



# PERSONNEL QUALIFICATION STANDARD

FOR

# DAMAGE CONTROL (DC) WATCHES

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.

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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 43119-4H.

## APPLICABILITY

This PQS is applicable to all naval ships.

## 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.

## TAILORING

To command tailor this package, first have it reviewed by one or more of your most qualified individuals. Delete any portions covering systems and equipment not installed on your ship, aircraft or unit. Next, add any line items, fundamentals, systems and watchstations/workstations that are unique to your command but not already covered in this package. Finally, the package should be reviewed by the cognizant department head and required changes approved by the Commanding Officer or his designated representative. Retain the approved master copy on file for use in tailoring individual packages.

## INTRODUCTION (CONT'D)

### QUALIFIER

The PQS Qualifier is designated in writing by the Commanding Officer to sign off individual watchstations. Qualifiers will normally be E-5 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.

### 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) 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!



## INTRODUCTION (CONT'D)

### 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.



## SUMMARY OF CHANGES

### CHANGES TO FUNDAMENTALS, SYSTEMS, AND WATCHSTATIONS:

<b>Fundamental Title</b>	<b>Action</b>	<b>Comment</b>
Safety	Modified	Updated to reflect current information and references
Engineering	Modified	Updated to reflect current information and references
Mechanical	Modified	Updated to reflect current information and references
Stability	Modified	Updated references
Physical Security	Modified	Updated references
<b>System Title</b>	<b>Action</b>	<b>Comment</b>
Ballasting	Modified	Updated to reflect current information
Damage Control Central (DCC)/ Central Control Station (CCS)	Modified	Updated to reflect current information and references
Collective Protection System (CPS)	Modified	Updated references
Smoke Ejection	Modified	Updated to reflect current information and references
Installed Fire Extinguishing	Modified	Updated to reflect current information
Computer Based Damage Control (DC) Management	Modified	Updated to reflect current information and references
Firemain	Modified	Updated to reflect current information and references
<b>Watchstation Title</b>	<b>Action</b>	<b>Comment</b>
Sounding and Security	Modified	Updated to reflect current information
Damage Control Central (DCC) Supervisor	Modified	Updated to reflect current information
Division Damage Control Petty Officer (DCPO)	Modified	Updated to reflect current information
Fire Marshall	Modified	Updated to reflect current information
Damage Control Console Operator	Modified	Updated to reflect current information
LHD 8/LHA 6 Damage Control Console Operator (DCCO)	Deleted	



## WATCHSTATION REQUALIFICATIONS

Due to changes in policies, systems, or procedures, personnel dealing with the subject matter of this PQS may be required to requalify IAW NAVEDTRA 43100-1G, Ch. 5, PQS Unit Coordinator's Guide.

The following watchstations regardless of qualifications achieved in previous versions, shall be completed.

None.



## 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.

AFFF	Aqueous Film Forming Foam
ATD	Air Tight Door
ATFP	Attack Team Fire Party
BOSS	Ballasting Operational Sequencing System
CAPDS	Chemical Agent Point Detection System
CBR-D	Chemical Biological and Radiological Decontamination
CCS	Central Control Station
CHT	Collection Holding Transfer
CPS	Collective Protection System
DC	Damage Control
DCAMS	Damage Control Action Management Software
DCTMS	Damage Control Tactical Management Software
DCC	Damage Control Central
DCCO	Damage Control Console Operator
ECS	Engineering Control System
EDO	Engineering Duty Officer
EDORM	Engineering Department Organization and Regulations Manual
EOCC	Engineering Operation Casualty Control
EOOW	Engineering Officer of the Watch
EOP	Engineering Operational Procedures
EOSS	Engineering Operational Sequencing System
FCCS	Flooding Casualty Control Software
FO	Fuel Oil
GRP	Glass Re-enforce Plastic
HFP	Hydrofluoropropane
HMI	Human Machine Interface
HP	High Pressure
HPAC	High Pressure Air Compressor
HVAC	Heating, Ventilation and Air-Conditioning
LO	Lube Oil
LOP	Local Operating Procedure
LP	Low Pressure
LP	Limited Protection
LPAC	Low Pressure Air Compressor
LPAD	Low Pressure Air Dehydrator
MCS	Machinery Control Console
MOPV	Manually Operated Pilot Valve
MPAC	Medium Pressure Air Compressor
MSD	Marine Sanitation Device
NAVOSH	Navy Occupational Safety and Health
OD	Orifice Damper

## ACRONYMS USED IN THIS PQS (CONT'D)

OOD	Officer of the Deck
ORM	Operational Risk Management
RPM	Repair Party Manual
QAWTD	Quick Acting Water Tight door
QAWTH	Quick Acting Water Tight Hatch
QAWTS	Quick Acting Water Tight Scuttle
SAR	Search and Rescue
SCBA	Self-Contained Breathing Apparatus
SCD	Smoke Control Damper
SDOSS	Sewage Disposal Operational Sequencing System
SES	Smoke Ejection System
SIB	Ship's Information Book
SOPV	Solenoid Operated Pilot Valve
SPD	Smoke Purge Damper
SSD	Smoke Shut-off Damper
TLI	Tank Level Indicator
TMDER	Technical Manual Deficiency Evaluation Report
TP	Total Protection
VCHT	Vacuum Collection Holding and Transfer
WDCM	Wash Down Counter Measure
WTD	Water Tight Door



## 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 requalifying 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 PRECAUTIONS FUNDAMENTALS

### References:

- [a] OPNAVINST 3500.39C, Operational Risk Management (ORM)
  - [b] NAVEDTRA 14104, Fireman
  - [c] NSTM S9086-RK-STM-010/CH-505R5, Piping Systems
  - [d] OPNAVINST 5100.19E, Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat
  - [e] NSTM S9086-SY-STM-010/CH-551R6, Compressed Air Plants and Systems
  - [f] NSTM S9086-S3-STM-010/CH-555V1R13, Surface Shipboard Firefighting
  - [g] NSTM S9086-VG-STM-010/CH-634R4, Deck Coverings
  - [h] NSTM S9086-K9-STM-010/CH-330R3, Lighting
  - [i] NSTM S9086-CH-STM-030/CH-074R6, Gas Free Engineering
  - [j] NSTM S9086-WK-STM-010/CH-670R6, Stowage, Handling, and Disposal of Hazardous General Use Consumables
  - [k] NSTM S9086-S4-STM-010/CH-556R9, Hydraulic Equipment Power Transmission and Control
  - [l] NSTM S9086-CL-STM-010/CH-077R7, Personnel Protection Equipment
  - [m] OPNAVINST 5090.1C, Environmental and Natural Resources Program Manual
  - [n] NSTM S9086-RW-STM-010/CH-516R5, Refrigeration Systems
  - [o] Local Instructions
  - [p] CHT/MSD Sewage Disposal Operational Sequencing System (SDOSS)
  - [q] NSTM-S0986-KC-STM-010/CH-300R9, Electrical Plant-General
- 

101.1 Discuss the concept of ORM. [ref. a]

\_\_\_\_\_  
(Signature and Date)

.2 Explain the following as they apply to ORM: [ref. a]

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

\_\_\_\_\_  
(Signature and Date)

.3 Explain the use of each of the following:

- a. Lagging [ref. b, app. I]

## 101 SAFETY PRECAUTIONS FUNDAMENTALS (CONT'D)

- 101.3 b. Flange spray shields [ref. c, sec. 7]  
c. Incandescent light steam-tight cover (explosion proof) [ref. h, sec. 2]

---

(Signature and Date)

- .4 State the safety precautions to be followed when working with rotating machinery. [ref. d, Vol. II ch. C13]

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(Signature and Date)

- .5 State the safety precautions to be followed when operating a compressed air system. [ref. e, sec. 1]

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(Signature and Date)

- .6 State the hazard of oil in the bilges. [ref. f, sec. 10; ref. j, sec. 2]

---

(Signature and Date)

- .7 State the safety precautions applicable for the use, handling, and storage of hydraulic fluids and synthetic lubricants aboard your ship. [ref. k, sec. 1]

---

(Signature and Date)

- .8 Explain the oily waste discharge limitations as they apply to shipboard personnel. [ref. m, ch. 19]

---

(Signature and Date)

- .9 State the procedures required in the event of an oil spill. [ref. m, ch. 19]

---

(Signature and Date)

- .10 State the protection provided by the following safety equipment; include examples of ship evolutions that require their use:

- a. Long-sleeved shirt [ref. d, Vol. II, ch. C13]
- b. Hard hat [ref. d, Vol. I, ch. B12]
- c. Goggles/safety glasses/face shield [ref. d, Vol. I, ch. B5]
- d. Gloves [ref. d Vol. I, ch. B12]
- e. Safety shoes [ref. d, Vol. I, ch. B12]

## 101 SAFETY PRECAUTIONS FUNDAMENTALS (CONT'D)

- 101.10
- f. Respirator [ref. d, Vol. I, ch. B6]
  - g. Safety harness/DYNA-brake [ref. d, Vol. I, ch. B12]
  - h. Life jacket [ref. I, sec. 2]
  - i. Rubber mats [ref. q, sec. 2]
  - j. Rubber aprons [ref. j, sec. 6]
  - k.. Hearing protection [ref. d, Vol. 1, ch. B4]

---

(Signature and Date)

- .11 State the safety precautions to be followed prior to and when entering a void or poorly ventilated space. [ref. i, sec. 19]

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(Signature and Date)

- .12 State the safety precautions to be followed when using the following:
- a. Calcium hypochlorite [ref. d, Vol. II, ch. C23]
  - b. Solvents [ref. d, Vol. II, ch. C23]
  - c. Caustic soda [ref. d, Vol. II, ch. C23]
  - d. Refrigerants [ref. n, sec. 1]

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(Signature and Date)

- .13 State the safety precautions to be observed and personnel safety equipment/devices required in the following situations:
- a. Replenishment-at-sea evolutions [ref. d, Vol. II, ch. C3]
  - b. Working aloft [ref. d, Vol. II, ch. C8]
  - c. Heavy weather [ref. d, Vol. II, ch. C16]
  - d. Working with paint [ref. d, Vol. II, ch. C18]
  - e. Working with electrical/electronic equipment [ref. d, Vol. II, ch. C9]
  - f. Operating portable electric tools [ref. d, Vol. II, chs. C9, C13]
  - g. Welding, cutting, and brazing [ref. d, Vol. II, ch. C11]
  - h. Working with workshop equipment [ref. d, Vol. II, ch. C13]
  - i. Handling hazardous material [ref. d, Vol. II, ch. C23]
  - j. Working with pneumatic tools [ref. d, Vol. II, ch. C13]

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(Signature and Date)

## 101 SAFETY PRECAUTIONS FUNDAMENTALS (CONT'D)

101.14 State the importance of tag-out procedures and clearing of tags. [ref. d, Vol. II, ch. C9]

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(Signature and Date)

.15 State the safety precautions when working close to electrical circuits. [ref. d, Vol. II, ch. C9]

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(Signature and Date)

.16 State the procedures for removing a victim from an energized circuit. [ref. d, Vol. II, ch. C9]

---

(Signature and Date)

.17 Explain the possible damage caused by missile hazards and flammable materials as applied to safety. [ref. d, Vol. II, ch. C1]

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(Signature and Date)

.18 Discuss the safety precautions to follow when working around pressurized systems. [ref. c, sec. 8]

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(Signature and Date)

.19 State the procedures for working on a system that opens to the sea. [ref. c, sec. 1]

---

(Signature and Date)

.20 Discuss the procedures required to permit underwater work by divers. [ref. o]

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(Signature and Date)

.21 Discuss the procedures required aboard your ship to gain permission to go aloft. [ref. o]

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(Signature and Date)

**101 SAFETY PRECAUTIONS FUNDAMENTALS (CONT'D)**

101.22 State who grants permission to start/test major machinery in-port. [ref. o]

\_\_\_\_\_  
(Signature and Date)

.23 Discuss the purpose and location of the CHT/MSD spill kit(s). [refs. o, p]

\_\_\_\_\_  
(Signature and Date)

.24 Discuss the procedures and actions taken for a CHT/MSD spill. [refs. o, p, i]

\_\_\_\_\_  
(Signature and Date)

.25 Discuss the hazards associated with the following: [ref. d]

- a. AFFF
- b. HFP/HALON
- c. CO<sub>2</sub>

\_\_\_\_\_  
(Signature and Date)

## 102 ENGINEERING FUNDAMENTALS

### References:

- [a] OPNAVINST 3120.32D, Standard Organization and Regulations Manual of the U.S. Navy (SORM)
  - [b] NTTP 3.20.31, Surface Ship's Survivability
  - [c] NSTM S9086-CH-STM-030/CH-074V3R6, Gas Free Engineering
  - [d] COMNAVSURFORINST 35403 Engineering Department Organization and Regulations Manual (EDORM)
  - [e] Ship's Damage Control Book
  - [f] Local Instructions
  - [g] NSTM S9086-CN-STM-010/CH-079V1R1, Damage Control Stability and Buoyancy
  - [h] NAVEDTRA 14057, Damage Controlman
  - [i] Ship's Information Book (SIB)
  - [j] NAVSEA S0005-AGA-GYD-010/TMMP & NAVSEAINST 4160.3A, NAVSEA/SPAWAR Technical Manual User's Quick Reference Guide
- 

102.1 State the information available in the following manuals/publications:

- a. SORM [ref. a, ch. 1]
- b. EDORM [ref. d, ch. 1]
- c. SIB [ref. i]
- d. Ship's Damage Control Book [ref. e]
- e. Guide for User's Maintenance of NAVSEA Technical Manuals [ref. f]
- f. Repair Party Manual [ref. b, ch. 3]
- g. Restricted Maneuvering Doctrine [ref. f]

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(Signature and Date)

.2 Discuss the duties of the following as defined in your ship's EDORM and SORM:

- a. Engineer Officer [ref. d, ch. 2]
- b. Main Propulsion Assistant [ref. d, ch. 2]
- c. Damage Control Assistant [ref. d, ch. 2]
- d. Auxiliary Officer [ref. d, ch. 2]
- d. Electrical Officer [ref. d, ch. 2]
- e. Engineering Administrative Assistant [ref. d, ch. 2]
- f. Oil King [ref. d, ch. 2]
- g. EDO [ref. d, ch. 2]



## 102 ENGINEERING FUNDAMENTALS (CONT'D)

- 102.2
- h. EOWW [ref. d, ch. 2]
  - i. Fire Marshall [ref. b, ch. 2]
  - j. Gas Free Engineering Personnel [ref. c, sec. 18]
  - k. DCC Supervisor [ref. d, ch. 2]
  - l. Sound and Security [ref. e, ch. 2]

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(Signature and Date)

- .3 State the purpose of the following logs/reports/orders:

- a. Engineering Log [ref. d, ch. 2]
- b. Fuel and Water Report [ref. d, ch. 2]
- c. Engineering Officer Night orders [ref. d, ch. 2]
- d. DC Closure Log [ref. b, ch. 3]
- e. Engineering Standing orders [ref. f]
- f. Trouble Call Record [ref. f]
- g. NAVSEA TMDER/NAVSEA Form 9086/10 [ref. k]
- h. Daily Draft Report [ref. f]
- i. Gas Free Engineering Log [ref. c, sec. 20]

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(Signature and Date)

- .4 Discuss the following terms as they relate to calculating a draft:

- a. Displacement [ref. g, sec. 3]
- b. List [ref. g, sec. 3]
- c. Trim [ref. g, sec. 3]
- d. Drafts [ref. g, sec. 3]
  - 1. Navigational
  - 2. Calculative
  - 3. Mean
  - 4. Limiting
- e. Clinometer [ref. h, ch. 3]
- f. FCCS [ref. f]

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(Signature and Date)

- .5 Discuss the purposes of and situation requirements for taking the Draft [ref. h, ch. 3].

---

(Signature and Date)

## **102      ENGINEERING FUNDAMENTALS (CONT'D)**

102.6      Discuss the operation and functions of the following remote valve operating systems: [ref. i]

- a.      Mechanical
- b.      Electrical
- c.      Hydraulic
- d.      Pneumatic

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(Signature and Date)

## 103 MECHANICAL FUNDAMENTALS

### References:

- [a] Ship's Information Book (SIB)
  - [b] Ship's Damage Control Book
  - [c] NAVEDTRA 14104, Fireman
  - [d] NSTM S9086-RK-STM-010/CH-505R5, Piping Systems
  - [e] NAVEDTRA 14057, Damage Controlman
- 

103.1 State the purpose or function of the following items/terms associated with tanks:  
[refs. a, b]

- a. Overflow
- b. Vent
- c. Sounding tube
- d. Radar tank level sensing devices
- e. TLI

---

(Signature and Date)

.2 Explain the function of the following:

- a. Flange shields [ref. c, ch. 9]
- b. Pipe hangers and supports [ref. c, ch. 9]
- c. Sounding tape [ref. e, ch. 3]
- d. Reach rod [ref. c, ch. 9]

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(Signature and Date)

.3 State the color code for the following systems: [ref. d, sec. 7]

- a. Feedwater/condensate
- b. Firemain
- c. AFFF/water solution
- d. AFFF concentrate
- e. FO
- f. HP air
- g. LP air
- h. Hydraulic
- i. JP-5
- j. LO

**103 MECHANICAL FUNDAMENTALS (CONT'D)**

- 103.3 k. Potable water
- l. Seawater
- m. VCHT/CHT/MSD
- n. Steam
- o. Refrigerants
- p. Chill water

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(Signature and Date)

## 104 STABILITY FUNDAMENTALS

### References:

- [a] NSTM S9086-CN-STM-010/CH-079V1R1, Damage Control Stability and Buoyancy  
 [b] NTTP 3.20.31, Surface Ship's Survivability  
 [c] Flooding Casualty Control Software (FCCS) User's Manual Version 5.8
- 

104.1 Discuss the following terms as they relate to ship's stability: [ref. a]

- a. Heel [sec. 11]
- b. Freeboard/reserve buoyancy [sec. 3]
- c. Free surface effect [sec. 10]
- d. Free communication effect [sec. 10]
- e. Solid flooding [sec. 10]

---

(Signature and Date)

.2 Discuss the effects on stability of: [ref. a, secs. 6, 8; ref. b, fig. 5-3]

- a. Weight additions above and below the center of gravity
- b. Weight removals above and below the center of gravity
- c. Weight shifts above, below, to port, and to starboard of the center of gravity

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(Signature and Date)

.3 Discuss the various methods used for correcting excessive list and trim caused by flooded compartments. [ref. a, sec. 17]

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(Signature and Date)

.4 Explain the use of the flooding effects diagram. [ref. a, sec. 13]

---

(Signature and Date)

.5 Explain the use of the liquid loading diagram. [ref. a, sec. 14]

---

(Signature and Date)

.6 Explain the use of FCCS. [ref. c]

---

(Signature and Date)

## 105 PHYSICAL SECURITY FUNDAMENTALS

### References:

- [a] OPNAVINST 3120.32D, Standard Organization and Regulations Manual of the U.S. Navy (SORM)
  - [b] COMNAVSURFORINST 35403.3 Engineering Department Organization and Regulations Manual (EDORM)
  - [c] NSTM S9086-SE-STM-010/CH-533R3, Potable Water Systems
  - [d] Local Instructions
- 

105.1 State the purpose of the Physical Security Program. [ref. a, ch. 6]

\_\_\_\_\_  
(Signature and Date)

.2 State how often designated spaces are inspected. [ref. b, ch. 4; ref. d]

\_\_\_\_\_  
(Signature and Date)

.3 State which designated spaces are locked during in-port/underway. [ref. b, ch. 4; ref. d]

\_\_\_\_\_  
(Signature and Date)

.4 State to whom you report violations of physical security. [ref. a, ch. 6; ref. d]

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(Signature and Date)

.5 State the requirements aboard your ship for locking devices and seals on the following:

- a. AFFF system valves [ref. d]
- b. Ballast and deballast valves [ref. d]
- c. Feedwater sounding tubes [ref. d]
- d. F/O transfer valves [ref. d]
- e. L/O transfer valves [ref. d]
- f. Potable water sounding tubes [ref. c, sec. 2]
- g. CHT system vent valves [ref. b, ch. 4]

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(Signature and Date)

## **105 PHYSICAL SECURITY FUNDAMENTALS (CONT'D)**

105.6 Explain the procedures for reporting the following:

- a. Bomb threat [ref. d]
- b. Intruder [ref. d]
- c. Sabotage [ref. a, ch. 5]

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(Signature and Date)





## 200 INTRODUCTION TO SYSTEMS

### 200.1 BASIC BUILDING BLOCKS

In this section, the equipment is broken down into smaller, more comprehensible, functional systems as basic building blocks in the learning process. Each system is written to reflect specific watchstation requirements by identifying the equipment most relevant to one or more designated watchstanders. The less complex systems may be identified and covered quickly or relegated to a lower priority to permit greater emphasis on more significant or complex systems.

### 200.2 COMPONENTS AND COMPONENT PARTS

For learning purposes each system is disassembled into two levels. Systems have components and components 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/maintenance are listed. Normally a number of very broad (overview) systems are disassembled into their components or parts with the big picture as the learning goal. Items listed as components in such a system may then be analyzed as separate systems and broken down into components and parts. Example: the turbogenerators may be listed as a component of the Ship's Service Electrical Distribution system and then later detailed as an individual system for closer study.

### 200.3 FORMAT

Each system is organized within the following format:

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

### 200.4 HOW TO COMPLETE

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



**201 BALLASTING SYSTEM**

## References:

- [a] Ship's Information Book (SIB)  
 [b] Ship's Damage Control Book/Diagrams  
 [c] Ballasting Operational Sequencing System (BOSS)
- 

201.1 SYSTEM COMPONENTS AND COMPONENT PARTS

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located?
- C. What are the sources of power?
- D. What are the modes of operation or control?
- E. What are the safety/protective devices for this component/component part?
- F. What protection is provided by this component/component part?
- G. What are the probable indications if this component fails?
- H. What is the effect on system operation if this component fails?

	<u>Questions</u>
201.1.1 Ballasting system [refs. a thru c]	A B C D E F G H
.2 Floodable tanks and voids [refs. a thru c]	A B D E F G H
.3 Firemain fill valves, vent, blow, unloader and sea valves [refs. a thru c]	A B C D E F G H
.4 Control stations [refs. a thru c]	A B C D E F G H
.5 Clinometer [ref. b]	A B

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(Signature and Date)

201.2 PRINCIPLES OF OPERATION

- 201.2.1 How do the components work together to achieve the system's function?  
[refs. a thru c]
- .2 Using a diagram of this system, show the path of: [refs. a thru c]
- a. Seawater from the sea to the tank
  - b. Ballast from tank to tank
  - c. Deballast from the tank to the sea
  - d. Firemain to the tank

**201 BALLASTING SYSTEM (CONT'D)**

201.2.3 What indications are received if the system is malfunctioning? [refs. a thru c]

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(Signature and Date)

201.3 PARAMETERS/OPERATING LIMITS

For the items listed, answer the following questions: [refs. a, b]

- A. What is the normal operating value?
- B. What is the physical location of the indicators?

**Questions**

201.3.1	Tank capacity	A B
.2	List	A B
.3	Trim	A B
.4	Air header pressure	A B

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(Signature and Date)

201.4 SYSTEM INTERFACE

201.4.1 How does this system interface with the following: [refs. a thru c]

- a. Firemain
- b. Fuel system
- c. Electrical system
- d. Main Drainage system
- e. Secondary Drainage system

.2 How do the following outside influences affect the operation of this system:  
[refs. a thru c]

- a. Loss of firemain
- b. Loss of electric power
- c. Loss of Deballasting Air system
- d. Loss of hydraulics

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201.5 SAFETY PRECAUTIONS

201.5.1 What safety precautions must be observed when operating this system? [refs. a, c]

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(Signature and Date)

## 202 DAMAGE CONTROL CENTRAL (DCC)/CENTRAL CONTROL STATION (CCS)

### References:

- [a] Ship's Information Book (SIB)
  - [b] NAVSEA SS200-AF-MMM-010, Navy Shipboard Collective Protection System (CPS) Technical Manual
  - [c] Engineering Department Organization and Regulations Manual (EDORM)
  - [d] Ship's Damage Control Book/Diagrams
  - [e] NSTM S9086-QH-STM-010/CH-470R4, Shipboard BW/CW Defense and Countermeasures
  - [f] NSTM S9086-CD-STM-010/CH-070R3, Nuclear Defense at Sea and Radiological Recovery of Ships After Nuclear Weapons Explosion
  - [g] OPNAVINST 5100.19E, Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat
- 

### 202.1 SYSTEM COMPONENTS AND COMPONENT PARTS

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located?
- C. What are the sources of power?
- D. What are the modes of operation or control?
- E. What are the safety/protective devices for this component/component part?
- F. What protection is provided by this component/component part?
- G. What are the probable indications if this component fails?
- H. What is the effect on system operation if this component fails?
- I. What is the source of control signals?
- J. What is the function of each position?
- K. Where are the circuit breakers located?

### Questions

- |         |   |                       |
|---------|---|-----------------------|
| 202.1.1 | DCC/CCS [ref. a]  | A                     |
| .2      | Alarms and indicators [refs. a, d]                        | A B C D E F G H I J K |
| .3      | DC plates [refs. a, d]                                    | A B                   |
| .4      | Liquid load diagrams [refs. a, d]                         | A B                   |
| .5      | DC communications [refs. a, d]                            | A B C D E F G H I J K |
| .6      | DC logs and records [ref. c, ch. 5]                       | A B                   |
| .7      | Installed CBR protection systems [ref. a; ref. f, sec. 4] | A B C D E F G H J     |



**202      DAMAGE CONTROL CENTRAL (DCC)/CENTRAL CONTROL STATION  
(CCS) SYSTEM (CONT'D)**

202.5      SAFETY PRECAUTIONS

202.5.1      What safety precautions must be observed when operating this system?  
[ref. g, ch. C1]

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(Signature and Date)

**203 COLLECTIVE PROTECTION SYSTEM (CPS)**

## References:

- [a] Ship's Information Book (SIB)  
 [b] NAVSEA SS200-AF-MMM-010, Navy Shipboard Collective Protection System (CPS) Technical Manual  
 [c] NSTM S9086-S3-STM-010/CH-555V1R13, Surface Shipboard Firefighting  
 [d] NSTM S9086-QH-STM-010/CH-470R4, Shipboard BW/CW Defense and Countermeasures
- 

**203.1 SYSTEM COMPONENTS AND COMPONENT PARTS**

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located?
- C. What are the sources of power?
- D. What are the modes of operation or control?
- E. What protection is provided by this component/component part?
- F. What are the probable indications if this component fails?
- G. What is the effect of system operation if this component fails?

		<b><u>Questions</u></b>
203.1.1	CPS [ref. a; ref. b, ch. 1; ref. d, sec. 6]	A
.2	CPS fan rooms [ref. a; ref. b, ch. 1]	A B C D E F G
.3	CPS alarm system [ref. a; ref. b, ch. 1]	A B C D F G
.4	CPS zone boundary bulkheads and decks [ref. a; ref. b, ch. 1]	A B F G
.5	CPS airlocks [ref. a; ref. b, ch. 1]	A B D E F G
.6	TP [ref. b, ch. 1]	A B D E F G
.7	LP [ref. b, ch. 1]	A B D E F G
.8	CPS electric/steam pre-heater [ref. b, ch. 1]	A B C E F G
.9	CPS Navy standard impingement filters (LP only) [ref. b, ch. 1]	A B E F G

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(Signature and Date)

**203.2 PRINCIPLES OF OPERATION**

- 203.2.1 How do the components work together to achieve the system's function?  
 [ref. a; ref. b, ch. 1]



**203 COLLECTIVE PROTECTION SYSTEM (CPS) (CONT'D)**

203.2.2 What indications are received if the system is malfunctioning? [ref. a; ref. b, ch. 1]

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(Signature and Date)

203.3 PARAMETERS/OPERATING LIMITS

For the items listed, answer the following questions: [ref. b, ch. 1]

- A. What is the normal operating value?
- B. What are the allowable operating limits?
- C. Where are the parameters sensed or monitored?
- D. What is the physical location of the indicators?
- E. What is the alarm set point?

- 203.3.1 CPS zone pressure
- .2 CPS alarm system
- .3 CPS fan control

**Questions**  
A B C D E  
A B C D E  
E

\_\_\_\_\_  
(Signature and Date)

203.4 SYSTEM INTERFACE

- 203.4.1 How do the following outside influences affect the operation of this system:
  - a. Loss of electrical power [ref. a]
  - b. Emergency operations [ref. b, ch. 4; ref. c, secs. 5, 6]
- .2 How does this system interface with the drainage system? [ref. a; ref. b, ch. 2]
- .3 How are the electric pre-heaters activated/reset. [refs. a, b, ch. 1]

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(Signature and Date)

203.5 SAFETY PRECAUTIONS

203.5.1 What safety precautions must be observed when operating this system?  
[ref. b, ch.1]

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(Signature and Date)

## 204 SMOKE EJECTION SYSTEM

### References:

- [a] NAVEDTRA 43119-L, Damage Control
  - [b] NTTP 3-20.31, Surface Ship Survivability
  - [c] NSTM S9086-S3-STM-010/CH-555V1R13, Surface Shipboard Firefighting
  - [d] Ships Damage Control Book
  - [e] NAVEDTRA 43103-B, Engineering Fundamentals
  - [f] OPNAVINST 3500.39C, Operational Risk Management (ORM)
  - [g] OPNAVINST 5100.19E, Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat
  - [h] S9LPD-AS-SSM-040, HVAC/SES Systems
  - [i] Engineering Operational Sequencing System (EOSS)
  - [j] Ships Information Book (SIB)
  - [k] Ship's Damage Control Book
  - [l] Propulsion Operating Guide (POG)
- 

### 204.1 SYSTEM COMPONENTS AND COMPONENT PARTS

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located?
- C. What are the sources of power?
- D. What are the modes of operation or control?
- E. What are the safety/protective devices for this component/component part?

		<u>Questions</u>
204.1.1	SES [refs. h, j]	A B C D E
.2	HVAC [refs. h, j]	A B C D E
.3	CPS [refs. k, j]	A B C D E
.4	SES areas: [refs. d, j]	
	a. Medical Complex	A B C D E
	b. Pilot House	A B C D E
	c. Passageways on Main and 2 <sup>nd</sup> Deck	A B C D E
.5	Ventilation: [refs. a, b c, d, j]	
	a. Purge	A B C D E
	b. Normal mode of operation	A B C D E
	c. SES mode of operation	A B C D E
.6	SES dampers: [refs. d, h, j]	
	a. SCD	A B C D E
	b. SPD	A B C D E

## 204 SMOKE EJECTION SYSTEM (CONT'D)

		<b><u>Questions</u></b>
204.1.6	c. SSD	A B C D E
	d. OD	A B C D E
.7	SES types: [refs. d, h, j]	
	a. Type 1	A B C D E
	b. Type 2	A B C D E
	c. Type 3	A B C D E
.8	Discuss the SES areas. Identify what SES type and which fire zone they are located in: [refs. d, h, j]	
	a. Area A	A B C D E
	b. Area B	A B C D E
	c. Area C	A B C D E
	d. Area D	A B C D E
	e. Area E	A B C D E
	f. Area F	A B C D E
	g. Area G	A B C D E
	h. Area H	A B C D E
.9	Discuss the SES areas and how the CPS affects their operation: [refs. h, j]	A B C D E

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(Signature and Date)

### 204.2 PRINCIPLES OF OPERATION

204.2.1 How do the components work together to achieve the system's function? [refs. e, h, l]

.2 What indications are received if the system is malfunctioning? [refs. h, l]

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204.3 PARAMETERS/OPERATING LIMITS – None to be discussed.

### 204.4 SYSTEM INTERFACE

204.4.1 How do the following outside influences affect the operation of this system: [refs. l, j]

- a. Loss of electrical power
- b. Improper valve alignment
- c. Loss of CPS

**204 SMOKE EJECTION SYSTEM (CONT'D)**

204.4.2 How does this system interface with the following: [refs. h, k]

- a. Engineering Control Station
- b. CPS

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(Signature and Date)

204.5 SAFETY PRECAUTIONS

204.5.1 What special safety precautions apply to: [refs. a thru g]

- a. Fan operation
- b. Material conditions of readiness
- c. CPS

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(Signature and Date)

## 205 INSTALLED FIRE EXTINGUISHING SYSTEM

### References:

- [a] Ship's Damage Control Book
  - [b] NSTM S9086-S3-STM-010/CH-555V1R13, Surface Ship Firefighting
  - [c] Ship's Information Book (SIB)
  - [d] NAVSEA 0910-LP-038-0700, Halon/HFP Fire Extinguishing Components
  - [e] NAVSEA 0993-LP-031-3000, CO<sub>2</sub> Fixed Flooding
- 

### 205.1 SYSTEM COMPONENTS AND COMPONENT PARTS

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located?
- C. What are the sources of power?
- D. What are the modes of operation or control?
- E. What are the indications if the component fails?

		<u>Questions</u>
205.1.1	CO <sub>2</sub> Hose Reel system [ref. a; ref. b, sec. 2; ref. c; ref. e, fig. 8-7]	A B
	a. 50-pound CO <sub>2</sub> cylinder/discharge head	A B
	b. Hose reel	A B
.2	CO <sub>2</sub> Fixed Flooding system [ref. a; ref. b, sec. 3]	A B
	a. Pull box	A B
	b. Cable operated control head	A B
	c. 50-pound CO <sub>2</sub> cylinder/flood valve	A B
	d. Activation pressure switch	A B
	e. Alarm indicators	A B
	f. Ventilation pressure switch	A B
	g. Discharge time delay	A B
.3	HALON1301/HFP system [ref. a; ref. b, sec. 3]	A B
	a. Five-pound CO <sub>2</sub> actuation cylinder	A B
	b. Pressure switches	A B
	c. Alarm indicators	A B
	d. Ventilation pressure switch	A B
	e. Time delay device	A B
	f. Time delay bypass valve	A B
	g. Discharge pressure switch	A B
.4	Saltwater sprinkling systems [ref. a; ref. b, sec. 3]	B
	a. Magazine Sprinkler system	A
	b. Miscellaneous Sprinkler system	A

**205 INSTALLED FIRE EXTINGUISHING SYSTEM (CONT'D)**

		<u>Questions</u>
205.1.5	Freshwater hose reels [ref. b, sec. 3]	B
	a. Activation push button	A
	b. Holding tank	A
	c. Hose reel nozzle	B
.6	APC extinguishing system (range guard) [ref. a; ref. b, sec. 3]	A B
	a. Remote manual control box	A B
	b. Pressure release control box	A B
	c. Fusible links	A B
	d. APC cylinder	A B
	e. Lever control head	A B
	f. Pressure switches	A B
.7	Steam smothering [ref. b, sec. 1]	A B
.8	Water mist pumping station components [refs. a, c]	A E
	a. Water mist supply tank	A B C
	b. Water mist pump	A B C D E
	c. Primary and secondary supply/isolation valves	A B C E
	d. Simplex strainer	A B C E
	e. Bulkhead isolation valves	A B E
	f. Primary and secondary high pressure water supply valves	A B E
	g. Water mist piping	A B C E
	h. Nozzles	A B E
.9	AFFF Sprinkler system [refs. a, c]	A B C D E
	a. Remote manual control box	A B E

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(Signature and Date)

**205.2 PRINCIPLES OF OPERATION**

- 205.2.1 Using a diagram of this system, show the path of the agent from the activation stations to the discharge nozzles: [ref. b, sec. 3]
- a. Fixed CO<sub>2</sub> systems
  - b. HALON/HFP
  - c. Saltwater
  - d. Range guard (APC)
  - e. Freshwater hose reel
  - f. Watermist

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(Signature and Date)

**205 INSTALLED FIRE EXTINGUISHING SYSTEM (CONT'D)**

205.3 PARAMETERS/OPERATING LIMITS

For the items listed, answer the following questions: [ref. a]

- A. What is the normal operating value?
- B. What are the allowable operating limits?

- 205.3.1 Watermist system pressure
- .2 Watermist FWD tank capacity
- .3 Watermist AFT tank capacity

**Questions**

- A B
- A B
- A B

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(Signature and Date)

205.4 SYSTEM INTERFACE

- 205.4.1 How does the loss of electrical power effect the operation of the HALON/HFP system? [ref. d, ch. 5]

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(Signature and Date)

205.5 SAFETY PRECAUTIONS

- 205.5.1 What safety precautions must be observed when operating the following: [ref. b, sec. 2-3]

- a. Fixed CO<sub>2</sub> systems
- b. HALON/HFP
- c. Saltwater
- d. Range guard (APC)
- e. Freshwater hose reel
- f. Watermist

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(Signature and Date)

**206 HIGH PRESSURE (HP) AIR SYSTEM**

References:

- [a] Manufacturer's Technical Manual for High Pressure (HP) Air System  
 [b] Engineering Operational Sequencing System (EOSS)/Engineering Operating Procedures (EOP)
- 

**206.1 SYSTEM COMPONENTS AND COMPONENT PARTS**

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located?
- C. What are the modes of operation or control?
- D. What protection is provided by this component/component part?
- E. What are the safety/protective devices for this component/component part?
- F. What protection is provided by this component/component part?
- G. What are the probable indications if this component fails?
- H. What is the source of control signals?
- I. What is the function of each position?
- J. What are the interlocks?
- K. Where are the circuit breakers located?

**Questions**

- |         |   |                       |
|---------|---|-----------------------|
| 206.1.1 | HPAC [refs. a, b]                               | A B C D E F G H I J K |
|         | a. Cooling system [refs. a, b]                  | A B C D E F G         |
|         | b. Controller [refs. a, b]                      | A B C D E F G H I J   |
|         | c. LO cooler [refs. a, b]                       | A B C D E F G         |
| .2      | Water separator [refs. a, b]                    | A B C D E F G H I     |
|         | a. Drain valves [ref. b]                        | A B C                 |
| .3      | Piping and valves [refs. a, b]                  | A B C D E F G H I J   |
|         | a. Air compressor discharge valves [refs. a, b] | A B C D               |
|         | b. Air compressor relief valve [refs. a, b]     | A B C D               |
| .4      | Air pressure-reducing manifold [refs. a, b]     | A B C D E F G H       |

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(Signature and Date)

**206.2 PRINCIPLES OF OPERATION**

- 206.2.1 How do the components work together to achieve the system's function? [ref. a]
- .2 Draw a diagram of this system. [ref. b]



## 206 HIGH PRESSURE (HP) AIR SYSTEM (CONT'D)

206.2.3 Using a diagram of the system, show the path of: [ref. b]

- a. Air from the atmosphere to the 3000/80, 3000/425, 3000/200 and 3000/250 reducing manifolds
- b. HP air flow from each of the reducing manifolds to the main and generator diesel engines and control air interface

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(Signature and Date)

### 206.3 PARAMETERS/OPERATING LIMITS

For the items listed, answer the following questions: [refs. a, b]

- A. What is the normal operating value?
- B. What are the allowable operating limits?
- C. Where are the parameters sensed or monitored?
- D. What is the physical location of the indicators?
- E. What is the alarm set point?

- 206.3.1 Air compressor discharge pressure  
.2 Manifold outlet air pressure  
.3 Starting air pressure  
.4 Compressor malfunction  
.5 Interstage air temperature  
.6 Jacket water temperature  
.7 LO pressure

#### Questions

- A B C D E  
A B C D  
A B C D E  
A B C D E  
A B C D E  
A B C D E  
A B C D

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(Signature and Date)

### 206.4 SYSTEM INTERFACE

206.4.1 How do the following outside influences affect the operation of this system: [ref. b]

- a. Loss of electrical power
- b. Loss of auxiliary seawater cooling
- c. Ambient air temperature

.2 How does this system interface with vital LP air. [ref. b]

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(Signature and Date)

**206 HIGH PRESSURE (HP) AIR SYSTEM (CONT'D)**

206.5 SAFETY PRECAUTIONS

206.5.1 What safety precautions must be observed when operating this system? [refs. a, b]

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(Signature and Date)

**207      LOW PRESSURE (LP) AIR SYSTEM**

References:

- [a]      Ship's Information Book (SIB)  
 [b]      Engineering Operational Sequencing System (EOSS)
- 

**207.1      SYSTEM COMPONENTS AND COMPONENT PARTS**

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A.      What is its function?
- B.      Where is it located?
- C.      What are the sources of power?
- D.      What protection is provided by this component/component part?
- E.      What are the probable indications if this component fails?
- F.      Where are the circuit breakers located?
- G.      What are the safety/protective devices for this component/component part?
- H.      What are the modes of operations or control?

207.1.1      LPAC [refs. a, b]

**Questions**  
 A B C D E F G H

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 (Signature and Date)
**207.2      PRINCIPLES OF OPERATION**

207.2.1      How do the components work together to achieve the system's function? [refs. a, b]

.2      Draw a diagram of this system. [ref. b]

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 (Signature and Date)

**207      LOW PRESSURE (LP) AIR SYSTEM (CONT'D)**

207.3      PARAMETERS/OPERATING LIMITS

For the items listed, answer the following questions: [refs. a, b]

- A.    What is the normal operating value?
- B.    Where are the parameters sensed or monitored?
- C.    What is the physical location of the indicators?

**Questions**  
A B C

207.3.1    LPAC/LPAD

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(Signature and Date)

207.4      SYSTEM INTERFACE

207.4.1    How do the following outside influences affect the operation of this system? [ref. a]

\_\_\_\_\_  
(Signature and Date)

207.5      SAFETY PRECAUTIONS

207.5.1    What safety precautions must be observed when operating this system?  
[refs. a, b]

\_\_\_\_\_  
(Signature and Date)

**208 MEDIUM PRESSURE (MP) AIR SYSTEM**

References:

- [a] Ship's Information Book (SIB)  
 [b] Engineering Operational Sequencing System (EOSS)  
 [c] NAVSEA S622-ER-MMC-010, Compressor, Medium Pressure, Air
- 

**208.1 SYSTEM COMPONENTS AND COMPONENT PARTS**

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located?
- C. What are the sources of power?
- D. What protection is provided by this component/component part?
- E. What are the probable indications if this component fails?
- F. Where are the circuit breakers located?
- G. What are the safety/protective devices for this component/component part?
- H. What are the modes of operations or control?

208.1.1 MPAC [ref. c, ch. 1-8]

**Questions**  
A B C D E F G H

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 (Signature and Date)
**208.2 PRINCIPLES OF OPERATION**

208.2.1 How do the components work together to achieve the system's function?  
 [ref. c, ch. 1-8]

.2 Draw a diagram of this system. [ref. c, ch. 1-8]

---

 (Signature and Date)

**208 MEDIUM PRESSURE (MP) AIR SYSTEM (CONT'D)**

208.3 PARAMETERS/OPERATING LIMITS

For the items listed, answer the following questions:

- A. What is the normal operating value?
- B. Where are the parameters sensed or monitored?
- C. What is the physical location of the indicators?

**Questions**  
A B C

208.3.1 MPAC [ref. c, ch. 1-8]

\_\_\_\_\_  
(Signature and Date)

208.4 SYSTEM INTERFACE

208.4.1 How do the following outside influences affect the operation of this system:  
[refs. a, b]

\_\_\_\_\_  
(Signature and Date)

208.5 SAFETY PRECAUTIONS

208.5.1 What safety precautions must be observed when operating this system? [refs. a, b]

\_\_\_\_\_  
(Signature and Date)

**209 POTABLE WATER SERVICE AND TRANSFER SYSTEM**

References:

- [a] Ship's Information Book (SIB)  
 [b] Engineering Operational Sequencing System (EOSS)  
 [c] NSTM S9086-SE-STM-010/CH-533R3, Potable Water Systems
- 

**209.1 SYSTEM COMPONENTS AND COMPONENT PARTS**

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located?
- C. What are the sources of power?
- D. What protection is provided by this component/component part?
- E. What are the probable indications if this component fails?
- F. Where are the circuit breakers located?
- G. What are the safety/protective devices for this component/component part?
- H. What are the modes of operations or control?

209.1.1 Potable water pumps [ref. a; ref. c, sec. 2]

**Questions**  
A B C D E F G H

---

 (Signature and Date)
**209.2 PRINCIPLES OF OPERATION**

209.2.1 How do the components work together to achieve the system's function? [refs. a, b]

.2 Draw a diagram of this system. [ref. c, sec. 2]

---

 (Signature and Date)

**209 POTABLE WATER SERVICE AND TRANSFER SYSTEM (CONT'D)**

209.2.3 PARAMETERS/OPERATING LIMITS

For the items listed, answer the following questions:

- A. What is the normal operating value?
- B. Where are the parameters sensed or monitored?
- C. What is the physical location of the indicators?

**Questions**  
A B C

209.3.1 Potable water pumps [ref. c, sec. 2]

\_\_\_\_\_  
(Signature and Date)

209.4 SYSTEM INTERFACE

209.4.1 How do the following outside influences affect the operation of this system: [ref. a ]

- a. Tank levels
- b. Sea state
- c. Chloride levels

.2 How does this system interface with the following: [ref. a ]

- a. Freshwater wash down
- b. Chill Water system

\_\_\_\_\_  
(Signature and Date)

209.5 SAFETY PRECAUTIONS

209.5.1 What safety precautions must be observed when operating this system?  
[ref. b ]

\_\_\_\_\_  
(Signature and Date)



**210 COMPUTER BASED DAMAGE CONTROL (DC) MANAGEMENT SYSTEM**

References:

- [a] NSTM S9086-CN-STM-020/CH-079V2R3, Damage Control, Practical Damage Control  
 [b] Local Ship's Instruction
- 

210.1 SYSTEM COMPONENTS AND COMPONENT PARTS

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located?
- C. What are the sources of power?
- D. What protection is provided by this component/component part?
- E. What are the probable indications if this component fails?
- F. Where are the circuit breakers located?
- G. What are the safety/protective devices for this component/component part?
- H. What are the modes of operations or control?

**Questions**

210.1.1 Computer Based DC Management system [ref. a, sec. 39] A B C D E F G H

---

(Signature and Date)

210.2 PRINCIPLES OF OPERATION – None to be discussed.

210.3 PARAMETERS/OPERATING LIMITS – None to be discussed.

210.4 SYSTEM INTERFACE

210.4.1 How does loss of power affect the operation of this system? [ref. c]

**210      COMPUTER BASED DAMAGE CONTROL (DC) MANAGEMENT SYSTEM  
(CONT'D)**

210.4.2    How does this system interface with the following: [ref. a, sec. 39]

- a.    LAN databases
- b.    Communications
- c.    Remote monitoring stations

---

(Signature and Date)

210.5      SAFETY PRECAUTIONS

210.5.1    What safety precautions must be observed when operating this system?  
[ref. c]

---

(Signature and Date)

## 211 FIREMAIN SYSTEM

### References:

- [a] NSTM S9086-S3-STM-010/CH-555V1R13, Surface Shipboard Firefighting
  - [b] NSTM S9086-QH-STM-010/CH-470R4, Shipboard BW/CW Defense and Countermeasures
  - [c] Ship's Information Book (SIB)
  - [d] Ship's Damage Control Book
  - [e] NAVEDTRA 14057-PPR, Damage Controlman
- 

### 211.1 SYSTEM COMPONENTS AND COMPONENT PARTS

Referring to a standard print of this system or the actual equipment, identify the following system components and component parts and discuss the designated items for each:

- A. What is its function?
- B. Where is it located within your assigned berthing compartment and workstation?
- C. Where is it located on your ship?
- D. What are the modes of operation or control?
- E. What is the function of each position?

	<u>Questions</u>
211.1.1 Fire pumps [ref. a, sec. 2; refs. c, d]	A C D
.2 Firemain piping [ref. a, sec. 2; ref. c]	A C
.3 Firemain cutout valves [ref. a, sec. 2; ref. c]	A B C D
.4 Firemain control valves/unloader [ref a. sec 2; ref c]	A B C D
.5 Fire station:	
a. Fireplug [ref. a, sec. 4; refs. c, d]	A B
b. Wye-gate [ref. a, sec. 4; ref. d]	A B
c. Spanner wrench [ref. a, sec. 4]	A B
d. 1 ½-inch fire hose [ref. a, sec. 4; ref. d]	A B C
e. 1 ¾-inch hose [ref. a, sec. 4; ref. d]	A B C
f. 2 ½-inch fire hose [ref. a, sec. 4; ref. d]	A B C
g. 1 ½-inch vari-nozzle [ref. a, sec. 4; ref. d]	A B C E
h. 2 ½-inch vari-nozzle [ref. a, sec. 4; ref. d]	A C E
.6 CMWD system [ref. b, sec. 7; refs. c, d]	A C D
a. Cutout valves [refs. c, d]	A C D
b. SOPV/MOPVs [refs. c, d]	A C D
c. Nozzles [refs. c, d]	A C

## 211 FIREMAIN SYSTEM (CONT'D)

		<u>Questions</u>
211.1.7	Magazine sprinkling system [ref. a, sec. 3; refs. c, d; ref. e, sec. 6]	A C D
	a. Valves [ref. a, sec. 3; ref. c; ref. e, ch. 6]	A C D
	b. Manual control valves [ref. a, sec. 4; ref. c]	A C
	c. Nozzles [ref. c; ref. e, ch. 6]	A C

---

(Signature and Date)

### 211.2 PRINCIPLES OF OPERATION

211.2.1 How do the components work together to achieve the system's function?  
[ref. a, sec. 2]

.2 Draw a diagram of your ship's Firemain system. [refs. c, d]

---

(Signature and Date)

### 211.3 PARAMETERS/OPERATING LIMITS

For the items listed, answer the following questions:

- A. What is the normal operating parameters?
- B. What is/are the physical location(s) of the indicator(s)?

		<u>Questions</u>
211.3.1	Firemain pressure [ref. a, sec. 2; refs. c, d]	A C

---

(Signature and Date)

### 211.4 SYSTEM INTERFACE

211.4.1 How do the auxiliary systems effect the operation of this system? [ref. a, sec. 2]

---

(Signature and Date)

211.5 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, 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 and 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.

301 SOUNDING AND SECURITY

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.

A copy of this completed page shall be kept in the individual's training jacket.

The trainee has completed all PQS requirements for this watchstation. Recommend designation as a qualified SOUNDING AND SECURITY (NAVEDTRA 43119-4I).

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Supervisor

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Division Officer

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Department Head

QUALIFIED \_\_\_\_\_ DATE \_\_\_\_\_  
Commanding Officer or Designated Representative

SERVICE RECORD ENTRY \_\_\_\_\_ DATE \_\_\_\_\_





**WATCHSTATION 301**

**301 SOUNDING AND SECURITY**

Estimated completion time: 12 weeks

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NOTE: THE FOLLOWING WATCHSTATIONS, REGARDLESS OF QUALIFICATIONS ACHIEVED IN PREVIOUS VERSIONS, SHALL BE COMPLETED: NONE

**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:**

Damage Control (NAVEDTRA 43119-L), Basic Damage Control (301 thru 306)

Completed \_\_\_\_\_  
(Qualifier and Date)

Damage Control (NAVEDTRA 43119-L), 311, Aqueous Film Forming Foam (AFFF)/  
Transfer Station Operator

Completed \_\_\_\_\_  
(Qualifier and Date)

**.2 FUNDAMENTALS FROM THIS PQS:**

101 Safety

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

102 Engineering

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

103 Mechanical

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

**301      SOUNDING AND SECURITY (CONT'D)**

301.1.2    104    Stability

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

105    Physical Security

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

.3    Systems From This PQS:

201    Ballasting

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

203    Collective Protection System (CPS)

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

204    Smoke Ejection

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

205    Installed Fire Extinguishing

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

206    High Pressure (HP) Air

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

207    Low Pressure (LP) Air

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

209    Potable Water Service and Transfer

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

**301 SOUNDING AND SECURITY (CONT'D)**

301.1.3 211 Fireman

Completed \_\_\_\_\_ 2% of Watchstation  
(Qualifier and Date)

301.2 TASKS

For the 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. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

301.2.1 Assume/relieve the watch IAW EDORM (2 times)

**Questions**  
A B C D F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.2 Sound and record all required tanks and voids IAW EDORM  
(2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.3 Check material condition settings IAW NSTM 079, Vol. 2 (2 times)

A B C F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.4 Inspect for fire, flooding, and missile hazards (2 times)

A B C E F G

\_\_\_\_\_  
(Signature and Date)

**301 SOUNDING AND SECURITY (CONT'D)**

**Questions**

301.2.4

\_\_\_\_\_  
(Signature and Date)

.5 Inspect for security violations (2 times)

A B C G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.6 Report results of inspections and soundings to DCC/CCS/EOOW/  
OOD (2 times)

A B C D G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.7 Monitor and interpret alarm panel (2 times)

A B C F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.8 Align and secure Main Drainage system locally IAW EOSS  
(2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.9 Align and secure Main Drainage system remotely IAW EOSS  
(2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

**301      SOUNDING AND SECURITY (CONT'D)**

**Questions**

301.2.10    Align and secure Secondary Drainage system locally IAW EOSS  
(2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.11    Align and secure Secondary Drainage system remotely  
IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.12    Align, start, and stop fire pump locally IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.13    Align, start, and stop fire pump remotely IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.14    Monitor and record required readings (2 times)

A B C D F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)



**301 SOUNDING AND SECURITY (CONT'D)**

**Questions**

301.4.3 Existence of fire, flooding, hazard material and missile hazards

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.4 Security violation

B C D E F G H

\_\_\_\_\_  
(Signature and Date)

COMPLETED .4 AREA COMPRISES 10% OF WATCHSTATION.

301.5 **EMERGENCIES**

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What other emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this emergency affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the immediate action for this emergency.

**Questions**

301.5.1 Activation of fixed-fire extinguishing system

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.2 Loss of firemain pressure

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.3 Loss of electrical power

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

COMPLETED .5 AREA COMPRISES 10% OF WATCHSTATION.





FINAL QUALIFICATION

NAVEDTRA 43119-4I

302 DAMAGE CONTROL CENTRAL (DCC) SUPERVISOR

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.

A copy of this completed page shall be kept in the individual's training jacket.

The trainee has completed all PQS requirements for this watchstation. Recommend designation as a qualified DAMAGE CONTROL CENTRAL (DCC) SUPERVISOR (NAVEDTRA 43119-4I).

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Supervisor

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Division Officer

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Department Head

QUALIFIED \_\_\_\_\_ DATE \_\_\_\_\_  
Commanding Officer or Designated Representative

SERVICE RECORD ENTRY \_\_\_\_\_ DATE \_\_\_\_\_



**WATCHSTATION 302**

**302 DAMAGE CONTROL CENTRAL (DCC) SUPERVISOR**

Estimated completion time: 6 weeks

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NOTE: THE FOLLOWING WATCHSTATIONS, REGARDLESS OF QUALIFICATIONS ACHIEVED IN PREVIOUS VERSIONS, SHALL BE COMPLETED: NONE

**302.1 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.**

**302.1.1 WATCHSTATIONS FROM THIS PQS:**

301 Sounding and Security

Completed \_\_\_\_\_  
(Qualifier and Date)

**.2 SYSTEMS FROM THIS PQS:**

202 Damage Control Central (DCC)/Central Control Station (CCS)

Completed \_\_\_\_\_ 5% of Watchstation  
(Qualifier and Date)

210 Computer Based Damage Control (DC) Management

Completed \_\_\_\_\_ 5% of Watchstation  
(Qualifier and Date)

**302.2 TASKS**

For the 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. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

**302.2.1 Assume/relieve the watch IAW EDORM (2 times)**

**Questions**  
**A B C D F G**

\_\_\_\_\_  
(Signature and Date)

**302 DAMAGE CONTROL CENTRAL (DCC) SUPERVISOR (CONT'D)**

**Questions**

302.2.1

\_\_\_\_\_  
(Signature and Date)

.2 Maintain required logs and records IAW EDORM (2 times) A B C D F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.3 Maintain DC Closure Log IAW NSTM 079 (2 times) A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.4 Direct the actions of supporting watches IAW EDORM (2 times) A B C D F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.5 Make reports as necessary to OOD and EOOW/EDO IAW EDORM (2 times) A B C D G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.6 Monitor and interpret alarm panels IAW EDORM (2 times) A B D F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

**302      DAMAGE CONTROL CENTRAL (DCC) SUPERVISOR (CONT'D)**

**Questions**

302.2.7      Monitor installed CBR-D detection equipment (2 times)

A C F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.8      Call away emergencies using the 1MC (2 times)

A B C D G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.9      Monitor and maintain firemain pressure IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.10      Monitor and maintain CPS IAW EDORM (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.11      Supervise/monitor ballast/list/trim control operations  
(2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

**302 DAMAGE CONTROL CENTRAL (DCC) SUPERVISOR (CONT'D)**

**Questions**

302.2.12 Calculate draft reading IAW Ship's DC Book (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

COMPLETED .2 AREA COMPRISES 30% OF WATCHSTATION.

302.3 INFREQUENT TASKS – None to be discussed.

302.4 ABNORMAL CONDITIONS

For the abnormal conditions listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this abnormal condition.

**Questions**

302.4.1 Abnormal sounding

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.2 Abnormal list or trim

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.3 Abnormal draft

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

**302 DAMAGE CONTROL CENTRAL (DCC) SUPERVISOR (CONT'D)**

**Questions**

302.4.4 Failure of supporting watches to make necessary reports

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.5 Violation of material conditions

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

COMPLETED .4 AREA COMPRISES 15% OF WATCHSTATION.

302.5 **EMERGENCIES**

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What other emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this emergency affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the immediate action for this emergency.

**Questions**

302.5.1 Fire

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.2 Smoke

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.3 Ruptured piping

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.4 Hazardous material spill

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)





**302 DAMAGE CONTROL CENTRAL (DCC) SUPERVISOR (CONT'D)**

302.6 WATCHES

302.6.1 STAND THE FOLLOWING WATCHES UNDER INSTRUCTION:

In-Port (2 times)

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

Underway (2 times)

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

Restricted Maneuvering

\_\_\_\_\_  
(Signature and Date)

COMPLETED .6 AREA COMPRISES 20% OF WATCHSTATION.

302.7 EXAMINATIONS (OPTIONAL EXCEPT AS REQUIRED BY TYCOM/ISIC, ETC.)

302.7.1 EXAMINATIONS Pass a written examination

\_\_\_\_\_  
(Signature and Date)

.2 EXAMINATIONS Pass an oral examination board

\_\_\_\_\_  
(Signature and Date)



303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO)

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.

A copy of this completed page shall be kept in the individual's training jacket.

The trainee has completed all PQS requirements for this watchstation. Recommend designation as a qualified DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (NAVEDTRA 43119-4I).

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Supervisor

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Division Officer

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Department Head

QUALIFIED \_\_\_\_\_ DATE \_\_\_\_\_  
Commanding Officer or Designated Representative

SERVICE RECORD ENTRY \_\_\_\_\_ DATE \_\_\_\_\_



**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO)**

Estimated completion time: 4 weeks

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303.1 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.**

303.1.1 SCHOOLS:

Damage Control Petty Officer (DCPO) (CIN A-495-0400) (CD-ROM) (REQUIRED)

**OR**

Damage Control Petty Officer (DCPO) (CNETDCPO) (REQUIRED)

Completed \_\_\_\_\_  
(Qualifier and Date)

Watertight Door Course (CIN K-495-0401) (RECOMMENDED)

Completed \_\_\_\_\_  
(Qualifier and Date)

.2 PQS QUALIFICATIONS:

Damage Control (NAVEDTRA 43119-L), Basic Damage Control (301 thru 306)

Completed \_\_\_\_\_  
(Qualifier and Date)

Ship's Maintenance and Material Management (3M) (NAVEDTRA 43241-J), 301 Maintenance Man

Completed \_\_\_\_\_  
(Qualifier and Date)

Quality Assurance (QA) (NAVEDTRA 43523-B), 301 Craftsman

Completed \_\_\_\_\_  
(Qualifier and Date)

**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (CONT'D)**

**303.2 TASKS**

For the 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. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

		<b><u>Questions</u></b>
303.2.1	Conduct a compartment space inspection with your Divisional DCPO IAW PMS  _____ (Signature and Date)	A B C E G
.2	Set the following and generate required reports	
a.	X-ray  _____ (Signature and Date)	A B C D E G
b.	Yoke  _____ (Signature and Date)	A B C D E G
c.	Modified Zebra  _____ (Signature and Date)	A B C D E G
d.	Dog Zebra  _____ (Signature and Date)	A B C D E G
.3	Validate compartment check-off lists in divisional spaces IAW Ship's DC Book/NSTM 079, Vol. 2  _____ (Signature and Date)	A B C E G

**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (CONT'D)**

		<b><u>Questions</u></b>
303.2.4	Inspect all damage control fittings in a divisional space for proper labeling and classification IAW Ship's DC Book	A B C E G
	_____ (Signature and Date)	
.5	Inspect piping and valves in a divisional space IAW NSTM 505	A B C E G
	_____ (Signature and Date)	
.6	Inspect and restow all divisional damage control equipment IAW NSTM 079, Vol. 2	A B C E G
	_____ (Signature and Date)	
.7	Inspect division spaces for fire hazards IAW PMS	A B C E F G
	_____ (Signature and Date)	
.8	Inspect a division space for preservation IAW PMS	A B C E G
	_____ (Signature and Date)	
.9	Inspect fire stations IAW PMS	A B C E G
	_____ (Signature and Date)	
.10	Inspect and clean a ventilation system and its components (Non-CPS) IAW PMS	A B C E G
	_____ (Signature and Date)	
.11	Inspect emergency escape breathing device IAW PMS	A B C E G
	_____ (Signature and Date)	

**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (CONT'D)**

	<u>Questions</u>
303.2.12 Inspect vertical/inclining ladders IAW PMS	A B C E G
_____	
(Signature and Date)	
.13 Inspect hand-held/relay-operated lanterns IAW PMS	A B C E G
_____	
(Signature and Date)	
.14 Inspect flammable/combustible storage lockers IAW PMS	A B C E G
_____	
(Signature and Date)	
.15 Inspect remote operators IAW PMS	A B C E G
_____	
(Signature and Date)	
.16 Inspect divisional equipment foundations IAW PMS	A B C E G
_____	
(Signature and Date)	
.17 Conduct proper maintenance on the following equipment IAW PMS:	
a. CO2 fire extinguisher	A B C E F G
_____	
(Signature and Date)	
b. PKP fire extinguisher	A B C E F G
_____	
(Signature and Date)	
c. Portable AFFF extinguisher	A B C E F G
_____	
(Signature and Date)	
d. Fire station	A B C E G
_____	
(Signature and Date)	



**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (CONT'D)**

**Questions**

303.2.17 e. QAWTD A B C E G

\_\_\_\_\_  
(Signature and Date)

f. QAWTS A B C E G

\_\_\_\_\_  
(Signature and Date)

g. QAATD A B C E G

\_\_\_\_\_  
(Signature and Date)

h. Individually dogged WTD A B C E G

\_\_\_\_\_  
(Signature and Date)

i. Individually dogged ATD A B C E G

\_\_\_\_\_  
(Signature and Date)

i. MAFO/Holtkamt QAWTD A B C E G

\_\_\_\_\_  
(Signature and Date)

k. Armored QAWTD A B C E G

\_\_\_\_\_  
(Signature and Date)

l. Armored QAWTS A B C E G

\_\_\_\_\_  
(Signature and Date)

**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (CONT'D)**

	<u>Questions</u>
303.2.17 m. Armored QAWTH	A B C E G
_____ (Signature and Date)	
n. GRP QAWTD	A B C E G
_____ (Signature and Date)	
o. FTD- Fume tight door	A B C E G
_____ (Signature and Date)	
p. FZ-fire zone	A B C E G
_____ (Signature and Date)	
q. Watertight closures	
1. Watertight doors	A B C E G
2. Watertight scuttles	A B C E G
3. Watertight hatches	A B C E G
_____ (Signature and Date)	
r. Emergency escape breathing device	A B C E G
_____ (Signature and Date)	
s. Battle lantern/Neals lighting	A B C E G
_____ (Signature and Date)	
t. Deck drain	A B C E G
_____ (Signature and Date)	

**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (CONT'D)**

303.2.17 u. Deck drain valve **Questions**  
A B C E G

\_\_\_\_\_  
(Signature and Date)

v. OVBD-overboard discharge fitting A B C E G

\_\_\_\_\_  
(Signature and Date)

w. Explosive proof lighting **Questions**  
A B C E G

\_\_\_\_\_  
(Signature and Date)

COMPLETED .2 AREA COMPRISES 30% OF WATCHSTATION.

**303.3 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 parameters must be monitored?
- E. How are the monitored parameters changed by this infrequent task?
- F. What conditions require this infrequent task?
- G. Satisfactorily perform or simulate this infrequent task.

303.3.1 Entering tanks and voids **Questions**  
A B C D E F G

\_\_\_\_\_  
(Signature and Date)

COMPLETED .3 AREA COMPRISES 10% OF WATCHSTATION.

**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (CONT'D)**

**303.4 ABNORMAL CONDITIONS**

For the abnormal conditions listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this abnormal condition.

		<u>Questions</u>
		A B C D E F G H
303.4.1	Leaking piping and valves	
	_____	
	(Signature and Date)	
.2	Improper setting of material conditions of readiness	B C D E F G H
	_____	
	(Signature and Date)	
.3	Improper maintenance of damage control equipment	A B C D E F G H
	_____	
	(Signature and Date)	
.4	Missing toggle pins in hatches or scuttles	A B C D E F G H
	_____	
	(Signature and Date)	
.5	Dirty ventilation systems	A B C D E F G H
	_____	
	(Signature and Date)	
.6	Bolts missing in ladder treads	A B C D E F G H
	_____	
	(Signature and Date)	

**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (CONT'D)**

**Questions**

303.4.7 Fire hazards A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.8 Missile hazards A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.9 Missing or damaged CPS air lock latch A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

COMPLETED .4 AREA COMPRISES 25% OF WATCHSTATION.

303.5 **EMERGENCIES**

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What other emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this emergency affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the immediate action for this emergency.

**Questions**

303.5.1 Frayed or cut counter balance cable (armored hatch/scuttle) A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

COMPLETED .5 AREA COMPRISES 10% OF WATCHSTATION.

**303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO) (CONT'D)**

303.6 WATCHES

303.6.1 PERFORM THE FOLLOWING PMS SPOT CHECKS WITH LCPO/DIVO:

Watertight Doors

\_\_\_\_\_  
(Signature and Date)

Overboard Discharge

\_\_\_\_\_  
(Signature and date)

Fire Station

\_\_\_\_\_  
(Signature and Date)

Portable Fire Extinguisher

\_\_\_\_\_  
(Signature and date)

Ventilation

\_\_\_\_\_  
(Signature and date)

COMPLETED .6 AREA COMPRISES 25% OF WATCHSTATION.

303.7 EXAMINATIONS (OPTIONAL EXCEPT AS REQUIRED BY TYCOM/ISIC, ETC.)

303.7.1 EXAMINATIONS Pass a written examination

\_\_\_\_\_  
(Signature and Date)

.2 EXAMINATIONS Pass an oral examination board

\_\_\_\_\_  
(Signature and Date)

FINAL QUALIFICATION

NAVEDTRA 43119-4I

304 FIRE MARSHALL

NAME \_\_\_\_\_ RATE/RANK \_\_\_\_\_

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A copy of this completed page shall be kept in the individual's training jacket.

The trainee has completed all PQS requirements for this watchstation. Recommend designation as a qualified FIRE MARSHALL (NAVEDTRA 43119-4I).

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Supervisor

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Division Officer

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Department Head

QUALIFIED \_\_\_\_\_ DATE \_\_\_\_\_  
Commanding Officer or Designated Representative

SERVICE RECORD ENTRY \_\_\_\_\_ DATE \_\_\_\_\_





304 FIRE MARSHAL

Estimated completion time: 8 weeks

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304.1 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.**

304.1.1 SCHOOLS:

Gas Free Engineer (K-495-0051) (REQUIRED)

Completed \_\_\_\_\_  
(Qualifier and Date)

Damage Control Assistant Senior Enlisted (DCASE) (A-4G-1111) (RECOMMENDED)

Completed \_\_\_\_\_  
(Qualifier and Date)

.2 WATCHSTATIONS FROM OTHER PQS:

Damage Control (NAVEDTRA 43119-L), 313 Scene Leader

Completed \_\_\_\_\_  
(Qualifier and Date)

Damage Control (NAVEDTRA 43119-L), 318 Repair Party Leader

Completed \_\_\_\_\_  
(Qualifier and Date)

Damage Control (NAVEDTRA 43119-L), 320 Damage Control Training Team (DCTT) Member

Completed \_\_\_\_\_  
(Qualifier and Date)

Engineering Watches (NAVEDTRA 43704), 316 Gas Free Petty Officer (REQUIRED)

Completed \_\_\_\_\_  
(Qualifier and Date)

**304 FIRE MARSHAL (CONT'D)**

304.2 TASKS

For the 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. What parameters/operating limits must be monitored?
- G. What actions are to be taken when discrepancies are identified?
- H. Satisfactorily perform this task.

**Questions**

304.2.1 Conduct fire hazard/hazardous material inspection  
IAW OPNAVINST 5100.19E (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.2 Conduct inspection of material condition of readiness IAW  
NTTP 3-20.31

A B F G H

\_\_\_\_\_  
(Signature and Date)

.3 Conduct fire watch indoctrination IAW NSTM 074, Vol. 1

A B C D E F H

\_\_\_\_\_  
(Signature and Date)

.4 Inspect Ventilation system IAW PMS

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.5 Prepare and submit required reports IAW SORM (2 times)

A B C D H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

**304 FIRE MARSHALL (CONT'D)**

**Questions**

304.2.6 Inspect DC/firefighting equipment IAW PMS (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.7 Inspect for safety violations IAW OPNAVINST 5100.19E  
(2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.8 Inspect and authorize hot-work/cold-work operations  
IAW NSTM 074, Vol. 3 (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.9 Direct the efforts of the Rapid Response Team IAW  
NSTM 555 (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.10 Coordinate Fire Party operations IAW SORM (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

**304 FIRE MARSHALL (CONT'D)**

**Questions**

304.2.11 Inventory/operate SAR/SCBA equipment IAW NSTM 077  
(2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.12 Inventory/operate GFE equipment IAW AEL (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

COMPLETED .2 AREA COMPRISES 50% OF WATCHSTATION.

304.3 **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 is the alarm set point?
- F. What parameters must be monitored?
- G. What conditions require this infrequent task?
- H. Satisfactorily perform or simulate this infrequent task.

**Questions**

304.3.1 Establish ship's Fire Watch Team for maintenance availability

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

.2 Maintain accountability of ship's hot-work/cold-work Operations

A B C H

\_\_\_\_\_  
(Signature and Date)

**304 FIRE MARSHALL (CONT'D)**

**Questions**  
A B C G H

304.3.3 Maintain accountability of gas-free operations IAW SOP

\_\_\_\_\_  
(Signature and Date)

COMPLETED .3 AREA COMPRISES 10% OF WATCHSTATION.

304.4 **ABNORMAL CONDITIONS**

For the abnormal conditions listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this abnormal condition.

**Questions**  
A B C D E F G H

304.4.1 Unauthorized hot-work/cold-work (2 times)

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.2 Improperly stowed HAZMAT (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.3 Change in list or trim

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

COMPLETED .4 AREA COMPRISES 10% OF WATCHSTATION.

**304 FIRE MARSHALL (CONT'D)**

**Questions**

304.5 EMERGENCIES

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What other emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this emergency affect other operations/equipment/watchstations?
- G. Satisfactorily perform or simulate the immediate action for this emergency.

**Questions**

304.5.1 Fire A B C D E F G

\_\_\_\_\_  
(Signature and Date)

.2 Smoke A B C D E F G

\_\_\_\_\_  
(Signature and Date)

.3 Flooding A B C D E F G

\_\_\_\_\_  
(Signature and Date)

.4 Ruptured piping A B C D E F G

\_\_\_\_\_  
(Signature and Date)

.5 HAZMAT spill A B C D E F G

\_\_\_\_\_  
(Signature and Date)

.6 Toxic atmosphere A B C D E F G

\_\_\_\_\_  
(Signature and Date)

.7 Structural damage A B C D E F G

\_\_\_\_\_  
(Signature and Date)

**304 FIRE MARSHALL (CONT'D)**

		<u>Questions</u>
304.5.8	LO/FO leak	A B C D E F G
	_____ (Signature and Date)	
.9	Activation of fixed fire extinguishing systems IAW NSTM 555	A B C D E F G
	_____ (Signature and Date)	
.10	Personnel injury	A B C D E F G
	_____ (Signature and Date)	
.11	Vertical trunk emergency rescue	A B C D E F G
	_____ (Signature and Date)	
.12	Confined space emergency rescue	A B C D E F G
	_____ (Signature and Date)	
.13	Coordinate Rescue and Assistance	A B C D E F G
	_____ (Signature and Date)	
.11	Loss of firemain	A B C D E F G
	_____ (Signature and Date)	
.12	Loss of electrical power	A B C D E F G
	_____ (Signature and Date)	

COMPLETED .5 AREA COMPRISES 10% OF WATCHSTATION.

**304 FIRE MARSHALL (CONT'D)**

304.6 WATCHES

304.6.1 STAND THE FOLLOWING WATCHES UNDER QUALIFIED SUPERVISION:

Fire Marshall In port (2 times)

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

Fire Marshal Underway (2 times)

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

COMPLETED .6 AREA COMPRISES 20% OF WATCHSTATION.

304.7 EXAMINATIONS (OPTIONAL EXCEPT AS REQUIRED BY TYCOM/ISIC, ETC.)

304.7.1 EXAMINATIONS Pass a written examination

\_\_\_\_\_  
(Signature and Date)

.2 EXAMINATIONS Pass an oral examination board

\_\_\_\_\_  
(Signature and Date)



FINAL QUALIFICATION

NAVEDTRA 43119-4I

305 DAMAGE CONTROL CONSOLE OPERATOR (DCCO)

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.

A copy of this completed page shall be kept in the individual's training jacket.

The trainee has completed all PQS requirements for this watchstation. Recommend designation as a qualified DAMAGE CONTROL CONSOLE OPERATOR (NAVEDTRA 43119-4I).

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Supervisor

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Division Officer

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_  
Department Head

QUALIFIED \_\_\_\_\_ DATE \_\_\_\_\_  
Commanding Officer or Designated Representative

SERVICE RECORD ENTRY \_\_\_\_\_ DATE \_\_\_\_\_



**305 DAMAGE CONTROL CONSOLE OPERATOR (DCCO)**

Estimated completion time: 6 Weeks

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305.1 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.**

305.1.1 SYSTEMS FROM NAVEDTRA 43119-L, DAMAGE CONTROL:

209 Aqueous Film Forming Foam (AFFF)

Completed \_\_\_\_\_  
(Qualifier and Date)

212 Ventilation

Completed \_\_\_\_\_  
(Qualifier and Date)

214 Chemical, Biological, and Radiological (CBR) Detection and Decontamination Equipment

Completed \_\_\_\_\_  
(Qualifier and Date)

.2 WATCHSTATIONS FROM THIS PQS:

301 Sounding and Security

Completed \_\_\_\_\_  
(Qualifier and Date)

.3 SYSTEMS FROM THIS PQS:

202 Damage Control Central (DCC)/Central Control Station (CCS)

Completed \_\_\_\_\_ 5% of Watchstation  
(Qualifier and Date)

210 Computer Based Damage Control (DC) Management

Completed \_\_\_\_\_ 5% of Watchstation  
(Qualifier and Date)

**305 DAMAGE CONTROL CONSOLE OPERATOR (DCCO) (CONT'D)**

**305.2 TASKS**

For the 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. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

		<u>Questions</u>
305.2.1	Properly assume and relieve the watch IAW EDORM (2 times)	A B C D E F G
	_____	
	(Signature and Date)	
	_____	
	(Signature and Date)	
.2	Maintain required logs and records IAW EDORM (2 times)	A B C D E F G
	_____	
	(Signature and Date)	
	_____	
	(Signature and Date)	
.3	Direct the actions of supporting watches IAW EDORM (2 times)	A B C D E F G
	_____	
	(Signature and Date)	
	_____	
	(Signature and Date)	
.4	Make reports as necessary to EOOW IAW EDORM (2 times)	A B C D E F G
	_____	
	(Signature and Date)	
	_____	
	(Signature and Date)	

**305      DAMAGE CONTROL CONSOLE OPERATOR (DCCO) (CONT'D)**

**Questions**

305.2.5      Monitor all pressures, temperatures and levels on console  
IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.6      Navigate HMI screen IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.7      Start/stop fire pumps remotely IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.8      Monitor and interpret alarm panels IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.9      Maintain firemain pressure IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

**305 DAMAGE CONTROL CONSOLE OPERATOR (DCCO) (CONT'D)**

**Questions**

305.2.10 Maintain fire main pressure while changing material condition or operating WDCM system IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.11 Maintain CPS pressure IAW EOSS (2 times) (if applicable)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.12 Calculate/monitor draft reading (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.13 Power up ECS IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.14 Power down ECS IAW EOSS (2 times)

A B C D E F G

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

COMPLETED .2 AREA COMPRISES 25% OF WATCHSTATION.

**305 DAMAGE CONTROL CONSOLE OPERATOR (DCCO) (CONT'D)**

305.3 INFREQUENT TASKS – None to be discussed.

305.4 ABNORMAL CONDITIONS – None to be discussed.

305.5 EMERGENCIES

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What other emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this emergency affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the immediate action for this emergency.

305.5.1 Abnormal sounding (2 times) Questions  
A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.2 Abnormal list or trim (2 times) A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.3 Abnormal draft (2 times) A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

**305      DAMAGE CONTROL CONSOLE OPERATOR (DCCO) (CONT'D)**

**Questions**

305.5.4      Violations of material conditions of readiness (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.5      Class B fire in main space (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.6      Class C fire (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.7      Class A fire (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.8      HAZMAT spill (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)





**305      DAMAGE CONTROL CONSOLE OPERATOR (DCCO) (CONT'D)**

**Questions**

305.5.14    Loss of CPS zones (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.15    Main space flooding (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.16    Flooding (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.17    Ruptured firemain piping (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.18    Class B fire (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

**305 DAMAGE CONTROL CONSOLE OPERATOR (DCCO) (CONT'D)**

**Questions**

305.5.19 Loss of console (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

.20 Class C fire in console (2 times)

A B C D E F G H

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

COMPLETED .5 AREA COMPRISES 30% OF WATCHSTATION.

305.6 WATCHES

305.6.1 STAND THE FOLLOWING WATCHES UNDER QUALIFIED SUPERVISION:

Damage Control Console Operator (DCCO) (3 times)

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

Damage Control Console Operator (DCCO) Restricted Maneuvering (2 times)

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Signature and Date)

COMPLETED .6 AREA COMPRISES 20% OF WATCHSTATION.



QUALIFICATION PROGRESS SUMMARY FOR  
DAMAGE CONTROL (DC) WATCHES

NAME \_\_\_\_\_ RATE/RANK \_\_\_\_\_

This qualification progress summary is used to track the progress of a trainee in the watchstations for this PQS and ensure awareness of remaining tasks. It should be kept by the individual or in the individual's training jacket and updated with an appropriate signature (Training Petty Officer, Division Officer, Senior Watch Officer, etc.) as watchstations are completed.

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301 SOUNDING AND SECURITY

Completed \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

---

302 DAMAGE CONTROL CENTRAL (DCC) SUPERVISOR

Completed \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

---

303 DIVISION DAMAGE CONTROL PETTY OFFICER (DCPO)

Completed \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

---

304 FIRE MARSHALL

Completed \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

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**QUALIFICATION PROGRESS SUMMARY FOR  
DAMAGE CONTROL (DC) WATCHES (CONT'D)**

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305 DAMAGE CONTROL CONSOLE OPERATOR (DCCO)

Completed \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

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## LIST OF REFERENCES USED IN THIS PQS

Ballasting Operational Sequencing System (BOSS)  
CHT/MSD Sewage Disposal Operational Sequencing System (SDOSS)  
Engineering Department Organization and Regulations Manual (EDORM)  
Engineering Operational Sequencing System (EOSS)  
Engineering Operational Sequencing System (EOSS)/Engineering Operating Procedures (EOP)  
Local Instructions  
Manufacturer's Technical Manual for High Pressure (HP) Air System  
NAVEDTRA 10572, Damage Controlman 3 & 2  
NAVEDTRA 12001, Fireman  
NAVEDTRA 12147, Engineering Administration  
NAVEDTRA 14057-PPR, Damage Controlman  
NAVEDTRA 43103-B, Engineering Fundamentals  
NAVEDTRA 43119-L, Damage Control  
NAVSEA 0910-LP-038-0700, Halon/HFP Fire Extinguishing Components  
NAVSEA 0993-LP-031-3000, CO<sub>2</sub> Fixed Flooding  
NAVSEA S0005-AA-GYD-030/TMMP & NAVSEAINST 4160.3A, NAVSEA/SPAWAR Technical Manual Deficiency/Evaluation Report (TMDER)  
NAVSEA S622-ER-MMC-010, Compressor, Medium Pressure, Air  
NAVSEA SS200-AF-MMM-010, Navy Shipboard Collective Protection System (CPS) Technical Manual  
NSTM S9086-CD-STM-000/CH-070R3, Nuclear Defense at Sea and Radiological Recovery of Ships After Nuclear Weapons Explosion  
NSTM S9086-CH-STM-030/CH-074V3R5, Gas Free Engineering  
NSTM S9086-CL-STM-010/CH-077R6, Personnel Protection Equipment  
NSTM S9086-CN-STM-010/CH-079V1R1, Damage Control Stability and Buoyancy  
NSTM S9086-CN-STM-020/CH-079V2R2, Damage Control, Practical Damage Control  
NSTM S9086-K9-STM-000/CH-330R3, Lighting  
NSTM S9086-QH-STM-010/CH-470R3, Shipboard BW/CW Defense and Countermeasures  
NSTM S9086-RK-STM-010/CH-505R4, Piping Systems  
NSTM S9086-RW-STM-010/CH-516R4, Refrigeration Systems  
NSTM S9086-S3-STM-010/CH-555V1R13, Surface Shipboard Firefighting  
NSTM S9086-S4-STM-010/CH-556R7, Hydraulic Equipment Power Transmission and Control  
NSTM S9086-SE-STM-010/CH-533R3, Potable Water Systems  
NSTM S9086-SY-STM-010/CH-551R5, Compressed Air Plants and Systems  
NSTM S9086-VG-STM-010/CH-634R4, Deck Coverings  
NSTM S9086-WK-STM-010/CH-670R6, Stowage, Handling, and Disposal of Hazardous General Use Consumables  
NTTP 3-20.31 (Rev. A), Surface Ship Survivability  
OPNAVINST 3120.32C, Standard Organization and Regulations Manual of the U.S. Navy (SORM)  
OPNAVINST 3500.39A, Operational Risk Management (ORM)  
OPNAVINST 5090.1B, Environmental and Natural Resources Program Manual  
OPNAVINST 5100.19E, Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat

## LIST OF REFERENCES USED IN THIS PQS

Propulsion Operating Guide (POG)  
S9LPD-AS-SSM-040, HVAC/SES Systems  
Ship's Damage Control Book  
Ship's Information Book (SIB)  
Ship's Damage Control Book  
Ship's Damage Control Book/Diagrams  
Ships Information Book (SIB)



PERSONNEL QUALIFICATION STANDARD  
Feedback Form for NAVEDTRA 43119-4I

From \_\_\_\_\_ Date \_\_\_\_\_

Via \_\_\_\_\_ Date \_\_\_\_\_  
Department Head

Activity \_\_\_\_\_

Mailing Address \_\_\_\_\_

Email Address \_\_\_\_\_ DSN \_\_\_\_\_

PQS Title \_\_\_\_\_ NAVEDTRA \_\_\_\_\_

Section Affected \_\_\_\_\_

Page Number(s) \_\_\_\_\_

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For faster response, you may email your feedback to the SWOS PQS Development Group at: Insert [CNE\\_PQSProgramMgr@navy.mil](mailto:CNE_PQSProgramMgr@navy.mil). Please include the above information so that we may better serve you.

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Remarks/Recommendations (Use additional sheets if necessary):

(FOLD HERE)

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DEPARTMENT OF THE NAVY

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OFFICIAL BUSINESS

COMMANDING OFFICER  
SURFACE WARFARE OFFICERS SCHOOL  
SUPPORT SITE NORFOLK  
1534 PIERSEY STREET  
BLDG O26 ROOM 300  
NORFOLK, VA 23511-2612

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