



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

IN REPLY REFER TO  
OPNAVINST 3501.177  
OP-375  
05 JAN 1988

OPNAV INSTRUCTION 3501.177

From: Chief of Naval Operations

Subj: PROJECTED OPERATIONAL ENVIRONMENT (POE) AND REQUIRED  
OPERATIONAL CAPABILITIES (ROC) FOR THE POWHATAN (TATF  
166) CLASS WITH MSC MANNING

Ref: (a) OPNAVINST C3501.2G (NOTAL)

Encl: (1) Projected Operational Environment for the TATF 166  
Class with MSC Manning  
(2) Required Operational Capabilities for the TATF 166  
Class with MSC Manning

1. Purpose. To issue the Projected Operational Environment (POE) and the Required Operational Capabilities (ROC) for the TATF 166 Class with MSC manning.
2. Discussion. Enclosures (1) and (2) have been prepared in accordance with reference (a). The ROC and POE provide the necessary details to describe the mission areas and operational capabilities for which the POWHATAN class was designed and are organized. Together, they establish the requirement to develop the civilian manpower requirements and Ship's Manpower Document (SMD).
3. Information. The Chief of Naval Operations has approved the TATF 166 class ROC and POE, and initial distribution has been made to commands concerned.
4. Action. Fleet Commanders in Chief are requested to periodically review enclosures (1) and (2), and recommend to the Chief of Naval Operations (Attn: OP-375) changes as may be appropriate when the capability of the class is significantly altered by introduction or deletion of systems.

J. W. NYQUIST  
Assistant Chief of Naval Operations  
(Surface Warfare)

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OPNAVINST 3501.177

5 JAN 1998

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PROJECTED OPERATIONAL ENVIRONMENT  
FOR THE POWHATAN (TATF 166)  
CLASS WITH MSC MANNING

1. At sea in wartime.
2. To perform towing at sea operations.
3. To perform rescue towing and limited salvage at sea service.
4. To perform debatching operations.
5. To extinguish fires on ships in distress.
6. Act as support ship for the deployment and recovery of portable oil spill recovery equipment and portable, self-sustaining, deep diving equipment.
7. Capable of performing all maintenance for which ship's company is assigned responsibility.
8. Primary and secondary mission areas are;

$\frac{AAW}{S}$	$\frac{ASU}{S}$	$\frac{CCC}{P}$	$\frac{FSO}{P}$	$\frac{INT}{S}$	$\frac{MOB}{P}$	$\frac{NCO}{S}$
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5 JAN 1988

REQUIRED OPERATIONAL CAPABILITIES  
FOR TATF 166 CLASS SHIPS  
WITH MSC MANNING

	<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
a. <u>ANTI-AIR WARFARE (AAW)</u>				
AAW 6 - Detect, identify and track air targets.				
AAW 6.2 Recognize by sight friendly and enemy aircraft which may be encountered in expected operating areas.	F	F	F	
b. <u>ANTI-SURFACE SHIP WARFARE (ASU)</u>				
ASU 4 - Detect, identify, localize and track surface ship targets.				
ASU 4.1 Detect, localize and track surface contacts with radar.	F	F		
ASU 4.4 Detect and track surface contacts visually.	F	F		
ASU 4.7 Identify surface contacts.	F	F		
ASU 6 - Disengage, evade and avoid surface attack.				
ASU 6.2 Employ evasion techniques.	F	F		
c. <u>COMMAND AND 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 2.8 Function as on-scene commander for a SAR operation.	F	F		

5 JAN 1988

	<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
CCC 3 - Provide own unit's command and control functions.				
CCC 3.3 Carry out emergency destruction of classified matter and equipment rapidly and efficiently.  IV(P), IP(P) Augmented by off-watch personnel.	F	P	P	
CCC 6 - Provide communications for own unit.				
CCC 6.1 Provide tactical voice communications.	F	F		
CCC 6.2 Maintain visual communications.  IV(P) Capability provided by on-call signalman.	F	F		A
CCC 6.3 Maintain multichannel cryptographically covered teletype receive circuits.  IP(P) Augmented by off-watch personnel depending on traffic volume.	F	F	P	A
CCC 6.4 Maintain uncovered RATT/CW communications.  IP(P) Augmented by off-watch personnel depending on traffic volume.	F	F	P	A
CCC 6.5 Maintain full duplex cryptographically covered HF teletype circuits.  IP(P) Augmented by off-watch personnel depending on traffic volume.	F	F	P	A

, 5 JAN 1988

	<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
CCC 6.6 Process message traffic.  IP(P) Augmented by off-watch personnel depending on traffic volume.	F	F	P	A
CCC 6.12 Maintain internal communications systems.	F	F	F	
CCC 7 - Implement Operations Security (OPSEC) measures and conduct military deception actions.				
CCC 7.2 Execute OPSEC measures.	F	F	F	
CCC 7.4 Execute Navy operational deception actions using tactics, operations, exercises or physical means.  I(P), IV(P), IP(P) Non-combatant roles only.	P	P	P	A
CCC 9 - Relay naval communications.				
CCC 9.1 Relay visual communications.  IV(P) Capability provided by on call signalman.  IP(P) Limited due to personnel ashore.	F	P	P	A
CCC 9.3 Relay electronic communications.	F	F	F	
NOTE: CCC 2 through CCC 9 are the only elements accomplished by the military detachment.				

I      IV      IP      OFF/W

d. FLEET SUPPORT OPERATIONS (FSO)

FSO 3 - Provide support services  
to other units.

FSO 3.19 Conduct MK5 pinger object  
recovery operations. P

IV(P) With special  
detail embarked.

FSO 5 - Conduct towing/search/salvage/  
rescue operations.

FSO 5.1 Conduct towing operations. F P

IV(P) Anticipate 35 per-  
cent of Underway time  
spent towing.

FSO 5.2 Conduct salvage operations. F P

IV(P) Off-watch personnel  
required to man special  
detail.

Note: Full capability  
derived from flyaway  
team being aboard.

FSO 5.3 Conduct rescue operations. F P A

IV(P) Off-watch personnel  
required to man special  
detail using portable  
payloads.

FSO 5.9 Conduct underwater search  
operations with divers  
to unit's depth capability. P P

IV(P), IP(P) Requires an  
embarked dive team with  
portable equipment.

5 JAN 1988

	<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
FSO 6 - Support/conduct Search And Rescue (SAR) operations in a combat/noncombat environment.				
FSO 6.2 Conduct combat/non-combat SAR operations by surface ships.	F	F		
FSO 6.4 Recover man overboard.  I(P), IV(P), IP(P) Personnel must secure from watch stations to man special detail.	P	P	P	E
FSO 6.6 Conduct search and rescue operations (including operations involving submarine disasters/rescues).  I(P) Personnel must secure from Condition I stations to man special details.  IV(P) Off-watch personnel to man special detail.	P	P		
FSO 6.7 Conduct general surveillance.	F	F		
FSO 6.9 Report situation assessment.	F	F	F	
FSO 9 - Provide routine health care.				
FSO 9.1 Conduct daily sick call.  IP(P) Personnel ashore.		F	P	
FSO 9.5 Conduct sanitation and safety inspections and provide preventive medicine instruction.  IP(P) Personnel ashore.		F	P	
FSO 9.9 Conduct associated administrative services.		F	P	

5 JAN 1968

	I	IV	IP	OFF/W
IP(P) Personnel ashore.				
FSO 10 - Provide first aid assistance.				
FSO 10.1	F	F	F	
FSO 10.2		F	F	
FSO 10.3		F	F	
FSO 20 - Provide fleet training services.				
FSO 20.1	F	F		
FSO 20.8			P	
IV(P) Augment with off-watch personnel.				
FSO 20.22			P	
IV(P) With remotely operated vehicle embarked.				
e. <u>INTELLIGENCE (INT)</u>				
INT 1 - Support/conduct intelligence collection.				
INT 1.5	F	P	P	E
IV(P), IP(P) Augment with off-watch personnel.				

5 JAN 1988

	<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
INT 1.11 Maintain radar scope photography capability.	F	P	P	E
IV(P), IP(P) Augment with off-watch personnel.				
INT 2 - Provide intelligence.				
INT 2.2 Evaluate and disseminate intelligence information.	F	F		
INT 3 - Conduct surveillance and reconnaissance.				
INT 3.2 Conduct overt surveillance and reconnaissance operations.	F	F		
INT 4 - Provide the capability to conduct ocean surveillance operations against targets of interest.				
INT 4.1 Provide the capability to detect and locate targets of interest.	F	F		
INT 4.2 Provide the capability to classify and identify targets of interest.	F	F		
INT 4.3 Provide the capability to track targets of interest.	F	F		
f. <u>MOBILITY (MOB)</u>				
MOB 1 - Steam to designed capabi- lity and in the most fuel efficient manner.				
MOB 1.1 Steam at full power.	F	F		
MOB 3 - Prevent and control damage.				
MOB 3.1 Control fire, flooding, electrical, structural,	F	P	P	A

5 JAN 1988

	<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
propulsion and hull casualties.				
IV(P) Assistance required from off-watch personnel. IP(P) Duty damage control party.				
MOB 3.3 Maintain security against unfriendly acts.  Limited number of small arms aboard.	P	P	P	
MOB 3.5 Provide damage control security/surveillance.	F	F	F	
MOB 3.8 Provide emergency breathing devices in accordance with ship's allowance.	F	F	F	
MOB 7 - Perform seamanship, airmanship and navigation tasks.				
MOB 7.1 Navigate under all conditions of geographic location, weather, and visibility.  IV(P) Augmented by special detail and/or low visibility look-outs.	F	P		E
MOB 7.2 Conduct precision anchoring.  I(P) May require standing down from Condition I watches.  IV(P) Requires special team.	P	P		E
MOB 7.3 Get underway, moor, anchor, and sortie with duty section in a safe manner.			P	A

5 JAN 1988

	<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
IP(P) Will require recall of personnel if more than three section liberty requirements are met.				
MOB 7.6 Abandon/scuttle ship rapidly.	F	P		
IV(P) Augmented by special detail.				
MOB 7.7 Provide lifeboat/raft capacity in accordance with unit's allowance.	F	F	F	
MOB 7.8 Tow or be towed (Towing engine not required).	P	P		E
I(P), IV(P) Augmented by special detail.				
MOB 7.9 Operate day and night and under all weather conditions.	F	F		
MOB 7.10 Conduct undetected transits.	F	F		
MOB 10 - Replenish at sea.				
MOB 10.1 Receive vertical replenishment.		P	P	E
IP(P), IV(P) Off-watch personnel required to man special details.				
MOB 10.2 Receive fuel while underway (alongside method).	P	P		E
I(P), IV(P) Off-watch personnel required to man special detail.				

5 JAN 1988

	<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
<p>MOB 10.3 Receive munitions and provisions while underway.</p> <p>IV(P) Off-watch personnel required to man special detail. Transfer limited to Manila highline only.</p>		P		E
<p>MOB 10.4 Receive potable and/or feed water while underway.</p> <p>IV(P) Replenishment detail.</p>		P		E
<p>MOB 12 - Maintain the health and well-being of the crew.</p>				
<p>MOB 12.1 Ensure all phases of food service operations are conducted consistent with approved sanitary procedures and standards.</p> <p>I(P) Battle messing only.</p>	P	F	F	
<p>MOB 12.2 Ensure the operation of the potable water system in a manner consistent with approved sanitary procedures and standards.</p>	F	F	F	
<p>MOB 12.3 Monitor to ensure the protection of personnel from overexposure to hazardous levels of radiation, temperature, noise, vibration, and toxic substances per current instructions.</p>	F	F	F	

g. NONCOMBAT OPERATIONS (NCO)

NCO 2 - Provide administrative and supply support for own unit.

5 JAN 1983

		<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
NCO 2.1	Provide supply support services.  I(P) Emergency steam-out only.	P	F	F	
NCO 2.3	Provide disbursing services.  IV(P), IP(P) Ship provides check cashing facilities only. Paychecks mailed to the ship and distributed.		P	P	
NCO 2.5	Provide messing facilities.  I(P) Battle messing.	P	F	F	
NCO 2.7	Provide inventory and custodial services.		F	F	
NCO 2.8	Provide personnel for living space maintenance.		F	F	
NCO 3 -	Provide upkeep and maintenance of own unit.				
NCO 3.1	Provide organizational level maintenance.		F	F	
NCO 3.2	Repair own unit's equipment.  I(P), IV(P), IP(P) Some electronics and engineering items require shore-side assistance.	P	P	P	
NCO 5 -	Conduct meteorological, hydrographic and/or oceanographic collection operations or surveys.				
NCO 5.1	Collect and disseminate meteorological information.	P	P	P	

OPNAVINST 3501.177

5 JAN 1988

	<u>I</u>	<u>IV</u>	<u>IP</u>	<u>OFF/W</u>
I(P), IV(P), IP(P) Limited to synoptic observations.				
NCO 5.2 Collect and disseminate hydrographic information.	P	P	P	
I(P), IV(P), IP(P), Limited to synoptic observations.				
NCO 10 - Provide emergency/disaster assistance.				
NCO 10.1 Provide emergency flooding/fire fighting assistance to another unit.	P	P	P	E
I(P) Personnel must secure from Condition I stations to man special detail.				
IV(P), IP(P) Off-watch personnel are required to man special detail.				