



SURFACE FORCE TRAINING MANUAL

SECTION 6

CREW CERTIFICATION AND FAST CRUISE

Ref: (a) OPNAVINST 9080.3G (Procedures for Test & Trials of Navy Nuclear Powered Ships under Construction, Modernization, Conversion, Refueling and Overhaul)

(b) COMNAVSURFLANTINST 4700.4 (Fleet Introduction Handbook)

(c) NAVEDTRA 43100-1D (PQS Management Guide)

(d) OPNAVINST C9210.2 (Engineering Department Manual for Naval Nuclear Propulsion Plants)

2601. **General.** The training process for crew watch station qualifications of ships in new construction or undergoing extended overhaul/major maintenance availability must be a well planned program instituted shortly after start of overhaul or formation of the precommissioning unit. This is particularly important because the sea trial will be the first time the crew has been at sea following an extended in port period. The emphasis of the training and qualification program should ensure the crew is effectively trained in standard operating procedures, emergency bills, and casualty drills, and is thoroughly cognizant of equipments either newly installed or relocated during the yard or building period as applicable. The scope and depth of watch station training and qualifications as discussed herein should be predicated on supporting a successful and safe sea trial. To this end, the procedures for conduct of crew certification and subsequent fast cruise reflect general guidelines and minimum requirements. Nothing in this instruction is to supersede the provision of reference (a) concerning surface nuclear powered ships.

2602. Crew Certification Requirements

a. Crew certification is required for all ships of new construction. Those ships undergoing extended conversion or modernization will use this instruction for conducting crew certification. Amplifying guidance is provided for NAVSURFLANT ships in reference (b). Crew certification for ships that have not been underway for a period of six months or more is encouraged and is at the discretion of the ISIC.

b. The major emphasis of crew certification is not training records or administrative procedures. Rather, emphasis is to be placed on review of the ship's overall training program, the ability to provide a minimum number of qualified crew members to support sea trials and whether these objectives are being satisfied. Review of emergency bills and ship's organization will also be included.

c. Applicable Personnel Qualification Standards (PQS) will be used wherever possible to qualify watchstanders. Those underway watches not covered by PQS should be qualified by locally developed Job Qualification Requirements (JQR) in the format specified in reference (c).

d. Ships are expected to accomplish these requirements without support from other ships.

e. The crew certification is normally conducted in two phases:

(1) Phase I will be completed approximately one to two months before fast cruise. Completion of this phase is accomplished by a successful one or two day visit which includes:

(a) A review of training conducted and training planned to support minimum underway watch qualifications for sea trial evolutions.

(b) Written or oral examination of underway watchstanders with emphasis on their knowledge of emergency/casualty bills and general ship operating procedures. This is conducted for engineering watch personnel during ATG visits as well as during ORSE (nuclear propulsion ships) or engineering certification (non-nuclear propulsion ships). Such

examinations should not be repeated by the ISIC.

(c) An audit of the ship's SORM, operational and emergency bills, Standing and Battle Orders, and shipboard doctrines.

(d) Rules of the Road written examination for officers and chief petty officers standing bridge and CIC watches.

(2) Phase II will be conducted before a formal fast cruise and will consist of an on board evaluation of watchstanders' abilities as determined during simulated underway operations. CSOSS organizational relationships shall be examined for conformance with the ship's Watch, Quarter, and Station Bill under all inport and at-sea conditions of readiness. The certification team will observe specified evolutions, including emergency drills, using constructive instructional techniques to afford the crew opportunity to correct training or procedural deficiencies during the fast cruise.

f. Composition of the monitor team for both Phase I and Phase II will be approximately as follows:

Monitor Team Area of Responsibility

ISIC/COS All areas

Commanding Officer All areas

Executive Officer/CSO Overall Training, Medical

Operations Officer Operations, Navigation, Communications, Deck (CRUDES)

Combat Systems Officer Combat Systems

Engineer/Material Officer Engineering, Damage Control

First Lieutenant Deck (CLF/AMPHIB)

g. Areas of responsibility are as follows:

(1) ISIC will monitor satisfactory accomplishment of the crew certification phases for assigned ships.

(2) Commanding officer will establish a crew certification program per the provisions contained herein.

h. Reports. No formal report is required other than by TRNGREP for the Crew Certification line item in TRMS.

2603. Crew Certification Subject Matter/Schedule

a. Phase I. Examination and audit of organization, bills and training.

(1) Executive and General Training

(a) Special Sea and Anchor Detail Watch Bill.

(b) Underway Watch Bill.

(c) General Emergency Bill.

(d) Man overboard procedures.

(e) Rules of the Road.

(f) Lookout oral interview.

(g) Helicopter Operations Bill.

(h) SORM.

(i) Personnel qualification status.

(2) Departments, General

(a) Safety precautions.

(b) Operational and emergency bills.

(c) Departmental personnel manning and training status.

1 Number of crew qualified in underway watch sections.

2 Nature and amount of DC training conducted, including fire fighting.

3 Nature and amount of training conducted on ship control and auxiliary support systems, such as emergency steering, magazine sprinklers, etc.

(d) Adequacy and availability of documentation for equipment and systems operation (plans, instructions, books, pre-underway checkoff lists and PMS/operational tests of equipment prior to underway).

(e) Departmental organizational manual, Standing and Battle Orders, and shipboard doctrines.

(f) Adequacy of Quality Assurance, 3M system, and Ship Configuration and Logistics Support Information System (SCLSIS) database training and operation.

(3) Operations/Communications. Familiarity with operational reports such as MOVREP, CASREP, SORTS, TRNGREP, and voice/message communications procedures (oral interviews).

(4) Combat Systems/Weapons. Nature and amount of training in combat systems casualty control.

(5) Engineering and Damage Control. Areas in paragraph 2602 above that are included in LOA/Precritical ORSE should not be reevaluated during crew certification.

(6) Boat Crew Qualifications.

b. Phase II. On board, conducted prior to fast cruise.

(1) General. During this phase, ISIC will verify the following:

(a) Posted operational and emergency bills, safety precautions, and check-off lists for leaving/entering port.

(b) Emergency and damage control equipment.

(c) Alarms and emergency communications equipment.

(d) Watchstanders' knowledge of compartments, equipment, and procedures.

(e) Operability of equipment (particularly navigation and safety equipment, including bridge-to-bridge radio).

(f) Reaction of personnel in handling casualties, including use of CSOSS/CSOOW organization or electronic casualty control folders (for non-CSOSS configured ships).

(g) Areas previously evaluated satisfactory by LOA/Post Overhaul Reactor Safeguards Examination should not be reevaluated during Phase II.

c. Sample Crew Certification Schedule

(1) Phase I

Day One

0815 - Written Rules of the Road Examination (all designated OOD, JOOD, Shipping Officer/Petty Officer and CIC watch officers). The certification team can simultaneously start review of written organization bills and procedures as outlined in paragraph 2602.

0915 - Complete Rules of the Road examinations. Begin oral examinations, interviews, audits and briefings by department. Emphasis will be on emergencies that can arise during sea trials. The personnel involved shall include lookouts, after steering watch, helmsmen, repair parties, etc.

1300 - Continue departmental examinations, interviews, audits and briefings.

1400 - Certification team pre-briefings to ISIC.

1415 - Critique.

Day Two - Complete review as required.

(2) Phase II

Day One

0800 - Station the special sea and anchor detail.

0810 - Simulate getting underway. Conduct emergency drills and special evolutions.

(1) Loss of engine order telegraph drill.

(2) Loss of steering drill.

(3) Anchoring.

(4) Loss of electrical power to selected combat system equipments (e.g., navigation radar).

0845 - Simulate reduced visibility. Evaluate performance of CIC, bridge, signal bridge and lookouts.

0850 - Station the regular underway watch section. During the remainder of the day, rotate watch sections in such a manner that all sections deal with loss of steering. Conduct man overboard and one at-sea general emergency drill (i.e. fire, flooding, or collision).

1130 - Relieve the watch.

1330 - Relieve the watch.

1600 - Critique.

Day Two - Complete as required.

NOTE: During Phase II, disclosures to each watch section are to be as realistic as possible. For example, lookouts should report traffic in the harbor as if contacts at sea. The ship will go to General Quarters during a general emergency such as a collision. It must be emphasized, however, that Phases I and II are checks to ensure that the ship is ready to conduct fast cruise and safely operate at sea. There may have been no time available before Phase II to conduct all hands training on board and, therefore, each drill should be viewed as the first step in preparation for fast

cruise. For example, during the general emergency drill, personnel should arrive on the scene knowing their basic assignment and expecting to demonstrate basic damage control knowledge, and not the expertise required for a final battle problem.

2604. Fast Cruise

a. The overall objectives of the fast cruise are to train the crew and determine their ability to take the ship to sea safely in a peacetime environment. In addition to the normal underway routine, to the maximum extent possible, equipment should be actuated to check for proper operation and to determine the state of training of the crew. Fast cruise shall, as far as is practicable, simulate at-sea operational conditions. It will be conducted by ship's force unhampered by construction or repair work or by the movement of shipyard personnel through the ship. No trials, tests or other work should be performed on the ship during this period. The fast cruise should end not more than three days nor less than one day before sea trials.

b. The general evolutions and drills listed below should be conducted except those previously evaluated as satisfactory by LOA teams. The ship shall be on ship's power. All telephone lines, power lines, service connections and brows shall be removed with the exception of one phone line for official use only. Provisions for discarding trash and garbage should be provided by the shipyard. Additional drills and operations are at the discretion of the commanding officer. The ship should be operated as if underway, simulating the various evolutions required for safe operation of the ship. Each underway section should be exercised in the evolutions that are normally performed on a watch section basis. During each evolution, check out all communication systems. Ensure that each is in proper working order and that where duplicate systems exist, a priority system is designated. If CSOSS is implemented ensure CSOOW organization is functioning. For non-CSOSS ships, ensure Repair 8 (Electronic Casualty Control Organization) is functioning

c. Minimum Fast Cruise Requirements

(1) All Ships

- (a) Station the Special Sea and Anchor Detail.
- (b) Station the normal underway watch (section watches).
- (c) Simulate getting underway and returning to port.
- (d) Walk through all major sea trial evolutions.
- (e) Exercise the Reduced Visibility Bill.
- (f) Simulate boat transfer at sea.
- (g) Spot-check storage and availability of spare parts and tools. Verify adequacy of stores and provisions.
- (h) Simulate transit, performing all evolutions and operating equipment as required.
- (i) Conduct the following emergency drills for each section:
 - 1 Loss of steering.
 - 2 Loss of electrical power to navigational radar and communications equipment.
- (j) Conduct man overboard (boat recovery).
- (k) Exercise the crew at General Quarters.
- (l) Exercise the crew at abandon ship.
- (m) Conduct communications drills with bridge, radio, CIC, and signal bridge personnel.

(n) Anchor.

(2) The following minimum requirements will be completed by the ship for the combat system as applicable. Check all systems/equipment for proper operation per CSOSS before getting underway. Verify all interior communications circuits including battle telephones and CSOOW circuits. Conduct communications checks on bridge-to-bridge radio. Walk through/conduct drills for each watch station as follows:

AAW-2-SF Link 11 Operations

AAW-3-SF Radar/IFF Tracking

C2W-4-SF EMCON Setting/Modification

CCC-1-SF Systems Control - Fleet Broadcast

CCC-6-SF Radio-Telephone Drills

CCC-8-SF TTY Circuit Procedures

CCC-9-SF Flag Hoist Signal Procedures

CCC-10-SF Flashing Light Procedures

CCC-11-SF Semaphore

CCC-14-SF QMCS Training

CCC-15-SF NTDS Initiation/Operation

INT-1-SF-MS Intelligence Collection and Reporting Team

MOB-N-3-SF Conning/Steering Secondary Conn (if applicable)

MOB-N-4-SF Piloting by Gyro

MOB-S-6-SF Man Overboard (Boat Recovery)

FSO-M-8-SF Electric Shock

SUW-1-SF Combined Air/Surface Tracking

(3) The following minimum requirements will be completed by the ship for the propulsion plant designated. Each watch section should walk through the listed drills and actually conduct as many drills as time permits.

(a) Steam Plant. Check propulsion systems/equipment for proper operation per EOSS (MLOC). Verify all vital interior communications circuits.

Main Space Fire (MCBF)

Loss of Steering Control (MLSC)

Unusual Noise or Vibration in Main Engine (NVME)

Hot Bearing Main Engine (HMEB)/Main Reduction Gear (MHMRG)

Loss of Main Engine Lube Oil Pressure (MLLOP/MLLOPR)

Class Charlie Fire in Switchboard (MCCFS)

Low Water in Boiler (MLBWL)

Loss of Main Feed Control (MLMFC)

High Water in Boiler (MHBWL)

Loss of Boiler Fires (MLOBF)

Loss of Vacuum in Main Condenser (MLVMC)

(b) Nuclear-powered surface ships will perform casualty drills and emergency drills per reference (d).

(c) Gas Turbine Plant. Check propulsion systems/ equipment for proper operation per EOSS (MLOC). Verify all vital interior communications circuits.

Main Space Fire - Major Class B Fire (MCBF)

Loss of Steering Control (MLSC)

Unusual Noise/Vibration in Main Engine/Shaft (MNVRG)

Loss of Propulsion Turbine Oil (MLPTO)

Class Charlie Fire in Switchboard (MCCFS)

Loss of Pitch Control (MLCRP)

Loss of CPP Hydraulic Oil Pressure (MLHOP)

High Power Turbine Inlet Gas Temperature (MHTIT)

Gas Turbine Cooling Air System Failure (MCASF)

Loss of Electrical Plant Control Console (MLEPC)

Class Bravo Fire in GTM Module (MBGTM)

Class Bravo Fire in Gas Turbine Generator Module (MBGGM)

Class Bravo Fire in a Diesel Generator Enclosure (MBFDG) (FFG 7)

(d) Diesel Plant. Check propulsion systems/ equipment for proper operation per EOSS (MLOC). Verify all vital interior communications circuits.

Main Space Fire - Major Class B Fire (MCBF)

Loss of Steering Control (MLSC)

Loss of Lube Oil Pressure Main Engine (MLLOP/MLLOPR)

- Unusual Noise or Vibration in main Engine/Shaft (MNVRG)

Class C Fire in Switchboard (MCCFS)

Overheating Diesel Engine (MDGEO)

Diesel Engine Crankcase Explosion (MDECE)

Ship's Service Generator Overload (MDGOL)

Loss of Pitch Control (MLCRP)

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