

DEPARTMENT OF THE ARMY
HEADQUARTERS AMERICAL DIVISION
APO San Francisco 96374

AVDF-CS

5 February 1968

SUBJECT: Gunnery Checklist

TO: Commanding General, 11th Light Infantry Brigade
APO San Francisco 96217
Commanding Officer, 196th Light Infantry Brigade,
APO San Francisco 96256
Commanding Officer, 198th Light Infantry Brigade,
APO San Francisco 96219
Commanding Officer, 3d Brigade, 4th Infantry Division,
APO San Francisco 96262

1. Attached as Inclosure #1 is a letter published by Headquarters, Americal Division Artillery, with a Gunnery Checklist attached. Thirty copies were provided to each direct support artillery battalion.

2. It is requested that action be taken to insure that:

a. Artillery battalions organic or attached to brigades comply with the instructions for the use of this checklist in accordance with Inclosure #1.

b. All references, with changes, of the attached Gunnery Checklist are on file in all Fire Direction Centers of artillery organic or attached to the brigades.

c. The inspections required on a monthly basis by the Battery and Battalion Commanders be completed, and a written record of deficiencies noted be posted in appropriate Fire Direction Centers.

3. Inspecting Officers from Headquarters, Americal Division Artillery will spot check units from time to time, using this checklist to evaluate the results of the inspections required by para 2c above.

FOR THE COMMANDER:

1 Incl
as

Nels A. Parson Jr.
NELS A. PARSON JR
Colonel, GS
Chief of Staff

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EXHIBIT M-67

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DEPARTMENT OF THE ARMY
HEADQUARTERS AMERICAL DIVISION ARTILLERY
APO San Francisco 96374

AVDF-AT

5 February 1968

SUBJECT: Gunnery Checklist

TO: Commanding Officer, 3d Battalion, 16th Artillery, APO 96374
Commanding Officer, 3d Battalion, 18th Artillery, APO 96374

1. The attached "Gunnery Checklist" is forwarded for your use in checking the fire direction centers and firing batteries under your command.

2. Each Battery and Battalion Commander in Americal Division Artillery will personally inspect each fire direction center and firing battery under his command, using technical assistants as appropriate, once each month, using this checklist. A copy of the checklist, with deficiencies noted thereon, will be posted in the FDC and at the battery executive post until the next inspection is made.

3. Inspecting officers from Headquarters Americal Division Artillery will spot check units from time to time using this checklist, in order to evaluate the results of the inspections required by paragraph 2, above.

Mason J. Young Jr.

MASON J. YOUNG JR.
Colonel, Artillery
Commanding

1 Incl
as

DISTRIBUTION:

30-Each Addresssee
30-CO, 2d Bn, 9th Arty
30-CO, 6th Bn, 11th Arty
30-CO, 1st Bn, 14th Arty
30-CO, 3d Bn, 82 Arty
1-S1
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AMERICAL DIVISION ARTILLERY GUNNERY CHECKLIST

A. Are the following references on hand

1. FM 6-40 dated October 1967 or FM 6-40 dated November 1960 with changes 1, 2, 3 and DA Training Circular 6-1.

2. Americal Division Artillery Field SOP

3. CO, TF OREGON Artillery message AVDF-AT 2790, subject: Selection of Ammunition, DTG 260830Z Jul 67.

4. CO, AMERICAL DIVISION Artillery letters, subject: Artillery Items for Command Emphasis, dated:

- | | |
|------------------------------|----|
| a. 23 April 1967 | i. |
| b. 13 June 1967 | j. |
| c. 20 June 1967 | k. |
| d. 12 October 1967 | l. |
| e. 15 October 1967 | m. |
| f. 26 November 1967 (FADAC) | n. |
| g. 26 November 1967 (Slings) | o. |
| h. 2 December 1967 | p. |

5. CO, TF OREGON Artillery message, AVDF-AT 1483, subject: Orientation and Training in Artillery Techniques, DTG 201501Z May 67.

6. CG, TF OREGON message (to brigade commanders) AVDF-AT 1669, subject: Adjustment of Artillery Defensive Concentrations, DTG 270330Z May 67.

7. CG, TF OREGON message (to brigade commanders) AVDF-AT 2128, subject: Double Check Procedures for Artillery Units, DTG 060806Z Jul 67

8. CG, TF OREGON message AVDF-AT 2859, subject: Reporting and Investigation of Erratic Artillery Rounds, DTG 300810Z Jul 67.

9. Artillery Incident File to include:

a. Headquarters, TF OREGON letter, subject: Investigation of Artillery Incidents, dated 7 May 1967.

b. Headquarters, III Marine Amphibious Force letter subject: Spot/Serious Incident Reports, undated.

Americal Division Gunnery Checklist

c. All CO, Americal Division Artillery messages, subject: Artillery Incident.

10. CG, TFO letter, subject: Safety in Artillery Firing, dated 26 Aug 67.

11. CG, TF OREGON message AVDF-AT 1570, subject: Adjusting with Shell Smoke prior to firing Shell HE, DTG, 230740Z May 67.

B. FDC Checklist:

1. Are standard Gunnery procedures and the "new" terminology used? (Ref 1)

2. Is a complete FDC team of five men on duty 24 hours a day? (Ref 2)

3. Does the FDC possess all the required equipment to perform its mission? (Chap 16, FM 6-40; TOE)

4. Is there adequate light and working space in the FDC?

5. Is a thorough briefing conducted between personnel when shifts are changed?

6. Is there an overlap of shift personnel to insure continuity?

7. Is there an adequate system of checks in the FDC to prevent errors from being transmitted to the guns? (App 2, Annex A, SOP; Ref 7)

8. Is a Fire Order issued for each mission? (Para 18-15, FM 6-40)

9. Are fire commands transmitted in proper sequence? (Sec IV, Chap 4, FM 6-40)

10. Is a complete and consolidated record of ammunition kept indicating rounds on hand and expended? (Para 18-32, FM 6-40)

11. Is an independent check of computations made at all times? (App 2, Annex A, SOP)

12. Is a fire capabilities overlay maintained? (Para 24-40, FM 6-40)

13. Is the situation map kept current, to include locations of all friendly forces, patrols, LRRP's observation posts, ambushes, no fire areas, free fire areas, fire coordination lines, built up areas, villages and hamlets? Is the map updated to reflect current inhabited areas? Are the limits of villages, refugee camps, etc, corrected as information is received from the district or by aerial reconnaissance? (Annex A. SOP)

Americal Division Gunnery Checklist

14. Is the grid of all fire requests checked with the situation map to assure an unsafe condition does not exist and then cleared with both the U.S. DS Artillery Liaison Officer, the local ARVN authorities (District) and/or other allied troops in the area, as appropriate?
15. Are fire direction records properly maintained? (Para 18-32, FM 6-40; Annex A, SOP)
16. Does the HCO determine Angle T to the nearest 10 mils and announce it when its value is 500 mils or greater? (Para 18-21, FM 6-40)
17. Are deflection indexes properly constructed and identified for 6400 mil operation? (Para 16-18, FM 6-40; Annex A, SOP)
18. Does the FDC always fire with the best data available? (Para 7f, App 2, Annex A, SOP)
19. Are GFT corrections being kept current by registration and/or MET plus VE?
20. Are registrations being conducted, as a minimum, every third day, and upon occupation of a new position? (For 105mm howitzers a daily registration is desirable.) Is the "full fork" method of registration being used? (Para 9i, Annex A, SOP)
21. Are MET Messages being received on a regular basis? (Every 6 hours) (Para 9m, Annex A, SOP)
22. Is the MET Message computed immediately upon receipt for all appropriate ranges and directions?
23. Is there an independent check of each battery computer by the chief computer or battery FDO, as appropriate? (App 2, Annex A, SOP)
24. Are at least 2 independent computations being made of each MET Message? (App 2, Annex A, SOP)
25. During computation is each computer extracting data from the firing tables independently of the other computers?
26. Is a check made between battalion and battery FDC's in order to compare met computations?
27. Is all encoding/decoding performed independently by at least two individuals?
28. Are registration transfer limits adhered to at all times? (Chap 20, FM 6-40)

Americal Division Gunnery Checklist

29. Are corrections for targets outside transfer limits computed using Met plus VE technique? (Para 21-15, FM 6-40)
30. Are comparative VE's known for all guns?
31. Are all targets plotted neatly and accurately? (Para 16-3, FM 6-40)
32. Is the 100/R factor used properly in Time and VT missions? (100/R determined at initial chart range) (Para 18-26, FM 6-40)
33. Is battery Executive Officer familiar with the Executive's High Burst? (Para 4-25, FM 6-40)
34. After the second and any subsequent registration, regardless of the point registered on (it may be the same point initially registered on), does the FDO assure that the deflection index is not moved? (Para 20-12, FM 6-40)
35. Are all FDO's familiar with high burst registration and registration by radar? (Sec IV, Chap 19, FM 6-40)
36. Are computers able to solve a high burst registration using logarithms? (Sec IV, Chap 19, FM 6-40)
37. Are FDO's familiar with the basic survey operations?
38. Are FDO's asking observers if "Adjust Fire" missions are Close Danger Close or Deep if appropriate? If "Close" are they asking "How Close"? It should be remembered that a two way channel exists over the radio to advise of unusual situations and difficulties which might produce safety hazards, such as friendly troops forward of the FO, on his flanks, jungle which hampers observation, etc. The FDO has a responsibility to question the FO if there is any indication that friendly troops or civilians may be endangered.
39. Is an officer present and awake at all times in the FDC?
40. Are artillery defensive concentrations plotted and have they been fired in prior to darkness unless a command decision has been made not to do so for cogent reasons? (Para 91(7), SOP and ref A6).
41. Do the FDC personnel know the proper procedure for properly computing an adjustment with shells: smoke, base ejection and WP and then changing to shell HE? (Sec I, Chap 24, FM 6-40)

Americal Division Gunnery Checklist

42. Is the FDC properly protected against mortar/small arms fire to include overhead cover? (Para 9c, SOP)

43. Does each DS Artillery Battalion maintain a liaison officer with the U.S. advisor to all districts in his brigade AO? (Para 6b, Appendix 4, Annex A, SOP)

44. Are new forward observers given a thorough orientation and a test (as applicable) prior to being sent up on the hill? (Para 10 Annex SOP and message reference A5 above)

45. Are new FDO's given a thorough orientation, and an apprentice period under an experienced FDO prior to going on shift? (reference A5)

46. Does each battalion have an FDC test which all officers in the gunnery chain are required to pass?

47. Is the prohibition against beer in the FDC or Executive Post strictly enforced? (Ref 4b)

48. Do some H&I fires commence promptly at dusk? (Letter, "Artillery Items for Command Emphasis", dated 13 June 1967)

49. Is responsibility fixed with a specific individual on each shift for each link in the gunnery chain, and its independent check? (Letter "Artillery Items for Command Emphasis", dated 20 June 1967)

50. Does the battery FDC compute the minimum CE to clear all intermediate crests occupied by friendly troops, and have on file the minimum CE to clear masks visible from the battery position as computed by the battery executive officer (Sec II, Chap 3, FM 6-40)

51. Does the FDC have wind data cards and are they using them correctly?

52. Does the FDO monitor the read back from the guns to insure that the correct data was received?

53. Are program tests of FADAC made periodically to check computer functioning?

54. Is the data on the computer visually checked by a second individual before the operator presses the "ENTER" button?

55. Are current registration corrections (deflection, time, range) being determined and entered into FADAC?

56. Is a primary check of data produced by FADAC made by either a second FADAC or by the manual system?

57. Is the solution of a MET check point for a target at maximum range checked between two different FADAC's to insure that all applicable MET lines have been entered correctly?

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10. Is the last motion in setting OE in the direction of greatest resistance? (Para 5-4, FM 6-40)
11. Is the Gunner's Quadrant used properly?
12. Are the guns loaded only after 'E is announced?
13. Is the hand wheel touched after announcing "Ready"?
14. Are the bubbles leveled after firing?
15. Is the "read back" accomplished properly?
16. Does the Chief of Firing Battery and/or the Executive Officer inspect all pieces daily for maintenance, serviceability, safety and cleanliness?
17. Does the Chief of Section insure that his prime mover and his portion of the basis load of ammunition is properly maintained?
18. Does the Battery Executive Officer check the azimuth of the orienting line for general direction by setting up his aiming circle and "floating a needle" over the OL? (Para 4-5, FM 6-40)
19. Are aiming circles properly declinated? (Applicable TM)
20. Is the "basic periodic check" performed on a regular basis?
21. Are powder pits or containers of sufficient size to prevent over flow during periods of heavy firing? (Para 8d(2), App2, Annex A, SOP)
22. Is unused powder burned regularly?
23. Are azimuth markers placed around each howitzer to provide a visual check of the correct azimuth of fire? (Para 8b(3), App2, Annex A, SOP)
24. Is proper protection provided for personnel, weapons and ammunition? (Para 9c(2)(a), Annex A, SOP) Is overhead protection provided for all personnel in their sleeping and working areas within a reasonable time here defined as 3-5 days?

ARTILLERY DIVISION GUNNERY CHECKLIST

25. Is an air sentinel posted at the firing position during missions? (Letter, "Artillery Items for Command Emphasis", dated 23 April 1967)

26. Is ammunition stored in accordance with the letter, "Artillery Items for Command Emphasis", dated 13 June 1967?

27. Is responsibility fixed on a specific individual at all times (including chow times) for each link in the gunnery chain, to include responsibility for supervision? (Letter, "Artillery Items for Command Emphasis", dated 20 June 1967)

28. Does the battery Executive Officer compute the minimum QE to the visible task, adding the required safety factor if it is occupied by friendly troops? (Sec II, Chap 4, FM 6-40)

29. Does the Executive Officer insure that the maximum rate of fire of the weapon is not exceeded? (Para 27-6, FM 6-40)

30. Are the powder increments removed from each semi-fixed round to verify that the complete and correct increments are present before the charge is cut? (Table II, FM 6-75)

31. Does the XO or Chief of Firing Battery visually check the powder increments held up by the Chief of Section to insure that the correct charge has been cut? (Reference 4d)

32. Are procedures established to insure that a round is not allowed to sit in a "hot" chamber an excessive period of time, i.e. not more than 2 minutes, without unloading by firing into a "safe" area?

33. Are there frequent, short, brisk periods of "Cannoneers Drill" with checks for accuracy, to insure high standards are maintained?

34. Are personnel provided protection, to include overhead cover, before ammunition, in accordance with the priorities established in Para 9c(2) Annex A, SOP?

35. Is ammunition properly protected from weather and rain?

36. Are wooden gun platforms provided for heavy artillery as soon as practicable?

37. Are all personnel in the firing battery familiar with the plan to defend their gun position against ground attack?

38. Have bunkers in front of 105mm howitzers been provided with sandbag protection to their rear so as to allow the safe firing of "Beehive" ammunition overhead in defense of the fire base?

AMERICAN DIVISION GUNNERY CHECKLIST

39. Is there a system of incentives to reward gun sections with an unbroken record of accuracy in firing?

40. Is the battery position neat and orderly?

41. Have howitzers been electronically calibrated? How recently? Are calibration corrections recorded and available?

42. Are ME's recorded at the piece by azimuth of fire to obstructions such as tall trees, towers, etc?