



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350-2000

IN REPLY REFER TO
OPNAVINST 8820.2
OP-502J
27 October 1988

OPNAV INSTRUCTION 8820.2

From: Chief of Naval Operations

Subj: HIGH SPEED ANTI-RADIATION MISSILE (AGM-88A/B HARM) FLEET
FIRING GUIDANCE

Ref: (a) COMOPTEVFOR TACTICS GUIDE XZ3032-3-88, F/A-18 Electronic
Warfare Suite and HARM Weapon System
(b) COMOPTEVFOR TACTICS GUIDE XZ3031-4-88, A-7E Electronic
Warfare Suite and HARM Weapon System

Encl: (1) Fleet Firing Scenario Message Format

1. Purpose. To issue guidance and considerations for fleet HARM firings.

2. Background. To gain experience in HARM employment, a limited number of HARM missiles are made available for fleet firings. Naval Weapons Center (NAVWPNCEN) China Lake provides realistic targets with ranges available to support HARM operational test and evaluation, but at present, those range facilities are not available for fleet firings owing to priority test scheduling. Instead, expendable emitters (Vitro 545, TEX 20, or CANOGA emitter) with broadbeam antennas are available as targets for fleet training expenditures. Although those fleet target emitters do not exercise full HARM Command Launch Computer ELINT discrimination and tactical launch ranges are reduced because of low power output, Air Wing strike planning and execution in support of fleet firings aid in the evaluation of tactics and training. Additionally the current nonavailability of HARM telemetry sections for fleet firings restricts fleet units from utilizing NWC targets with live warhead firings.

3. Discussion. To ensure safety and opportunity of success for each HARM firing, all HARM fleet firing units must comply with the following limitations:

a. The extended range capability of the HARM weapon system requires a large clear area. Frequency deconfliction as well as removal of nonparticipants from the operations area must be completed prior to commencing any fleet HARM firing.

b. The target emitter power output and general operating characteristics greatly limit the launch range of the HARM weapon system. Those reduced launch ranges are available from VX-5 and must be taken into consideration prior to any live firing.

27 OCT 1988

c. Target radar parametrics are chosen to provide emission deconfliction with other commonly used commercial radars. Use of incorrect target parameters or unapproved HARM targets could result in missile track of commercial or military nonparticipants.

4. Action

a. Fleet firing unit

(1) Two months prior: Request missile, target and range funding from Commander, Naval Air, Atlantic Fleet (COMNAVAIRLANT) or Commander, Naval Air, Pacific Fleet (COMNAVAIRPAC).

(2) One month prior: Submit HARM firing scenario message, enclosure (1), and provide Commander, Operational Test and Evaluation Force (COMOPTEVFOR)/Air Test and Evaluation Squadron FIVE (VX-5) with the additional background information required in the fleet firings section of reference (a) or (b).

(3) No later than two weeks prior: Coordinate specific target and manual entry parameters, missile launch requirements and HARM scenario approval with COMOPTEVFOR/VX-5. Scenario approval must be received prior to missile live firing.

(4) After completion of firing: Provide COMOPTEVFOR/ VX-5 with a post strike report under reference (a) or (b) as applicable.

b. Air Wing

(1) Provide assets to monitor the target emitter (EA-6B or EA-3) immediately prior and during the firing to verify target emission and to detect false targets, interference, hulk beam orientation and correlation of missile time-of-flight and emitter shutdown time.

(2) Miss distance assessment is required. If costs or availability preclude use of target cameras, an F-14 target camera set or A-6E FLIR aircraft should be used for assessment. Availability of target cameras or F-14/A-6E assets should be considered GO/NO GO criteria for a HARM fleet firing.

c. COMOPTEVFOR/VX-5

(1) Provide the HARM firing squadron with all operational considerations, missile launch requirements, target parameters and scenario approval prior to the fleet firing.

27 OCT 1988

(2) Review Air Wing and squadron tactical procedures and provide inputs and recommendations to fleet units if required.

d. NAVWPNCEN China Lake

(1) Provide safety of flight and missile kinematic range envelopes for proposed scenario launch conditions.

(2) Provide technical support for all HARM fleet firings.

e. Commander, Pacific Missile Test Center. Install target emitter and provide target emitter RF characteristics, antenna patterns, power output and photos or drawings of installation to VX-5 and NAVWPNCEN China Lake.

5. Report. Symbol OPNAV 8820-1 has been assigned to the reporting requirement contained in paragraph 4a(2) and is approved for three years only from the date of this instruction.

JDTaylor
J. D. TAYLOR
By direction

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OPNAVINST 8820.2

27 OCT 1988

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27 OCT 1988

FLEET FIRING SCENARIO MESSAGE FORMAT

FROM: (SQDN, AIR WING, ETC.)

TO: AIRTEVRON FIVE//2L//

NAVWPNCEN CHINA LAKE CA//CODE 3506//

INFO: CNO WASHINGTON DC//OP-502J/OP-411//

COMNAVAIRSYSCOM WASHINGTON DC//PMA-242/AIR 5402B//

COMPACMISTESTCEN PT MUGU CA

(APPROPRIATE OTHER INFO ADDEES)

S E C R E T //NO3960//

SUBJ: FLEET EXPENDITURE OF HARM (REPORT SYMBOL 8820-1) (U)

1. (S) TYPE MSL TO BE FIRED (BLOCK NUMBER)
 2. (S) TYPE CLC/HCP TO BE USED (SOFTWARE AND BLOCK VERSION)
 3. (S) FIRING DATE
 4. (S) FIRING LOCATION/NAME OF TARGET RANGE
 5. (U) FIRING SQUADRON/TYPE AIRCRAFT
 6. (U) TARGET EMITTER(S) AVAILABLE (INCLUDE FLEX TGTS)
 7. (S) TARGET PLATFORM SIZE/SPEED/ABILITY TO MANEUVER
 8. (S) TARGET MSL ALTITUDE AND ANTENNA HEIGHT ABOVE PLATFORM MAIN DECK
 9. (S) FIRING AIRCRAFT LAUNCH POINT (CV/SHORE)
 10. (S) ANTICIPATED OVERLAND/OVERWATER STRIKE ROUTE
 11. (U) DAY/NIGHT SCENARIO
 12. (S) NWDC/MC SOFTWARE RELEASE VERSION
 13. (U) ANY KNOWN RANGE RESTRICTIONS
 14. (S) COUNTERMEASURES AVAILABLE TO BE USED AGAINST WEAPON
 15. (S) SINGLE/MULTIPLE WPN SHOT AGAINST TGT
 16. (S) OTHER WEAPON(S) TO BE FIRED DURING EXERCISE (E.G. HARPOON)
 17. (S) PROPOSED LAUNCH PARAMETERS
LAUNCH MODE (IF PREBRIEFED, ACFT OR MISSILE PULLUP)
ALTITUDE
AIRSPEED
LAUNCH ANGLE
RANGE
ANGLE OFF BORESIGHT
 18. (S) TYPE DESIGNATION (LINK-4A, RADAR, FLYOVER, GPS, ETC.)
 19. (S) DETAILS OF SCENARIO, INCLUDING NAME OF SIMULATED REAL-WORLD EMITTER BEING TARGETED
 20. (U) AIRCRAFT TO BE USED IN SUPPORT OF FIRING
 21. (S) AIRCRAFT TO BE USED FOR MISS DISTANCE ASSESSMENT
 22. (U) SQDN/AIR WING POINT OF CONTACT AND PHONE NUMBER
- DECL OADR BT

Enclosure (1)