



DEPARTMENT OF THE NAVY

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

IN REPLY REFER TO  
OPNAVINST 3501.328  
N85

10 September 1996

OPNAV INSTRUCTION 3501.328

From: Chief of Naval Operations

Subj: PROJECTED OPERATIONAL ENVIRONMENT (POE) AND REQUIRED  
OPERATIONAL CAPABILITIES (ROC) FOR MINE SEARCH SQUADRON  
(MSR) AND MINE SEARCH UNITS (MSU)

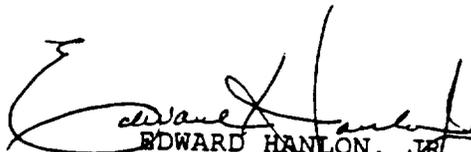
Ref: (a) OPNAVINST C3501.2H

Encl: (1) Projected Operational Environment (POE) for  
Mine Search Squadron and Mine Search Units  
(2) Required Operational Capability (ROC) for  
Mine Search Squadron and Mine Search Units.

1. Purpose. To define the POE and establish ROC for U.S. Navy  
MSR and MSU's in accordance with reference (a).

2. Mission. The mission of the MSR is to provide trained forces  
for, and to conduct and coordinate, shallow water mine  
countermeasures (SWMCM) and inshore clearance operations, in  
support of expeditionary operations, by U.S. Naval Forces, in  
littoral regions worldwide. The mission of the MSU's is to  
provide a rapidly deployable, inshore clearance capability,  
employing towed and hull mounted sonars and Remotely Operated  
Vehicles (ROV), to facilitate avoidance, neutralization in place,  
and/or removal of non-explosive obstacles and explosive ordnance  
such as mines and bombs. The MSR and MSU mission objective is to  
facilitate the safe passage of shipping within critical re-supply  
ports, inshore anchorages, and inshore Amphibious Objective Areas  
(AOA). A key focus is to provide support during Naval Coastal  
Warfare (NCW) operations, submarine security operations, and  
Maritime Pre-positioning Force (MPF), Joint Logistics Over-the-  
Shore (JLOTS), and Assault Follow-on Echelon (AFOE) operations.

3. Action. Fleet Commanders in Chief and Commander, Mine  
Warfare Command, are requested to periodically review enclosures  
(1) and (2) and provide recommended changes to the Chief of Naval  
Operations, Expeditionary Warfare Division (N85).

  
EDWARD HANLON, JR.  
Director, Expeditionary Warfare  
Division (N85)



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PROJECTED OPERATIONAL ENVIRONMENT (POE) FOR  
MINE SEARCH SQUADRON (MSR) AND MINE SEARCH UNITS (MSU)

MINE SEARCH SQUADRON (MSR)

1. Exercise operational and administrative control over assigned MSU's.
2. Provide mine warfare-trained individuals or detachments to augment forward deployed Mine Countermeasures (MCM) commanders in support of MSU's.
3. Conduct administrative and operational readiness evaluations of subordinate units.
4. Coordinate, monitor and conduct MSU training.
5. Perform command and control, tactical, and support missions afloat and ashore as outlined in the Required Operational Capabilities (ROC).
  - a. At advanced bases, amphibious operating areas, logistic off-load areas, or other locations worldwide in an expeditionary warfare environment.
  - b. Independently, in remote locations such as a strait or choke point.
  - c. At out-CONUS/CONUS locations worldwide in a littoral or coastal warfare environment as set forth in NWP 3-10, Naval Coastal Warfare.
6. Exercise command and control under all environmental conditions within the constraints of equipment and personnel safety.
7. Perform all assigned tasks in a low threat (Level I - Platoon size or smaller terrorist) environment, as defined by U.S.A. Field Manual 90-14, Rear Battle.
8. Exercise operational control of organic assets as assigned by the MCM commander.

Enclosure (1)

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MINE SEARCH UNITS (MSU)

1. Perform missions afloat or ashore as assigned by higher authority, and as outlined in the Required Operational Capabilities (ROC).
  - a. At advance bases, amphibious operating areas, logistic off-load areas, or other deployed locations worldwide in an expeditionary warfare environment.
  - b. Independently in remote locations such as a strait or choke point.
  - c. At out-CONUS/CONUS locations worldwide in a littoral or coastal warfare environment as set forth in NWP 3-10, Naval Coastal Warfare.
2. Be fully ready for operational lift within 72 hours of mobilization processing by aircraft, organic vehicles, ship or other available means.
3. Conduct operations, under all environmental conditions, within the constraints of equipment and personnel safety.
4. Conduct unit level training on equipment use and mission execution.
5. Perform equipment emergency corrective repair and limited organizational level maintenance and repair, within personnel and OPTEMPO constraints, in a geographically remote environment,
6. Perform all assigned tasks in a low threat (Level I - Platoon size or smaller terrorist) environment, as defined by U.S.A. Field Manual 90-14, Rear Battle.

REQUIRED OPERATIONAL CAPABILITY (ROC) STATEMENT FOR  
MINE SEARCH SQUADRON (MSR) AN MINE SEARCH UNIT (MSU)

The MSR and subordinate MSU's are immediate crisis response assets that provide a rapidly deployable SWMCM and inshore clearance capability in support of expeditionary warfare objectives worldwide.

MSU's are hardware equipped, lightly manned units, that employ sonars and Remotely Operated Vehicles (ROV) for detecting, locating, and classifying underwater objects. MSU's are not self-sufficient and are dependent on a host command to provide habitability, supply and administrative support after deployment in-theater. Primary naval warfare missions for the MSU's are command, control communications (C3), mine warfare (MIW), mobility (MOB); and non-combatant operations (NCO), including the sub-mission area of Naval Coastal Warfare per NWP 3-10, Naval Coastal Warfare. Secondary mission areas are anti-surface warfare (ASU), fleet support operations (FSO), intelligence (INT), logistics (LOG), and naval special warfare (NSW).

The MSR is a lightly manned staff responsible for the operational readiness/training, administration, and fiscal oversight of subordinate MSU's. The MSR may be forward deployed to coordinate deployed MSU's and/or to provide command and control of assigned forces in support of expeditionary warfare mine warfare clearance operations. The MSR may also provide individuals or small detachments to augment the forward deployed MCM Commander or another staff for the coordination of inshore mine warfare operations. Primary naval warfare missions for the MSR are CCC, MIW, MOB, and NCO. Secondary mission areas are FSO, INT, and NSW.

Table 1 summarizes the primary (P) and secondary (S) warfare mission areas for the MSU's. Table 2 lists specific capabilities and the degree of capability as either full (F) or limited (L). For each limited capability, a limiting statement is provided to define the limitation.

TABLE 1

	ASU	CCC	FSO	INT	LOG	MIW	MOB	NCO	NSW
MSR	-	P	S	S	-	P	P	P	S
MSU	S	P	S	S	S	P	P	P	S

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Degree of Capability  
MSU MSRTABLE 2

1.	<u>ANTI-SURFACE SHIP WAREFARE (ASU)</u>		
ASU 3	- Support anti-surface ship defense of a geographical area (e.g. zone or barrier) in cooperation with other forces.	L	L
ASU 4	- Detect, localize and track surface ship targets.		
ASU 4.1	Detect, localize and track surface contacts with radar.	F	-
ASU 4.4	Detect, localize and track surface contacts visually.	F	-
ASU 4.7	Identify surface contacts.	F	-
ASU 6	- Disengage, evade and avoid surface attack.		
ASU 6.2	Employ evasion techniques.	F	-
ASU 6.3	Employ EMCON procedures.	F	F
2.	<u>COMMAND, CONTROL AND COMMUNICATIONS (CCC)</u>		
CCC 2	- Coordinate and control the operations of the task organization or functional force to carry out assigned missions.		
CCC 2.13	Plan, coordinate, control and analyze the effectiveness of a Surface Mine Countermeasures/Airborne Mine Countermeasures (SMCM/AMCM) operation.	-	L
CCC 3	- Provide own unit's command and control functions.		
CCC 3.3	Provide all personnel services programs, and facilities to safeguard classified material and information.	L	F

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Degree of Capability  
MSU MSR

(L) Limited to safeguarding classified material and information.

CCC 3.4	Carry out emergency destruction of classified material and equipment rapidly and efficiently.	F	F
CCC 6 -	Provide communications for own unit.		
CCC 6.1	Provide tactical voice communications.	F	F
CCC 6.15	Maintain frequency data base.	F	F
CCC 7 -	Implement Operations Security (OPSEC) measures and conduct military deception actions.		
CCC 7.2	Execute OPSEC measures.	F	F
CCC 7.4	Execute Navy operational deception actions using tactics, operations, exercises or physical means.	F	F

3. FLEET SUPPORT OPERATIONS (FSO)

FSO 5 -	Conduct towing/search/salvage/rescue operations.		
FSO 5.1	Conduct towing operations.	L	-
	(L) Limited to towing small craft of similar size.		
FSO 5.2	Conduct salvage operations.	L	-
	(L) Limited to object localization and small craft support of Mobile Diving and Salvage missions.		
FSO 5.3	Conduct rescue operations.	L	-
	(L) Limited to near land areas.		

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		Degree of Capability	
		MSU	MSR
FSO 5.11	Conduct underwater search operations using towed and/or hull mounted sonar and/or magnetometer.	F	F
FSO 6 -	Support/conduct Search and Rescue (SAR) operations in a combat/noncombat environment.		
FSO 6.1	Support/conduct combat/non-combat SAR operations by fixed or rotary wing aircraft.  (L) Limited to SAR support in near land areas.	L	-
FSO 6.2	Conduct combat/noncombat SAR operation by surface ships.  (L) Limited to SAR support in near land areas.	L	-
FSO 6.4	Recover man overboard.	F	-
FSO 6.7	Conduct general surveillance.  (L) Limited to visual and acoustic surveillance only.	L	-
FSO 6.9	Report situation assessment.	F	F
FSO 7 -	Provide Explosive Ordnance Disposal (EOD) services		
FSO 7.13	Locate/detect surface ordnance.  (L) MSR limited to C3 coordination with other forces.	F	L
FSO 7.14	Locate/Detect underwater ordnance.  (L) MSR limited to C3 coordination with other forces.	F	L
FSO 7.21	Conduct small craft operations in support of EOD missions.	F	L

Degree of Capability  
MSU MSR

(L) MSR limited to C3 coordination  
with other forces.

FSO 10 - Provide first aid assistance.

FSO 10.2	Train assigned and embarked personnel in first aid, self aid and buddy aid procedures.	F	F
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4. INTELLIGENCE (INT)

INT 1 - Support/conduct intelligence collection.

INT 1.2	Support/conduct acoustic intelligence information collection.	F	L
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(L) MSR limited to evaluation of  
of intelligence information and C3  
coordination with other forces.

INT 3 - Conduct surveillance and reconnaissance.

INT 3.2	Conduct overt surveillance and reconnaissance operations.	F	L
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(L) MSR limited to mission planning  
and coordination with other forces.

INT 6 - Conduct surface reconnaissance.

INT 6.1	Conduct surface patrols or barriers.	L	-
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(L) Limited to acoustic and visual  
surveillance. No self defense capability.

INT 6.5	Conduct inshore harbor defense patrols.	L	-
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(L) Limited to acoustic and visual  
surveillance. No self defense capability.

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Degree of Capability  
MSU            MSR

5. LOGISTICS (LOG)

LOG 3 - Provide sea-lift for cargo and personnel.

LOG 3.2 Provide small boat services for transfer of personnel, cargo, weapons, provisions and supplies.

L            -

(L) Limited by craft size and cargo capacity.

6. MINE WARFARE (MIW)

MIW 3 - Conduct mine neutralization and destruction.

MIW 3.1 Neutralize located mines.

L            -

(L) Limited to providing small craft support to EOD detachments.

MIW 3.2 Destroy floating mines.

L            -

(L) Limited to marking locations of mines/mine-like objects and small craft support to EOD detachments.

MIW 3.3 Destroy subsurface mines.

L            -

(L) Limited to marking locations of mines and mine-like objects and small craft support to EOD detachments.

MIW 3.4 Recover enemy mines.

L            -

(L) Limited to marking location of mines and mine like objects and small craft support of EOD detachments.

MIW 3.6 Provide support for embarked EOD/SEAL.

L            -

(L) Limited to providing small craft mission support to EOD/SEAL detachments.

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Degree of Capability  
MSU MSR

MIW 4 -	Conduct mine countermeasures (MCM).		
MIW 4.1	Detect, classify and plot sea mines.	F	-
MIW 4.2	Vector small craft to mark location of mine-like objects.	F	-
MIW 4.3	Neutralize moored sea mines.	L	-
	(L) Limited to providing support to SMCM, AMCM and EOD forces.		
MIW 4.4	Neutralize bottom mines.	L	-
	(L) Limited to providing support to SMCM. AMCM and EOD forces.		
MIW 4.5	Conduct MCM operations using ROV.	F	-
MIW 4.6	Conduct underwater search operations using towed and/or hull mounted sonar and/or magnetometer.	F	-
MIW 4.8	Conduct underwater search operations using diver hand-held sonar and/or magnetometer.	L	-
	(L) Limited to providing support to diver detachments.		
MIW 5 -	Support/conduct offensive/defensive service and exercise mine-laying operations.	-	L
	(L) Limited to inshore operations.		
MIW 8 -	Conduct precise navigation		
MIW 8.1	Maintain a precise navigation system.	F	-
MIW 8.2	Navigate precisely in an MCM environment.	F	-
MIW 8.3	Navigate precisely in a mine-laying	F	-

		Degree of Capability	
		MSU	MSR
	environment.		
MIW 8.5	Safely navigate mine-fields.	F	-
MIW 11 -	Conduct Route Survey Operations		
MIW 11.1	Conduct route survey operations by SMCM ships/craft	L	L
	(L) MSU limited to near land areas and by craft size and crew endurance.		
	(L) MSR limited to planning missions and C2 coordination with other forces.		
MIW 11.3	Provide capability to collect, store, retrieve and process MIW contact information.	F	F
7.	<u>MOBILITY (MOB)</u>		
MOB 3 -	Prevent and control damage.		
MOB 3.1	Control fire, flooding, electrical, structural, propulsion and hull casualties.	F	-
MOB 3.3	Maintain security against unfriendly acts.	L	L
	(L) Limited to physical security measures. No response capability.		
MOB 7 -	Perform seamanship and navigation tasks.		
MOB 7.1	Navigate under all conditions of geographic location, weather and visibility.	F	-
MOB 7.3	Get underway, moor, anchor, and sortie with duty section in a safe manner.	F	-
MOB 7.8	Tow or be towed (towing engine not required).	L	-

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Degree of Capability  
MSU MSR

	(L) Limited to craft of similar size.		
MOB 7.9	Operate day and night under all weather conditions.	L	-
	(L) Day and night small craft operations limited by weather and sea state.		
MOB 7.15	Operate in a chemically contaminated environment.	L	L
	(L) Limited to wearing personnel protective gear.		
MOB 8 -	Operate from a ship		
MOB 8.2	Operate from a ship with a helicopter platform.	F	F
MOB 8.4	Operate from a combatant craft.	L	F
	(L) Limited to combatant craft capable of launch and recovery of MSU craft.		
MOB 8.6	Operate from merchant ships and indigenous craft.	L	F
	(L) Limited to craft capable of launch and recovery of MSU craft.		
MOB 8.8	Operate from a well deck equipped amphibious ship.	F	-
MOB 11 -	Maintain mount-out capabilities.		
MOB 11.1	Deploy with organic allowance within designated time period.	L	L
	(L) Requires the mobilization of selected reserve personnel.		
MOB 11.2	Mount-out selected elements and detachments.	F	F

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Degree of Capability  
MSU MSR

MOB 11.3	Maintain capability for rapid airlift of unit/detachment as directed.  (L) Requires mobilization of selected reserve personnel.	L	L
MOB 11.5	Maintain capability for rapid ground conveyance of unit/detachment.	F	F
MOB 13 -	Maintain reserve unit mobilization readiness.		
MOB 13.1	Ensure personnel onboard and their associated records are ready for immediate mobilization.	F	F
MOB 14 -	Conduct operations ashore.		
MOB 14.1	Operate in climate extremes ranging from cold weather to tropical to desert environments.	-	F
MOB 14.2	Operate in rear of combat zone in Afloat Pre-positioning Force (APF), or Marine Expeditionary Brigade (MEB) environment.	-	F
MOB 14.5	Conduct peacetime activation, mount-out and movement exercises of selected personnel and equipment to ensure capability of contingencies involving naval forces short of a general war.	-	F

8. NONCOMBATANT OPERATIONS (NCO)

NCO 2 -	Provide administrative and supply support for own unit.		
NCO 2.1	Provide supply support services.  (L) Limited to own unit.	L	L
NCO 2.2	Provide clerical services.	L	L

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Degree of Capability  
MSU MSR

(L) Limited to own unit.

NCO 2.11 Provide personnel for fuels support. L -

(L) Limited to own unit.

NCO 3 - Provide upkeep and maintenance of own unit.

NCO 3.1 Provide organizational maintenance. L -

(L) Limited to non-deployed periods.

NCO 3.2 Repair own unit's equipment. F -

(L) Limited to organizational level repair during non-deployed periods and emergency corrective repair when deployed.

NCO 10 - Provide emergency/disaster assistance.

NCO 10.4 Provide disaster assistance and evacuation. L L

(L) MSU limited by detachment size, craft, weather, sea state and environmental conditions at scene.

(L) MSR limited to C2 coordination with other forces.

NCO 11 - Support/provide for the evacuation of noncombatant personnel in areas of civil or international crisis.

NCO 11.1 Support/conduct boat evacuation of noncombatant personnel as directed by higher authority from areas of civil or international crisis. L L

(L) MSU limited by detachment size, craft weather, sea state and environmental conditions at scene, and the availability of a base of operations ashore.

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Degree of Capability  
MSU MSR

	(L) MSR limited to C2 coordination with other forces.		
NCO 11.2	Provide for embarkation, identification, and processing of evacuees.	L	-
	(L) Limited to small craft transportation support only.		
NCO 18 -	Conduct surface aids to navigation operations.		
NCO 18.4	Recover or mark lost or destroyed aids.	L	-
	(L) Limited to marking only.		
NCO 25 -	Conduct Marine Environmental Protection.		
NCO 25.1	Detect oil or hazardous chemical chemical spills.	L	-
	(L) Limited to visual detection only.		
NCO 25.2	Report spills to proper authority.	F	F

9. NAVAL SPECIAL WARFARE

NSW 1 -	Conduct hydrographic reconnaissance.		
NSW 1.1	Reconnoiter seaward approaches to amphibious landing beaches from the 3 1/2 fathom line to the high water mark.	L	L
	(L) MSU limited to acoustic reconnaissance and by the navigation constraints of craft.		
	(L) MSR limited to C3 coordination with other forces.		
NSW 1.2	Locate shallow water mines from the 3 1/2 fathom line to	L	L

