

01 DEC 1992

- 3. Compartment volumes (in tons of sea water)
- 4. Variable ballast tank capacities (in tons of sea water)

(d) Discuss the ability of the ship to remain on the surface following a flooding casualty. State the approximate floodable volume of each compartment which would allow survival of the ship.

c. Deballasting Considerations

Ref: 28, 29, 30, 46

(1) Knowledge Requirement:


DOOW

9/10/58(S)

(a) Be able to list the deballasting rates (in tons of sea water per minute) for the following at test depth: emergency blow, normal blow, trim and/or drain pump, hovering system blow.

d. Stability Considerations

Ref: 28

(1) Knowledge Requirements:


OOD

11/10/97(S)

- (a) Explain the relationship and location of the center of buoyancy, center of gravity, metacenter and righting moment.
- (b) Discuss longitudinal and transverse stability in terms of ballast and moment arm requirements to trim or list the ship one degree.
- (c) For those tanks for which routine compensation is required (RFT's potable water, sanitarries, etc.) list compensation percentages for variable ballast tanks.
- (d) Demonstrate a thorough knowledge of the equilibrium polygon with respect to buoyancy and ship control.
- (e) Explain the free surface effect and the purpose of flood control.
- (f) Discuss shipboard indications that indicate the ship is fully on the surface and holding, when surfacing. Include a discussion of low pressure blower backpressure changes when surfacing without air.

01 DEC 1992

e. Trim Considerations

Ref: 28, 30, 64

(1) Knowledge Requirements:

DOOW

8/24/98 (S)

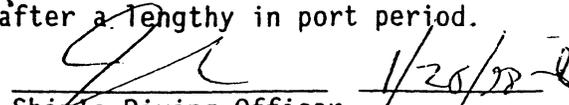
- (a) Demonstrate a thorough understanding of trim analysis.
1. Explain the objective of trim analysis to include the definition of trim satisfactory and close-in trim conditions.
 2. List the various out-of-trim conditions and their associated corrective actions.
 3. Explain the priority principle of "planes, angle, speed" with respect to trim analysis and control.
 4. List the basic thumb rules for trimming the ship.
 5. Explain how much out-of-trim moment can be "masked" by various speeds.
- (b) Demonstrate proficiency in use of the stick diagram convention of trim analysis.
- (c) Describe how the following factors affect the ship's trim condition; include thumb rules for compensation for these effects:
1. Hull compressibility
 2. Temperature
 3. Salinity
- (d) Explain the operation of the AN/BQH-1 or equivalent, and SSXBT and use of SVP trace in computing ballast changes.

f. Compensation

Ref: 28, 30, 64

(1) Practical Factors:

- (a) Compute a compensation after a lengthy in port period.

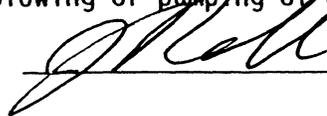

 Ship's Diving Officer
1/26/98
Enclosure (5)

01 DFC 1992

- (b) Demonstrate proficiency as DOOW in conducting watch-to-watch compensations.

 7/24/97

- (c) Perform compensation as Chief of the Watch (under instruction) for the blowing or pumping of a sanitary tank.

 7/24/97

g. Submerged Depth Control

Ref: 3, 28, 30, 64

- (1) Knowledge Requirements:

 1/2/98 (S)
DOOW

- (a) Discuss the normal methods for depth control and the ship conditions for which each method is appropriate.
1. Normal stern planes controlling angle, fairwater planes controlling depth
 2. Stern planes only
 3. Fairwater planes only
 4. Single-stick control
- (b) Explain the principle of stern planes reversal. Specify the speed at which this principle becomes significant to depth control.
- (c) Explain the principle of surface suction forces, including an explanation of how these forces vary as a function of sea state (swell or wave height) and relative sea direction. State the compensation thumb rules for surface suction effects as a function of sea state direction.
- (d) Explain the effects of large rudder angles on ship's speed, depth control, roll and trim angle.
- (e) Explain the effects of large control surface angles on cavitation.

3. Watch Organization and Responsibilities

Ref: 2, 3, 4, 64

01 DEC 1992

[Handwritten Signature] 7/27/97 (S)

a. Knowledge Requirements:

- (1) Explain the duties, responsibilities and authority of the OOD, DOOW, and COW with regard to submerged ship control.
- (2) Explain the organizational relationship of the DOOW to the OOD, COW and ship's diving officer.
- (3) Explain watch relief procedures for the DOOW and subordinate watch stations.
- (4) Explain the responses and actions for all orders to the helmsman from the OOD.

4. Operational Procedures

a. Operational Bills

Ref: 2, 3, 4, 30, 46, 64

(1) Knowledge Requirements:

(a) For the following operational bills, explain the purpose, responsibilities and (in general terms) the actions taken by all watch stations. Describe in detail all actions of the DOOW, the OOD and subordinate watch stations. Describe face-to-face and other communications that relate to ship control or which involve the DOOW.

- 1. Propulsion Bill *[Signature]* 1/9/98
- 2. Snorkel Bill *[Signature]* 10/12/97
- 3. Rig for Dive/Surface Bill *[Signature]* 7/21/97
- 4. Deep Submergence Bill *[Signature]* 9/7/97
- 5. Depth Charge Bill *[Signature]* 26 Mar 97
- 6. Ventilation Bill *[Signature]* 28 Mar 97

b. Submerged Operations

Ref: 2, 3, 4, 35, 46, 64, 65, 74

(1) Knowledge Requirements:

(5)

01 DEC 1992

(a) Periscope Depth Operations

 26 Nov 87 7

1. Explain in detail the procedures for preparing to go to periscope depth, including:
 - a. Importance of determining the expected surface sea state and direction at periscope depth.
 - b. Importance of expected SVP conditions during the ascent to periscope depth.
2. Explain the actions required during the ascent to periscope depth.
 - a. Describe the typical orders to and responses from the helmsman, planesman, and COW.
 - b. Discuss the significance of the following on ascent rate: initial ship's speed, trim and planes angle, ballasting requirements for SVP, sea state and direction, and surface suction effects.
3. Discuss considerations for typical evolutions conducted at periscope depth.
 - a. List the depths at which the diesel and low pressure blower will shut down on high back pressure.
4. For loss of depth control at periscope depth describe:
 - a. Effective actions to get the ship submerged from a broached condition. Specify the broach depth for the ship.
 - b. Effective actions to get the ship back to periscope depth after loss of depth control below periscope depth. Discuss procedures to ensure ship safety when ventilating and snorkeling during this transient.
5. Explain the procedures for return to patrol depth, including trimming considerations and the effect of large angles on screw exposure and damage to the floating wire.

(b) High Speed Transit

 8 Jan 88(S)

1. Explain the significance of the following with regard to

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high speed transits:

- a. Minimizing plane/rudder motion and operating in depth bands
- b. Watch to watch compensation and horizontal changes in sound velocity

(c) Large Angles

DOOW

9 Jan 98

1. Discuss the guidelines for maximum trim angle as a function of ship's speed and the amount of depth change.

(d) TDU Operations

DOOW

7/21/97

1. Explain the operation of the trash disposal unit including all related valves, interlocks and operating controls.
2. Explain the procedure for TDU operations, including loading, flushing, securing and rigging for dive (both locally and from the BCP, where appropriate).
3. Describe the limitations on TDU operations.

(e) Battle Stations

DOOW

1/17/98

1. Discuss the special considerations for the DOOW during Battle Stations Torpedo (e.g., periscope observation procedures, ship control considerations at the time of the torpedo launch).
2. Discuss the actions required by the on-watch DOOW upon manning Battle Stations Missile.
 - a. Explain the responsibilities of the DOOW as outlined in the Weapons Procedure (WP) during a tactical launch, including operations at the missile compensating and hovering sections of the BCP, if applicable.
 - b. List the initial criteria to initiate automatic hovering.
 - c. Describe the conditions necessary, with regard to ship control, before the Diving Officer of the Watch

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is ready for a missile launch, if applicable.

5. Emergency/Casualty Procedures

a. Emergency Bills

Ref: 2, 3, 4, 30, 46, 64

(1) Knowledge Requirements:

(a) For the following emergency bills, explain the purpose, responsibilities and the actions taken by all watch stations. Describe in detail all actions of the DOOW, the OOD and subordinate watch stations. Describe the face-to-face communications that relate to ship control or which involve the DOOW.

- 1. General Emergency Bill [Signature] 10/1/97 (S)
- 2. Emergency Ship Control Bill [Signature] 10/1/97 (S)
- 3. Collision Bill [Signature] 10/1/97 (S)
- 4. Flooding Bill [Signature] 12/5/97 (S)
- 5. Fire Bill [Signature] 12/5/97 (S) x
- 6. Toxic Gas Bill [Signature] 12/5/97 (S)
- 7. Missile Emergency Bill, if applicable [Signature] 7/2/97
- 8. Reduced Electrical Power Bill [Signature] 9/2/97 (S)

b. Loss of Control Surface Response

Ref: 3, 29, 65

(1) Knowledge Requirements: [Signature] (S)

- (a) Discuss the effect of using backing bells, operating planes, rudder, and MBT blow either singly or in combinations to reduce the effect of a control surface casualty.
- (b) Discuss the effect of speed, angle and depth in increasing the severity of a control surface casualty.

(55)

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(c) Discuss response time for initiation of corrective action in reducing the severity of a planes casualty.

c. Other Emergency Conditions

Ref: 3, 30, 31, 36, 47, 54, 65

(1) Knowledge Requirements:

(a) For the following emergency/casualty conditions explain how these conditions affect submerged ship control and their significance to you as DOOW. Explain in detail all actions required by the DOOW, the OOD and subordinate watchstanders. Describe the communications that relate to ship control or which involve the DOOW.

1. Propulsion plant _____ (E)

[Signature]
OOD

- a. Reactor Scram
- b. Major steam leak
- c. Loss of shaft lube oil
- d. Loss of main lube oil
- e. Single loop operations
- f. Loss of a Turbine Generator

2. Loss of Hydraulics _____

[Signature]
OOD

3. Emergency deep procedures _____

[Signature]
OOD

4. Torpedo in the water _____

[Signature]
OOD

d. Emergency Blow

Ref: 3, 28, 29, 30

(1) Knowledge Requirements:

[Signature] *[Signature]*
DOOW (5)

(a) List all criteria for initiation of an emergency blow for flooding and jam dive casualties.

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01 DEC 1992

(b) Discuss when the emergency blow is secured.

6. Watchstanding Requirements

NOTE: THE WATCHSTANDING SIGNATURES MUST BE PROVIDED BY A-DOOW, UNLESS OTHERWISE NOTED.

a. Watch Organization and Responsibilities

(1) Practical Factors:

(a) Stand one watch under instruction (minimum of 3 hours) on each of the following watch stations. Take all log readings for that watch station.

1. Chief of the Watch [Signature] 7/29/97

2. Auxiliaryman of the Watch [Signature] 7/21/97

3. Auxiliary Electrician Forward [Signature] 7/21/97

(b) Stand four watches (a minimum of 3 hours each) as DOOW under instruction.

(1) [Signature] 10 Nov 97

(2) [Signature] 09 Dec 97

(3) [Signature] 9 Jan 98

(4) [Signature] 11/15/97

b. Watchstanding Practical Factors

(1) Operational Skills

(a) Diving Bill

1. Demonstrate proficiency as DOOW (under instruction) in conducting the initial dive after an in port period. (If practical, conduct the compensation also).

[Signature]
Ship's Diving Officer

2. Act as COW under instruction while diving the ship.

[Signature] 7/21/97

01 DEC 1992

(b) Surfacing Bill

1. Demonstrate proficiency surfacing the ship as DOOW (under instruction) with or without air. Describe the method not actually performed. 1/9/98

2. Act as COW under instruction for a surfacing evolution with or without air. 7/21/97

(c) Snorkel Bill

1. Conduct snorkel operations under instruction as DOOW. 4/7/98

(d) Ventilation Bill

1. Conduct ventilation operations under instruction as COW. 7/21/97

2. Observe the induction and ventilation lineups with a qualified watchstander (preparing and securing). 7/21/97

(2) Periscope Depth Operations

(a) Act as COW during PD operations, including: Ascent, Operations, Return to patrol depth. 7/21/97

(b) Act as DOOW during an ascent to periscope depth and return to patrol depth on the EPM. 4/7/98

(c) Demonstrate proficiency at taking the ship to and operating the ship at periscope depth as DOOW. 1/8/98

(3) High Speed Transit

(a) As DOOW, demonstrate the ability to maintain and change depth through the range of the ship's speed and with various rudder angles applied. 1/9/98

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01 DEC 1992

(b) As DOOW, demonstrate proficiency in making depth changes with large angles.

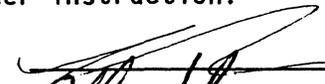
(4) Hovering/Slow Speed Operations

(a) Demonstrate ability to conduct low speed/hovering operations as DOOW under instruction.

(5) Emergency Bills

(a) Demonstrate the ability to react properly to the following casualties as DOOW under instruction:

1. Jam Dive/Rise

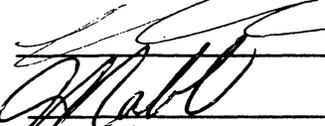
 15 Oct 97

2. Flooding

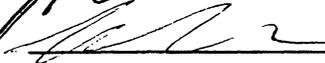
 12/5/97

3. Casualty requiring the ship to snorkel/ventilate

4. Reactor Scram

 15 Oct 97
12/5/97

5. Emergency Deep

 15 Oct 97

6. IC Casualties

a. Loss of normal and auxiliary planes/rudder indication.

 15 Oct 97

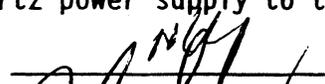
b. Loss of normal control to the planes and rudder.

 15 Oct 97

c. Loss of normal and emergency control to the planes and rudder.

 12/5/97

d. Loss of 400 Hertz power supply to the SCP.

 11/10/98

e. Loss of EH Power

 11/10/98

7. Walk Through. Complete a walk through of the ship and discuss equipment locations and operations relating to ship control and DOOW functions.



Ship's Diving Officer 1/29/98

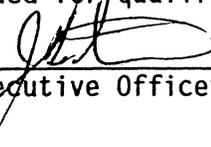
C. EXAMINATIONS AND RECOMMENDATIONS

1. Completed written examination and recommended for qualification as Diving Officer of the Watch. Written 3.77



Ship's Diving Officer 1/29/98

2. Completed oral examination and recommended for qualification as Diving Officer of the Watch.



Executive Officer 2/5/98

D. QUALIFICATION

1. Completed oral examination and is certified as a Diving Officer of the Watch.

[63/66] 4

Commanding Officer 2-5-98

2. Appropriate entries made in ship's qualification records, and service record.

[63/66] 2

Admin Officer 2-5-98

13 DEC 94

ORAL EXAMINATION RECORD

NAME (b) (3) / (b) (6) RANK/RATE I DATE 27 Jan 98

PURPOSE:	QUALIFICATION	<input checked="" type="checkbox"/>	WATCHSTATION/SYSTEM:	EXAMINED BY:
	REQUALIFICATION	<input type="checkbox"/>	<u>Diving OFFICER of Watch</u>	CO <input type="checkbox"/> XO <input type="checkbox"/>
	PROFICIENCY	<input type="checkbox"/>		DEPT. HD. <input type="checkbox"/>
	QPO DESIGNATION	<input type="checkbox"/>		DIV. OFF. <input type="checkbox"/>
	SAFEGUARDS	<input type="checkbox"/>		OOD/EOOW <input type="checkbox"/>
	OTHER	<input type="checkbox"/>		LPO <input type="checkbox"/>
				D.O. <input checked="" type="checkbox"/>

AREA COVERED:

<u>Snorkel System, 25W Circuit</u>	<u>High Speed Operations</u>
<u>Mast Speeds / Supply Hyd.</u>	<u>Stem Plane Ventier</u>
<u>Emergency Deep Action</u>	<u>Dive Stops / Emerg. Plane Operations</u>
<u>Collision Actions</u>	<u>Loss EH/EA</u>
<u>Flood Casualty / Blow Reason</u>	<u>Large Rudder angle / Ships Actions</u>
<u>Maximum Angles</u>	<u>High Speed turns / Wine up</u>
<u>Speeds for Flooding / Emer deep</u>	<u>Compensation for Dive</u>
<u>Jam Dive Casualty</u>	
<u>SOE</u>	

WEAK AREAS:

Speed Required for Emerg Deep

Maximum angle for Flooding

2 more Emerg Blow Reason

Maximum / Req Speeds for Flooding

ADDITIONAL ACTION REQUIRED:

Discuss w/ Diving Off

RESULT: (Interviewer's Initial)

_____ SAT

g SAT WITH WEAK AREAS DISCUSSION REQUIRED

_____ UNSAT

ADDITIONAL ACTION OR WEAK AREA DISCUSSION COMPLETE

g SAT _____ UNSAT _____ N/A

g 1/29/98

RE-INTERVIEWER SIGNATURE DATE

g 1/27/98

INTERVIEWER SIGNATURE DATE

APPROVED/CERTIFIED/NOTED DATE

ORAL EXAMINATION RECORD

NAME E (b)(3) / (b)(6) RANK/RATE I DATE 3 FEB 98

PURPOSE:	QUALIFICATION	<input checked="" type="checkbox"/>	WATCHSTATION/SYSTEM:	EXAMINED BY:
	REQUALIFICATION	<input type="checkbox"/>	<u>D.O.O.W</u>	CO <input type="checkbox"/> XO <input checked="" type="checkbox"/>
	PROFICIENCY	<input type="checkbox"/>		DEPT. HD. <input type="checkbox"/>
	QPO DESIGNATION	<input type="checkbox"/>		DIV. OFF. <input type="checkbox"/>
	SAFEGUARDS	<input type="checkbox"/>		OOD/EOOW <input type="checkbox"/>
	OTHER	<input type="checkbox"/>		LPO <input type="checkbox"/>

AREA COVERED:

Periscope Depth operations

Flood casualty / max angle

Blow (MBT) Operation & Pressures.

Surface Operations.

High Speed turns / operations

Loss EA/EH Power

WEAK AREAS:

Flood Angles

ADDITIONAL ACTION REQUIRED:

RESULT: (Interviewer's Initial)

X SAT

_____ SAT WITH WEAK AREAS DISCUSSION REQUIRED

_____ UNSAT

ADDITIONAL ACTION OR WEAK AREA DISCUSSION COMPLETE

_____ SAT _____ UNSAT _____ N/A

[Signature] 2/5/98

INTERVIEWER SIGNATURE DATE

RE-INTERVIEWER SIGNATURE DATE

APPROVED/CERTIFIED/NOTED DATE

ORAL EXAMINATION RECORD

NAME [(b) (3) / (b) (6)] RANK/RATE -7 DATE 2-5-96

PURPOSE:	QUALIFICATION	<input checked="" type="checkbox"/>	WATCHSTATION/SYSTEM:	EXAMINED BY:
	REQUALIFICATION	<input type="checkbox"/>	<u>DOOW</u>	CO <u>X</u> XO <input type="checkbox"/>
	PROFICIENCY	<input type="checkbox"/>		DEPT. HD. <input type="checkbox"/>
	QPO DESIGNATION	<input type="checkbox"/>		DIV. OFF. <input type="checkbox"/>
	SAFEGUARDS	<input type="checkbox"/>		OOD/EOOW <input type="checkbox"/>
	OTHER	<input type="checkbox"/>		LPO <input type="checkbox"/>

AREA COVERED:

- | | |
|---|-------------------------------------|
| <p>1) limits in speed/depth</p> <p>2) SOE limitations</p> <ul style="list-style-type: none"> - basis of curves - rig to high speed - 3 v 3A curve - shift in shallow water - depth/speed <p>3) shallow water</p> <ul style="list-style-type: none"> - depth/speed limit - effect of angle <p>4) SVP impact</p> | <p>5) Ballasting / deballasting</p> |
|---|-------------------------------------|

WEAK AREAS:

ADDITIONAL ACTION REQUIRED:

RESULT: (Interviewer's Initial)

K SAT

____ SAT WITH WEAK AREAS DISCUSSION REQUIRED

____ UNSAT

ADDITIONAL ACTION OR WEAK AREA DISCUSSION COMPLETE

____ SAT ____ UNSAT ____ N/A

RE-INTERVIEWER SIGNATURE _____ DATE _____

[Signature] 2-5-96
INTERVIEWER SIGNATURE DATE

[Signature] 2-5-88
APPROVED/CERTIFIED/NOTED DATE

TAB C-3

SONAR SUPERVISOR QUALIFICATION CARD
(AN/BSY-1)

NAME: E(b)(3)/(b)(6)
RATE: I NEC: 0419/0421/0428/9585
DATE QUALIFICATION COMMENCED: 6/3/97
DATE QUALIFICATION DUE: 8/3/97
DATE QUALIFICATION COMPLETED: 7/29/97

All items must be signed by a qualified Sonar Supervisor unless otherwise indicated. This qualification card is designed to be used in conjunction with the accompanying Sonar Supervisor Qualification Guide (Tab C-4).

40 202
140
12KTS
35000

SONAR SUPERVISOR QUALIFICATION CARD
(AN/BSX-1)

	DATE	SIGNATURE
I. PREREQUISITES		
a. Top Secret Security clearance.	<u>22 Jun 97</u>	<u>[63/665]</u> <u>SECURITY MANAGER</u>
b. Qualified as a Sonar Operator for a minimum of six months.	<u>N/A</u>	<u>N/A</u> <u>STLPO</u>
c. Graduate of the Submarine Sonar Subjective Analysis (SSA) (A-130-0020) course during or up to nine months prior to the current sea tour.	_____	<u>Deleted</u> *
d. Satisfactorily completed an audiogram in the past twelve months.	<u>19 Jun 97</u>	<u>[Signature]</u> <u>MDR</u>
e. Graduate of Sonar Supervisor Course (A-130-0313)	_____	<u>Deleted</u> *
f. Qualified in submarines.	<u>01/3/97</u>	<u>[Signature]</u>
II. KNOWLEDGE REQUIREMENTS		
a. Detailed knowledge of the duties and responsibilities of each member of the sonar watch in all scenarios.	_____	<u>Deleted</u> *
b. Detailed knowledge of required sonar manning during various scenarios.	_____	<u>Deleted</u> *
c. Detailed knowledge of tactical guidelines and actual ship's policies relative to the employment of sonar and other sensors.	_____	<u>Deleted</u> *
d. Detailed knowledge of sound propagation in the ocean.	_____	<u>Deleted</u> *
e. Detailed knowledge of measuring and predicting sonar background noise.	_____	<u>Deleted</u> *
f. Detailed knowledge of counter-detection estimation and probabilities of detection other than 50%.	_____	<u>Deleted</u> *
g. Detailed knowledge of basic PNB threat characteristics.	_____	<u>Deleted</u> *
h. Detailed knowledge of PNB sonar arrays, analyzers and trackers.	<u>6-30-91</u>	<u>[63/665]</u>

i. Detailed knowledge of PNB recognition differential factors and equation.

Deleted *

j. Detailed knowledge of predicting PNB detection performance, limitations, work sheets, and values for range predictions.

Deleted *

k. Detailed knowledge of PNB and towed array post-detection procedures.

6-30-97 Deleted *

l. Detailed knowledge of the tactical use of the ocean environment.

Deleted *

BLOCK REVIEW

m. Detailed knowledge of operational description, unique features, and development of basic speed and track plans in support of various types of searches.

7-9-97 Deleted *

n. Detailed knowledge of factors involved with updating an ASW sonar search plan on station.

ST LPO Deleted *

o. Detailed knowledge of the detection probability calculation method.

Deleted *

p. Detailed knowledge of axioms of submarine tracking.

Deleted *

q. Detailed knowledge of tactical aspects of sonar search, detection, and classification.

Deleted *

r. Detailed knowledge of the contents of Chapter 4 of NWP 74.

7/22/97 Deleted *

s. Detailed knowledge of the contents of Chapter 6 of NWP 74.

7/22/97 Deleted *

u. Detailed knowledge of the contents of Chapter 4 of NWP 79-0-1.

Deleted *

v. Detailed knowledge of all aspects of active sonar tracking.

Deleted *

w. Detailed knowledge of under-ice tracking considerations and tactics.

6-30-97 Deleted *

x. Detailed knowledge of contact classification procedures.

7-2-97 Deleted *

y. Detailed knowledge of approach and attack self-protective measures.

Deleted *

z. Detailed knowledge of initial approach tactics.

7/22/97 Deleted *

aa. Detailed knowledge of towed array TMA.

Deleted *

BLOCK REVIEW

7/21/97 *Jhd* ST LPO *STSC/SS*

bb. Detailed knowledge of employment aspects of the following sonar equipment:

- (1) Ships Data Displays use for assignment of AN/BSY-1 tasks and reconfiguration management.
- (2) AN/BQR-22^{EC-17} Analyzer
- (3) AN/WLR-9B(V)4
- (4) AN/WQC-6
- (5) Combat Systems Display Console
- (6) Multi-Purpose Console
- (7) Acoustic Support Console
- (8) BQH-5(V)4
- (9) Special/Temporary Equipment Installation (i.e. NAU).

7-2-97 *[Signature]*
 7-10-97 *[Signature]*
 7-2-97 *[Signature]*
 6-30-97 *[Signature]*
 7-10-97 *[Signature]*
 7-10-97 *[Signature]*
 7-2-97 *[Signature]*
 _____ *N/A*
 7-2-97 *[Signature]*

cc. Detailed knowledge of the operation and employment of the following AN/BSY-1 task and subtask:

- (1) PBB
- (2) PNB
- (3) MF Active
- (4) HF Active
- (5) Passive Classification
- (6) On Board Training (AOBT)
- (7) Top and Bottom sounding
- (8) Under Ice Active
- (9) PM/PL
- (10) Acoustic Coordinator
- (11) Equipment Vibration Monitoring
- (12) NM/ASA
- (13) Reconfiguration Management
- (14) Acoustic Communications

Deleted *
 7-10-97 *[Signature]*
 6-30-97 *[Signature]*
 7-10-97 *[Signature]*
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 7-10-97 *[Signature]*
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 7-10-97 *[Signature]*

(b)(3)
(b)(6)

(15) Cavitation Noise Monitoring

dd. Detailed knowledge of AN/WLR-9 employment procedure.

ee. Detailed knowledge of AN/BQR-22A^{EC-17} employment, including sensor selection options.

ff. Detailed knowledge of operating the sonar suite with reduced capabilities.

BLOCK REVIEW

gg. Detailed knowledge of the acoustic characteristics, capabilities and limitations, and tactical considerations for employment of the ship's tactical weapons.

hh. Detailed knowledge of the acoustic characteristics, capabilities and limitations of threat platform launched tactical weapons.

ii. Detailed knowledge of the acoustic characteristics, capabilities and limitations of threat surface ship contacts.

jj. Detailed knowledge of the acoustic characteristics, capabilities and limitations of threat submarine contacts.

kk. Detailed knowledge of characteristics, policies, and procedures relative to the TB-16 and TB-23 towed arrays and their respective towed array handling systems.

mm. Detailed knowledge of the ship's noise reduction program and platform noise measurement procedures.

nn. Detailed knowledge of the ship's detection and detectability characteristics.

oo. Detailed knowledge of the ship's radiated noise, major noise offenders on the ship, and methods for lessening their effects based on the last report on the results of DYNSTRDC conducted sound trials.

pp. Detailed knowledge of the last report of SSEP conducted sonar groom and calibration on TUBA equipped submarines, covering array sensitivity values at various threat frequencies and TUBA calibration data.

qq. Detailed knowledge of the AN/WLR-9B(V)4 employment procedures.

BLOCK REVIEW

6-30-97 Delkin

7-2-97 CL SRS/S

7-10-97 EC (b)(3)

7-10-97 EC (b)(6) J

7-10-97 CL SRS/S
ST LPO

Deleted *

Deleted *

Deleted *

Deleted *

7-2-97 CL SRS/S

7-2-97 CL SRS/S
ST LPO

6-30-97 Delkin

7-2-97 CL SRS/S

7-2-97 CL SRS/S

Deleted *

7/21/97 Delkin SRS/S

actions required of a sonar supervisor for various watch section scenarios.

m. Demonstrate ability to control and monitor noise augmentation settings when installed and in operation.

Deleted *
7/21/97 [Signature]

n. Demonstrate ability to take or coordinate the required employment/operational actions relative to AN/BSY-1.

Deleted *

o. Demonstrate the ability to monitor own-ship's weapons after launch.

Deleted *

q. Demonstrate ability to construct a passive and active sonar search plan.

IV. TRAINING WATCHES

a. Stand at least six Sonar Supervisor watches under instruction.

7-8-97 [Signature]
7-9-97 [Signature]
7-15-97 [Signature]
7-16-97 [Signature]
X Deleted
X Deleted

V. EXAMINATION AND CERTIFICATION

a. Successfully complete a comprehensive written exam prepared by the ST LPO and approved by the Commanding Officer.

7/21/97 [Signature]
Grade 3.0 STLPO

b. Examined by a board consisting of at least the Sonar Officer, the Sonar Division LPO, and at least one additional qualified Sonar Supervisor; or examined individually by the Sonar LPO and the Sonar Officer and recommended for qualification as a Sonar Supervisor.

7/21/97 [Signature]
STLPO
N/S
7/22/97 [Signature]
SONAR SUPERVISOR
SONAR OFFICER

c. Examined and recommended for qualification as a Sonar Supervisor.

7/22/97 [Signature]
CSO

d. Examined and certified as a qualified Sonar Supervisor.

7-29-97 [Signature]
COMMANDING OFFICER

VI. ADMINISTRATION

a. Entry made in the Ship's Qualification Notebook.

7/29/97 [Signature]
CSO

b. Entry made in Service Record (page 4)

7/25/97 [Signature]
PERSONNEL OFFICER

* Deletions based on members previous qualifications as Sonar Supervisor and graduation of Advanced Sonar Employment.

4-C-3-8

Submitted [Signature] Reviewed [Signature] Approved [Signature]
 STLPO CSO CO.

13 DEC 94

ORAL EXAMINATION RECORD

NAME [(b)(3)/(b)(6)] RANK/RATE J DATE _____

PURPOSE:	QUALIFICATION _____	WATCHSTATION/SYSTEM:	EXAMINED BY:
	REQUALIFICATION <u>X</u>	<u>SONAR SUPERVISOR</u>	CO <u>X</u> XO _____
	PROFICIENCY _____	_____	DEPT. HD. _____
	QPO DESIGNATION _____	_____	DIV. OFF. _____
	SAFEGUARDS _____	_____	OOD/EOOW _____
	OTHER _____	_____	LPO _____

AREA COVERED:

COSO No 1

Contact evaluate/correlate

Communications

Op guidelines

PD preparation

Procedures to track

Active sonar

Watchstudy guidance

WEAK AREAS:

ADDITIONAL ACTION REQUIRED:

RESULT: (Interviewer's Initial)

X SAT

_____ SAT WITH WEAK AREAS DISCUSSION REQUIRED

_____ UNSAT

ADDITIONAL ACTION OR WEAK AREA DISCUSSION COMPLETE

_____ SAT _____ UNSAT _____ N/A

[Signature] 29 Jul 97

INTERVIEWER SIGNATURE DATE

[Signature] 29 Jul 97

APPROVED/CERTIFIED/NOTED DATE

RE-INTERVIEWER SIGNATURE DATE

ORAL EXAMINATION RECORD

NAME [(b) (3) / (b) (6)] RANK/RATE J DATE 2/22/97

PURPOSE:	QUALIFICATION _____	WATCHSTATION/SYSTEM:	EXAMINED BY:
	REQUALIFICATION <u>X</u>	<u>SONAR SUPERVISOR</u>	CO _____ XO _____
	PROFICIENCY _____	_____	DEPT. HD. <u>CD</u>
	QPO DESIGNATION _____	_____	DIV. OFF. <u>X</u>
	SAFEGUARDS _____	_____	OOD/EOOW _____
	OTHER _____	_____	LPO _____

AREA COVERED:

<u>PD EVOLUTIONS</u>	<u>ACTIVE USE & EVALUATION</u>
<u>MONITORING COMMS</u>	<u>TORPEDO EVASION</u>
<u>EQUIPMENT LINEUP CONTROL</u>	<u>STACK TIME</u>
<u>IDM's</u>	<u>Watchstation Routine</u>
<u>LAG AND LEAD LINEUP SKIFF</u>	<u>Reports</u>
<u>RATIO BEARING RATE</u>	<u>SONAR SENSE PIM</u>
<u>PASSIVE RANGING</u>	<u>EPL</u>
<u>TACO</u>	<u>AWST</u>
<u>Propagation Paths</u>	<u>NB track, Base prep</u>

WEAK AREAS:

Beam Cent Rh, Tri + Ping Sten Rh eqs, Ratio Rg, Environ, Trip wires

ADDITIONAL ACTION REQUIRED:

Discuss in Sonar O

RESULT: (Interviewer's Initial)

SAT
JW SAT WITH WEAK AREAS DISCUSSION REQUIRED
UNSAT

ADDITIONAL ACTION OR WEAK AREA DISCUSSION COMPLETE

SAT _____ UNSAT _____ N/A _____

[Signature] 2/22/97
RE-INTERVIEWER SIGNATURE DATE

[Signature] 2/22/97
INTERVIEWER SIGNATURE DATE
[Signature] 2/22/97
APPROVED/CERTIFIED/NOTED DATE

ORAL EXAMINATION RECORD

NAME [(b)(3) / (b)(6)] RANK/RATE T DATE 7/21/97

PURPOSE:	QUALIFICATION	_____	WATCHSTATION/SYSTEM:	EXAMINED BY:
	REQUALIFICATION	<u>X</u>	<u>SONAR SUPERVISOR</u>	CO _____ XO _____
	PROFICIENCY	_____	_____	DEPT. HD. _____
	QPO DESIGNATION	_____	_____	DIV. OFF. _____
	SAFEGUARDS	_____	_____	OOD/EOOW _____
	OTHER	_____	_____	LPO <u>X</u>

AREA COVERED:

<u>IDM's</u>	<u>DIFFERENCE BETWEEN IPL + UYK-43 RELOAD</u>
<u>PROPAGATION PATHS</u>	<u>DESCRIBE SONAR WATCH ROUTINE.</u>
<u>PD AND OTHER MANUEVERS</u>	<u>TYPES OF SEARCHES AREA, BARRIEL, SOA, DIRECT</u>
<u>SONAR RELIEF PROCEDURES</u>	_____
<u>SONAR SUPERVISORS RESPONSIBILITIES</u>	_____
<u>↓ ORGANIZATIONAL RELATIONSHIP</u>	_____
<u>OLW SHIP SONARS - WHAT DO YOU DO</u>	_____
<u>DESCRIPTION OF UNITS & AN/BSY-1</u>	_____
<u>REQUIREMENTS FOR A SPL</u>	_____

WEAK AREAS:

ADDITIONAL ACTION REQUIRED:

RESULT: (Interviewer's Initial)

X SAT

SAT WITH WEAK AREAS DISCUSSION REQUIRED

UNSAT

ADDITIONAL ACTION OR WEAK AREA DISCUSSION COMPLETE

____ SAT _____ UNSAT _____ N/A

SPC/SS 21 JUL 97
INTERVIEWER SIGNATURE DATE

RE-INTERVIEWER SIGNATURE DATE

APPROVED/CERTIFIED/NOTED DATE

ORAL EXAMINATION RECORD

NAME E-(b)(3) / (b)(6) RANK/RATE I 11 DATE 7-19-97

PURPOSE:	QUALIFICATION	<input checked="" type="checkbox"/>	WATCHSTATION/SYSTEM:	EXAMINED BY:
	REQUALIFICATION	<input checked="" type="checkbox"/>	<u>Sonar Supervisor</u>	CO <input type="checkbox"/> XO <input type="checkbox"/>
	PROFICIENCY	<input type="checkbox"/>		DEPT. HD. <input type="checkbox"/>
	QPO DESIGNATION	<input type="checkbox"/>		DIV. OFF. <input type="checkbox"/>
	SAFEGUARDS	<input type="checkbox"/>		OOD/EOOW <input type="checkbox"/>
	OTHER	<input type="checkbox"/>		LPO <input checked="" type="checkbox"/>

AREA COVERED:

PD ops
ops weapon monitoring
initial detection manuev.
CIS sonar systems
acoustic intel
search planning
TMA techniques
duties/responsibilities
sys. employment

WEAK AREAS:

ADDITIONAL ACTION REQUIRED:

N/A

RESULT: (Interviewer's Initial)

SAT
 SAT WITH WEAK AREAS DISCUSSION REQUIRED
 UNSAT

ADDITIONAL ACTION OR WEAK AREA DISCUSSION COMPLETE

SAT UNSAT N/A

[Signature] STS/ks 7-19-97
 INTERVIEWER SIGNATURE DATE

RE-INTERVIEWER SIGNATURE DATE

APPROVED/CERTIFIED/NOTED DATE