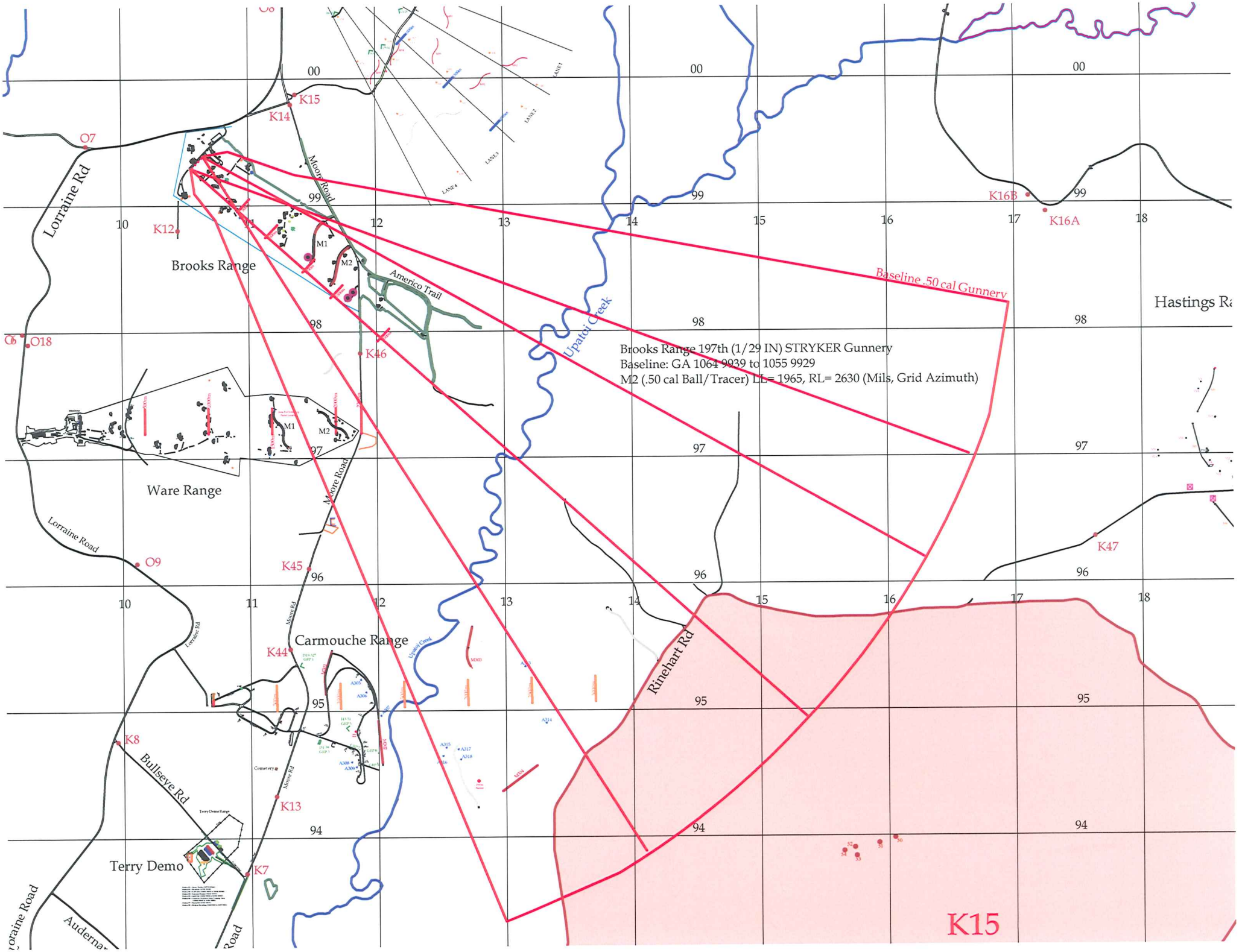
#	GRID	LOCATION	TYPE
K-26	GA 201 949	Across Boundry Road 1800m S of its intersection with Turrentine Road	Gate
K-27	GA 207 968	Across Turrentine Rd 600m E. of its intersection with Boundary Rd.	Gate
K-28	GA 191 885	Across Whitson Rd 15m W. of its intersection with Cactus Rd.	Gate
K-29	GA 189 888	Across un-named trail on left side of Cactus Range 300m W of Cactus Road	Gate
K-30	GA 190 890	Across un-named trail on right side of Cactus Range 250m W of Cactus Road.	Gate
K-32	GA 192 915	Across Shamanski Road 35m W of its intersection with Cactus Rd.	Gate
K-36	GA 163 883	Across Buena Vista Rd 50m W. of its intersection with Box Springs Rd. (Road guard location).	Gate
K-36A	GA 163 882	Across Tank Trail 50m W. of its intersection with Box Springs Rd.	Gate
K-38	GA 201 941	Across unnamed trail 35m W. of its intersection with the east boundary road. Permanently closed.	Gate
K-39	GA 202 949	Across unnamed trail 15m W. of its intersection with the east boundary road. Permanently closed.	Gate
K-40	GA 174 908	Across Box Springs Rd 30m S. of Pine Knot Creek.	Gate
K-41	GA 192 944	Across Kennesaw Trail 30m W. of its intersection with Box Springs Rd.	Gate
K-42	GA 193 944	Across Box Springs Rd 10m N. of its intersection with Cactus 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-44	GA 113 955	Across Moore Rd on the N. side of Carmouche Range maneuver box.	Gate
K-45	GA 115 961	Across Moore Rd 300m S. of its inter-section with the old Ware Range course road.	Gate
K-46	GA 119 979	Across Moore Rd 725m S. of its intersection with Americo Trail	Gate
K-47	GA 176 963	Across Turrentine Rd 1000m W. of mover 4 on Hastings Range	Gate
K-50	GA 195 988	Across Box Springs Rd 60m N. of its intersection with the northern boundary range road.	Cable
O-9	101 962	600m N of Carmouche Rng on right side of Lorraine Rd	Gate
O-18	093 979	800m N of Ware Rng Entrance on right side of Lorraine Rd	Gate


Lorraine Rd
Mortar Pool
Ammo Point
BP1
BP2
FP1
FP2
FP3
Start
Stop
Tower
Bleachers
Baseline
Baseline Left Side
Baseline Right Side
201
202
203
Group 1
Group 2
Group 3
Group 4
P8
Bld
Brooks Range

Brooks Range
Tower
Bleachers
Baseline


Lorraine Rd
Baseline
Moore Rd
Americo Trail
Brooks Range
GRP 1
GRP 2
GRP 3
GRP 4
GRP 5
GRP 6
GRP 7
M1
M2
500m
800m
1000m
1600m
2000m


Baseline
Moore Rd
500m Visable Area
1200m Visable Area
1500m Visable Area
Brooks Range
America Trail



Brooks Range 197th (1/29 IN) STRYKER Gunnery
Baseline: GA 1064 9939 to 1055 9929
M2 (.50 cal Ball/Tracer) LL= 1965, RL= 2630 (Mils, Grid Azimuth)
Baseline .50 cal Gunnery
Lorraine Rd
Moore Road
Americo Trail
Upatoi Creek
Brooks Range
Ware Range
Carmouche Range
Terry Demo
Bullseye Rd
Rinehart Rd
Hastings Ra
K15
K14
K12
K16B
K16A
K46
K45
K44
K47
K8
K13
K7
O7
O18
O9
M1
M2