



DEPARTMENT OF THE NAVY
NAVY MEDICINE OPERATIONAL TRAINING CENTER
NAVAL UNDERSEA MEDICAL INSTITUTE DETACHMENT
BOX 159, NAVAL SUBMARINE BASE NLON
GROTON, CONNECTICUT 06349-5159

IN REPLY REFER TO:

NUMIINST 5420.2L

MAR 03 2014

NAVAL UNDERSEA MEDICAL INSTITUTE INSTRUCTION 5420.2L

Subj: BOARD FOR QUALIFICATION OF SUBMARINE MEDICAL OFFICERS

Ref: (a) MILPERSMAN SSIC 1210-130 (dtd 22 Aug 2002)

Encl: (1) Qualification Procedure Supplementary Information
(2) Sample Thesis Proposal Approval Request Letter
(3) Submarine Officers Qualification Card
(4) Sample request for designation as Undersea Medical Officer: Qualified in Submarines (AQD: 6UM)

1. Purpose. To establish a Board for Qualification of Submarine Medical Officers, to outline procedures to be followed by the Board, and to promulgate guidance for Submarine Medical Officer Candidates.

2. Cancellation. NUMIINST 5420.2K

3. Background. Reference (a) sets forth the requirements and procedures for qualification of Submarine Medical Officers and delegates authority for such qualification to the Officer in Charge (OIC), Navy Medicine Operational Training Center Detachment, Naval Undersea Medical Institute (NUMI), Naval Submarine Base New London, Groton, CT.

4. Board Establishment. The Board for Qualification of Submarine Medical Officers will be appointed by the OIC, NUMI, ordinarily from qualified submarine medical officers and/or subject matter experts on the thesis topic being reviewed. The Board will normally consist of four members with the OIC, NUMI serving as the senior member.

5. Duties and Responsibilities.

a. The Senior Member of the Board will:

(1) Route all proposed thesis topics, completed theses, and recommendations for qualification to appropriate Board members for review and comment;

(2) Supervise grading of qualification examination;

MAR 03 2014

(3) Retain authority to make final determination and to take final action on proposed thesis topics and submitted theses;

(4) Approve and certify medical officers as "Qualified Submarine Medical Officers" upon completion of all requirements to the satisfaction of the Board; and

(5) Submit notification of such designation to the officer concerned, his/her Commanding Officer, the Chief, Bureau of Naval Personnel (PERS-4415N), the Chief, Bureau of Medicine and Surgery (BUMED M3/5), and the Force and Squadron commanders as applicable.

b. The other Board members, upon request from the recorder, will review proposed thesis topic requests and completed theses and make appropriate recommendations to the Senior Member.

c. The Board Recorder will:

(1) Receive all incoming correspondence addressed to the OIC, NUMI, pertaining to Submarine Medical Officer qualifications;

(2) Prepare all pertinent outgoing correspondence;

(3) Maintain all files pertaining to qualification and have custody of theses;

(4) Select and recommend specific Board members for assignment for review and recommendations of thesis topic requests and completed theses;

(5) Make qualification examination copies available to the Submarine Medical Officer Candidates upon request and maintain a file on issued booklets to ensure that they are returned with the answer sheets; and

(6) Oversee the grading of completed examinations by the NUMI UMOG Program Manager. Any candidate receiving a grade less than 80 percent on any section will have this section returned for re-examination, with errors annotated.

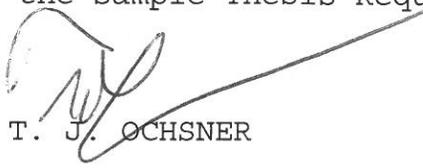
6. Consultants to the Senior Member may be called upon, if needed, for a given case.

a. Consultants may include, but are not limited to, the Officer in Charge, Naval Branch Health Clinic Groton; the Commanding Officer, Naval Submarine Medical Research Laboratory; the Commanding Officer, Navy Experimental Diving Unit and the Chief, Bureau of Medicine and Surgery (BUMED M3B42).

MAR 03 2014

b. Requests for approval of proposed thesis topics may additionally be routed through the Commanding Officer, Naval Submarine Medical Research Laboratory (NSMRL), when deemed appropriate, to determine whether or not NSMRL is in a position to provide support for the project, either in the form of funding, technical assistance, or the loan of equipment. The CO, NSMRL may also make recommendations on the possibility of publishing a high quality thesis as a research paper.

7. Procedures. Reference (a) and enclosure (1) review the basic procedure for qualification of Submarine Medical Officers. Enclosure (2) contains the format to be used for submission of the proposed Submarine Medical Officer Qualification Thesis Topic or Thesis letter. Enclosure (3) is the Sample Thesis Request Letter.



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MAR 03 2014

QUALIFICATION PROCEDURES SUPPLEMENTARY INFORMATION1. Qualification Examination:

a. The qualification examination is a three-part multiple choice, open book, examination, covering Radiation Health, Submarine Medicine, and Diving Medicine. Candidate must score 80% or better on each part. In the case of failure of any part, the candidate will be required to retake only the part failed.

b. Tests may be distributed electronically or in hard copy format. Completed exams may be submitted to the UMOG Program Manager at NUMI, either via electronic means (email, facsimile) or mailed to NUMI as a hard copy.

c. When reexamination is required, the submitted examination will be returned to the applicant, along with information concerning the test questions missed on the failed part.

2. Submarine underway qualification.

a. Submarine Medical Officer Qualification Card: A qualification card (enclosure 3) documents successful attainment of a standard set of skills and knowledge of procedures expected of any Submarine Medical Officer. Candidates must present a completed Submarine Medical Officer Qualification Card to the Board.

b. Submarine Underway Time: Candidates must present to the board documentation of time spent underway on submarines. Thirty days cumulative, hour for hour, time is required (720 hours).

c. In special cases, portions of the required Submarine underway time may be waived, if the candidate's request for such waiver is compelling and supported by his/her Commanding Officer. Requests for waiver of the Submarine Medical Officer Qualification Card are not considered.

3. Thesis (Scholarly Submission) Preparation.

a. As a general principle, the thesis or Scholarly Submission must be a scholarly contribution to Undersea Medicine. Relevant papers or studies completed prior to training as an Undersea Medical Officer will be considered, but will be screened as other theses are screened. Examples of an acceptable thesis or submission include the following:

(1) Report of original research

(2) Report and careful analysis of a special or unique submarine or diving operation, such as an extraordinary diving accident, an epidemic, etc.

MAR 03 2014

(3) Analysis of a particular training, operational or administrative problem which clearly defines the problem and presents well thought-out solutions.

(4) Comprehensive review of some subject germane to submarine, diving or Special Warfare (SPECWAR) medicine.

(5) New development or significant rewrite/revision of a major Undersea(sub, dive, hyperbaric, SF, Rad Health) related SOP or instruction as dictated by a concurring Command, Group or TYCOM level Undersea Medical Officer. The submission must be adopted and make a material change to the affected organization's existing policies and/or procedures.

(6) Report of an interesting undersea (sub, dive, hyperbaric, SF) medical case or condition that is definitively published in a medical journal. This report must include an extensive discussion regarding a review of the disease (incidence, scope of symptomatic presentation/findings, discussion of differential diagnoses and a provision of best practices related to this particular case).

b. Be aware that the assignment of a security classification to a thesis is the responsibility of the submitting member's command. Security classification precludes general distribution and complicates the mailing and review process; therefore, avoid such material if at all possible, and be aware of inadvertent inclusion of such material.

c. Thesis Proposal: Once a topic for the thesis is selected the candidate will submit the proposed topic for approval to the OIC, NUMI using enclosure (2) as a guide. The proposal will be evaluated by the Board, and if approved, will be returned to the candidate along with any comments offered by the reviewers. If disapproved, reviewers' comments will be forwarded as explanations of the decision, or as guidance to make revisions to the project which may make it acceptable. Thesis proposals should include a brief (approximately 5-15 page) summary of the proposed thesis topic, and should clearly delineate the proposed goals of the thesis. A full and comprehensive bibliography should accompany each thesis proposal prospectus.

d. Final Thesis Submission: After the thesis proposal is approved and work is finished, the candidate will receive notification of thesis approval from NUMI. The completed thesis will be submitted using the format below. Recommendations of the reviewers must be incorporated or addressed. Any thesis submitted without prior topic approval will not be considered. A paper which

MAR 03 2014

was prepared before UMO training must be approved in the described fashion.

e. The candidate will electronically submit the original thesis, recorded in Microsoft Word, to the Board Recorder. The completed thesis will be reviewed by the Board (ordinarily the same members who reviewed the thesis proposal) and the candidate will be notified once the Board has made a final decision to accept or reject.

f. Format of Thesis: The thesis must be 6,000 - 20,000 words long. It must be typed, double-spaced on 8-1/2" x 11" paper, and must follow the general requirements for acceptance by a scientific journal if the candidate plans to submit it for publication. An abstract and summary page are mandatory.

The following format is suggested:

- (1) Cover
- (2) Title Page
- (3) Abstract (maximum 150 words)
- (4) Summary page (problem, finds, applications, administrative information)
- (5) Table of Contents
- (6) List of illustrations
- (7) List of tables
- (8) Introduction
- (9) Description
- (10) Procedure
- (11) Results
- (12) Discussion
- (13) Conclusions
- (14) References
- (15) Index
- (16) Appendices

g. Candidate Information: The following information should accompany your first interaction (e.g. submission of examination, ride time, qualification card or thesis proposal) with the Board for Qualification of Submarine Medical Officers:

Full name
Rank
NUMI graduation date and UMO class number
Command address in full
Home phone
Work phone
Email address

This information will facilitate feedback to you.

MAR 03 2014

h. Submarine Underway Time Waiver: If a candidate is unable to attain 720 hours of submarine underway time, a waiver request may be submitted to OIC, NUMI. Only in special cases will a waiver of submarine underway time be considered. Waiver requests should be submitted to OIC, NUMI, in standard format, with command endorsement, and include all pertinent documentation clearly explaining why a candidate feels that a waiver is warranted. It is recommended that a candidate document all unsuccessful attempts at scheduling submarine underway time (dates, times, personnel, reason(s) for inability to receive orders) to help support a case for waiver.

i. Waiver of 2 Year Qualification Time Period: Per MILPERSMAN 1210-130 (http://buperscd.technology.navy.mil/bup_updt/508/milpers/1210-130.htm), Undersea Medical Officers must complete all requirements for qualification in submarines within 2 years of graduating from NUMI (UMO Course, CIN: B-6A-2200). Waivers of the 2 year requirements will be liberally granted, but must be properly applied for and should accompany initial contact with the Board. Waiver requests should be in standard format, with command endorsement, and include the candidate's NUMI graduation date, UMOC class number, and a brief explanation of why the UMO was unable to complete qualification requirements within the proscribed 2 year period.

j. Final Application to Request AQD of 6UM: Enclosure (4) contains a sample letter format for a candidate's request to receive the Additional Qualifying Designator of 6UM - Undersea Medical Officer - Qualified in Submarines (i.e. a Submarine Medical Officer). All appropriate enclosures should accompany this final application package. Packages may be submitted electronically (with scanned, faxed or emailed documents) or by mail in hard copy format.

MAR 03 2014

DD MMM YYYY

From: Lieutenant John B. Doe, MC, USNR, XXX-XX-last 4/Desig
To: Officer in Charge, Navy Medicine Operational Training
Center Detachment, Naval Undersea Medical Institute,
Box 159, NAVSUBASE NLON, Groton, CT 06359-5159
Via: Commanding Officer, USS SUBMARINE (SSBN-000) (Gold),
FPO NY NY 09ZIP

Subj: REQUEST FOR APPROVAL OF PROPOSED SUBMARINE MEDICAL OFFICER
QUALIFICATION *THESIS TOPIC (PROSPECTUS)*

Ref: (a) NUMIINST 5420.2 series

Encl: (1) *Thesis Prospectus with Bibliography*

1. In compliance with reference (a), enclosure (1) entitled "*Title of Thesis*" is submitted for approval by the Board for Qualification of Submarine Medical Officers.

J. B. DOE

1410
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Date

FIRST ENDORSEMENT on Lieutenant John B. Doe's letter of (date)

From: Commanding Officer, USS SUBMARINE (SSBN-000) (Gold)
To: Officer in Charge, Navy Medicine Operational Training
Center Detachment, Naval Undersea Medical Institute,
Box 159, NAVSUBASE NLON, Groton, CT 06359-5159

1. Forwarded.

SUBMARINE MEDICAL OFFICER QUALIFICATION CARD

MAR 03 2014

NAME _____ DATE BEGUN _____
DATE COMPLETED _____

The Medical Corps officer qualifying in submarines will maintain a qualification notebook containing, as a minimum, the following:

- a. All watch qualification cards.
- b. All qualification tests, quizzes, or examinations.
- c. All written work required by this enclosure.

I. REFERENCES

- a. Navy Regulations
- b. Standard Organization and Regulation of U.S. Navy (OPNAVINST 3121.32)
- c. Ship's Organization and Regulation Manual (SORM)
- d. Ship's Information Books (SIBs); Training Aid Booklets (TABS); Ship System Manuals (SSMs)
- e. Submarine Atmosphere Control Manual (NAVSEA S5910-AB-ATM-010-/020)
- f. MANMED (NAVMED P-117)
- g. NAVMED P-5055
- h. NAVMED P-5010, Manual of Naval Preventive Medicine
- i. COMNAVSUBFORINST 6000.2A (01 Dec 2008)
- j. COMNAVSUBFORINST 6470.4 (02 May 2003)
- k. BUMEDINST 6470.10B
- l. Radiological Controls Manual (NAVSEA S9213-33-MMA-000/V)
- m. OPNAVINST 5100.19 Series
- n. COMSUBLANT/COMSUBPACINST 5100.3
- o. Gas Free Engineering Manual

SUBMARINE MEDICAL OFFICER QUALIFICATION CARD

MAR 03 2014

- p. COMSUBLANT/COMSUBPACINST 6600 Series
- q. BUMEDINST 6240.3
- r. BUMEDINST 6240.10A, Standards for Potable Water (19 Jul 1999)
- s. OPNAVINST 6400.1C, Certification, Training, and Use of Independent Duty Hospital Corpsmen (15 Aug 2007)
- t. COMNAVSUBFORNOTE 6000 (29 Jul 2009)

II. MEDICAL DEPARTMENT KNOWLEDGE REQUIREMENTS - Medical Department checkouts must be signed by the ship's Medical Department Representative (MDR) or Executive Officer.

1. GENERAL INFORMATION - Describe the chain of medical responsibility aboard a submarine to include the specific assigned responsibilities of, and relationship between, the following personnel:

- a. Commanding Officer
- b. Executive Officer
- c. Medical Department Representative
- d. Squadron, Group, and Force Medical Officers

MDR/XO	Date
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2. ORGANIZATION AND ADMINISTRATION - Demonstrate understanding of routine organization and daily administration of the medical department including:

- a. Organization and maintenance of health records
- b. Maintenance of other required logs and journals
- c. Familiarity with medical department instructions
- d. Use of SNAP Automated Medical System (SAMS).
- e. Conduct of routine sick call.

MAR 03 2014

SUBMARINE MEDICAL OFFICER QUALIFICATION CARD

f. Location of medical department equipment (O₂ bottles, backboard, ERK, etc), and required maintenance of same

MDR/XO Date

3. MEDICAL EVALUATION AND TREATMENT - Demonstrate understanding of the medical evaluation and treatment conducted by the MDR at sea including:

a. Indications for medical consultations, to include a detailed understanding of the medical and administrative aspects and risk/benefit analysis of a MEDEVAC

b. Options available for medical consultation while at sea, to include MEDEVAC, MEDADVICE, chat, and phone communication

c. Familiarity with the protocols used for treatment of common submarine emergencies

MDR/XO Date

4. TRAINING - Be familiar with MDR training responsibilities including:

a. knowledge of minimum requirements for MDR periodic training

b. Participation in at least one Onboard Emergency Medical Assistance Team (EMAT) training evolution and drill.

MDR/XO Date

5. MEDICAL READINESS - Demonstrate familiarity with requirements for medical/dental readiness, including ship's AMAL and supply process, and the following::

a. Medical Readiness Inspections, including a walk-through of the MRI checklist with the MDR

b. Ship's AMAL supply procedures, including supplemental Medical Allowance List and supply control

SUBMARINE MEDICAL OFFICER QUALIFICATION CARD

MAR 03 2014

c. Preventive maintenance schedules and procedures for medical equipment

MDR/XO Date

6. PREVENTIVE MEDICINE AND SANITATION AFLOAT - Understand requirements for shipboard preventive medicine and sanitation and be able to demonstrate the following:

- a. Sanitation Inspection (Galley, General/Berthing)
- b. Potable water inspection
- c. Management of medical waste at sea

MDR/XO Date

7. ATMOSPHERE CONTROL - Know the requirements for atmospheric monitoring and the proper use of monitoring equipment to include:

- a. General features and use of fixed and portable monitoring equipment
- b. Sources of atmospheric contaminants while at sea
- c. Routing methods of regenerating and demontaminating the submarine atmosphere
- d. Principles and practice of emergency atmosphere management
- e. Principles and practice of gas-free engineering

MDR/XO Date

8. RADIATION HEALTH PROGRAM - Demonstrate familiarity with MDR responsibilities as they apply to the Radiation Health Program, including:

- a. Internal and external reporting requirements.
 - (1) Situational/Annual reports.
 - (2) CO's quarterly dosimetry report.

SUBMARINE MEDICAL OFFICER QUALIFICATION CARD

MAR 03 2014

- (3) Dose transmittal letters.
- (4) Termination letters.

MDR/XO Date

b. Decontamination Procedures

- (1) Walk through a radiological spill drill
- (2) Knowledge of decontamination standards and procedures.

MDR/XO Date

III. KNOWLEDGE REQUIREMENTS FOR SHIP'S SYSTEMS AND OPERATIONS - Ship's Systems checkouts may be signed by any submarine qualified crewmember proficient in the use of the relevant system.

A. GENERAL SUBMARINE ORIENTATION

1. PROPULSION PLANT INDOCTRINATION - Demonstrate a basic understanding of the design and function of the propulsion plant, to include:

- a. Basic design of the reactor, including major reactor safety features
- b. Sources of primary and secondary propulsion

Date

2. EMERGENCY PROCEDURES - Describe the types of emergency evolutions and be able to explain the major players and procedures during fire, flooding, collision, propulsion plant casualty, battle stations, and submarine escape scenarios

Date

SUBMARINE MEDICAL OFFICER QUALIFICATION CARD

MAR 03 2014

3. INTERIOR COMMUNICATION - Demonstrate proper ships communications procedures, and be able to describe the purpose of the various communication circuits present onboard

_____ Date

4. EMERGENCY EQUIPMENT PROFICINECY - Demonstrate the ability to:

a. Be able to locate emergency breathing devices throughout the ship (EAB/SCBA)

b. Don an appropriate emergency breathing device, and demonstrate its use during a circuit of the ship

_____ Date

5. SHIPBOARD PROTOCOL AND ETIQUETTE - Understand the social and professional expectations of embarked personnel ito include:

a. Principles of wardroom etiquette

b. Etiquette of the Chiefs' Mess and the Crew's Mess

c. Common submarine traditions and pastimes

d. Common enlisted ratings and their role onboard

_____ Date

B. SHIP CONSTRUCTION AND MAIN SYSTEMS

1. SHIP CONSTRUCTION, TANKS, AND COMPARTMENTS - Be able to diagram the major compartments on the ship, as well as the location and use of the major tanks and spaces. Given a location on the ship, be able to describe various ways of getting to that location

_____ Date

2. TRIM AND DRAIN SYSTEMS - Explain the importance and use of the trim and drain systems as they pertain to routine operations

_____ Date

SUBMARINE MEDICAL OFFICER QUALIFICATION CARD

MAR 03 2014

3. AIR SYSTEMS - Describe the features and uses of the different air systems onboard including HP air, service air, and emergency MBT blow

Date

4. HYDRAULIC SYSTEMS - Describe the features of the hydraulic systems onboard and their relation to the ship's control and operation

Date

C. SHIP SUPPORT SYSTEMS

1. ELECTRICAL SYSTEMS - Understand and locate the source of electrical power onboard and the means by which electrical power can be distributed and directed

Date

2. WATER SYSTEMS - Explain the different water systems onboard including potable, sanitary, and flushing water. Understand the sources and uses of each

Date

3. WASTE DISPOSAL SYSTEM - Describe the use of the Trash Disposal Unit and common injuries associated with it

Date

4. FOOD SERVICES SYSTEMS - Describe and locate the equipment available for the storage and preparation of food while underway, including refrigeration systems, shill boxes, freeze boxes, and cooking equipment

Date

SUBMARINE MEDICAL OFFICER QUALIFICATION CARD**MAR 03 2014**

D. COMBAT AND NAVIGATIONAL SYSTEMS

1. SONAR SYSTEMS - Stand part of a watch as sonar UI, at the conclusion of which be able to:

- a. Describe the basic principles of underwater sound propagation
- b. List and describe the various sonar systems onboard and their uses
- c. Describe the main roles of the sonar department as well as the different roles within the sonar department.
- d. Explain how information from sonar is shared and used throughout the ship

Date

2. FIRE CONTROL - Stand part of a watch as fire control UI, at the conclusion of which be able to:

- a. Describe the function of fire control onboard
- b. List and describe the various fire control systems
- c. Describe the main roles of the fire control department as well as the different roles within the fire control department
- d. Explain how information from fire control is shared and used throughout the ship

Date

3. QUARTERMASTER/NAVIGATION - Stand part of a watch as quartermaster UI, at the conclusion of which be able to:

- a. Describe the function of quartermaster onboard
- b. List and describe the various navigational systems and their use (RLGN, GPS, BMS, etc)
- c. Describe the main roles of the quartermaster as well as the different roles within the navigation department

SUBMARINE MEDICAL OFFICER QUALIFICATION CARD

MAR 03 2014

d. Explain how information from navigation is shared and used throughout the ship

Date

4. SHIP'S CONTROL PANEL - Stand part of watch as helm/pilot UI, at the conclusion of which be able to:

a. Describe the role of helm/pilot onboard

b. List and describe the various steering systems and their use

c. Describe basic routine and emergency procedures in which helm/pilot plays a large role

Date

5. WEAPONS - Detail the types of weapons present onboard and the basics of their use, limitations, and capabilities

Date

4. RADIO - Describe the different means of communication onboard, including ESM, VHF, UHF, and VLF for routine and emergency communications

Date

IV. EXAMINATION AND QUALIFICATION - Complete an oral Undersea Medical Officer Submarine Qualification examination based on above requirements list. Certify satisfactory completion of all underway requirements for designation "Qualified Submarine Medical Officer."

MDR Date

OOD Date

CO Date

MAR 03 2014

DD MMM YYYY

From: Lieutenant John B. Doe, MC, USN, XXX-XX-last4/Desig
To: Officer in Charge, Navy Medicine Operational Training
Center Detachment, Naval Undersea Medical Institute,
Box 159, NAVSUBASE NLON, Groton, CT 06359-5159
Via: (1) Commanding Officer, for LT John B. Doe
Subj: REQUEST FOR DESIGNATION AS SUBMARINE MEDICAL OFFICER (AQD
6UM)
Ref: (a) NUMIINST 5420.2 series
(b) MILPERSMAN 1210-130
Encl: (1) Thesis Approval Letter
(2) Ride time memos documenting attainment of 720
hours underway time aboard submarine (or appropriate w
waiver of submarine underway time)
(3) Submarine Medical Officer Qualification Card
(4) Submarine Medical Officer Examination Pass letter

1. In compliance with reference (a), it is requested that LT John B. DOE (XXX-XX-XXXX/210X) receive the Additional Qualifying Designator (AQD) of 6UM and be qualified as an UNDERSEA MEDICAL OFFICER, QUALIFIED IN SUBMARINES.

2. Enclosures (1) through (4) are submitted in support of this request and as proof of completion of all requirements detailed in reference (a).

J. B. DOE

1410
Ser
Date

FIRST ENDORSEMENT on Lieutenant John B. Doe's letter of (date)

From: Commanding Officer, USS SUBMARINE (SSBN-000) (Gold)
To: Officer in Charge, Navy Medicine Operational Training
Center Detachment, Naval Undersea Medical Institute,
Box 159, NAVSUBASE NLON, Groton, CT 06359-5159

1. Forwarded.