



DEPARTMENT OF THE NAVY

CHIEF OF NAVAL OPERATIONS  
2000 NAVY PENTAGON  
WASHINGTON, DC 20350-2000

IN REPLY REFER TO

OPNAVINST 3370.4

N85

10 September 1996

OPNAV INSTRUCTION 3370.4

From: Chief of Naval Operations

Subj: MINE WARFARE READINESS/EFFECTIVENESS MEASURING (MIREM)  
PROGRAM

1. Purpose. To establish procedures to execute and conduct the Mine Warfare Readiness/Effectiveness Measuring (MIREM) Program.
2. Aim. The overall objective of the MIREM Program is the collection and analysis of high-quality data to quantitatively assess mine warfare readiness and effectiveness. This is achieved by the accomplishment of the following Program goals:
  - a. Meet Chief of Naval Operations (CNO) and fleet requirements for assessing and documenting the performance of naval surface and air mine countermeasure (MCM) systems in tactical environments through the collection and analysis of high quality data.
  - b. Identify and develop solutions for tactical problems connected with the employment of mine warfare systems and platforms through the analysis of accumulated data.
  - c. Produce recommendations for effective employment of mine warfare systems and platforms as well as to validate and support the development of fleet, force, and unit MCM tactics.
  - d. Establish and maintain a computerized database that is comprehensive and responsive to fleet and CNO requirements for tactical and technical data.
3. Method. MIREM Program goals are to be accomplished through design, conduct, reconstruction and analysis of at-sea exercises. Evaluation of threats and environments of national interest, as recommended by the fleet and type commanders, Commander, Mine Warfare Command (COMINEWARCOM), Commanding General Marine Corps Combat Development Command (CG MCCDC) and as directed by CNO (N85), will lead to the development of threat and site specific MCM tactics and the collection of tactically significant



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environmental data. Environmental data collection will be accomplished in coordination with the Naval Oceanographic Office and supporting Naval Laboratories. MIREM will reflect current maritime operational plans in the accomplishment of Program goals. MIREM will conduct exercises and collect and analyze exercise data to assess performance through the sequence of MCM operations from time on task, whether the tasking be hunting, sweeping, neutralization, etc., through completion of that tasking with respect to specific threat mines. Exercise design will consider command and control effectiveness, system vulnerability, and the ability of MCM forces to tactically exploit the environment. Specific objectives are to be formulated for each exercise. Data is to be collected in both structured and freeplay scenarios to accomplish these objectives.

4. MIREM Program Organization. The MIREM Program organization members and their primary responsibilities are:

a. CNO (N85)

- (1) Act as MIREM Program and Resource Sponsor.
- (2) Convene and chair the MIREM Program Annual Review.
- (3) Approve MIREM Six-Year Plan, including Program objectives, budget, and annual exercise schedule.
- (4) Approve requests from outside agencies for analysis products produced from the MIREM database.

b. Program Executive Office, Mine Warfare (PEO-MIW)

- (1) Act as MIREM Resource Manager and provide funding for the Program.
- (2) Review and provide inputs to annual program plan and exercise schedule.

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(3) Provide special data collection requirements to CNO (N85).

(4) Establish and issue standard mine warfare Measures of Effectiveness and related Measures of Performance.

c. Commander, Surface Warfare Development Group  
(COMSURFWARDEVGRU)

(1) Act as MIREM Program Executive Agent.

(2) Coordinate development of and submit to CNO (N85) the Annual MIREM Program Six-Year Plan.

(3) Conduct liaison necessary to solicit recommendations from CNO, fleet and type Commanders, Naval Laboratories, system commands and the Naval Oceanographic Office for the MIREM Program Annual Review as well as support the annual MIREM exercise schedule.

(4) Contract for outside services and establish memoranda of agreement necessary to support COMSURFWARDEVGRU in the accomplishment of Program goals.

(5) Draft operations orders, letters of instruction and other exercise planning materials for issuance by the fleet commanders. Develop and issue Test and Data Collection plans for each exercise.

(6) Coordinate observers for MIREM exercises and oversee data collection efforts.

(7) Advise the Fleet Commanders on the execution of the Test Plan.

(8) Conduct post-exercise reconstruction and analysis; prepare and publish Program products as required.

(9) Maintain and validate the MIREM database. Recommend to CNO (N85) any changes in the data collection requirements.

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(10) Conduct cross-MIREM analyses and publish periodic reports.

(11) Respond to requests for analysis products derived from the MIREM database by outside activities as directed by CNO (N85).

d. COMINEWARCOM

(1) Coordinate with COMSURFWARDEVGRU on developing the annual MIREM program Six-Year Plan.

(2) Schedule dedicated MCM assets for participation in MIREM exercises.

(3) Provide Mine Exercise and Training (MET) assets and perform post-exercise analysis of actuation mines, including the Versatile Exercise Mine System (VEMS).

(4) For COMINEWARCOM exercises, issue operations orders, letters of instruction, and other exercise planning materials.

(5) Assist COMSURFWARDEVGRU in preparation of Program products.

(6) Use MIREM products to develop and improve MCM tactics and planning processes for existing systems.

(7) Provide special data collection requirements to CNO (N85).

e. Ad Hoc Membership. Ad hoc members of the MIREM program organization include the Fleet Commanders in Chief (CINCs), the numbered Fleet Commanders, COMNAVSURFLANT, COMNAVSURFPAC, CG MCCDC, COMINEWARCOM, Commander Marine Corps Systems Command (COMMARCORSYSCOM), Naval Surface Warfare Center Coastal Systems Station, Naval Laboratories, Surface Warfare Centers, other tactical development commands, Naval Oceanographic Office, representatives of the Surface MCM, Aviation MCM, Explosive Ordnance Disposal (EOD), Special Warfare, submarine communities,

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and support activities. Coastal Systems Station and other Naval Laboratories may provide support for pre-exercise planning, exercise observation, and post-exercise technical analysis, including assessments of the environment and system performance. Designated tactical commanders will be invited to present unit and squadron concerns.

#### 5. MIREM Long-Range Planning Process

a. MIREM Program policy and focus will be established at the MIREM Program Annual Review held during the first quarter of each fiscal year. COMSURFWARDEVGRU will liaise with the ad hoc members for input to MIREM Program goals, exercise objectives, and schedule for the next year.

As far as possible, sufficient details of exercise opportunities for the following 18 months shall be provided when solicited by COMSURFWARDEVGRU to enable advanced planning and commitment of MIREM assets. This should include projected exercise dates, location, scenario, objectives, and participants. COMSURFWARDEVGRU will consolidate all inputs and submit them to CNO (N85) 2 months prior to the MIREM Program Annual Review for fleet-wide issuance. Action addressees will have 30 days to provide comment/input on the proposed schedule and objectives which will be finalized at the Program Annual Review.

b. CNO's representative shall chair the MIREM Program Annual Review attended by representatives of PEO-MIW, COMINWARCOM, and COMSURFWARDEVGRU as well as the ad hoc members. The main topics to be covered during the meeting are:

(1) Review of the previous MIREM exercises and major accomplishments year.

(2) Review MIREM Program budget and products of the previous year.

(3) Present ad hoc members' issues concerning Program direction and objectives.

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(4) Review and update/affirm MIREM program objectives.

(5) Establish exercise schedule for next year and the out-years.

(6) Determine mapping and survey requirements.

(7) Identify and resolve programmatic issues.

c. The principal objective of the MIREM Program Annual Review will be to review the goals, objectives, and requirements of the upcoming year's exercise schedule, as well as the development of the MIREM Six-Year Plan. The most important facet of this review is early commitment by the fleet, type, and operational commanders to MIREM exercises.

d. Within 1 month after the Program Annual Review COMSURFWARDEVGRU will draft a Letter of Execution (LOE) for release by CNO (N85). This letter will present the results of the meeting and serve as a record of the exercise schedule proposed at the meeting. Once approved and revised by CNO, this will be the basis of COMSURFWARDEVGRU's direct liaison with fleet, type, and operational commanders and Navy Laboratories for detailed exercise planning.

#### 6. MIREM Six-Year Plan

a. The MIREM Six-Year Plan will be submitted by COMSURFWARDEVGRU and forwarded to CNO (N85) for action and approval before the end of the third quarter of the fiscal year. Once approved, it will be issued to members of the MIREM program organization for planning purposes.

b. The main components of the MIREM Six-Year Plan are:

(1) Background and review of the MIREM program.

(2) Program objectives for the coming year.

(3) Tasks to be accomplished by the program.

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- (4) Material support requirements.
- (5) Program costs.
- (6) MIREM exercise schedule for the coming years.

c. The Program objectives listed in the MIREM Six-Year Plan are general in nature, dictated by the overall Program goals. These are to be reviewed, as necessary, at the MIREM Program Annual Review and updated to support the U.S. Navy goals and objectives and the concerns of the Fleet CINCs, numbered fleet commanders and the mine warfare community. They are to be sufficiently broad to cover the spectrum of mine warfare but sufficiently focused to permit the timely production of meaningful analyses. The Program objectives are to be stated in terms which will be relatively stable and which will accommodate the specific objectives of individual exercises.

d. Program tasks listed in the MIREM Six-Year Plan are to be those specific items to be accomplished in the planning, execution, reconstruction, and analysis of the proposed schedule of exercises. The Program is to be costed for the completion of these tasks. The schedule of MIREM exercises is to be given both in the form of a generic schedule, representing the intended level of effort, and a specific schedule detailing individual proposed exercises. Program costs are to be presented by task for each exercise and as an aggregate amount for the coming year. An appropriate inflation factor is to be applied to projected costs for out-years. Budget requirements shall be recommended in accordance with the objectives and schedule generated from the MIREM Program Annual Review.

7. Detailed Exercise Planning and Coordination. On approval of the MIREM Program Annual Review letter of execution, COMSURFWARDEVGRU will liaise directly with fleet, type and operational commanders as well as the as hoc members for detailed exercise planning. This planning will deal with every aspect of the exercise which pertains to MIREM and will provide the officer scheduling the exercise (OSE) and the officer conducting the exercise (OCE) with draft messages and other associated planning materials. Where appropriate, MIREM exercises will be conducted

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in conjunction with other fleet exercises, taking full advantage of data collection opportunities and integration of MCM forces into the battle force. COMSURFWARDEVGRU will be designated the coordinator for all MIREM exercises. COMSURFWARDEVGRU will solicit the Navy Laboratories for desired participation in MIREM exercises and will work with the OSE and OCE to accommodate laboratory requirements within the established scenario of the exercise.

8. Program Products. The MIREM program will collect high quality data on the performance of surface and air MCM systems and tactics. Analysis conducted on these data will be presented in terms of Measures of Effectiveness (MOEs) and Measures of Performance (MOPs) as approved by the Program Sponsor. Particular attention shall be given to analysis which reveals needed improvements to system performance or tactics. The output of the Program is to be provided by COMSURFWARDEVGRU in the following forms:

a. QUICKLOOK Message. To be transmitted within 30 days of the end of the exercise summarizing known results. These will be preliminary analysis results based on unrectified Global Positioning System tracks and shall be caveated as such. This message shall be sent to all participants, planning group members, interested activities, and to the MIREM address indicating group (AIG).

b. Exercise Brief. To be completed within 60 days of the exercise for presentation to CNO. This will review the QUICKLOOK message and will include any additional analysis conducted to that point. This brief will be made available to the fleet commander requesting the exercise, the OSE and OCE, and exercise participants.

c. Exercise Reconstruction and Analysis Report (R & A). To be completed within 6 months of selected exercises. This report is to include the results of complete reconstruction and analysis, but need not replicate data in the MIREM database. It is to be produced in a standard format, as established by COMSURFWARDEVGRU, for the sake of consistency and comparability. The R & A report will supplement the MIREM database and provide

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details on exercise conduct, analysis methodology, and analysis results. It shall be distributed to the exercise participants and to a standard distribution list approved by CNO.

d. Data Analysis Report (DAR). Unlike an R & A report, the DAR will concentrate on a specific objective rather than all of the standard MIREM objectives. A DAR may be directed in lieu of an R & A report for a reduced level of effort; the DAR will be submitted within 60 days after completion or as directed by the exercise sponsor.

e. Exercise Technical Analysis Report. Whenever the nature of a particular exercise requires technical analysis beyond the capability or scope of the MIREM Program, COMSURFWARDEVGRU shall task the appropriate naval laboratory to conduct a supplementary analysis and to prepare a report covering those technical aspects of the exercise. The specific topic, scope, and format shall be determined by COMSURFWARDEVGRU.

f. Exercise Data Report. Exercise data will be validated and entered into the MIREM database after approval of the R & A or DAR report. This data consists of data collected during the exercise and that which resulted from reconstruction and analysis efforts. Following completion of data entry and validation, a listing of all data collected during the exercise shall be provided to the standard distribution list approved by CNO.

g. Cross-MIREM Analysis Report. Periodic analysis shall be performed on fundamental MIREM objectives and other selected topics to identify trends. Topics for analysis shall be solicited prior to the MIREM Program Annual Review and chosen by COMSURFWARDEVGRU in consultation with the Program Sponsor. Some of these topics may require tasking of Naval Laboratories, as appropriate, to benefit from their technical expertise. The distribution of these reports shall be in accordance with the standard distribution list. At least one cross-MIREM analysis shall be attempted each year.

h. Tactical Development. Cross-MIREM analyses which indicate an area of tactical interest requiring further analysis, or deficiencies in existing tactical guidance, or a need for new

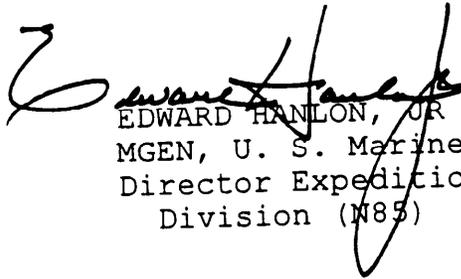
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guidance, shall be pursued as appropriate. Development of new or improved tactical guidance shall be coordinated with concurrent MIW tactical development efforts.

9. Action. CNO will delegate exact details on implementation of all Program objectives and all report requirements to COMSURFWARDEVGRU. CNO will maintain final approval authority on all report formats and responses to data queries.

10. Reports. The reporting requirements detailed in this instruction are exempt from reports control by SECNAVINST 5214.2B.



EDWARD HANLON, JR  
MGEN, U. S. Marine Corps  
Director Expeditionary Warfare  
Division (N85)

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