



Naval Education and
Training Command

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November 2010



PERSONNEL QUALIFICATION STANDARD

FOR

SEABEE COMBAT WARFARE NMCB SPECIFIC

NAME (Rate/Rank) _____

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Although the words “he”, “him,” and “his” are used sparingly in this manual to enhance communication, they are not intended to be gender driven nor to affront or discriminate against anyone reading this material.

PREFACE

Warfare Qualified Sailors are an essential element of our Navy's Operational Primacy. The objective of the Seabee Combat Warfare (SCW) Specialist Program is to provide the candidate an introduction into the processes and topics necessary to support the warfighting requirements of our Navy. This personnel warfare qualification standard will focus on mission effectiveness, combat readiness, and survivability as well as introducing an overall understanding of how an individual unit's mission fits into and supports naval doctrine and its objectives. Experience shows it is essential that every warrior in our Navy be totally familiar with the mission of their command and be able to apply this knowledge to support the successful execution of the command's current and future missions.

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INTRODUCTION

PQS PROGRAM

This PQS program is a qualification system for officers and enlisted personnel where certification of a minimum level of competency is required prior to qualifying to perform specific duties. A PQS is a compilation of the minimum knowledge and skills that an individual must demonstrate in order to qualify to stand watches or perform other specific routine duties necessary for the safety, security or proper operation of a ship, aircraft or support system. The objective of PQS is to standardize and facilitate these qualifications.

CANCELLATION

This Standard cancels and supersedes NAVEDTRA 43904-1B.

APPLICABILITY

This PQS is applicable to all personnel serving in Naval Construction Force units, which are authorized to grant Seabee Combat Warfare designations IAW OPNAVINST 1410.1 (Series).

MODEL MANAGER

The Model Manager Command manages a specific PQS manual. This includes overseeing the process of monitoring and updating assigned PQS manuals from the standpoint of technical content and relevance within the community.

QUALIFIER

The PQS Qualifier is designated in writing by the Commanding Officer to sign off individual watchstations. Qualifiers will normally be E-6 or above and, as a minimum, must have completed the PQS they are authorized to sign off. The names of designated Qualifiers should be made known to all members of the unit or department. The means of maintaining this listing is at the discretion of individual commands. For more information on the duties and responsibilities of PQS Qualifiers, see the PQS Unit Coordinator's Guide.

INTRODUCTION (CONT'D)

CONTENTS

PQS is divided into three sections. The 100 Section (Fundamentals) contains the fundamental knowledge from technical manuals and other texts necessary to satisfactorily understand the watchstation/workstation duties. The 200 Section (Systems/Mission Areas) is designed to acquaint you with the systems you will be required to operate at your watchstation/workstation. The 300 Section (Watchstations) lists the tasks you will be required to satisfactorily perform in order to achieve final PQS qualification for a particular watchstation/workstation. All three sections may not apply to this PQS, but where applicable, detailed explanations are provided at the front of each section.

REFERENCES

The references used during the writing of this PQS package were the latest available to the workshop; however, the most current references available should be used when qualifying with this standard.

NOTES

Classified references may be used in the development of PQS. If such references are used, do not make notes in this book as answers to questions in this standard may be classified.

TRAINEE

Your supervisor will tell you which watchstations/workstations you are to complete and in what order. Before getting started, turn to the 300 Section first and find your watchstation/workstation. This will tell you what you should do before starting your watchstation/workstation tasks. You may be required to complete another PQS, a school, or other watchstations/workstations within this package. It will also tell you which fundamentals and/or systems from this package you must complete prior to qualification at your watchstation/workstation. If you have any questions or are unable to locate references, contact your supervisor or qualifier. Good luck!

PQS FEEDBACK REPORTS

This PQS was developed using information available at the time of writing. When equipment and requirements change, the PQS needs to be revised. The only way the PQS Development Group knows of these changes is by you, the user, telling us either in a letter or via the Feedback Report contained in the back of this book. You can tell us of new systems and requirements, or of errors you find.

ACRONYMS USED IN THIS PQS

Not all acronyms or abbreviations used in this PQS are defined here. The Subject Matter Experts from the Fleet who wrote this Standard determined the following acronyms or abbreviations may not be commonly known throughout their community and should be defined to avoid confusion. If there is a question concerning an acronym or abbreviation not spelled out on this page nor anywhere else in the Standard, use the references listed on the line item containing the acronym or abbreviation in question.

1NCD	First Naval Construction Division
ABFC	Advance Base Functional Component
ACR	Allowance Change Request
AMC	Air Mobility Command
CBR	Chemical, Biological, Radiological
CESE	Civil Engineer Support Equipment
CMDCM	Command Master Chief
CNO	Chief of Naval Operations
COMSEC	Communication Security
COSAL	Coordinated Shipboard/Shorebased Allowance List
DRMO	Defense Reutilization Marketing Office
EDVR	Enlisted Distribution Verification Report
EMP	Electromagnetic Pulse
EPW	Enemy Prisoner of War
GFCI	Ground Fault Circuit Interruption
HM/HW	Hazardous Material/Hazardous Waste
MAGTF	Marine Air/Ground Task Force
MCPON	Master Chief Petty Officer of the Navy
MOCC	Mount Out Control Center
MOV	Material Obligation Validation
MSDS	Material Safety Data Sheet
NECC	Navy Expeditionary Combat Command
NCF	Naval Construction Force
NCR	Naval Construction Regiment
OPLANS	Operational Plans
OPORDS	Operational Orders
OPREP	Operational Report
OPTAR	Operating Target
PPE	Personal Protection Equipment
SECNAV	Secretary of the Navy
SITREP	Situation Report
TPI	Two-Person Integrity

PROFESSIONAL LIBRARY

NO SINGLE BOOK OR GROUP OF BOOKS CONTAINED IN THIS PROFESSIONAL LIBRARY IS INTENDED TO BE A MANDATORY READING ITEM WHEN COMPLETING THIS PQS MANUAL.

RECOMMENDED READING:

THE SEABEE READING LIST IS INCLUDED AS A SOURCE OF RECOMMENDED READING FOR PERSONNEL, WHO DESIRE TO OBTAIN ADDITIONAL INFORMATION WHICH SUPPORTS THE HERITAGE AND DOCTRINE FUNDAMENTALS CONTAINED IN THIS COMMON CORE PQS MANUAL. THE INFORMATION CONTAINED IN THESE SUGGESTED READING BOOKS SHOULD NOT BE USED AS WRITTEN OR ORAL BOARD TESTING MATERIAL.

The Defense of Duffer's Drift – E. D. Swinton
Builders of Battle (1946) – David O. Woodbury
Building the Navy Base's in World War II (V1 & 2 1947)
Can Do! (1944) – William Bradford Huie
Can Do, Will Do! (1987) – Navy Seabees Veterans of America
The Civilized Engineer (1970) – Samuel C. Florman
Great Engineer (1970) – Conrad Matschoss Translated by H. Stafford Hatfield
A History of Civil Engineering (1952) – Hans Straub
Seabee: Bill Scott Builds and Fights for the Navy (1944) – Henry B. Le
The Seabees of World War II (1963) – Edmund L. Castillo
The Dammed Engineers (1985) – Janice Holt Guiles
Engineering and the Mind's Eye (1992) – Eugene S. Ferguson
The Bridge at Dong Ha (1989) – John Grider Miller
Southeast Asia: Building the Base (1975) – Richard Tregaskis
Five Star Leadership: The Art and Strategy of Creating Leaders at Every Level - Patrick L. Townsend, Joan E. Gebhardt, and forward by Nancy K. Austin
Marine: A Guide Tour to a Marine Expeditionary Unit - Tom Clancy

SUPPLEMENTAL READING:

THE FOLLOWING LISTS ARE INCLUDED AS A SOURCE OF SUPPLEMENTAL READING FOR PERSONNEL WHO DESIRE TO OBTAIN ADDITIONAL INFORMATION WHICH SUPPORTS THE HERITAGE AND DOCTRINE FUNDAMENTALS CONTAINED IN THIS COMMON CORE PQS MANUAL. ADDITIONALLY, THE INFORMATION CONTAINED IN THESE SUGGESTED READING BOOKS SHOULD NOT BE USED AS WRITTEN OR ORAL BOARD TESTING MATERIAL.

The MCPON's "Naval Heritage and Core Values" Reading List, Parts "A" and "B".

AS THE MCPON READING LIST IS UPDATED ANNUALLY, THE MOST CURRENT VERSION CAN BE FOUND IN THE MCPON DIRECTLINE PUBLICATION OR THROUGH THE INTERNET AT EITHER OF THE FOLLOWING WEB ADDRESSES:

<https://www.nko.navy.mil/portal/home>

<http://www.history.navy.mil/>

100 INTRODUCTION TO FUNDAMENTALS

100.1 INTRODUCTION

This PQS begins with a Fundamentals section covering the basic knowledge and principles needed to understand the equipment or duties to be studied. Normally, you would have acquired the knowledge required in the Fundamentals section during the school phase of your training. If you have not been to school or if you need a refresher, the references listed at the beginning of each fundamental will aid you in a self-study program. All references cited for study are selected according to their credibility and availability.

100.2 HOW TO COMPLETE

The fundamentals you will have to complete are listed in the watchstation (300 section) for each watchstation. You should complete all required fundamentals before starting the systems and watchstation portions of this PQS, since knowledge gained from fundamentals will aid you in understanding the systems and your watchstation tasks. When you feel you have a complete understanding of one fundamental or more, contact your Qualifier. If you are attempting initial qualification, your Qualifier will expect you to satisfactorily answer all line items in the fundamentals. If you are re-qualifying or have completed the appropriate schools, your Qualifier may require you to answer representative line items to determine if you have retained the necessary knowledge for your watchstation. If your command requires an oral board or written examination for final qualification, you may be asked any questions from the fundamentals required for your watchstation.

101 SAFETY FUNDAMENTALS

References:

- [a] OPNAVINST 3500.39B, Operational Risk Management
 [b] OPNAVINST 5100.23G, Navy Safety and Occupational H Occupational Safety and Health ((NAVSOHOSH) Program Manual
-

101.1 Discuss the concept of ORM. [ref. a, encl. 1, p. 1]

 (Signature and Date)

.2 Explain the following as they apply to ORM: [ref. a, encl. 1, p. 2]

- a. Identifying hazards
- b. Assessing hazards
- c. Making risk decisions
- d. Implementing controls
- e. Supervising

 (Signature and Date)

.3 Explain in detail how commands shall minimize hazards in the workplace. [ref. b, ch. 5, pp. 5-1 thru 5-4]

 (Signature and Date)

.4 Name eight specific individuals or job positions that require CPR qualifications. [ref. b, ch. 6, pp. 6-4 thru 6-5]

 (Signature and Date)

102 ADMINISTRATION/COMMAND AND CONTROL FUNDAMENTALS

References:

- [a] NWP 4-04.1, U.S. Navy, Seabee Operations in the MAGTF
 - [b] NAVEDTRA 14235, Seabee Combat Handbook, Vol. 2
 - [c] 1NCD TACMEMO 4-01.01-07
 - [d] Blue Jackets' Manual, 23rd Edition
 - [e] NAVFAC P-315, Naval Construction Force Manual
-

102.1 Discuss the function and organization of the following companies within the battalion:
[ref e, ch. 8)

- a. Alfa [p. 6-9]
- b. Bravo [p. 10-12]
- c. Charlie/Delta [p. 12-14]
- d. Headquarters [p. 5-6]

(Signature and Date)

.2 Describe the mission of Convoy Security Element (CSE). [ref. c]

(Signature and Date)

.3 State the purpose of and describe the following:

- a. Combat Operation Center (COC) [ref. b, pp. 1-6 thru 1-16]
- b. Alternate Combat Operation Center (ACOC) [ref. b, p. 1-8]
- c. Company Command Post (CP) [ref. a, ch. 5]
- d. Air Detachment (AIRDET) [ref. a, pp. 2-10 thru
- e. 2-11]

(Signature and Date)

102 ADMINISTRATION/COMMAND AND CONTROL FUNDAMENTALS (CONT'D)

102.4 Identify and explain the purpose of the following ratings in a Naval Mobile Construction Battalion (NMCB). [ref. d, pp. 23 thru 35]

- a. BM
- b. LS
- c. CS
- d. LN
- e. MR
- f. MA
- g. NC
- h. HM
- i. MC
- j. IS
- k. PS
- l. YN
- m. ET
- n. GM
- o. IT

103 SUPPLY/LOGISTICS FUNDAMENTALS

References:

- [a] ABFC View
- [b] COMFIRSTNCDINST 4400.3A Seabee Supply Manual (Dec 2007)
- [c] NAVFACINST 4423.1H, Navy Expeditionary Table of Allowance (TOA) and Advance Base Functional Component (ABFC Development and modification policy and processes)

103.1 Name the 7 Sub-Components of the NMCB Table of Allowance (TOA) [ref. a]

(Signature and Date)

- .2 Describe the duties and responsibilities of the Material Liaison Officer (MLO) within the battalion organization. [ref. b, p. 1-10]

(Signature and Date)

- .3 Describe the procedures for issuing project material from the MLO office. [ref. b, pp. 6-2 thru 6-3]

(Signature and Date)

- .4 Describe the procedures for conducting physical inventories. [ref. b, pp. 6-3 thru 6-4]

(Signature and Date)

- .5 Describe the procedures for requesting changes to approved TOAs. [ref. c, pp. 9 thru 11]

(Signature and Date)

104 COMMUNICATIONS/COMMUNICATIONS SECURITY MATERIAL SYSTEM FUNDAMENTALS

References:

- [a] Construction Battle Skills Guide, P-1160, Book 1, All Hands
- [b] NAVEDTRA 14235, Seabee Combat Handbook, Vol. 1
- [c] COMFIRSTNCDINST 2000.2 COMMUNICATIONS INFORMATION SYSTEMS POLICY AND PROCEDURES (DECEMBER 2009)
- [d] S-710-0811 Field Communications TG
- [e] MCWP 3-40.3 Communications and Information Systems
- [f] http://www.navy.mil/search/display.asp?story_id=43066
- [g] NTP 4 (E)

- 104.1 Describe the purpose of the RDSAT and how it applies to the NCF. [ref. f; ref. Unit Communication Dept.]

(Signature and Date)

2. Discuss the general characteristics and implementation of the following wire communication assets: [ref. d]
- a. TA-312/PT [p. 3-6-1]
 - b. TA-838/PT [p.3-7-1]
 - c. AN/GRA-39 [pp. 4-5-1 thru 4-5-6]
 - f. SB-22 [p.3-8-1]

(Signature and Date)

- .3 Discuss the general use of the Tactical Data Network (TDN). [ref. e, ch. 5, p. 5-23]

(Signature and Date)

- .4 Discuss the tactical employment and purpose of NMCB communication. [ref. c, ch. 5, p. 5-1]

(Signature and Date)

- .5 Explain the scope of the CIS (Communication and Information Security) Program? [ref. c, pp. 1-1 thru 1-3]

(Signature and Date)

104 COMMUNICATIONS/COMMUNICATIONS SECURITY MATERIAL SYSTEM FUNDAMENTALS (CONT'D)

- 104.6 Explain the proper equipment check-out procedures as it applies to CIS
(Communications and Information Systems) [ref. c, pp. 6-6 thru 6-7]

(Signature and Date)

7. Describe the proper handling storage and disposal of Lithium Batteries. [ref. c, pp. 2-7
thru 2-9]

(Signature and Date)

8. Describe the function of the following communications services and equipment. [ref. g]

NIPRNET [ch. 2, p. 2-38]

SIPRNET [ch. 2, p. 2-38]

CENTRIX [ch. 7, p. 7-6]

VOIP [ch2, p. 2-63]

Iridium Phones [ch. 5, p. 5-37]

Video Teleconference (VTC) [ch. 2, pp. 2-64 thru 2-65]

(Signature and Date)

105 WEAPONS FUNDAMENTALS

References:

- [a] NAVEDTRA 14234, Seabee Combat Handbook, Vol. 1
 - [b] TM 9-1005-319-23 & P Technical Maintenance Manual
 - [c] ABFC View P-25, (<https://abcfview.navfac.navy.mil>)
-

The following items apply to the 84mm M136 (AT-4):

- 105.1 Describe the 84mm M136 (AT-4). [ref. a, p. 14-20]

(Signature and Date)

- .2 Describe the different firing positions. [ref. a, pp. 14-30 thru 14-32]

(Signature and Date)

- .3 State the following capabilities/nomenclature: [ref. a]

- a. Length [p. 14-21]
- b. Weight [p. 14-21]
- c. Maximum range [p. 14-21]
- d. Maximum effective range [p. 14-21]
- e. Controls [p. 14-22]
- f. Ammunition [p. 14-22]
- g. Misfire procedures [pp. 14-26 thru 14-27]
- h. Minimum arming range [p. 14-21]
- i. Safety [pp.14-32 thru, 14-33]

(Signature and Date)

The following items apply to the M4:

- .4 Describe the characteristics of M4 rifle. [ref. b, p. 1-3]

(Signature and Date)

- .5 Discuss loading/unloading procedures. [ref. b, p. 4-12]

(Signature and Date)

105 WEAPONS FUNDAMENTALS (CONT'D)

105.6 Describe and identify the parts and major groups within the M4 carbine. [ref. b, pp. 1-4.1 thru 1-5]

- a. Length
- b. Weight
- c. Maximum range
- d. Maximum effective range
- e. Safeties
- f. Ammunitions Types
- g. Rates of Fire

(Signature and Date)

.7 State TOA weapons allotment for a NMCB: [ref. c]

- a. M2
- b. M240B
- c. MK19
- d. M203
- e. M500
- f. M16
- g. M9
- h. M4

(Signature and Date)

106 EMBARKATION FUNDAMENTALS

References:

- [a] COMFIRSTNCDINST 3100.1, Movement Control Center
 [b] MCRP 4-11.3H, Convoy Tactical Operations
 [c] AMC Pamphlet 36-101, Vol. I, AMC Affiliation Program Equipment Preparation Course
 [d] JP4-01.3 Joint Tactics, Techniques and Procedures for Movement
-

- 106.1 Explain the operations of the battalion Movement Control Center (MCC). [ref. a, p. 3-1]

 (Signature and Date)

- .2 Discuss who is responsible for the operation of the battalion MCC. [ref. a, p 3-1]

 (Signature and Date)

- .3 State the purpose and the function of Unit Movement Control Center (UMCC). [ref. d, ch. 3, p. 10]

 (Signature and Date)

- .4 Describe the duties and responsibilities of the following key Embark personnel. [ref a. pp. 2-3 thru 2-4]

- a. Embarkation Officer
 b. Embarkation Chief
 c. Embarkation LPO

 (Signature and Date)

- .5 Explain the procedures to calculate the center of balance for Civil Engineer Support Equipment (CESE). [ref. c, pp. 4-6 thru 4-24]

 (Signature and Date)

106 EMBARKATION FUNDAMENTALS (CONT'D)

106.6 Explain the four types of shoring used during embarkation operations. [ref. c, ch. 6]

- a. Sleeper [pp. 6-6 thru 6-7]
- b. Rolling [p. 6-3]
- c. Parking [pp. 6-4 thru 6-6]
- d. Approaching [p. 6-8]

(Signature and Date)

.7 Describe movement formations and techniques of a convoy. [ref b, pp. iii-3 thru iii-15]

(Signature and Date)

.8 Identify and explain the elements of a convoy organization. [ref. b, pp. i-9 thru i-16]

(Signature and Date)

.9 Identify planning requirements for vehicle convoys. [ref. b, p. i-6]

(Signature and Date)

.10 Describe vehicle convoy logistics and security requirements. [ref. b, pp.i-15 thru ii-4]

(Signature and Date)

107 CONTINGENCY OPERATIONS FUNDAMENTALS

References:

- [a] COMSECONDNCB/COMTHIRDNCBINST 3300.1, Rapid Runway Repair
- [b] NAVFACINST 4423.1H, ABFC View Program,
- [c] NAVEDTRA 14279, Utilitiesman Basic Vol. 2, p 2-21
- [d] FM 5-277, Bailey Bridge
- [e] TM-08676A-23/2, Medium Girder Bridge, Marine Corps
- [f] AFMAN 10-219, Vol. 4, Rapid Runway Repair Operations
- [g] NAVEDTRA 14081, Equipment Operator, Basic
- [h] UFC 3-270-07 Unified Facilities Criteria O&M Airfield Damage Repair
- [i] CIN-710-1023, Airfield Damage Repair Crew Training Guide,
- [j] Mabey Johnson User Manual
- [k] Training Guide for Command Post Bunker S-710-1017

107.1 Describe the duties and responsibilities of the following Rapid Runway Repair (RRR) / Airfield Damage Repair (ADR) teams and state what type of equipment is necessary to perform their mission under Battle Damage Repair (BDR)/RRR. [ref. a, ch. III]

- a. MOS [Annex C, pg. 3-C-1 and 3-C-2]
- b. DAT [Annex B, pg. 3-B-1]
- c. Crater/Spall [Annexes E, F, pp.. 3-E-1, 3-F-1]

(Signature and Date)

.2 Describe the following methods of RRR / ADR:

- a. Folded Fiberglass Matting (FFM) [ref. f, par. 5.8.2, p. 81] [ref. k, p. 2-15]
- b. AM-2 aluminum matting [ref. f, p. 5.8.1, p. 81] [ref. h. p. 2-18]
- c. Crushed stone repair [ref. a, Annex E, ch. 3, par. 2, p. 3-E-1]
- d. Crete mobile [ref. g, ch. 14, pp. 14-3, 14-4]
- e. Pave Mend [ref. i, ch. 2, p. 2-1-20]

(Signature and Date)

.3 Explain the fundamentals of a typical battalion tent camp layout. [ref. b, High-res camp layout, DWG 6028038]

(Signature and Date)

.4 Explain the purpose of maintaining operator logs for generators and boilers [ref. c, ch. 2, p. 2-21; ref. d, ch. 3, p. 3-21]

(Signature and Date)

107 CONTINGENCY OPERATIONS FUNDAMENTALS (CONT'D)

107.5 Discuss the following transportable bridges:

- a. Bailey [ref. d, p. 1-5]
- b. Medium girder [ref. e, pp. 1-8 thru 1-13]
- c. Mabey Johnson [ref. j]

(Signature and Date)

.6 Discuss heavy timber construction: [ref. b]

- a. Bunker Assembly 14003 [S-710-1017, p. 1-1-8]
- b. Bridge Assembly 13202 A-710-0044
- c. Tower Assembly 13630, 13640, 13650 [S-710-1016, p. 1-1-12]

(Signature and Date)

108 CIVIL ENGINEER SUPPORT EQUIPMENT (CESE)/TOA FUNDAMENTALS

References:

- [a] NAVFAC P-300, Management of Civil Engineering Support Equipment
 - [b] COMFIRSTNCDINST 11200.2, Equipment Management (Red Book)
 - [c] NAVFAC P-307, Management of Weight Handling Equipment
 - [d] NAVSEA 4790.8B, Maintenance and Material Management (3M)
-

- 108.1 State the purpose of the Battalion Equipment Evaluation Program (BEEP). [ref. b, ch. 4, p. 4-1]

 (Signature and Date)

- .2 Discuss the purpose of the following publications and instructions:

- a. P-300 [ref. a, p. iii]
- b. COMFIRSTNCDINST 11200.2 [ref. b, signature page]
- c. P-307 [ref. c, p. i]
- d. NAVSEA 4790.8B Maintenance and Material Management (3M) [ref. d, ch. 1, p. 1-1]

 (Signature and Date)

- .3 Describe the term deadline and its effects on availability. [ref. b, ch. 1, p. 1-20 thru 1-21]

 (Signature and Date)

- .4 Describe the purpose of equipment lay up (3M). [ref. d]

- a. IEM [ch. 1, pp. 1-68 thru 1-69]
- b. Status I and Status II [ch. 1, p. 1-69]

 (Signature and Date)

108 CIVIL ENGINEER SUPPORT EQUIPMENT (CESE) FUNDAMENTALS (CONT'D)

108.5 Describe the responsibilities of the following: [ref. b]

- a. Equipment yard supervisor [ch. 2, p. 2-3]
- b. Collateral equipment custodian [ch. 2, p. 2-25]
- c. Dispatcher [ch. 2, p. 2-2]
- d. Maintenance Supervisor [ch. 1, pp. 1-4 thru 1-5]
- e. Det Repair parts Petty Officer [ch. 3, p. 3-3]

(Signature and Date)

.6 State the purposes of a Monthly CESE/MHE report. [ref. b, ch. 1, p. 1- 20]

(Signature and Date)

.7 Describe in detail the steps and procedures required to initiate Table of Allowance (TOA) changes. [ref. a, ch. 5, pp. 5-3 thru 5-4]

(Signature and Date)

109 CONSTRUCTION OPERATIONS FUNDAMENTALS

References:

- [a] Crew Leader Handbook
 - [b] NAVFAC P-405, Planners and Estimators Handbook
 - [c] NAVFAC P-445, Construction Quality Management Program
-

109.1 Explain the use of the following:

- a. Construction Management [ref. a, p. 1-1]
- b. Crew Leader Handbook [ref a, p. i]
- c. NAVFAC P-405 [ref. b, p. iii]

(Signature and Date)

.2 Discuss project scope. [ref. a, pp. 4-2 thru 4-3; 15-17 thru 15-18]

(Signature and Date)

.3 Discuss the following: [ref. b]

- a. Direct labor [p. 1-2]
- b. Indirect Labor [p. 1-2]
- c. Overhead Labor [p. 1-2]

(Signature and Date)

4. Discuss the following: [ref. a]

- a. Delay Factor (DF) [p. 2-8, par. 2.4.2]
- b. Production Efficiency Factor (PEF) [p. 2-8, par. 2.4.1.8, 2.4.2]
- c. Mandy Capability Equation (MC) [p. 2-10, par. 2.4.3]

(Signature and Date)

.5 Discuss the following scheduling reports [ref. a]

- a. Level I [p. 1-1, par. 1.1]
- b. Level II [p. 1-1 and p. 3-1]
- c. Level III [p.1-1, pp. 1-2, 3-5, 3-6]

(Signature and Date)

109 CONSTRUCTION OPERATIONS FUNDAMENTALS (CONT'D)

109.6 Discuss the Construction Project SITREP [ref a, pp. 9-1 thru 9-4; G-6]

(Signature and Date)

.7 Discuss the importance of generating and maintaining complete and accurate Construction Activity Summary Sheets (CASS). [ref. a, p. 2-12, par. 2.6]

(Signature and Date)

.8 Discuss Field Adjustment Requests (FAR)/Design Change Directives (DCD) and who would submit and approve. [ref. a, pp. 12-3, 4-C-5]

(Signature and Date)

.9 Discuss Request for Information (RFI). [ref. a, pp. 12-4, 15-9, 15-72]

(Signature and Date)

.10 Discuss a project scope change. [ref. a, pp. 12-3, 12-4]

(Signature and Date)

.11 Describe the purpose of the Naval Construction Force (NCF) Quality Control Program (QCP). [ref. c, p. 1-1]

(Signature and Date)

.12 State the purposes of the project safety plans contained in the project package. [ref. a, p. 11-3, par.11.4]

(Signature and Date)

.13 Describe the 3-phases of control for the Construction Quality Management Program (CQMP) [ref. c, pp. 2-10 thru 2-13]

(Signature and Date)

200 INTRODUCTION TO MISSION AREAS

200.1 BASIC BUILDING BLOCKS

In this section, the mission area is broken down into smaller, more comprehensible, functional systems as basic building blocks in the learning process. Each system is written to reflect specific warfare specialist requirements by identifying the equipment most relevant.

200.2 SYSTEMS AND SYSTEM PARTS

For learning purposes each mission area is disassembled into two levels. Mission areas have systems and systems have parts. Do not expect to see every item which appears on a parts list to be in the PQS. Only those items which must be understood for operation are listed. Normally a number of very broad (overview) mission areas are disassembled into their systems or system parts with the big picture as the learning goal.

200.3 FORMAT

Each mission area is organized within the following format:

- It lists the references to be used for study and asks you to explain the function of each mission area.
- It asks for the static facts of what or where the system and system parts are in relation to the mission area.
- It directs attention to the dynamics of how the system and system parts operate to make the mission area function.
- It specifies the parameters that must be immediately recalled.
- It requires study of the relationship between the mission area being studied and other mission areas.

200.4 HOW TO COMPLETE

The mission areas you must complete are listed in the Prerequisites section of each watchstation. When you have mastered one or more mission areas, contact your Qualifier. The Qualifier will give you an oral examination on each mission area and, if satisfied you have sufficient knowledge of the mission area, will sign the appropriate mission area line items. You will be expected to demonstrate through oral or written examinations a thorough understanding of each mission area required for your watchstation.

201 WARFARE MISSION AREA

References:

- [a] OPNAVINST 3501.115D, Projected Operational Environment (POE) and Require Operational Capabilities (ROC) for the Naval Construction Force Series
 - [b] NTTP 4-04.1M, Seabee Operations in the MAGTF (February 2008 Edition)
 - [c] NAVFAC P-1049, Naval Construction Force Mobilization Manual
 - [d] OPNAVINST 5450.46K, Naval Construction Force Policy Statement
 - [e] NWP 4-04 Naval Civil Engineer Operations (December 2007 Edition)
-

201.1 MISSION STATEMENT

201.1.1 State and discuss the NMCB mission. [ref. b, pp. 1-1 thru 1-6]

(Signature and Date)

MOBILITY

.2 Define the Mobilization Process as it applies to an NMCB. [ref. c, pp. 7-1 thru 7-2]

(Signature and Date)

.3 Discuss tasks priority codes and how they are applied to NMCB mobility tasks. [ref. e, Appendix A, Annex A-1 thru A2, pp. 87 thru 88]

(Signature and Date)

COMMAND, CONTROL, COMMUNICATION, COMPUTERS, AND INTELLIGENCE [C4I]

.4 Discuss battalion command and control within the Marine Air/Ground Task Force (MAGTF). [ref. b, p. 1-13]

(Signature and Date)

.5 Discuss battalion command and control during joint operations in peacetime and wartime [ref. d, pp. 5 thru 14]

(Signature and Date)

.6 Describe tactical construction. [ref. a, encl. 7, pp.3 thru 4]

(Signature and Date)

201 WARFARE MISSION AREA

CONTINGENCY ENGINEERING

01.1.7 Discuss in detail the three construction standards. [ref. e, pp. 5-1 thru 5-2]

(Signature and Date)

.8 Describe the Seabees role in advanced base and camp construction. [ref. c, p. 12- 2]

(Signature and Date)

NON-COMBAT OPERATIONS (NCO)

.9 Discuss battalion operations during a peacetime deployment. [ref. c, p. 12-3]

(Signature and Date)

.10 Discuss Seabees role in humanitarian operations. [ref. a, encl. 7]

(Signature and Date)

COMMAND AND CONTROL WARFARE (C2W)

.11 Discuss battalion Administrative Control (ADCON) and Operational Control (OPCON) in homeport. [ref. d, pp. 7 thru 8]

(Signature and Date)

.12 Discuss NMCB administrative control when forward deployed. [ref. d, p. 8]

(Signature and Date)

.13 Discuss NMCB operational control within the MAGTF and a Naval Construction Regiment (NCR) [ref. b, p. 2-7; ref. e, p. 2-7]

(Signature and Date)

- 201.2 PRINCIPLES OF OPERATION – None to be discussed.
- 201.3 PARAMETERS/OPERATING LIMITS – None to be discussed.
- 201.4 SYSTEM INTERFACE – None to be discussed.
- 201.5 SAFETY PRECAUTIONS – None to be discussed.

300 INTRODUCTION TO WATCHSTATIONS

300.1 INTRODUCTION

The Watchstation section of your PQS is where you get a chance to demonstrate to your Qualifier that you can put the knowledge you have gained in the previous sections to use. It allows you to practice the tasks required for your watchstation and to handle abnormal conditions and emergencies. Before starting your assigned tasks, you must complete the prerequisites that pertain to the performance of that particular task. Satisfactory completion of all prerequisites is required prior to achievement of final watchstation qualification.

300.2 FORMAT

Each watchstation in this section contains:

- A FINAL QUALIFICATION PAGE, which is used to obtain the required signatures for approval and recording of Final Qualification.
- PREREQUISITES, which are items that must be certified completed before you can begin qualification for a particular watchstation. Prerequisites may include schools, watchstation qualifications from other PQS books, and fundamentals, systems/mission areas, or watchstation qualifications from this book. Prior to signing off each prerequisite line item, the Qualifier must verify completion from existing records. Record the date of actual completion, not the sign-off date.
- WATCHSTATION Performance, which is the practical factors portion of your qualification. The performance is broken down as follows:

- Tasks (routine operating tasks that are performed frequently)
- Infrequent Tasks
- Abnormal Conditions
- Emergencies
- Training Watches

If there are multiple watchstations, a QUALIFICATION PROGRESS SUMMARY will appear at the end of the Standard.

300 INTRODUCTION TO WATCHSTATIONS (CONT'D)

300.3 OPERATING PROCEDURES

The PQS deliberately makes no attempt to specify the procedures to be used to complete a task or control or correct a casualty. The only proper sources of this information are the technical manuals, Engineering Operational Sequencing System (EOSS), Naval Air Training and Operating Procedures Standardization (NATOPS) or other policy-making documents prepared for a specific installation or a piece of equipment. Additionally, the level of accuracy required of a trainee may vary from school to school, ship to ship, and squadron to squadron based upon such factors as mission requirements. Thus, proficiency may be confirmed only through demonstrated performance at a level of competency sufficient to satisfy the Commanding Officer.

300.4 DISCUSSION ITEMS

Though actual performance of evolutions is always preferable to observation or discussion, some items listed in each watchstation may be too hazardous or time consuming to perform or simulate. Therefore, you may be required to discuss such items with your Qualifier.

300.5 NUMBERING

Each Final Qualification is assigned both a watchstation number and a NAVEDTRA Final Qualification number. The NAVEDTRA number is to be used for recording qualifications in service and training records.

300.6 HOW TO COMPLETE

After completing the required prerequisites applicable to a particular task, you may perform the task under the supervision of a qualified watchstander. If you satisfactorily perform the task and can explain each step, your Qualifier will sign you off for that task. You may then be required to stand a watch or a number of watches to earn qualification. There are two levels of supervision for this:

- Under Instruction: You will perform the duties and tasks of the watchstation under the direct supervision of a qualified watchstander or supervisor. This is intended to be a one-on-one training situation.
- Under qualified supervision: You will perform the duties and tasks of the watchstation with minor guidance from a qualified watchstander or supervisor. This is intended to allow you to develop proficiency in an operational environment with minimal oversight or have a supervisor close at hand if needed.

After all line items have been completed, your Qualifier will verify Final Qualification by signing and dating the Final Qualification pages.

FINAL QUALIFICATION

NAVEDTRA 43904-1C

301 SEABEE COMBAT WARFARE, UNIT SPECIFIC FOR NMCB

NAME _____ RATE/RANK _____

This page is to be used as a record of satisfactory completion of designated sections of the Personnel Qualification Standard (PQS). Only specified supervisors may signify completion of applicable sections either by written or oral examination, or by observation of performance. The examination or checkout need not cover every item; however, a sufficient number should be covered to demonstrate the examinee's knowledge. Should supervisors *give away* their signatures, unnecessary difficulties can be expected in future routine operations.

This qualification section is to be kept in the individual's training jacket.

The trainee has completed all PQS requirements for this watchstation. Recommend designation as a qualified SEABEE COMBAT WARFARE SPECIALIST, UNIT SPECIFIC FOR NMCB (NAVEDTRA 43904-1C).

RECOMMENDED _____ DATE _____
Supervisor

RECOMMENDED _____ DATE _____
Company Chief

RECOMMENDED _____ DATE _____
Company Commander/Department Head

QUALIFIED _____ DATE _____
Commanding Officer or Designated Representative

SERVICE RECORD ENTRY _____ DATE _____

WATCHSTATION 301

301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB

Estimated completion time: 12 months

301.1 PREREQUISITES

FOR OPTIMUM TRAINING EFFECTIVENESS, THE FOLLOWING ITEMS SHOULD BE COMPLETED PRIOR TO STARTING YOUR ASSIGNED TASKS BUT SHALL BE COMPLETED PRIOR TO FINAL WATCHSTATION QUALIFICATION.

301.1.1 PQS QUALIFICATIONS:

Seabee Combat Warfare (SCW), Common Core (NAVEDTRA 43904-C)

Completed _____
(Qualifier and Date)

.2 FUNDAMENTALS FROM THIS PQS:

101 Safety Fundamentals

Completed _____
(Qualifier and Date)

102 Administration/Command and Control Fundamentals

Completed _____
(Qualifier and Date)

103 Supply/Logistics Fundamentals

Completed _____
(Qualifier and Date)

104 Communications/Communications Security Material System Fundamentals

Completed _____
(Qualifier and Date)

105 Weapons Fundamentals

Completed _____
(Qualifier and Date)

106 Embarkation Fundamentals

Completed _____
(Qualifier and Date)

107 Contingency Operations Fundamentals

Completed _____
(Qualifier and Date)

108 Civil Engineer Support Equipment (CESE) Fundamentals

Completed _____
(Qualifier and Date)

109 Construction Operations Fundamentals

Completed _____
(Qualifier and Date)

**301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB
(CONT'D)**

.3 MISSION AREAS FROM THIS PQS:

201 Warfare Mission Area

Completed _____
(Qualifier and Date)

301.2 TASKS

For the tasks listed below as applicable:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

Questions

The following items apply to weapons:

301.2.1 9mm pistol:

- a. Demonstrate the four weapons conditions.
FG

A B C E

(Signature and Date)

- b. Load and unload the magazine.

A B E F G

(Signature and Date)

- c. Fieldstrip.
G

A B C E F

(Signature and Date)

WATCHSTATION 301

**301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB
(CONT'D)**

		Questions
301.2.1	d. Clean and lubricate	A B D E F
G		
	_____ (Signature and Date)	
	e. Assemble	A B D E F
	G	
	_____ (Signature and Date)	
301.2.2	5.56mm M16/M4 rifle:	
G	a. Demonstrate the four weapons conditions	A B C E F
	_____ (Signature and Date)	
	b. Fieldstrip	A B D E F
	G	
	_____ (Signature and Date)	
	c. Clean and lubricate	A B D E F
	G	
	_____ (Signature and Date)	
	d. Load and unload the magazine	A B C E F
	G	
	_____ (Signature and Date)	
	e. Assemble	A B D E F
	G	

(Signature and Date)

- f. Develop a range card
G

A B C D E F

(Signature and Date)

**301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB
(CONT'D)**

The following items apply to tactics:

	Questions
301.2.3 Inspect, assemble, and perform maintenance on Personal Gear Issue (PGI).	A B C D E F
G	

(Signature and Date)	
.4 Erect an Individual Combat Shelter (ICS).	A E G

(Signature and Date)	
.5 Camouflage yourself and your personal equipment.	A B C D E F G

(Signature and Date)	
.6 Utilizing a grid map and protractor, give the eight digit coordinate for a specific location.	A B C E F G

(Signature and Date)	
.7 Measure the straight line and curved distance between two identified locations on a grid map.	A
B C E F G	

(Signature and Date)	
.8 Utilize the Lensatic compass to orient a grid map to the North.	A B C E F G

(Signature and Date)	
.9 Utilize the Lensatic compass to determine the forward and back azimuths for a given location.	A B C D F G

(Signature and Date)	
.10 Demonstrate the ability to conduct resection/intersection using map, protractor and Lensatic compass.	A B G

(Signature and Date)	

301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB
(CONT'D) Questions

301.2.11 Demonstrate the ability to perform night navigation using a Lensatic compass and map.

A B E G

(Signature and Date)

.12 Demonstrate the ability to properly set up TOA GPS equipment for navigation.

A B D F G

(Signature and Date)

.13 Demonstrate the ability to mark and navigate between way points using TOA GPS equipment for navigation.

A B D F G

(Signature and Date)

.14 Demonstrate the ability to recall a way-point 10 digit grid coordinate using TOA GPS equipment for navigation.

A B D F G

(Signature and Date)

.15 Draw a squad fire plan.

A B G

(Signature and Date)

.16 Demonstrate tactical hand signals in small unit movements.
G

A B C D E F

(Signature and Date)

.17 Create a patrol order in five paragraph format.

A B G

(Signature and Date)

.18 Perform ADDRAC.

A B D G

(Signature and Date)

301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB (CONT'D)

Questions

301.19 Demonstrate the following utilizing the most current TOA SINCGARS radios:

- | | | |
|----|----------------------|-------------|
| a. | Replace battery | A B C E F G |
| b. | Install frequency | A B C E F G |
| c. | Transmit and receive | A B C E F G |
| d. | Level I maintenance | A B C E F G |

(Signature and Date)

.20 Draw a company level communication wire/radio plan: A F G

(Signature and Date)

.21 Assemble a gun loop and perform a proper splice with WD-1 wire and communicate. A B C D E F

G

(Signature and Date)

The following items apply to CBR:

.22 Demonstrate the five MOPP levels: A B C D E F G

(Signature and Date)

.23 Simulate and discuss the use of the M-291 and M-295 for decontamination. A B E F G

(Signature and Date)

.24 Illustrate and discuss Detailed Troop Decontamination (DTD). A B E F G

(Signature and Date)

.25 Illustrate and discuss Detailed Equipment Decontamination (DED) A B E F G

(Signature and Date)

301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB (CONT'D)

Questions

The following items apply to logistics:

301.2.26 Complete a NAVSUP 1250-1:

- a. Requisitioning A B C F G
- b. Turn-in A B C F G

(Signature and Date)

.27 Complete form DD-200: A B C F G

(Signature and Date)

.28 Locate a specified item within TOA using ABFC view
<https://abfcview.navfac.navy.mil>: A B C F G

(Signature and Date)

The following items apply to administration/command and control:

.29 Draw a chain-of-command chart from a Fire team through 1NCD. A B C D F G

(Signature and Date)

.30 Given a battalion EDVR, find the following:

- a. Battalion current NMP and BA A B F G
- b. Warfare qualification A B F G
- c. Naval Enlisted Classification (NEC) A B F G
- d. Projected rotation date (PRD) A B F G
- e. EAOS A B F G
- f. Extensions A B F G

(Signature and Date)

**301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NCR
(CONT'D)**

Questions

The following item applies to contingency operation:

- .31 Draw a basic camp layout:
- | | |
|---|-------------|
| a. Galley | A B C E F G |
| b. Latrines | A B C E F G |
| c. Medical/dental | A B C E F G |
| d. Garbage pits | A B C E F G |
| e. Leach fields | A B C E F G |
| f. Shower units/laundry unit | A B C E F G |
| g. Water source | A B C E F G |
| h. Power distribution | A B C E F G |
| i. Berthing | A B C E F G |
| j. Transportation yard | A B C E F G |
| k. Company Command Post | A B C E F G |
| l. Barriers and obstacles | A B C E F G |
| m. Armory | A B C E F G |
| n. Supply/CTR/MLO | A B C E F G |
| o. Antenna Farms | A B C E F G |
| p. Entry Control Point | A B C E F G |
| q. Ammo Supply Point | A B C E F G |
| r. Landing Zone | A B C E F G |
| s. Detainee Compound | A B C E F G |
| t. Combat Operations Center /Alternate Combat Operations Center | A B C E F G |

(Signature and Date)

The following item applies to contingency construction/battle damage repair:

- .32 Given an assembly number, use the ABFCVIEW Program to show the relationship between facilities and components
- | | | | | | |
|---|---|---|---|---|---|
| A | B | C | D | E | F |
| G | | | | | |

(Signature and Date)

- .33 Perform as a crew member to erect a squad tent.
- | | | | | | |
|---|---|---|---|---|---|
| A | B | C | D | E | F |
| G | | | | | |

(Signature and Date)

WATCHSTATION 301

**301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB
(CONT'D)**

Questions

The following applies to Construction Operations:

- .34 Perform man-day capability calculations: A B G

(Signature and Date)

301.3 INFREQUENT TASKS

For the infrequent tasks listed below:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. Satisfactorily perform or simulate this infrequent task IAW your Command's Sops.

The following items apply to weapons:

- 301.3.1 Demonstrate operational familiarization of the shotgun. A B C D E F

(Signature and Date)

- .2 Throw a practice grenade from the standing, kneeling, and prone positions, observing all safety precautions. A B C D E F

(Signature and Date)

The following items apply to tactics:

- .3 Perform the following tasks as a member of a security patrol:
- a. Exit friendly lines A B C D E F

(Signature and Date)

- b. Perform a security halt A B C D E F

(Signature and Date)

**301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB
(CONT'D)**

		Questions
301.3.3	c. React to a near and far ambush	A B C D E F
	(Signature and Date)	
	d. Cross danger areas	A B C D E F
	(Signature and Date)	
	e. Reenter friendly lines	A B C D E F
	(Signature and Date)	
.4	Demonstrate procedures for handling Enemy Prisoner of War (EPW)	A B C D E F
	(Signature and Date)	
.5	Demonstrate the duties and responsibilities of a react/interior guard team member.	A B C D E F
	(Signature and Date)	

The following items apply to communications/communications security material system:

.6	Perform as a crew member in the erection of the OE-254 antenna	A B C D E F
	(Signature and Date)	
.7	Draft a SPOT report and SALUTE report	A B F
	(Signature and Date)	
.8	Draft a personnel casualty report	A B F
	(Signature and Date)	
.9	Draft a MEDEVAC Request	A B F
	(Signature and Date).	

**301 SEABEE COMBAT WARFARE (SCW), UNIT SPECIFIC FOR NMCB
(CONT'D)**

The following items apply to contingency construction:

Questions

301.3.10 Perform as a crew member in the installation of a triple strand wire barrier. A B C E F

(Signature and Date)

301.4 ABNORMAL CONDITIONS – None to be discussed.

301.5 EMERGENCIES – None to be discussed.

301.6 WATCHES – None.

301.7 EXAMINATIONS

301.7.1 EXAMINATIONS Pass a written examination

(Signature and Date)

.2 EXAMINATIONS Pass an oral examination board

(Signature and Date)

LIST OF REFERENCES USED IN THIS PQS

1NCD TACMEME 4-01.01-07
1NCD BASEBAND Training Course Material
29 CFR Parts 1926- Construction Safety Standards
AFMAN 10-219, Vol. 4, Rapid Runway Repair Operations
AMC Pamphlet 36-101, Vol. 1, AMC Affiliation Program Equipment Preparation Course
Blue Jackets' Manual, 23rd Edition
CIN-710-1023, Airfield Damage Repair Crew Training Guide
COMFIRSTNCDINST 2000.2, COMMUNICATIONS INFORMATION SYSTEMS POLICY AND PROCEDURES
COMFIRSTNCDINST 11200.2, Naval Construction Force Equipment Management
COMSECONDNCB/COMTHIRDNCBINST 3122.1, Embarkation Manual
COMSECONDNCB/COMTHIRDNCBINST 3300.1, Rapid Runway Repair
COMSECONDNCB/COMTHIRDNCBINST 4627.1, NCF MPF Operations
Construction Battalion Battle Skills Guide Book 1
Crew Leader Handbook
EM-385-1-1, Safety and Health Requirements
FM 5-277, Bailey Bridge
Harris Guide 10515-0103-4100 (Rev. A), AN/PRC-150(V) (C), Man Pack Radio (Operator's Manual)
<https://abfcview.navy.mil>
<http://www.navy.mil/navydata>
<http://www.nko.navy.mil>
JP4-01.3 Joint Tactics, Techniques and Procedures for Movement Control
Mabey Johnson User Manual
MCRP 4-11.3F, Convoy Operations Handbook
MCRP 4-11.3H, Convoy Tactical Operations
MCWP 3-40.3 Communications and Information Systems
NAVEDTRA 14026, Construction Electrician Basic
NAVEDTRA 14081, Equipment Operator, Basic
NAVEDTRA 14234, Seabee Combat Handbook, Vol. 1
NAVEDTRA 14235, Seabee Combat Handbook, Vol. 2
NAVEDTRA 14265, Utilitiesman Basic, Vol. 1
NAVEDTRA 14324, Gunner's Mate
NAVFAC P-300, Management of Civil Engineering Support Equipment
NAVFAC P-307, Management of Weight Handling Equipment
NAVFAC P-315, Naval Construction Force Manual
NAVFAC P-405, Planners and Estimators Handbook
NAVFAC P-445, Construction Quality Management Program
NAVFAC P-1049, Naval Construction Force Mobilization Manual
NAVSEA 4790.8B Maintenance and Material Management (3M)
NTTP 4-04.1, Seabee Operations in the MAGTF
NWP 4-04, Naval Civil Engineer Operations
NWP 4-04.1, Seabee Operations in the MAGTF
OPNAVINST 5450.46K, Naval Construction Force Policy Statement
OPNAVINST 3501.115D, Projected Operational Environment (POE) and Required Operational
OPNAVINST 3500.39B, Operational Risk Management

LIST OF REFERENCES USED IN THIS PQS (CONT'D)

OPNAVINST 5100.19D, Naval Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat
OPNAVINST 5100.23G, Navy Occupational Safety and Health (NAVOSH) Program Manual
TM-08676A-23/2, Medium Girder Bridge, Marine Corps
Training Guide for Command Post Bunker S-710-1017
Training Guide for Observation Tower S-710-1016
Training Guide Heavy Construction 1 A-710-0044
TM 9-1005-315-10-C3 Operators Manual M16A & M4 Rifle
UFC 3-270-07 Unified Facilities Criteria O&M Airfield Damage Repair

Personal Qualification Standard

Feedback Form for NAVEDTRA 43904-1C

From _____ Date _____

Via _____ Date _____
Department Head

Activity _____

Mailing Address _____

Email Address _____ DSN _____

PQS Title _____ NAVEDTRA _____

Section Affected _____

Page Number(s)

For faster response, you may email your feedback to the PQS Development Group at:
https://wwwa.nko.navy.mil/portal/seabees_facilitiesengineering/home/pqs. Please
include the above information so that we may better serve you.

Remarks/Recommendations (Use additional sheets if necessary):

(FOLD HERE)

DEPARTMENT OF THE NAVY

OFFICIAL BUSINESS

COMMANDING OFFICER
Naval Education and Training Command
9549 Bainbridge Ave
NORFOLK, VA 23511

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