



DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND
1333 ISAAC HULL AVE SE
WASHINGTON NAVY YARD DC 20376-0001

IN REPLY TO

9077
Ser 92Q12/100
29 Apr 2002

From: Commander, Naval Sea Systems Command
Subj: LIST OF ACTIVE SUBSAFE LIAISON ACTION REQUESTS (SSLARs)
To: Distribution
Ref: (a) NAVSEA letter 9007 Ser 92Q12/057 of 17 April 2002
(b) NAVSEA letter 9077 Ser 92Q13/053 of 28 March 2001
Encl: (1) List of Active SSLARs as of 3/02
(2) List of SSLARs Overcome By Events (OBE) Since 3/01

1. This letter supercedes reference (a) and addresses changes to enclosure (1) and adds PSNSY-001-99-92Q(1) to the list of SSLARs overcome by events since 3/01 (enclosure(2)).

2. To keep SUBSAFE activities informed of program issues and guidance SEA 92Q annually reviews SSLARs and provides a listing of active SSLARs. Enclosure (1) is the current listing of active SSLARs. As indicated by asterisks (*), two new SSLARs have been added since reference (b).

3. Reference (b) provided the last update. Enclosure (1) identifies SSLARs that remain in effect, including those generated since reference (b) was issued. Enclosure (2) identifies SSLARs that were determined to be OBE since reference (b) was issued.

4. Guidance provided by any SSLAR series not identified in enclosure (1) is hereby canceled. If activities feel that an SSLAR series cited in enclosure (1) no longer provides necessary guidance or that one in enclosure (2) still provides necessary guidance, they should identify their concerns to the NAVSEA 92Q point-of-contact (POC) for re-evaluation.

5. The NAVSEA 92Q POC for SSLARs is Mr. Ross Baker, SEA 92Q12, at COM (202)-781-1320 or (DSN) 326-1320 or email BakerLR@navsea.navy.mil.

A handwritten signature in black ink that reads "Chris DeCamp".

CHRIS DeCAMP
By direction

Subj: LIST OF ACTIVE SUBSAFE LIAISON ACTION REQUESTS (SSLARs)

Distribution:

COMSUBLANT (LCDR D. Trem Code N409)
COMSUBPAC (CDR M. Sumrall Code N473)
NAVSHIPYD Norfolk, VA (E. Karkane, Code 200S)
NAVSHIPYD Pearl Harbor, HI (M. Takafuji, Code 200S)
NAVSHIPYD Portsmouth, NH (M. Jacques, Code 200S)
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NAVSEALOGCEN Mechanicsburg, PA (E. Martin, Code N43)
NSWCCD-SSES Philadelphia, PA (J. Lutz, Code 9601)
NUWCDIV Newport, RI (D. Borgeson, Code 00SS)
NAVICP Mechanicsburg, PA (R. Smith, Code 845)
DCMA, Alexandria, VA (M. J. Costa, Code DCMA-OCT)
SUPSHIP Groton, CT (W. Falman Jr., Code 100Q)
SUPSHIP Newport News, VA (E. Pickler, Code 208)
Electric Boat Corporation, Groton, CT (J. Noonan, Department 320)
Newport News Shipbuilding, Newport News, VA (D. Conley,
Department 003)
SHAPEC SSN 688 Class, Portsmouth, NH (R. Toole, Code 240S)

Copy To:

NAVSHIPREPFAC Yokosuka, JA (Code 240)
Consolidated Launcher Technology-Oceanering International, Inc.,
Chesapeake, VA (M. Merzwa)

Subj: LIST OF ACTIVE SUBSAFE LIAISON ACTION REQUESTS (SSLARs)

Blind copy to:

SEA 92QB

SEA 92Q1

SEA 92Q12

SEA 92Q2

SEA 92Q4

SEA 92QD

SEA 92QL (9077/09)

SEA 92QE

SEA 92/92B

SEA 92C24

SEA 92TC

SEA 05U32

SEA 04XQ1

SEA 08D (C. Richard)

PMS350A21

PMS393A13

PMS393M

PMS395A18

PMS398T1B

PMS450CSS

List of Active SSLARs as of 3/02

No	SUBSAFE LAR	SUBJECT/DESCRIPTION
1.	CDNSWC-001-97-92Q(1)	Periscope Hoist Cylinder
2.	CSL-003-98-92Q(1)	Material Requirement for Torpedo Tube Capscrews
3.	CSL-004-98-92Q(1)	Hull Insert Threaded Bolt Hole Repair
4.	CSL-001-00-92Q(1)	Hull Penetration Packing Glands
5.	CSP-001-99-92Q(1)	ASW and MSW System Hydrostatic Testing
6.	CSP-001-00-92Q(1)	SUBSAFE Boundary for 3" Launcher Interlocks.
7.	NNS-004-93-92Q(1)	REC of DSRV Seating Surfaces Although the subject SSLAR was written for SSN 673, this guidance is still applicable to SSN637 Class submarines.
8.	NNS-001-98-92Q(1)	Mechanical Joint Records for Joints with No Specific Torque Values
9.	NNS-001-00-92Q(1)	Fastener Requirements ASDS N2 Purge Hull and Back-up Valves
10.	NNS-002-00-92Q(1)	HI Material Traceability Requirements, 7010 Vs 1688
11.	*NNS-001-01-92Q(1)	SUBSAFE Boundary Definition for Air Ind. & Diesel
12.	*NNS-002-01-92Q(1)	SS & SSSDR Boundaries for VLS Pressure Vent Piping
13.	NUWC-001-98-92Q(1)	Design Requirements for Non-metallics/composites
14.	NUWC-001-99-92Q(1)	Towed Array Stack Ball Check Fitting LI Certification
15.	PHNSY-002-87-92Q(2)	Material Specifications
16.	PHNSY-003-87-92Q(2)	Reconstruction of Lost Documentation
17.	PHNSY-001-93-92Q(1)	CERT/Stock of Non-Nuc Material used within the SUBSAFE Boundary
18.	PHNSY-001-98-92Q(1)	Minor Departures
19.	PNSY-007-89-92Q(1)	Post Installation Testing of EHF
20.	PNSY-002-90-92Q(1)	SSN688 Class Heat Exchanger Tubes and Plugs
21.	PNSY-001-95-92Q(1)	Post Installation Testing of Hull Fittings
22.	PNSY-002-96-92Q(1)	Bolted Pressure Boundary Joints
23.	PNSY-005-96-92Q(1)	Clarification of the SUBSAFE Boundary
24.	PNSY-006-96-92Q(1)	Exceptions to the SUBSAFE Boundary
25.	PNSY-007-96-92Q(1)	List of Wrought Material

List of Active SSLARs as of 3/02

No	SUBSAFE LAR	SUBJECT/DESCRIPTION
26.	PNSY-008-96-92Q(1)	Submarine Safety Certification Boundary Book
27.	PNSY-010-96-92Q(1)	List of Castings Requiring Radiographic Inspection
28.	PNSY-002-99-92Q(1)	Post Installation Testing of Electrical Hull Fittings
29.	PNSY-003-99-92Q(1)	Inboard Joint Fasteners
30.	PNSY-004-99-92Q(1)	EMBT Blow System Test Requirements
31.	PNSY-005-99-92Q(1)	Torque Requirements
32.	PNSY-001-00-92Q(1)	Use of Subcontractors for GFE/GFM Refurbishment
33.	PSNSY-006-93-92Q(1)	TT Blow & Vent, Flood & Drain Hyd Act 726 CL
34.	PSNSY-002-99-92Q(1)	Identification of Hull Integrity Fasteners
35.	SMEPP-001-92-92Q(1)	Re-Entry Control for AERP/TRIPER Components
36.	SMEPP-001-00-92Q(1)	Non-Watertight Covers in Pressure Hull Plate
37.	SOSG-001-90-92Q(1)	Contractor use of Naval Supply System Material
38.	SOSG-002-90-350(1)	Contractor use of Naval Supply System Material -SEAWOLF specific.

*Indicates a SSLAR issued since the last List of Active SSLARs was published (3/01).

List of SSLARs Overcome By Events (OBE) Since 3/01

SSLAR	Description	Summary of Events
CSP-006-89-92Q(1)	Hull/Back-up Valve Tightness Test	Requirements were incorporated into DDGOS Section 9480-0-1 Table 6
PNSY-001-01-92Q(1)	Conflict in Valve Timing Reqmnts for USS Dolphin	Requirements were incorporated into NAVSEA Manual S9SS-S3-SCB-010/AGSS-555
PSNSY-001-99-92Q(1)	Teflon Coating and OQE	Agreed upon at the 10/2001 SSWG Meeting
SOSG-001-94-92Q(1)	Damage Control & Salvage Equipment	Rev C of 0010 addresses these requirements.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: ALL	3. SERIAL NO. CDNSWC-001-97	
4. SUBJECT: PERISCOPE HOIST CYLINDER PISTONS		5. FORM TYPE REQUEST	
6. PAGE REF(A), PG. 4-35	7. PARAGRAPH 4.5.10.1.B.(7)	8. ISSUE DATE 3/3/97	9. REQSTD RESP DATE 4/3/97

10. COMMENTS/RECOMMENDATIONS

References: (A) NAVSEA 0924-062-0010; SUBMARINE SAFETY REQUIREMENTS MANUAL, REV C
(B) NAVSEA 0948-LP-045-7010; MATERIAL CONTROL STANDARD (NON NUCLEAR), VOL 1

1. Introduced as a change from previous revisions of reference (A), the referenced paragraph now specifically excludes Hydraulic Hoist Cylinder Pistons from the SUBSAFE Boundary. Having been excluded from the SUBSAFE Boundary, reference (B) was consulted to determine if there existed a necessity to treat/procure these pistons as level 1 controlled material. Reference (B) paragraph 1.1.6.1 defines the parameters that deal with this type of level 1 components as follows:

"Portions of Submarine Hull Penetrations, excluding hull structure items, which isolate seawater from the Submarine atmosphere. Examples of Hull Penetrations are: Hull Fittings (electrical and fiber optic), rodimeters, periscopes and periscope hoist cylinders."

2. The Periscope Hoist Cylinder Pistons, part of the Periscope Hoist Cylinder Assembly internal to the actual hoist cylinder, serves no function of isolating seawater from the Submarine atmosphere and therefore is believed to not meet the intent of this criteria. Additionally, no other portions of appendices A or B of reference (B) appear to substantiate consideration of this piece part as level 1 controlled material.

3. NSWCCD-SSES no longer considers the Periscope Hoist Cylinder Piston as SUBSAFE or Level 1 controlled material and request NAVSEA 92Q concurrence as such.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: CDNSW		2. INFO: ALL		3. SERIAL NO. CDNSWC-001-97-92Q(1)	
4. SUBJECT: PERISCOPE HOIST CYLINDER				5. FORM TYPE RESPONSE	
6. PAGE REF A PG. 4-35		7. PARAGRAPH 4.5.10.1.B.(7)	8. ISSUE DATE 3/12/97		9. REQSTD RESP DATE

10. COMMENTS/RECOMMENDATIONS

Ref: (a) Submarine Safety (SUBSAFE) Requirements Manual,
NAVSEA 0924-062-0010, Rev C
(b) Material Control Standard (Non-Nuclear), Vol I
NAVSEA 0948-LP-045-7010

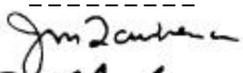
Comments:

1. SSLAR CDNSWC-001-97 notes that when reference (a) was issued paragraph 4.5.10.1.b.(7) excluded periscope hoist cylinder pistons from the SUBSAFE boundary. CDNSWC requests NAVSEA concurrence that the pistons, which are internal to the hoist cylinders and do not isolate seawater from the submarine atmosphere, are not in the SUBSAFE boundary and are not subject to the Level I material control requirements of reference (b).

2. NAVSEA concurs with CDNSWC that while the periscope hoist cylinders are still within the SUBSAFE boundary and subject to the material control requirements of reference (b) the pistons associated with these cylinders are not SUBSAFE and do not require Level I material control. These requirements are adequately reflected in reference (a) & (b).

3. NAVSEA considers this SSLAR closed.

Program Office Technical Concurrence

Signature	Code	Date
	92TC	6/2/97
	SEA92Q	03 JUN 97

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: <p style="text-align: center;">NAVSEA 92Q</p>	2. INFO: <p style="text-align: center;">92T</p>	3. SERIAL NO: <p style="text-align: center;">CSL-003-98</p>	
4. SUBJECT: <p style="text-align: center;">MATERIAL REQUIREMENT FOR TORP TUBE CAPSCREWS</p>		5. FORM TYPE: <p style="text-align: center;">Request</p>	
6. PAGE: <p style="text-align: center;">4-32</p>	7. PARAGRAPH: <p style="text-align: center;">4.5.7.1.B</p>	8. ISSUE DATE: <p style="text-align: center;">9/14/98</p>	
9. REQSTD RESP DATE: <p style="text-align: center;">10/15/98</p>			

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010, Rev C, Submarine Safety (SUBSAFE) Requirements Manual

Cited paragraph and paragraph 4.6.6.a(1) would indicate that the capscrews holding the torpedo tube muzzle doorsite glass in place should be Level I. APL does not support Level I material. Should capscrews be Level I?

CDR A. Paquin

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: COMSUBLANT	2. INFO: ALL	3. SERIAL NO: CSL-003-98-92Q(1)	
4. SUBJECT: MATERIAL REQUIREMENT FOR TORP TUBE CAPSCREWS		5. FORM TYPE: Response	
6. PAGE: 4-32	7. PARAGRAPH: 4.5.7.1.B	8. ISSUE DATE: 12/21/1999	9. REQSTD RESP DATE: 10/15/98

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010, Rev C, Submarine Safety (SUBSAFE) Requirements Manual

(b) NAVSEA 0948-LP-045-7010, Material Control Standard (Non-Nuclear)

1. SSLAR CSL-003-98 stated that paragraphs 4.5.7.1.b and 4.6.6.a(1) of reference (a) indicate that the capscrews holding the Torpedo Tube Breech Door Water-Level Gage in place should be Level I, although the Sight Glass Allowance Parts List (APL) does not support Level I material. CSL specifically asked if these capscrews are Level I.

Recommendations:

1. The Torpedo Tube sight glass assembly is Level 1 based on cognizant NAVSEA technical code review in accordance with Appendix A, paragraph 1.1.7 of reference (b) and plate 32 of the SSN 688 and SSBN 726 Class Material Identification and Control (MIC) Boundary Books.

2. Level 1 requirements for capscrews associated with the Torpedo Tube Breech Door Water-Level Gage assembly are as follows:

a. The 1/4" capscrews which join the Water-Level Gage cover to the Water-Level Gage housing are Level 1 per Appendix B, paragraph 1.1.4 of reference (b).

b. The 1/2" capscrews which join the Water-Level Gage housing to the Torpedo Tube Breech Door are Level 1 per Appendix B, paragraph 1.1.4 of reference (b).

3. Level 1 control is also required for the Torpedo Tube Breech Door Sight Glass Housing and Cover as specified per Appendix A paragraph 1.1.7 of reference (b) and identified on plate 32 of SSN 688 and SSBN 726 Class MIC Boundary Books.

4. NAVSEA review reveals that Torpedo Tube Breech Door Water-Level Gage capscrews are not currently listed as Level 1 items on the Torpedo Tube APLs. NAVSEA has requested NSLC to initiated action with NAVICP to correct the Water-Level Gage APL to support Level 1 capscrews.

5. The Torpedo Tube Breech Door Water-Level Gage assembly is not SUBSAFE because the hole size through the Torpedo Tube Breech Door leading to the sight glass is less than 0.28 square inches. Paragraph 4.5.7.1b of reference (a) refers.

6. NAVSEA considers this SSLAR series closed.

Continued

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: COMSUBLANT	2. INFO: ALL	3. SERIAL NO: CSL-003-98-92Q(1)
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Program Technical Concurrence

Signature	Code	Date
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<i>Steve Sits</i>	92TC	12/21/99
<i>Robert Cuy</i>	05432	12/21/99

Mary Townsend-Manning

MARY TOWNSEND-MANNING
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: 92T	3. SERIAL NO. CSL-004-98
4. SUBJECT: HULL INSERT THREADED BOLT HOLE REPAIR		5. FORM TYPE REQUEST
6. PAGE 4-5	7. PARAGRAPH 4.3.1	8. ISSUE DATE 9/17/98
		9. REQSTD RESP DATE 10/15/98

10. COMMENTS/RECOMMENDATIONS

Paragraph 4.3.1 indicates that threaded bolt holes that hold MBT vent covers in place are in the SUBSAFE boundary and have to meet Section 4.6 technical requirements.

Phone conversations with Mr. M. Gifford indicates that repairing these bolt holes using a thin wall insert is the best method. Request a procedure for this method and specifically request that the procedure detail if the thin wall insert needs to be Level 1 and what material type.

Would this be applicable to all classes and all hull inserts?

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: CSL	2. INFO: ALL	3. SERIAL NO. CSL-004-98-92Q(1)	
4. SUBJECT: HULL INSERT THREADED BOLT HOLE REPAIR		5. FORM TYPE RESPONSE	
6. PAGE 4-5	7. PARAGRAPH 4.3.1	8. ISSUE DATE 11/18/98	9. REQSTD RESP DATE

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE)
Requirements Manual

COMMENTS:

1. CSL notes that the threaded bolt holes holding MBT vent covers in place are SUBSAFE in accordance with reference (a), paragraph 4.3.1 and that the technical requirements of reference (a), section 4.6 are applicable. CSL also notes that they contacted Mr. M. Gifford (SEA 92T237) regarding repair of subject bolt holes. Mr. M. Gifford advised CSL that the best method for repairing these holes would be to utilize thin wall inserts.

2. CSL asks NAVSEA to provide a procedure for repairing subject bolt holes, and asks if the inserts should be Level I. CSL further asks what material type should be used and if this would be applicable to all submarine classes and all hull inserts.

RECOMMENDATIONS:

1. SEA 92Q has communicated with Mr. M. Gifford over this SSLAR. He indicates that his code will develop and provide a procedure for repair of subject bolt holes. Request that CSL redirect this and future inquiries regarding this repair procedure and its application to SEA 92T237, at (703) 602-7080, ext. 442.

2. Main Ballast Tanks 3A & 3B and 4A & 4B vent valve non-pressure hull structural inserts (item 4501 of NAVSEA Dwg 4457060 and item 301 of NAVSEA Dwg 4497220, respectively) are designated SUBSAFE because they are located in areas of the tank plating that act as frame flanges. Note 3 of figures I-14 of SSN 688 Class Submarine Safety Certification Boundary Books refer.

3. Material control of structural items is in accordance with NAVSEA T9074-AD-GIB-010/1688.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. CSL-004-98-92Q(1)

COMMENTS/RECOMMENDATIONS

4. Use of thread inserts in SUBSAFE applications is prohibited unless specifically required by component drawings. Waivers of this prohibition for repair may be sought from NAVSEA on a case-by-case basis. Section 075-2.7 of NAVSEA S9086-CJ-STM-010/CH075R2 refers. Recommend that repair of threaded holes in MBT vent valve non-pressure hull structural inserts in question be documented/approved as a precedent setting waiver.

5. NAVSEA considers this SS LAR series closed

Program Technical Concurrence

Signature	Code	Date
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<i>Steve Sipes</i>	92TC	10/2/98
<i>Robert J. Long</i>	03432	10/29/98

for *A. H. Ford, Jr.*
D.R. ALEXANDER
Commander, USN
Director Submarine Safety
and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: <p style="text-align: center;">COMSUBLANT</p>	2. INFO: <p style="text-align: center;">ALL</p>	3. SERIAL NO: <p style="text-align: center;">CSL-001-00</p>
4. SUBJECT: <p style="text-align: center;">Hull Penetration Packing Glands</p>		5. FORM TYPE: <p style="text-align: center;">Request</p>
6. PAGE: <p style="text-align: center;">4.46.1</p>	7. PARAGRAPH: <p style="text-align: center;">4.6.5</p>	8. ISSUE DATE: <p style="text-align: center;">07/21/2000</p>

10. COMMENTS/RECOMMENDATIONS:

References: (a) NAVSEA 0948-LP-045-7010 Rev 2 Material Control Standard (Non-Nuclear)
 (b) NAVSEA 0924-LP-062-0010 Rev C Submarine Safety Requirements Manual

1. Sima Norfolk believes that there is some confusion and possible conflict between the requirements of references (a) and (b). Are hull penetration packing glands for periscope and antennas and their associated components (i.e. flanges and fasteners) required to be MIC Level I in accordance with reference (a) or do they fall into the category of those excluded from the requirement of being Level I.

2. Request evaluation and clarification of this issue based on the requirements of references (a) and (b).

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: COMSUBLANT	2. INFO: ALL	3. SERIAL NO: CSL-001-00-92Q(1)
4. SUBJECT: Hull Penetration Packing Glands		5. FORM TYPE: Response
6. PAGE: 4-46.1	7. PARAGRAPH: 4.6.5	8. ISSUE DATE: 8/10/00
9. REQSTD RESP DATE: 07/21/2000		

10. COMMENTS/RECOMMENDATIONS:

References: (a) NAVSEA 0948-LP-045-7010 Rev 2 Material Control Standard (Non-Nuclear)
 (b) NAVSEA 0924-LP-062-0010 Rev C Submarine Safety (SUBSAFE) Requirements Manual

1. SIMA Norfolk requested evaluation and clarification on hull penetration packing glands for periscopes and antennas and their associated components (i.e. flanges and fasteners). Are they to be MIC Level I in accordance with reference (a) or do they fall into the category of those excluded from Level I? Furthermore, should the fasteners be considered Hull Integrity Fasteners in accordance with reference (b)?

2. Reference (b) paragraph 4.5.10 clearly states that periscope and antenna packing glands and their associated fasteners are in the SUBSAFE Boundary and therefore must be worked under re-entry control. These packing glands and their associated fasteners are also in the hull integrity boundary as defined in reference (b). Hull integrity fasteners are normally subject to the requirements of reference (a); however, glands and their associated fasteners are excluded from being Level I by reference (a) Appendix B paragraph 2.1.1. Therefore, hull penetration packing glands for periscopes and antennas and their associated flanges and fasteners are not required to be MIC Level I

3. NAVSEA notes that the gland joint is considered to be a bolted pressure boundary joint as defined in reference (b) paragraph 4.6.4.2.1, and therefore must have a mechanical joint record with the OQE listed in reference (b) paragraph 4.6.4.2.1.1.

4. NAVSEA considers this SS LAR closed.

Program Office Technical Concurrence

Signature

Code

Date

Jeffrey D. Clark

05033

8/9/00

Steve Sites

92TC

8/10/00

A. H. Ford, Jr. 8/10/00
 for Mary-Townsend Manning
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIASON ACTION REQUEST (SSLAR) FORM

1. TO: NAVSEA	2. INFO: ALL	3. SERIAL NO: CSP-001-99
4. SUBJECT: ASW and MSW System Hydrostatic Testing		5. FORM TYPE: Request
6. PAGE: 6-5	7. PARAGRAPH: 6.3.2.2.e	8. ISSUE DATE: 26 October 1999
		9. REQST RESP DATE: 26 November 1999

10. COMMENTS/RECOMMENDATIONS:

Reference: (a) NAVSEA 0924-062-0010, Submarine Safety Requirements Manual
 (b) NAVSEA 0948-LP-012-5000, Standard Navy Valves
 (c) NAVSEA dwg 810-4384678, General Notes for Standard Seawater Valves
 (d) NAVSEA dwg 803-4384539, 12 Inch Combination Hull and Backup Valve (Ball and Poppet)
 (e) NAVSEA dwg 803-5348077, 16 Inch Combination Hull and Backup Valve (Ball and Poppet)

1. Reference (a) classifies all piping systems and components, NPS 1/2 or larger, from and including the inboard joint of the backup valve outboard to the hull or hull equivalent as SUBSAFE.

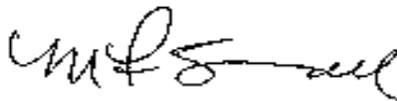
2. On the 688 class ASW and MSW hull backup valves and 726 class submarine MSW hull backup valves, references (b) and (c) require the removal of a special test plug from the backup valve body access cover for reference (d) and (e) valves to attach a hydraulic hand pump. The purpose of the hydraulic hand pump is to apply pressure to an internal piston to compress the valve seats against the valve ball to allow the backup valve to serve as an isolation boundary for system hydrostatic tests.

3. The test plug description is Plug, hex head 3/4 size 1.062-12UNC-2A. The plug also has an o-ring that forms the seal between the plug and the valve body access cover.

4. The plug is in the SUBSAFE boundary and is not covered by the 9/16" test fitting Re-entry Control Exception. This plug is removed and reinstalled during the test phase after production work is complete and as such should be controlled by a separate Controlled Work Package. This is a cumbersome work practice. Current COMSUBPAC guidance to it's ships is to perform a controlled assembly and document the reassembly on a QA-34. The QA-34 is retained until the joint is again disturbed. The joint can not be tested by a controlled dive to test depth as the area is not exposed to sea pressure due to an o-ring seal between the piston and body.

5. Request NAVSEA evaluate and assign a REC exception for the special test fittings on MSW and ASW backup valve special test connections. The operational control will be by a Formal Work Procedure with a controlled assembly. Recertification testing would be none.

6. The COMSUBPAC point of contact is LCDR Mike Sumrall, Code N473, (808) 473-5577 X127. Email - SumralMH@csp.navy.mil.



M. H. SUMRALL
 LCDR USN

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: <p style="text-align: center;">COMSUBPAC</p>	2. INFO: <p style="text-align: center;">ALL</p>	3. SERIAL NO: <p style="text-align: center;">CSP-001-99-92Q(1)</p>
4. SUBJECT: ASW and MSW Hydrostatic Testing		5. FORM TYPE: <p style="text-align: center;">Response</p>
6. PAGE: <p style="text-align: center;">6-5</p>	7. PARAGRAPH: <p style="text-align: center;">6.3.2.2.e</p>	8. ISSUE DATE: <p style="text-align: center;">12/28/99</p>
9. REQSTD RESP DATE: <p style="text-align: center;">11/26/1999</p>		

10. COMMENTS/RECOMMENDATIONS:

Reference: (a) NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE) Requirements Manual

1. SSLAR CSP-001-99 requested that NAVSEA review the SUBSAFE requirements for removal of special test plugs from MSW and ASW Hull and Back-up valve body access covers. These plugs are removed to attach the hydraulic pump used to lock the valve seats against the ball during system hydrostatic testing. Since the plug is 3/4", it does not meet the 9/16" test fitting Re-Entry Control exception, and a separate CWP is required for removal of the plug. CSP stated that this is a cumbersome work practice, and that the current guidance provided by CSP to its ships is to perform a controlled assembly of the joint and retain the QA-34 until the joint is disturbed again.

2. NAVSEA has evaluated CSP's request and notes the following:

- a. Reference (a). Section 6.3.2.2.e states that the REC Exceptions are authorized "where frequent entry into the SUBSAFE Certification Boundary for routine operations or maintenance actions is required."
- b. The use of a controlled assembly does not alleviate the requirement to use and retain a REC in accordance with the SUBSAFE Manual.
- c. The SSLAR system is not intended to replace the MCR process.

3. Based on the frequency of this operation by Ship's Force, this appears to be an appropriate candidate for a REC Exception. Therefore, NAVSEA will generate an MCR to address this maintenance related action.

4. NAVSEA considers this SS LAR series closed.

Program Technical Concurrence		
Signature	Code	Date
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Mary Townsend-Manning

MARY TOWNSEND-MANNING
 Commander, USN
 Director of Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: SEA 92Q	2. INFO: ALL	3. SERIAL NO: CSP-001-00	
4. SUBJECT: SUBSAFE BOUNDARY FOR 3" LAUNCHER INTERLOCKS		5. FORM TYPE: Request	
6. PAGE: 4-31	7. PARAGRAPH: 4.5.6.1d	8. ISSUE DATE:	9. REQSTD RESP DATE: 08/15/2000

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE) Requirements Manual

1. Section 4.5.6.1d of the SUBSAFE Requirements Manual specifies which interlock systems associated with the 3" launcher are to be controlled as SUBSAFE. As written, CL-4, 5, 6, 7, 16, 17, HP-94 and HP-16 all fall into this category. Please advise if the interlocks associated with other than the muzzle ball valve and the breech door should be considered SUBSAFE.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: COMSUBPAC	2. INFO: ALL	3. SERIAL NO: CSP-001-00-92Q(1)
4. SUBJECT: SUBSAFE BOUNDARY FOR 3" LAUNCHER INTERLOCKS		5. FORM TYPE: Request
6. PAGE: 4-31	7. PARAGRAPH: 4.5.6.1d	8. ISSUE DATE:
		9. REQSTD RESP DATE: 08/15/2000

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE) Requirements Manual, Rev C

1. SSLAR CSP-001-00 requested that NAVSEA clarify the SUBSAFE boundary definition of Section 4.5.6.1.d of reference (a) for SSN 688 Class 3" launcher interlocks, and asked if interlocks associated with other than the muzzle valve and the breech door should be considered SUBSAFE.

2. NAVSEA has determined that the muzzle valve/locking ring and locking ring/breech door mechanical interlocks are required to be SUBSAFE in order to prevent "uncontrolled" flooding. The hydraulic control valves for the vent valve/drain valve interlock (HP-97 and HP-88) and the firing valve/muzzle valve interlock (HP-95 and HP-17) are also considered SUBSAFE due to their interaction with emergency flood control hydraulics per reference (a) Section 4.5.1. The remaining interlocks associated with the SSN 688 Class 3" launcher are not SUBSAFE due to the small size of the flood path and the ability to isolate flooding through the use of a hull and backup valve.

3. To clarify the above interpretation, the SSN 688 Class and SSBN 726 Class SUBSAFE Certification Boundary Books (SSCB) will be modified to include the locking ring/breech door interlock mechanical interlock mechanism, which is currently not shown on the 3" launcher figures. In addition, hydraulic piping and components which are SUBSAFE, including emergency flood control, will be added to the SSN 688 3" launcher SSCB figure, similar to the SSBN 726 3" launcher SSCB figure.

4. NAVSEA considers this SSLAR series closed.

Signature	Code	Date
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<i>Jeffrey A. Clark</i>	0503	09 Nov 00
<i>Steve Sits</i>	92TC	13 Nov 2000

MARY TOWNSEND-MANNING
Commander, USN
Director Submarine Safety
and Quality Assurance

Chris DeCamp 13 NOV 00

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 92Q	2. INFO: ALL	3. SERIAL NO. NNS-004-93	
4. SUBJECT REC OF DSRV SEATING SURFACES		5. FORM TYPE REQUEST	
6. PAGE 6-3	7. PARAGRAPH 6.3.2.2.B	8. ISSUE DATE 07/26/93	9. REQSTD RESP DATE 08/26/93

10. COMMENTS/RECOMMENDATIONS

REFERENCES:

- (a) USS FLYING FISH (SSN673) SRA-2 FY93 Work Package SWLIN 70A01
- (b) NAVSEA Drawing 800-2656512, Revision B
- (c) S9SSN-WN-SCB-010/SSN-673 USS FLYING FISH SSN673 Submarine Safety Certification Boundary Book (Non-Nuclear), dated Jan 1988 - Plate I (Hull Integrity Envelope)
- (d) NAVSEA S9SSN-X2-SCB-010/SSN719-725, 750 & Later, SUBSAFE Certification Boundary Book - Plate III-8 (Escape and Rescue - Air, Water and Mech System)
- (e) NAVSEA Letter 393A13B Ser 393A1/1259, SSN688 Class Submarines, Contract N00024-87-2014; Recommendation for SUBSAFE Designation on Class Test Forms
- (f) SSN688 Class Test Procedure HC-3.4, Fit of DSRV Mating Ring - Flatness & Roughness Test - Forward and Aft Escape Trunks (SSN688-755, 750-772)
- (g) NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE) Requirements Manual, Revision B-1

COMMENTS:

During SRA-2 for SSN673, USS FLYING FISH, the inspection requirements of Reference (a) for the forward and aft DSRV seating surfaces failed the surface finish requirements of less than 250 micro inch finish. Also the paint had peeled away from several areas on the seating surface. Both seating surfaces required "hand" sanding smooth in accordance with Note 5.D of Reference (b) and repainting in order to pass requirements.

Based on Plate 1 of Reference (c), SUBSAFE Re-Entry Control (REC) was not maintained by NNS since the area worked is shown in black. During the SUPSHIPNN SUBSAFE Audit, a Category I audit card was written for not controlling and accomplishing the work with a REC. When questioned, NNS was advised by SUPSHIPNN that NAVSEA's verbal instructions was that any work associated with the DSRV operation required REC and that the SSCB, Reference (c) was in error. In order to resolve the audit card and preclude a delay in the initiation of Fast Cruise, the action necessary to meet REC requirements was accomplished.

While Reference (c) shows the DSRV seating surface in black, Reference (d) shows the surface in red as an integral part of the pressure hull (due to changes in ship design). Reference (e) provided NAVSEA approval of Reference (f) as a "SUBSAFE"

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. NNS-004-93

COMMENTS/RECOMMENDATIONS

Test Procedure. NNS agrees that the test is SUBSAFE and used a similar test instruction for SSN673 and identified it as SUBSAFE.

The fact that one Class SSCB shows the area in black and the other in red is not the real issue. Paragraph 6.3.2.2.b (Re-Entry Control Exceptions) of Reference (g) states that "...shipyards that are normally engaged in submarine construction or repair work, grinding on SUBSAFE portions of hull structure does not require re-entry control provided grinding is accomplished in accordance with a control process that ensures the depth of grinding does not reduce the thickness of the hull structure to less than the design thickness."

NNS recognizes that the SUBSAFE attribute or concern when working on the DSRV seating surfaces is not reducing the thickness of the hull but ensuring a smooth flat surface for successful operation of the DSRV. However, NNS believes that REC is not necessary since the inspection of the DSRV seating surface is accomplished by the completion of a test form and that specific repair instructions, if required are provided by engineering documentation.

RECOMMENDATIONS:

In order to preclude future problems when accomplishing DSRV seating surface inspection requirements, resolution to the recommendation shown below is requested since no written NAVSEA direction could be located.

NAVSEA concur that work on the DSRV seating surfaces does not require REC and that the SSN673 SSCB Plate 1 is correct.

NOTE: If NAVSEA does not concur, than paragraph 6.3.2.2.b of Reference (g) should be expanded to state that the exception does not apply to work on the DSRV seating surfaces and the 637 Class SSCB's be changed to show the seating surfaces in red.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: NNS		2. INFO: ALL		3. SERIAL NO. NNS-004-93-92Q(1)	
4. SUBJECT REC OF DSRV SEATNG SURFACES				5. FORM TYPE RESPONSE	
6. PAGE		7. PARAGRAPH		8. ISSUE DATE 03/17/94	
9. REQSTD RESP DATE					

10. COMMENTS/RECOMMENDATIONS

- Ref: (a) USS FLYING FISH SSN673 Submarine Safety Certification Boundary Book (Non-Nuclear), S9SSN-WN-SCB-010/SSN-673
 (b) Submarine Safety (SUBSAFE) Requirements Manual, NAVSEA 0924-062-0010, Rev B-1
 (c) NAVSEA Dwg # 115-2141297, Rev J, SSN 637 Class Escape Trunk Forward
 (d) Submarine Safety Certification Boundary Book SSN 719-725, 750 & Later, NAVSEA S9SSN-X2-SCB-010
 (e) Submarine Safety Certification Boundary Book (U) SSBN 726 Class, S9SSB-X9-SCB-010/(C) SSCB

Comments:

1. SSLAR NNS-004-93 stated that during an SOSNN SUBSAFE audit of SRA work performed on SSN673 a Category I audit card was written against NNS for not implementing re-entry controls for hand sanding smooth and repainting the forward and aft DSRV seating surfaces. NNS stated a REC was not initiated because Plate 1 of reference (a) shows the DSRV seating surface in black. However, SOSNN later advised NNS that SOSNN had been provided verbal instructions from NAVSEA that any work associated with DSRV operations required a REC and Plate 1 of reference (a) is incorrect. NNS went on to state that even if the seating surfaces are SUBSAFE paragraph 6.3.2.2.b of reference (b) states that an activity normally engaged in submarine construction or repair is not required to invoke re-entry controls when grinding on SUBSAFE portions of the hull structure when the work is accomplished in accordance with a controlled procedure that ensures the structure will not be reduced below design thickness. NNS requested that NAVSEA concur that work done on DSRV seating surfaces does not require a REC and determine whether or not reference (a) correctly depicts the SUBSAFE boundary with respect to DSRV seating surfaces. In addition, NNS requested that, if NAVSEA still considers a REC required for all work on DSRV seating surfaces, paragraph 6.3.2.2.b of reference (a) be expanded to state that the controlled grinding exception does not apply to DSRV seating surfaces.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. NNS-004-93-92Q(1)

COMMENTS/RECOMMENDATIONS

2. NAVSEA has reviewed references (b), (c), (d), (e), & a SSCB for a SSN 637 Class submarine. It was determined from this review that the DSRV mating surface forms part of the pressure hull and is within the SUBSAFE boundary for all classes of submarines. Therefore a REC is required when work is performed on a DSRV seating surface. However, NAVSEA does concur with NNS that the REC exception for grinding described in paragraph 6.3.2.2.b of reference (b) is applicable for DSRV seating surfaces.

3. NAVSEA will pursue providing information that will correct Plate 1 of reference (a).

4. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature Code Date

Jm Lawrence

393TC

3/15/94

J. A. Edwards

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: ALL	3. SERIAL NO. NNS-001-98
4. SUBJECT: MECHANICAL JOINT RECORDS FOR JOINTS WITH NO SPECIF		5. FORM TYPE REQUEST
6. PAGE 4-43	7. PARAGRAPH 4.6.4.2.1.1.B	8. ISSUE DATE
9. REQSTD RESP DATE		

10. COMMENTS/RECOMMENDATIONS

Ref: (a) Submarine Safety (SUBSAFE) Requirements Manual,
NAVSEA 0924-062-0010, Rev C

Comments:

1. Reference (a) requires a mechanical joint record for bolted pressure boundary joints ½" and larger from the inboard joint of the backup valve outboard and for 4" and larger inboard of the backup valve. Attribute 6 states that the "torque required and the torque applied" must be present on this mechanical joint record. These requirements were developed from SSLAR SWOLF-001-89-350(4) which also required that torque values be provided by the design agent on all joints within the boundaries described above.

2. Some joints on pre-SEAWOLF Class submarines that fall within the boundary specified above by reference (a) have no torque specified per the approved drawing or specification. NNS seeks NAVSEA guidance on these situations in which the torque is not specified. Is a mechanical joint record required with its specified OQE (signatures, etc.) for all joints within the above specified boundaries, even if no torque is specified? If so, what torque value should be documented on the record?

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NNS		2. INFO: ALL		3. SERIAL NO. NNS-001-98-92Q(1)	
4. SUBJECT: MECH JOINT RECORDS FOR JOINTS W/NO SPECIFIED TORQ				5. FORM TYPE RESPONSE	
6. PAGE 4-43		7. PARAGRAPH 4.6.4.2.1.1.B		8. ISSUE DATE 5/11/98	
9. REQSTD RESP DATE					

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety
(SUBSAFE) Requirements Manual
(b) NAVSEA S9505-AM-GYD-010, Submarine Fastening
Criteria (Non-Nuclear)

1. SSLAR NNS-001-98 stated that some mechanical joints on pre-SEAWOLF Class submarines that fall into the boundary of paragraph 4.6.4.2.1.1.b of reference (a) have no torque specified per approved drawing or specification. NNS requested NAVSEA guidance for mechanical joint record requirements for these joints.

2. NAVSEA has reviewed paragraph 4.6.4.2.1.1.b of reference (a) and determined that the requirements of reference (b), Appendix C, apply for these joints. Specifically, paragraph C-3 states: "Seawater system flanges shall be tightened to the torque value specified on the appropriate drawing, technical repair standard or other applicable document. If torque values are not specified elsewhere, use the torque values specified in the appropriate table of this manual. Torque values are required for load carrying fasteners associated with pressure containing part of seawater system components and flange assemblies."

3. NAVSEA considers this SSLAR series closed.

Signature	Code	Date
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<i>Jm Lawrence</i>	92TC	5/8/98
<i>Robert J. ...</i>	03432	5/8/98

MS Conn 5/10/98
SEA 92Q

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NAVSEA 92Q	2. INFO: ALLs	3. SERIAL NO. NNS-001-00	
4. SUBJECT: HI FASTENER RQMTS FOR BONNET FASTENERS IN NON-SEA CONNECTED		5. FORM TYPE Request	
6. PAGE 4-39 & 4-4	7. PARAGRAPH 4.5.14	8. ISSUE DATE	9. REQSTD RESP DATE 5/15/00

10. COMMENTS/RECOMMENDATIONS

Ref: (a) Submarine Safety (SUBSAFE) Requirements Manual, NAVSEA 0924-062-0010, Rev C

1. Reference (a) para. 4.5.14.1 defines the boundary for non-sea-connected systems terminated by a hull blanking plug to include the external blanking plug inboard to the inboard joint of the back-up valve.

2. Paragraph 4.6.5 defines HI fasteners as male threaded items such as bolts socket head cap screws, studs, and bolt studs which are loaded by the differential between sea pressure and internal atmospheric pressure, and which are a part of pressure hull integrity components or of systems penetrating the Pressure Hull Structure, from the pressure hull to and including the inboard joint of the backup valve or its equivalent.

3. The ASDS Battery Purge System piping host ship mods on SSN 688 class identified on Dwg 501-7312673 fall within the boundaries described above. The hull and back up valves are IAW DWG 256202 with some modification of ball and valve body materials. PNSY identified in PY LAR 40170 that the bonnet fasteners for these valves were not Level 1, K-monel as required by Para 4.6.5.2.a for HI fasteners.

4. NNS concurs that the subject fasteners are in the HI boundary as defined by Ref (a), but contends that these fasteners are not loaded by sea pressure under any normal mode of operation. NNS requests that NAVSEA clarify the material requirements for bonnet fasteners in this situation.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NNEWS	2. INFO: ALL	3. SERIAL NO: NNS-001-00-92Q(1)
4. SUBJECT: HI Fastener Requirements for Bonnet Fasteners		5. FORM TYPE: Response
6. PAGE: 4-39, 4-46	7. PARAGRAPH: 4.5.14	8. ISSUE DATE: 7/13/00
		9. REQSTD RESP DATE: 05/15/2000

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE) Requirements Manual
 (b) NAVSEA 0948-LP-045-7010, Material Control Standard (Non-Nuclear)
 (c) NAVSEA Dwg 256202, Valves Top Loaded Ball Stop Straight 1/4 & 1/2 IPS Nitrogen
 (d) APL 887306321
 (e) APL 887306322

- SS LAR NNS-001-00 requested that NAVSEA clarify the material requirements for the body-to-bonnet fasteners of the ASDS Battery N2 Purge System Hull and Backup valves. NNS stated that these fasteners are in the hull integrity boundary defined by reference (a), but are not loaded by sea pressure in any normal mode of operation.
- NAVSEA agrees these fasteners are not hull integrity fasteners as defined in reference (a) section 4.6.5, since they are not loaded by sea pressure. The fastener material should be as specified by the reference (c) drawing. The "Level of Essentiality" specified in references (d) and (e) is incorrect. IAW reference (b) Appendix A paragraph 1.1.1, only the hull valves and associated piping outboard are required to be Level 1 due to the system design pressure of greater than 1500 PSIG. Therefore, the valve assembly including fasteners for N-100/101, is required to be Level 1 and the valve assembly including fasteners for N-130/131 should be Level N/A.
- NAVSEA has taken action with NSLC/NAVICP to correct the associated APLs.
- It is noted that during maintenance, replacement of fasteners for N-130/131 with non-level fasteners will require downgrade of the entire valve assemblies (i.e. obliteration of MIC markings).
- NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature	Code	Date
	05033	7/11/00
	92TC	07/12/00


 MARY TOWNSEND-MANNING
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: ALL	3. SERIAL NO. NNS-002-2000
4. SUBJECT: HI MATERIAL TRACEABILITY REQUIREMENTS, 7010 VS 1688		5. FORM TYPE REQUEST
6. PAGE 4-3 & 4-47	7. PARAGRAPH 4.2.4 & 4.6.6	8. ISSUE DATE 5/19/2000
9. REQSTD RESP DATE 6/15/2000		

10. COMMENTS/RECOMMENDATIONS

Ref: (a) Submarine Safety (SUBSAFE) Requirements Manual, NAVSEA 0924-062-0010, Rev C

(b) Material Control Standard (Non-nuclear) NAVSEA 0948-LP-045-7010, Rev 2

(c) Requirements for Fabrication, Welding, and Inspection of Submarine Structure, T9074-AD-GIB-010/1688

Comments:

1. Ref (a), Paragraph 4.2.4 states: "The construction or installing activity shall review one hundred percent (100%) of the manufacturing, installation, and quality control records of all installed material within the hull integrity boundary to ensure that the material installed meets specification requirements and traceability exists when required by the invoked specification, standard, or drawing."

2. Ref (a), Paragraph 4.6.6 states "Level I material is defined by and shall be controlled in accordance with NAVSEA 0948-LP-045-7010, Material Control Standard (Non-Nuclear)." And "Hull Structural Material (HY-130, HY-80/100, and HSS) is defined by and shall be controlled in accordance with MIL-STD-1681, MIL-STD-1688, or MIL-STD-1689 as applicable."

3. Ref (b), Paragraph D.1.1.6 states that "For the purpose of assigning MIC numbers to assemblies on a lot basis, a lot shall consist of those assemblies whose major pressure boundary part is the same homogeneous lot."

4. Ref (c), Paragraph 5.7.4 states "All base material used in the pressure hull envelope shall be traceable from the required base material records to the specific location or use in the submarine, and from the specific location or use in the submarine back to the required base material records."

5. NNS notes that Ref (a) produces no additional material control requirements for HI material above those requirements in Ref (b) and (c). Yet the requirements of Ref (b) and (c) stated above are not equal. This is best explained by the following example. Consider a lot of hull penetrators purchased from a single vendor. The material test report for the base material is identical for all of the penetrators, therefore, the penetrators are all sourced from a single lot or heat. The supplier fabricates the penetrators by cutting pieces from the raw stock, machining and performing required NDT on each piece. Since a unique NDT document is required for each piece, the supplier serializes each piece such that traceability exists between each delivered piece and the NDT record for each piece. If the penetrators are bought IAW Ref (b), then one MIC number can be marked on all penetrators that were fabricated from the same base material heat. If the penetrators are bought IAW Ref (c), then unique traceability numbers are required on each penetrator.

6. NNS requests that NAVSEA address the following issues:

- Confirm that Ref (a) requires no additional material traceability requirements above and beyond Ref (b) and Ref (c) for HI material?
- Confirm the interpretation that Ref (c) requires traceability for pressure hull envelope applications which exceed the requirements of Ref (b) for similar applications?

7. NNS recommends that NAVSEA clarify the requirements such that material traceability requirements are consistent regardless of the fabrication document referenced in the building specifications for HI material.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NNS		2. INFO: ALL		3. SERIAL NO. NNS-002-00-92Q(1)	
4. SUBJECT: HI Material Traceability Requirements, 7010 Vs 1688				5. FORM TYPE Response	
6. PAGE 4-3, 4-47		7. PARAGRAPH 4.2.2, 4.6.6		8. ISSUE DATE	
				9. REQSTD RESP DATE 6/15/00	

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010, Rev C, Submarine Safety (SUBSAFE) Requirements Manual
 (b) NAVSEA 0948-LP-045-7010, Rev 2, Material Control Standard (Non-Nuclear)
 (c) T9074-AD-GIB-010/1688, Requirements for Fabrication, Welding, and Inspection of Submarine Structure.

1. SS LAR NNS-002-00 requested that NAVSEA confirm that:
 - a. Reference (a) requires no additional material traceability requirements above and beyond those contained in references (b) and (c) for Hull Integrity (HI) material.
 - b. Reference (c) requires traceability for pressure hull envelope applications that exceed the reference (b) requirements for "similar applications".

2. NAVSEA has reviewed references (a), (b), and (c) and concurs with NNS as follows.
 - a. Reference (a) section 4.2.4 states that the traceability requirements are provided by the invoked specifications. Therefore, reference (a) contains no additional traceability requirements for Level I material or Hull Structural Material within the HI boundary.
 - b. The traceability requirements for penetrators (e.g. Hull fittings; electrical and fiber optic, rodmeters, periscopes and periscope hoist cylinders, radar masts) are provided in reference (b), which does allow for traceability on a lot basis. The traceability requirements of reference (c) are only applicable to Hull Structural materials, such as hull penetrations, including hull inserts and stuffing boxes. The example provided by NNS addressed hull inserts or "penetrations", which are hull structure material and must have one-for-one traceability IAW reference (c).
 - c. Therefore, NAVSEA does not recognize a conflict in traceability requirements in the NNS example and the traceability requirements are clear. Should NNS prefer to receipt inspect all material IAW reference (b), for consistency, the additional traceability requirements of reference (c) can be accommodated by treating each penetration as a separate lot.

3. NAVSEA along with both major private shipbuilders and the public yards is currently discussing the feasibility of combining all material control and traceability requirements into one document. As part of this process the group will review the issue of differing material traceability requirements for "similar applications".

4. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature	Code	Date
<i>John S. Clark</i>	SEA 05V33	02 Oct 00
<i>Steve Sites</i>	SEA92TC	04 Oct 00

Mary Townsend-Manning 10/5/00

MARY TOWNSEND-MANNING
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: ALL	3. SERIAL NO. NNS-001-2001
4. SUBJECT: SUBSAFE Boundary Definition for Air Induction & Diesel Exhaust (AIDE) Valve		5. FORM TYPE REQUEST
6. PAGE 4-8 & 6-2	7. PARAGRAPH 4.4.1.1.1 & 6.3.2	8. ISSUE DATE 2/5/2001
9. REQSTD RESP DATE 02/19/2001		

10. COMMENTS/RECOMMENDATIONS

References:

- (a) Submarine Safety (SUBSAFE) Requirements Manual, NAVSEA 0924-062-0010, Rev C
- (b) NAVSEA DWG 501-4638884: Ventilation – Cont Rm & Attack Ctr & NAV Eqpt Space – Sect & Elev
- (c) NAVSEA DWG 516-5007928: Piping Diesel Exhaust Material and Notes

COMMENTS:

Ref. (a), Paragraph 4.4.1.1.1 which applies to the AIDE valve defines the SUBSAFE boundary as: "The piping system and components, NPS 1/2 or larger, from and including the inboard joint of the backup valve outboard to the hull or hull equivalent." Based on this boundary definition Re-Entry Control in accordance with Ref. (a), Paragraph 6.3.2, is invoked whenever piping connected to the inboard joint of the backup valves (VH-3 & VH-5) is removed.

RECOMMENDATIONS:

It is recommended that the inboard joint of the Air Induction backup valve (VH-3) and the inboard joint of the Diesel Exhaust backup valve (VH-5) be exempt from Re-Entry control requirements. The justification for this request is as follows:

- Ventilation duct, Pc. 40 on Ref. (b), connects to VH-3 at the inboard joint. The duct is not SUBSAFE and was not designed to withstand submergence pressure.
- Fasteners used for bolting the inboard flange of VH-3 to the ventilation duct are not SUBSAFE or Level I.
- 1/8" Inconel exhaust fitting, F-14 on Ref. (c), connects to VH-5 at the inboard joint. The fitting is not SUBSAFE and was not designed to withstand submergence pressure.
- Fasteners used for bolting the inboard flange of VH-5 to the exhaust fitting are not SUBSAFE or Level I.
- Standard shipyard procedures (bolting procedures) provide adequate assurance and documentation that the inboard joint will be reassembled and the proper fasteners used whenever work requires that the joint be disassembled. All activities are required to have a bolting procedure.
- Hull Integrity fasteners are defined as "... bolts, socket head capscrews, studs, and bolt studs with are loaded by the differential between sea pressure and internal hull pressure... from the pressure hull to and including the inboard joint of the backup valve...". The fasteners between the duct and VH-3 (and the exhaust fitting and VH-5) do not meet this criteria since they are not designed to withstand sea pressures.
- The joint at VH-3 is sealed by a rubber gasket. Mechanical joint records and specified torque values are not required to make up the joint per the class drawings. Proper joint make-up requires that the mechanic not over-compress the gasket. Completing a Mechanical Joint Record or QA Form 34 for make-up of this joint is not practical since there is no required torque and the mating pieces, except for VH-3/VH-5, are not Level 1.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM (cont.)

SERIAL NO. NNS-001-2001

10. COMMENTS/RECOMMENDATIONS

- Proper make-up of the VH-3 joint is verified by a 2 psi air test and the VH-5 joint is verified by a mechanical joint tightness test at normal operating pressure. Neither test is SUBSAFE. Since a mechanical joint record is not appropriate and the test requirements are not SUBSAFE, there is no SUBSAFE certification OQE to be documented in the closed REC.
- The duct work is typically removed and re-installed multiple times on a DMP/ERO availability. Requiring Re-entry control is therefore cumbersome.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: <p style="text-align: center;">NNS</p>	2. INFO: <p style="text-align: center;">ALL</p>	3. SERIAL NO: <p style="text-align: center;">NNS-001-01-92Q(1)</p>
4. SUBJECT: SUBSAFE Boundary Definition for Air Ind & Diesel		5. FORM TYPE: <p style="text-align: center;">Response</p>
6. PAGE: <p style="text-align: center;">4-8, 6-2</p>	7. PARAGRAPH: <p style="text-align: center;">4.4.1.1.1</p>	8. ISSUE DATE: <p style="text-align: center;">02/19/2001</p>

10. COMMENTS/RECOMMENDATIONS:

- References:
- (a) Submarine Safety (SUBSAFE) Requirements Manual, NAVSEA 0924-062-0010, Rev C
 - (b) NAVSEA DWG 501-4638883: Ventilation Cont Rm & Attack Ctr & NAV Eqpt Space Plan & List
 - (c) NAVSEA DWG 516-5007928: Piping Diesel Exhaust Material and Notes

COMMENTS:

1. NNS notes that reference (a), paragraph 4.4.1.1.1, which applies to the AIDE valves, defines the SUBSAFE boundary as: "The piping system and components, NPS 1/2 or larger, from and including the inboard joint of the back-up valve outboard to the hull or hull equivalent". Based on this boundary definition Re-Entry Control in accordance with reference (a), Section 6.3.2, is invoked whenever piping connected to the inboard joint of the back-up valves (VH-3 & VH-5) is removed.
2. NNS recommended that the inboard joint of the Air Induction back-up valve (VH-3) and the inboard joint of the Diesel Exhaust back-up valve (VH-5) be exempt from Re-Entry control requirements because:
 - a. Ventilation Duct special flange, Pc. 25 on reference (b), which connects to VH-3 at the inboard joint, is not SUBSAFE and was not designed to withstand submergence pressure.
 - b. The 1/8" Inconel exhaust fitting, F-14 on reference (c), which connects to VH-5 at the inboard joint, is not SUBSAFE and was not designed to withstand submergence pressure.
 - c. The duct work is typically removed and re-installed multiple times on a DMP/ERO availability. Requiring Re-Entry control is therefore cumbersome.
 - d. Standard shipyard procedures provide assurance that disassembly and reassembly of the two joints are performed properly.
3. NAVSEA considers the AIDE valves to be unique components in the SUBSAFE boundary that do not warrant Re-Entry Control requirements for the inboard joint. Exemption from REC of the inboard joint is based on the rationale that the valves are shut and not operated below periscope depth, and the inboard duct/piping would not be capable of withstanding submergence pressure. Maximum reasonable assurance of hull integrity to preclude flooding and the operability and integrity of critical systems and components to control and recover from a flooding casualty are not compromised by deleting these joints from the SUBSAFE boundary.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NNS	2. INFO: ALL	3. SERIAL NO: NNS-001-01-92Q(1)
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4. NAVSEA concurs with the NNS recommendation. PHNSY has submitted a similar recommendation to change reference (a), via Manual Change Request (MCR) DR Number N0109. NAVSEA is currently processing this MCR for incorporation into reference (a).

a. The MCR submitted by PHNSY recommends revising the boundary definition to delete inboard joints of backup valves for the Snorkel Induction and Diesel Exhaust System from the SUBSAFE boundary for 688 and later Classes.

b. The change recommendation adds new paragraph 4.4.1.1.3h. as follows: Snorkel Induction and Diesel Exhaust System. The inboard joint of the backup valve is in the SUBSAFE Certification Boundary and consists of the seat retainer to valve body joint. The ducting/piping joint to the Snorkel Induction and Diesel Exhaust hull and backup valves is excluded from the boundary.

5. NAVSEA considers this SS LAR series closed.

Program Office Technical Concurrence

Signature	Code	Date
<i>Jeffrey S. Clark</i>	<i>0503</i>	<i>3/26/01</i>
<i>Steve Pitts</i>	<i>SEA92TC</i>	<i>3/29/01</i>

Mary Townsend-Manning
 CAPT (S), USN
 Director Submarine Safety
 and Quality Assurance

Mary Townsend-Manning
4/2/01

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: ALL	3. SERIAL NO. NNS-002-2001	
4. SUBJECT: SUBSAFE and SSSR Boundaries for VLS Pressure/Vent Piping		5. FORM TYPE REQUEST	
6. PAGE 4-39	7. PARAGRAPH 4.5.14.1.a	8. ISSUE DATE 5/29/2001	9. REQSTD RESP DATE 6/22/2001

10. COMMENTS/RECOMMENDATIONS

References:

- (a) Submarine Safety (SUBSAFE) Requirements Manual, NAVSEA 0924-062-0010, Rev C
- (b) NAVSEA Drawing 513-5795662, Rev. G – Piping Pressure/Vent Inboard
- (c) Submarine Safety (SUBSAFE) Design Review Manual, NAVSEA 0941-041-3010, Chg. 7

COMMENTS:

The SUBSAFE boundary and the SSSR boundary for the VLS Pressure/Vent Piping do not agree.

Reference (a), paragraph 4.5.14.1.a, defines the SUBSAFE boundary for non-sea-connected piping systems which penetrate the pressure hull. The boundary is defined as "Piping systems and components, NPS 1/2 or larger, which operate at pressures less than collapse depth pressure, from and including the inboard connection of the first isolation valve inboard of the hull out to and including the outboard connection to the hull." With regard to the vent and pressurization piping in the Vertical Launch System, the isolation valves (which are also hull valves) consists of APV(5)-2 through APV(16)-2 on Reference (b). Prior to Revision C of Reference (a) the SUBSAFE boundary was more inclusive and extended to the inboard flange of the backup valve (valves APV(5)-1 through APV(16)-1 on Reference (b)).

Reference (c), paragraph 1.1.1.d, defines the SUBSAFE Design Review (SSDR) boundary as, "Components located between and including the hull closure and the backup valve inboard connection which are 1/2 NPS and larger, or whose failure would result in an opening of 0.28 square inches or larger." With regard to the vent and pressurization piping in the Vertical Launch System the SSSR boundary includes all piping from the hull penetration up to and including valves APV(5)-1 through APV(16)-1.

Other than SSSR hangers, NNS knows of no other case where SSSR piping components are not also included in the SS boundary as defined in Reference (a) and the appropriate Ship's SSCB. Since work on these SSSR components is not required to be controlled by an activities SS REC process, potential exists for reportable changes to be missed if activities rely on a review of SS RECs to identify SSSR reportable changes (other than SSSR Hangers).

RECOMMENDATIONS:

Currently, Reference (c) does not define the SSSR boundary based on whether a system is sea-connected or non-sea-connected (except for piping flexibility analysis). NNS recommends that Reference (c) be revised such that the SSSR boundary is a reflection of the SUBSAFE boundary as defined in Reference (a) for non-sea-connected piping systems which penetrate the pressure hull.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NNEWS	2. INFO: ALL	3. SERIAL NO: NNS-002-01-92Q(1)	
4. SUBJECT: SS & SDR Boundaries for VLS Pressure Vent Piping		5. FORM TYPE: Response	
6. PAGE: 4-39	7. PARAGRAPH: 4.5.14.1.a	8. ISSUE DATE:	9. REQSTD RESP DATE: 06/22/2001

10. COMMENTS/RECOMMENDATIONS:

References: (a) Submarine Safety (SUBSAFE) Requirements Manual, NAVSEA 0924-062-0010, Rev C
 (b) Submarine Safety (SUBSAFE) Design Review Manual, NAVSEA 0941-041-3010, Chg. 7
 (c) NAVSEA Drawing 513-5795662, Rev. G - Piping Pressure/Vent Inboard

COMMENTS:

1. NNS notes that paragraph 4.5.14.1a of reference (a) defines the SUBSAFE Boundary for non-sea-connected piping systems which penetrate the pressure hull and that the SUBSAFE Boundary for subject VLS components is described by that paragraph. Paragraph 4.5.14.1a identifies only the hull valve as being within in the SUBSAFE Boundary, vice the hull valve, back-up valve, and piping in between. NNS advises that paragraph 1.1.1.d of reference (b) is inconsistent with the above because it identifies the hull valve, back-up valve, and piping in between, as being in the SDR Boundary. On the basis that this is the only case known to NNS where the SUBSAFE Boundary and SDR Boundary are inconsistent with one another, NNS requests that NAVSEA revise reference (b), paragraph 1.1.1.d to make it consistent with reference (a), 4.5.14.1a.

2. NAVSEA has reviewed references (a) through (c), and does not concur with NNS for the following reasons:

a. Paragraph 4.4.1u of reference (a) cites subject system as an example of a sea-connected rather than non-sea-connected piping system which penetrates the pressure hull. As such, the associated SUBSAFE Boundary definition falls under 4.4.1. vice 4.5.14.

b. The SUBSAFE Boundary definition for subject VLS components is provided in paragraph 4.4.1.1.3g of reference (a), as a clarification of the general sea-connected SUBSAFE Boundary definition. Paragraph 1.1.1.d of reference (b) gives general design review boundaries, however, paragraph 2.1 of reference (b) states that reference (a) details the requirements of Design Review. Paragraph 4.6 of reference (a) requires Design Review for all items in section 4.3, 4.4, and 4.5. Therefore, the specific boundary clarification in reference (a) of the VLS Boundary applies to both the SUBSAFE boundary and the SDR boundary.

3. NAVSEA considers this SS LAR series closed.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO:

NNEWS

2. INFO:

ALL

3. SERIAL NO:

NNS-002-01-92Q(1)

Program Office Technical Concurrence

Signature

Code

Date

Steve Sits

92TC

6/18/01

Jeffrey S. Clark

m0503

7/9/01

Mary Townsend-Manning

MARY TOWNSEND-MANNING
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: ALL	3. SERIAL NO. NUWC-001-98
4. SUBJECT: DESIGN REQUIREMENTS FOR NON-METALLICS/COMPOSITES		5. FORM TYPE REQUEST
6. PAGE	7. PARAGRAPH	8. ISSUE DATE 2/6/98
9. REQSTD RESP DATE		

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual
 b) NAVSEA 0941-041-3010 Chg 7, Submarine Safety (SUBSAFE) Design Review Procedure Manual

1. Reference (a) addresses material control requirements, but does not address design requirements for non-metallic/composite material used in SUBSAFE applications.

2. Reference (b) also does not address design requirements for non-metallic/composite material used in SUBSAFE applications.

3. In June 1997, NAVSEA 92Q conducted a SUBSAFE Functional Audit of the Naval Unndersea Warfare Center, Division Newport. An audit finding in the Technical area was written as follows:

"The Periscope Submarine Satellite Information Exchange System (SSIXS) Antenna SUBSAFE Design Review Report (SSDR), which has been completed and submitted to NAVSEA, does not formally identify lack of guidance/expertise/experience with composite materials in pressurized sea water service, specifically in the area of predominate failure modes."

4. During this audit NAVSEA 92Q determined that both references (a) and (b) did not provide sufficient guidance to support design criteria for non-metallics in SUBSAFE applications. A major concern is that reference (b) does not address materials that do not exhibit elastic-plastic behavior.

Recommendation

NAVSEA issue an addendum to references (a) and (b) that addresses design requirements for non-metallics/composites used in SUBSAFE applications.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NUWC		2. INFO: ALL		3. SERIAL NO. NUWC-001-98-92Q(1)	
4. SUBJECT: DESIGN REQUIREMENTS FOR NON-METALLICS/COMPOSITES I				5. FORM TYPE RESPONSE	
6. PAGE		7. PARAGRAPH		8. ISSUE DATE 4/14/98	
9. REQSTD RESP DATE					

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual
 (b) NAVSEA 0941-041-3010 Chg 7, Submarine Safety (SUBSAFE) Design Review Procedure Manual

1. SSLAR NUWC-001-98 noted that both references (a) and (b) fail to address SUBSAFE design requirements for non-metallic/composite material used in SUBSAFE applications and requested that NAVSEA provide addenda to references (a) and (b) to address these requirements.

2. NAVSEA requests that NUWC, Division Newport submit Manual Change Requests (MCRs) to NAVSEA detailing the necessary requirements to be included in references (a) and (b).

3. NAVSEA considers this SSLAR series closed.

Program Technical Concurrence
 Signature Code Date

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<i>Jim Lawrence</i>	92TC	4/8/98
<i>Kelvin J. King</i>	SEA0943	4/8/98

MS Conn, SEA92Q
 4/9/98

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NAVSEA		2. INFO: ALL		3. SERIAL NO. NUWC-001-99	
4. SUBJECT: TOWED ARRAY STACK BALL CHECK FITTING LI CERTIFICATION				5. FORM TYPE Request	
6. PAGE B-2		7. PARAGRAPH 1.1.6.5		8. ISSUE DATE 10/15/99	
9. REQSTD RESP DATE 11/04/99					

COMMENTS/ RECOMMENDATIONS:

- Ref: (a) NAVSEA Dwg 412-4637512 Rev. R, SSN 688 Class Submarine Towed Sonar Array Cable Handling System Valve Stack Detail Sheet 1 (Newport News Shipbuilding)
- (b) NAVSEA Dwg 412-4678004 Rev. F, SSBN Trident Class Towed Sonar Hull Valve Misc Details (General Dynamics Corporation)
- (c) NAVSEA 0948-LP-045-7010, Material Control Standard
- (d) NAVSEA Ltr 9078 OPR: 393TC1 Ser 393T1391 of 20 May 1993, SSN 688 Material Identification and Control Boundary Book, Distribution of Enclosure (1), Appendix A-6, Miscellaneous Components - Towed Sonar Array Hull and Back-up Valve Stack Assembly.
- (e) SSBN 726 Class Submarine Level 1 Material Identification and Control (MIC) Boundary Book, 15 October 1998, Plate 40, Towed Sonar Array (AN/BQQ-6).
- (f) PHONECON NUWC DIVNPT (Code 70T) Mr. R. Borgeson/ NAVSEA (92T) Mr. S. Sites of 5 Oct 99

1. Item No. 11 (Fitting, Ball Check) of reference (a) and Item No. 16 (Seat, Ball Check) of reference (b) are listed as requiring Level 1 material certification in accordance with reference (c). Appendix B, Section 1.1.6.5 of reference (c) indicates these items are not required to be Level 1 because they are downstream of the hull and back-up valves within the respective Towed Sonar Array Valve Stack assemblies. This is further reflected in reference (d) for item No. 11, reference (e) for item No. 16, and in guidance provided by Mr. S. Sites during reference (f). In addition, the Naval Supply System procures and ships these items as SMIC Q3.

2. In view of this, request NAVSEA concur with Naval Undersea Warfare Center Division Newport's interpretation of references (c), (d), and (e), and approved the use of these non-level parts vice Level 1 per references (a) and (b) for all future maintenance refurbishment of OK-276 Valve Stack Assemblies by the Towed Sonar Array Handling Equipment (TAHE) Depot at NUWC DIVNPT.

<u>Signature</u>	<u>Code</u>	<u>Date</u>
Richard E Borgeson	70T	15 Oct 99

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NUWC		2. INFO: ALL		3. SERIAL NO. NUWC-001-99-92Q(1)	
4. SUBJECT: TOWED ARRAY STACK BALL CHECK FITTING LI CERTIFICATION				5. FORM TYPE Response	
6. PAGE B-2		7. PARAGRAPH 1.1.6.5		8. ISSUE DATE 12/14/99	
9. REQSTD RESP DATE 11/04/99					

COMMENTS/ RECOMMENDATIONS:

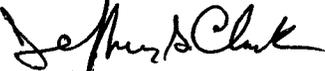
- Ref: (a) NAVSEA Dwg 412-4637512 Rev. R, SSN 688 Class Submarine Towed Sonar Array Cable Handling System Valve Stack Detail Sheet 1 (Newport News Shipbuilding)
- (b) NAVSEA Dwg 412-4678004 Rev. F, SSBN Trident Class Towed Sonar Hull Valve Misc Details (General Dynamics Corporation)
- (c) NAVSEA 0948-LP-045-7010, Material Control Standard
- (d) NAVSEA Ltr 9078 OPR: 393TC1 Ser 393T1391 of 20 May 1993, SSN 688 Material Identification and Control Boundary Book, Distribution of Enclosure (1), Appendix A-6, Miscellaneous Components - Towed Sonar Array Hull and Back-up Valve Stack Assembly.
- (e) SSBN 726 Class Submarine Level 1 Material Identification and Control (MIC) Boundary Book, 15 October 1998, Plate 40, Towed Sonar Array (AN/BQQ-6).
- (f) PHONECON NUWCDIVNPT (Code 70T) Mr. R. Borgeson/ NAVSEA (92T) Mr. S. Sites of 5 Oct 99

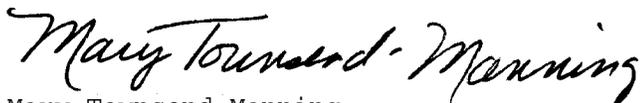
1. SS LAR NUWC-001-99, documented the NUWCDIVNPT interpretation of references (c), (d), and (e), and requests NAVSEA approval for the use of non-level parts for Item No. 11 of reference (a) and Item No. 16 of reference (b) for all future maintenance refurbishment of OK-276 Valve Stack Assemblies by the Towed Sonar Array Handling Equipment (TAHE) Depot at NUWCDIVNPT.

2. NAVSEA has reviewed references (a) through (e) and concurs with the interpretation of references (c), (d), and (e), provided in SS LAR NUWC-001-99 and approves the use of non-level parts for Item No. 11 of reference (a) and Item No. 16 of reference (b) vice Level 1 per references (a) and (b).

3. NAVSEA considers this SS LAR series closed.

Program Technical concurrence:

<u>Signature</u>	<u>Code</u>	<u>Date</u>
	0503	12/2/99
	92TC	12/13/99



Mary Townsend-Manning
Commander, USN
Director Submarine Safety
and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 92Q	2. INFO: SSWG (MINSY, PSNSY, NNSY, CNSY, PNSY)	3. SERIAL NO. PHNSY-002-87
4. SUBJECT USE OF SUPERSEDING SPECIFICATIONS		5. FORM TYPE REQUEST
6. PAGE 4-81 -4-85	7. PARAGRAPH 4.7.1 &4.7.2	8. ISSUE DATE 11/12/87
9. REQSTD RESP DATE 12/08/87		

10. COMMENTS/RECOMMENDATIONS

COMMENTS:

GENERAL TOPIC: Superseded specifications listed on drawings.

SPECIFIC TOPIC: Departure for Specifications and Design Review and Non_deviation (ND). We have all been indoctrined and re-indoctrinated in compliance with specifications and documentation using the departure from specific directions, i.e., NAVSEA C9210.4, DDGOS and 0010A.

BACKGROUND: SSN 688 class and other class drawings list specifications that have since been superseded. See attached LAR 688CL-94).

CLARIFICATION REQUESTED: Do we control use of superseding specifications as a departure from specifications? Do we account for the use of the superseding specifications on the ERDs for Design Review?

RECOMMENDATIONS:

Provide clarification.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: PHNSY	2. INFO: ALL	3. SERIAL NO. PHNSY-002-87-92Q(1)
4. SUBJECT MATERIAL SPECIFICATIONS		5. FORM TYPE RESPONSE
6. PAGE 4-81 to 4-85	7. PARAGRAPH 4.7.1 and 4.7.2	8. ISSUE DATE 02/02/88
9. REQSTD RESP DATE		

10. COMMENTS/RECOMMENDATIONS

COMMENTS:

Paragraphs 4.7.1 and 4.7.2 were addressed at the 8-11 Dec 87 Submarine Safety Working Group (SSWG) meeting and assigned to SEA 05 for technical review.

Further action on SS LAR PHNSY-002-87 is held in abeyance until input is provided by SEA 05. A SS LAR response will be issued providing the results of SEA 05 technical review.



SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: PHNSY		2. INFO: ALL		3. SERIAL NO. PHNSY-002-87-92Q(2)	
4. SUBJECT MATERIAL SPECIFICATIONS				5. FORM TYPE RESPONSE	
6. PAGE		7. PARAGRAPH		8. ISSUE DATE 03/21/94	
9. REQSTD RESP DATE					

10. COMMENTS/RECOMMENDATIONS

Ref: (a) SUBMEPP SSN 688 Class Availability Work Package SWLIN
002Y01, Availabilty Specifications, Section 01.01
(b) NAVSHIPS Submarine Material Certification Design
Review Procedure Manual, NAVSHIPS 0941-041-3010

Comments:

1. SSLAR PHNSY-002-87 stated that SSN 688 Class drawings often list specifications that have been superseded. PHNSY requested that NAVSEA clarify if a departure from specification is necessary to control the use of a superseding specification, and if so, how should the shipyard account for the use of the superseding specification on Engineering Review Diagrams (ERDs) during the design review process.

2. NAVSEA has reviewed the requirements of reference (a) and does not consider it necessary to control use of a superseding specification with a departure, provided the specification revisions meet the intent and interface with the other requirements of the specification initially invoked by NAVSEA for the specific availability. The superseding specifications should be recorded on the appropriate system ERD. These changes to the system ERD should be included with the design review submittal in accordance with the requirements of paragraph 9.5.1.b.2 of reference (b).

3. The guidance provided in paragraph 2 above is not unique to SSN 688 Class submarines, it is also applicable to all classes of submarines. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence
Signature Code Date
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Jim Lawrence

3935C

3/17/94

D.A. Edwards 3/21/94

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 92Q	2. INFO: SSWG (MINSY, PSNSY, NNSY, CNSY, PNSY)	3. SERIAL NO. PHNSY-003-87	
4. SUBJECT RECONSTRUCTION OF LOST DOCUMENTATION		5. FORM TYPE REQUEST	
6. PAGE 4-149/150	7. PARAGRAPH 4.7.12	8. ISSUE DATE 11/12/87	
9. REQSTD RESP DATE 12/08/87			

10. COMMENTS/RECOMMENDATIONS

COMMENTS:

GENERAL TOPIC: Documentation

SPECIFIC TOPIC: Reconstruction of actions for lost documentation.

BACKGROUND: There have been instances when documentation has been lost but required actions can be reconstructed from other documentation and signed statements of actions taken.

CLARIFICATION REQUESTED: Are signed statements of actions taken for lost documentation together with other records that substantiate statements that are true acceptable for SUBSAFE documentation? Based on discussions with NAVSEA 92Q personnel, NAVSEA functional audit and Senior Board Review, I view reconstruction of documentation as "testimony" not documentation. What is NAVSEA 92Q position and guidance on reconstruction of actions for lost documentation?

RECOMMENDATIONS:

Provide clarification and guidance.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: PHNSY	2. INFO: ALL	3. SERIAL NO. PHNSY-003-87-92Q(1)
4. SUBJECT RECONSTRUCTION OF LOST DOCUMENTATION		5. FORM TYPE RESPONSE
6. PAGE 4-149/4-150	7. PARAGRAPH 4.7.12	8. ISSUE DATE 02/02/88
9. REQSTD RESP DATE		

10. COMMENTS/RECOMMENDATIONS

COMMENTS:

Paragraph 4.7.12 was addressed at the 8-11 Dec 87 Submarine Safety Working Group (SSWG) meeting and assigned to SEA 05 for technical review.

Further action on SS LAR PHNSY-003-87 is held in abeyance until input is provided by SEA 05. A SS LAR response will be issued providing the results of SEA 05 technical review.



SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: PHNSY		2. INFO: ALL		3. SERIAL NO. PHNSY-003-87-92Q(2)	
4. SUBJECT RECONSTRUCTION OF LOST DOCUMENTATION				5. FORM TYPE RESPONSE	
6. PAGE 4-149/4-150		7. PARAGRAPH 4.7.12	8. ISSUE DATE 07/07/92		9. REQSTD RESP DATE

10. COMMENTS/RECOMMENDATIONS

Ref: (a) Submarine Safety (SUBSAFE) Requirements Manual,
NAVSEA 0924-062-0010, Rev A

Comments:

1. SSLAR PHNSY-003-87 noted that Chapter 4 of reference (a) does not contain requirements for reconstructing lost SUBSAFE work documentation. PHNSY requested that NAVSEA provide position on the issue of whether signed statements together with other records that substantiate the validity of the signed statements are acceptable substitutes for lost SUBSAFE documentation.

2. NAVSEA does not, as normal procedure, concur that signed statements along with supporting records are acceptable replacements for lost SUBSAFE documentation. Each instance of lost SUBSAFE documentation needs to be evaluated on a case basis. The action necessary to offset the lost documentation should be based on an evaluation of the seriousness of the lost documentation, the supportiveness of the "other documentation" and a risk assessment of the situation. (This response is also applicable to NAVSEA 0924-062-0010, Rev B).

3. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature Code Date

Frank Leonard

393702

7/7/92

*J.F. 142
929*

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 92Q	2. INFO: SSPD	3. SERIAL NO. PHNSY-001-93	
4. SUBJECT CERT/STOCKING OF NON-NUC MATERIAL USED W/SS BNDRY		5. FORM TYPE REQUEST	
6. PAGE 2-13	7. PARAGRAPH 2.4	8. ISSUE DATE 06/09/93	9. REQSTD RESP DATE 07/09/93

10. COMMENTS/RECOMMENDATIONS

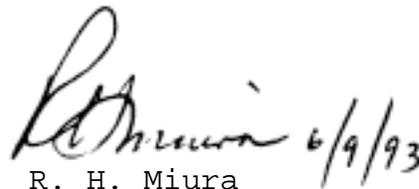
Ref: (a) COMNAVSEASYSYSCOM ltr 4855 OPR 07Q1B Ser 07Q/078 of
11 June 1992
(b) NAVSEA 0948-LP-045-7010, Rev 2, ACN 1-1
(c) NAVSEA 0924-062-0010, Rev B

1. Reference (a) identifies 78 activities that have been approved by NAVSEA 07Q to certify LEVEL I material per reference (b). Each of these activities have been assigned a Certifying Activity Designator (CAD).

2. Reference (c), paragraph 2.4 states "When SUBSAFE and LEVEL I material is required for use within certification boundaries but is not available through the three stocking and issuing activities identified above, the material may be obtained from one of the following certifying activities:...". There are only twelve (12) activities listed in this paragraph. The 12 activities are also a part of the list provided by reference (a).

3. Why does reference (c) authorize only the 12 specified activities to certify LEVEL I material used in the certification boundary, while reference (a) authorizes 78 activities to certify LEVEL I material? The requirements for certifying LEVEL I material per reference (b) are the same for all LEVEL I material regardless of where it is to be installed.

4. Request reference (c) be revised to allow all activities, authorized by NAVSEA 07Q per reference (a), to certify LEVEL I material for use in the certification boundary.


R. H. Miura

Copy to:
Code 136.2(RU)
200S
260.05
260.03

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: PHNSY		2. INFO: SSPD / / /		3. SERIAL NO. PHNSY-001-93-92Q(1)	
4. SUBJECT CERT/STOCKING OF NON-NUC MATERIAL USED W/SS BNDRY				5. FORM TYPE RESPONSE	
6. PAGE 2-13		7. PARAGRAPH 2.4		8. ISSUE DATE 08/02/93	
9. REQSTD RESP DATE					

10. COMMENTS/RECOMMENDATIONS

- Ref:
- (a) Submarine Safety (SUBSAFE) Requirements Manual, NAVSEA 0924-062-0010, Rev B
 - (b) COMNAVSEASYS COM ltr 4855 OPR 07Q1B Ser 07Q/078 of 11 June 1992
 - (c) Material Control Standard (Non-Nuclear) Vol. 1, NAVSEA 0948-LP-045-7010, Rev. 2

Comments:

1. SSLAR PHNSY-001-93 requested that the list of authorized Level I/SUBSAFE certifying activities in paragraph 2.4 of reference (a) be expanded to include all the Level I certifying activities identified in reference (b). PHNSY stated that their rationale for this revision is that all Level I material is certified in accordance with reference (c) regardless of end use.

2. NAVSEA does not concur with PHNSY's proposed change to paragraph 2.4 of reference (a). While all 78 activities identified in reference (b) are recognized as Level I certifying activities only those listed in paragraph 2.4 of appendix D to reference (a) are authorized to certify Level I material for use in SUBSAFE applications by another activity. This requirement is reflected in paragraph 1.6.4 of reference (c). If Level I material is acquired from an activity other than those listed in paragraph 2.4 of reference (a) the receiving activity is required to obtain the appropriate OQE and certify the material for SUBSAFE use.

3. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature Code Date

Jim Zanbetta

393TC

7/30/93

P.A. Edwards
8/2/93

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: SSPDS	3. SERIAL NO. PHNSY-001-98	
4. SUBJECT: MINOR DEPARTURES		5. FORM TYPE REQUEST	
6. PAGE 3-4	7. PARAGRAPH 3.4.1.1.C	8. ISSUE DATE 7/14/98	9. REQSTD RESP DATE 7/17/98

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEAINST 5400.95A
 (b) NAVSEA 0924-062-0010
 (c) SSLAR PHNSY 002-92-92Q(1)
 (d) NAVSEA 0902-LP-018-2010

1. Reference (a) is applicable to SUBSAFE work as defined in reference (b). The requirements for minor departures differ between reference (a) and reference (b). Reference (a) allows the CHENGs to approve all minor non-conformances provided the approval does not have a deleterious effect on cost and schedule. Reference (b) requires that the shipyard to forward minor non-conformances to the planning yard by LAR for disposition. In addition, reference (b), paragraph 3.4.2 allows the TYCOM to approve all request for departures if the departure were not classified as critical/major or when NAVSEA is requested to evaluate a temporary departure as a permanent departure.

2. PHNSY & IMF are now regionalized and all previous IMF work is now planned and executed by this activity. The previous IMF activity routinely processed minor non-conformances via the TYCOM in accordance with the Joint Fleet Maintenance Manual (CINCLANTFLT/CINPACFLTINST 4790.3). Departures for PHNSY & IMF work are now the responsibility of the CHENG (Code 240). The existing process in reference (b) will not support the needs of the fleet. The technical authority as authorized by reference (a) is essential for the pilot to be effective.

3. In regards to the above, it is requested that this shipyard be allowed to process minor non-conformances as allowed by reference (a) vice reference (b). Reference (c) was a similar request for which the process allowed by reference (d) was approved in lieu of following reference (b) requirements for pre-SSN 688 Class submarines. A response is requested by 17 July 1998.

R. PINHO, CODE 240

M. TAKAFUJI, CODE 200S

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PHNSY		2. INFO: ALL		3. SERIAL NO. PHNSY-001-98-92Q(1)	
4. SUBJECT: MINOR DEPARTURES				5. FORM TYPE RESPONSE	
6. PAGE 3-4		7. PARAGRAPH 3.4.1.1.C		8. ISSUE DATE 7/17/98	
9. REQSTD RESP DATE 7/17/98					

10. COMMENTS/RECOMMENDATIONS

- Ref: (a) NAVSEAINST 5400.95A Policy for Non-Nuclear Non-Conformance Approval and Delegation of Technical Authority to Shipyard and SUPSHIP Chief Engineers
- (b) NAVSEA 0924-062-0010 Submarine Safety (SUBSAFE) Requirements Manual
- (c) NAVSEA 0902-LP-018-2010 General Overhaul Specification for Deep Diving SSBN/SSN Submarines

1. ISSUE:

a. SSLAR PHNSY-001-98 stated that references (a) and (b) differ regarding requirements for minor departures. Reference (a) allows the CHENGs to approve all minor non-conformances, provided their approval does not have a deleterious effect on cost and schedule. But reference (b) requires shipyards to forward minor non-conformances to the planning yard by LAR for disposition. In addition, reference (b), paragraph 3.4.2 allows the TYCOM to approve all requests for departure not classified as critical/major or when NAVSEA is requested to approve a temporary departure as a permanent one.

b. PHNSY & IMF are now regionalized and all previous IMF work is now planned and executed by this activity. The previous IMF activity routinely processed minor non-conformances via the TYCOM in accordance with the Joint Fleet Maintenance Manual (CINCLANTFLT/CINPACFLTINST 4790.3). Departures for PHNSY & IMF work are now the responsibility of PHNSY CHENG(code 240).

c. On the basis that the reference (b) process will not support the needs of the fleet, PHNSY requests that they be allowed to process minor non-conformances in accordance with reference (a) vice (b). This technical authority, as authorized by reference (a), is essential for the pilot to be effective.

2. RESOLUTION:

a. Reference (a) allows the shipyard CHENG to approve all minor non-conformances provided the approval does not have a deleterious effect on cost or schedule.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. PHNSY-001-98-92Q(1)

COMMENTS/RECOMMENDATIONS

b. Reference (b) and (c) allow a Supervising Authority or Shipyard Engineering organization, respectively, to approve a minor departure locally if it can be accepted in accordance with NAVSEA approved technical requirements and standards listed in those references. Per reference (b) and (c), if a minor non-conformance cannot be accepted in accordance with those requirements or standards, it must be forwarded to the Planning Yard for approval.

c. Reference (a) assigns the NAVSEA Deputy Commander for Engineering line authority, on an additional duty basis, over all field organization elements that exercise technical decision making. Reference (a) designates Shipyard and SUPSHIP CHENGs accountable, as an additional duty, to the NAVSEA Deputy Commander for Engineering foreexecution of non-nuclear technical authority delegated to their activity by NAVSEA.

d. Given this additional authority and accountability assigned by reference (a), NAVSEA concurs with PHNSY recommendation that CHENGs may process for approval all minor SUBSAFE non-conformances.

e. As required by references (a), (b), and (c), minor non-conformances are still required to be forwarded to the Planning Yard for information and applicable software changes.

NAVSEA considers this SSLAR series closed

Program Office Technical Concurrence

Signature Code Date
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<i>Steven J. Lutz</i>	<i>SEA92TC1</i>	<i>7-17-98</i>
<i>Robert J. Cing</i>	<i>SEA03432</i>	<i>7/17/98</i>
<i>Chris De Camp</i>	<i>SEA 92Q</i> <i>acting</i>	<i>7/17/98</i>

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 92Q	2. INFO: SSPDS	3. SERIAL NO. PNSY-007-89	
4. SUBJECT POST INSTALLATION TESTING OF ELEC HULL FITTINGS		5. FORM TYPE REQUEST	
6. PAGE 5-6	7. PARAGRAPH 5.2.1.1	8. ISSUE DATE 09/07/89	9. REQSTD RESP DATE 09/29/89

10. COMMENTS/RECOMMENDATIONS

- Ref (a) NAVSEA 0924-062-0010 REV (-)
 (b) NAVSEA 0924-062-0010 REV (A)
 (c) PERA(SS) 4700-087-0010 REV 4 SHIP WORK AUTH BOUNDARIES FOR SUBMARINES OF JULY 1987
 (d) NAVSEA 0901-LP-884-0004
 (e) NAVSHIPS ltr 425:GLH:eat 9290 ser 3611-425 of 19 NOV 73
 (f) NAVSEA ltr 924/GLH 9290 Ser 1020-924 of 24 MAR 1975
 (g) NAVSEA 0902-018-2010
 (h) NAVSHIPYD PTSMH Spdltr 270.2:BBS:gro 9090 Ser 270/119 of 21 Apr 1982
 (i) NAVSEA ltr 921T/MAD 9610/2 Ser 1320-921 of 7 May 1982
 (j) COMSUPAC ltr 4855 4012-47 Ser 07212 (not dated)
 (k) NAVSEA ltr 4855 OPR PMS 393TH5 Ser 393T/0185 of 12 JAN 1989
 (l) NAVSEA ltr 4710 OPR PMS 396A312 Ser 396A3/1420 (not dated)
 (m) MSG NAVSHIPYD MARE ISLAND CA 200801Z JUL 89
 (n) Dwg 126-2482085 Rev D
 (o) Dwg 126-4403300 Rev S
 (p) Dwg 126-4556170 Rev B

1. Recent correspondence and discussion of post installation testing of electrical hull fittings (EHFs) has generated confusion in the interpretation of existing requirements. References (a) through (i) and (n) through (p) reflect that a compartment completion test per section 9290-8-b of reference (g) and additional tests per reference (f) to prove any subsequent repairs constitutes a full determination of the water tight integrity of the submarine for the areas or components tested. References (j) through (m) constitute a shift in interpretation, subsequently requiring each joint which will be subject to sea pressure when the ship is submerged, to be recorded on the deep dive test form, tested by submerging the ship to its design test depth, and certified at each incremental depth. Requiring each EHF to be listed in the deep dive test form per section 9290-8-C of reference (g) would be inconsistent with the method of tightness testing per section 9290-8-C for other hull integrity joints. eg...hull-cut joints and hatches. The joints in the examples receive non-destructive testing or operational testing and are observed by walk-throughs during each incremental depth in lieu of observing and recording each joint on the deep dive test form. Historically, this approach

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. PNSY-007-89

COMMENTS/RECOMMENDATIONS

has been successful in identifying any minor joint leakage during submergence to test depth.

2. Request NAVSEA evaluate the interpretation that a compartment completion test per section 9290-8-b of reference (g), additional tests per reference (f) to prove any subsequent repairs, and certification of walk-through inspections during each incremental depth to test depth is sufficient objective quality evidence to meet post installation (non-electrical) testing for electrical hull fittings in lieu of listing the deep dive test form number on each REC and listing each joint record on the deep dive test form.

3. References (k) and (l), which constitute the change (or, at the very least a significant clarification which has a major effect on how shipyards now must test) in NAVSEA position on this issue, had only limited distribution. Therefore, the only written correspondence on this new interpretation I am aware of is the discussion summary presented in the minutes of the SUBSAFE Working Group Meeting, 31 MAY - 02 JUN 1989, issued by Ser 92Q/283 of 22 JUN 1989. Given that, and the numerous other, apparently conflicting, references which this shipyard has used in the past, I believe formal written NAVSEA direction is required which details current applicable requirements as NAVSEA wants them implemented, and the components to which these requirements apply.

4. References (a) through (p), or applicable portions, will be forwarded upon request.

D J ROONEY

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: PNSY	2. INFO: ALL	3. SERIAL NO. PNSY-007-89-92Q(1)	
4. SUBJECT POST INSTALLATION TESTING OF EHF		5. FORM TYPE RESPONSE	
6. PAGE	7. PARAGRAPH	8. ISSUE DATE 04/08/93	9. REQSTD RESP DATE

10. COMMENTS/RECOMMENDATIONS

Ref: (a) General Overhaul Specifications for Deep Diving
SSBN/SSN Submarines, NAVSEA 0902-018-2010
(b) NAVSEA ltr 924/GLH 9290 ser 1020-924 of 24 Mar 1975
(c) Submarine Safety (SUBSAFE) Requirements Manual,
NAVSEA 0924-062-0010, Rev B

Comments:

1. SSLAR PNSY-007-89 requested that NAVSEA evaluate their interpretation of the requirements in the references to PNSY-007-89 regarding the post installation watertight integrity testing of electrical hull fittings (EHFs). PNSY stated that they consider a certification of the walk-through inspections during each incremental change in depth down to test depth, as required by section 9290-8-c of reference (a), sufficient OQE to meet the EHF post installation (non-electrical) testing requirements. PNSY noted this action is in lieu of listing each joint record individually on the deep dive test form and identifying the deep dive test form number on each REC.

2. NAVSEA has reviewed the guidance contained in the references to PNSY-007-89 and has determined that all EHFs which have undergone SUBSAFE work are to be listed on the deep dive test form by compartment & joint number and visually inspected for leaking during the deep dive test. However, a single signature for each compartment, at each depth increment, certifying the watertight integrity of the compartment is acceptable OQE to meet post installation testing requirements of all EHFs in that compartment. In cases where an EHF is not visible, inspection will include, as a minimum, a general area check for drips and wet lagging in the vicinity of the EHF in question and other evidence that the EHF lacks watertight integrity.

3. NAVSEA also reviewed the testing requirements of reference (b) and determined that these requirements are completion testing requirements and are not intended to prove the watertight integrity of repairs performed on an EHF subsequent to the deep dive test.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. PNSY-007-89-92Q(1)

COMMENTS/RECOMMENDATIONS

4. NAVSEA will initiate a Manual Change Request to Chapters 4, 7, 8, & 9 of reference (c) to reflect the guidance provided in paragraph 2 above.

5. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence
Signature Code Date

Jm Lawrence

393TC

3/25/93

*J.R. [unclear]
S-4025
18/10/93*

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 92Q	2. INFO: SSPDS	3. SERIAL NO. PNSY-002-90
4. SUBJECT SSN 688 CLASS HEAT EXCH TUBES AND TUBE PLUGS		5. FORM TYPE REQUEST
6. PAGE 3-67	7. PARAGRAPH 3.3.1.1.1	8. ISSUE DATE 09/07/90
9. REQSTD RESP DATE 10/01/90		

10. COMMENTS/RECOMMENDATIONS

- References (a) NAVSEA S9SSN-XG-SBB-010/SSN700-10 SUBMARINE SAFETY CERTIFICATION BOOK (SSN 688 CLASS SUBMARINES)
- (b) NAVSEA 0948-LP-045-7010 VOL1 REV2 JUNE 1989 MATERIAL CONTROL STANDARD
- (c) NAVSEA 0924-062-0010 (A) SUBSAFE MANUAL
- (d) NAVSEA 0924-062-0010 (-) SUBSAFE MANUAL
- (e) LAR 705-191
- (f) LAR 705-205

1. Reference (a) shows all seawater condenser and heat exchanger tubes in dashed red lines indicating that the tubes are within the material certification boundary.

2. Reference (b) excludes heat exchangers, and condensers from LEVEL I requirements except when specifically included within the Submarine Safety Certification Boundaries as defined in Sections 4.4, 4.5, and 4.6 of reference (c). Sections 4.4, 4.5, and 4.6 of reference (c) are not invoked currently on Shipyards. However, boundary description definitions in sections 4.4, 4.5, and 4.6 do not include heat exchanger tubes.

3. Rev 1 of reference (b) excludes heat exchangers, and condensers from LEVEL I requirements unless the system piping or component drawing specifically defines the item as LEVEL I. Drawings 6295919 Rev (-) and 6295917 Rev (-) of Shipalt 3380D require tubes and plugs to be Level I.

4. Other pre-688 class submarines drawings and SSCBs do not show the tubes as Level I or in red respectively.

5. The tubing sizes for these heat exchanges and condensers range from 5/8 to 3/4 inches outside diameter and therefore are not within the requirements of 1/2-inch ips and larger, para 3.2.1.1.1 of reference (d).

6. References (e) and (f) were sent to the Planning Yard concerning this issue and were answered without resolving the question.

7. Questions:

- a. Are the tubes for the heat exchangers and condensers described above within the SUBSAFE boundary and thus require SUBSAFE controls?

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. PNSY-002-90

COMMENTS/RECOMMENDATIONS

- b. Are the tubes and any tube plugs required to be Level I?
- c. Do these requirements also apply to pre-688 class ships?

D. J. ROONEY

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: PNSY		2. INFO: ALL		3. SERIAL NO. PNSY-002-90-92Q(1)	
4. SUBJECT SSN 688 CLASS HEAT EXCH TUBES AND PLUGS				5. FORM TYPE RESPONSE	
6. PAGE 3-67		7. PARAGRAPH 3.3.1.1.1		8. ISSUE DATE 01/15/92	
9. REQSTD RESP DATE					

10. COMMENTS/RECOMMENDATIONS

- Ref: (a) SSLAR SER PNSY-002-90
 (b) NAVSEA S9SSN-XG-SSB-010/700-10 SUBMARINE SAFETY CERTIFICATION BOUNDARY BOOK (SSN 688 CLASS)
 (c) NAVSEA 0924-062-0010 (-) SUBSAFE MANUAL
 (d) NAVSEA 0924-062-0010, REV B
 (e) NAVSEA S9SSBN-X9-SCB-010/(c) SUBMARINE MATERIAL CERTIFICATION BOUNDARY BOOK, SSBN 726 CLASS
 (f) NAVSEA 0905-507-1010 SUBMARINE SEA TRIAL CERTIFICATION BOOKLET, SSN 688 CLASS
 (g) S9SSB-X9-SHP-010 SUBMARINE SEA TRIAL CERTIFICATION BOOKLET, SSBN 726 CLASS
 (h) NAVSEA 0948-045-7010 VOL 1 REV 2 JUNE 1989 MATERIAL CONTROL MANUAL

1. Reference (a) noted an inconsistency between reference (b) which designates seawater heat exchanger tubes SUBSAFE and reference (c) which does not include the tubes within the SUBSAFE boundary. Reference (a) requested answers to the following related questions:

- a. Are tubes for SSN 688 Class heat exchangers within the SUBSAFE boundary?
- b. Are tubes for SSN 688 Class heat exchangers and tube plugs Level I?
- c. Do these requirements apply to pre-688 Class ships?

2. Although your SSLAR did not address TRIDENT Class submarines, the following response includes TRIDENT, since similar questions are applicable to them.

SUBSAFE requirements:

a. Heat exchanger tubes are not within the SUBSAFE boundary, as defined by either reference (c) or reference (d), for any submarine. Therefore, references (b) and (e) are incorrect in depicting the heat exchanger tubes to be within the SUBSAFE boundary. We also note reference (f) is correct in excluding heat exchanger tubes and reference (g) is incorrect in including these tubes.

- b. Heat exchanger tube plugs for all submarines are not

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. PNSY-002-90-92Q(1)

COMMENTS/RECOMMENDATIONS

within the SUBSAFE boundary established by either reference (c) or (d).

3. Level I requirements:

a. All heat exchanger tubes are excluded from Level I material control, in accordance with reference (g), appendix B, paragraph 2.1.9.

b. Although reference (g), appendix B, paragraph 1.1.3 requires all plugs "opened to sea below 200 feet" to have Level I material control, this requirement is intended to apply to plugs in a pressure boundary where failure would let the fluid into the ship. Therefore, plugs in heat exchanger tubes are not classified as Level I.

4. In order to correct existing documents to reflect correct requirements NAVSEA will pursue the following changes:

a. Revise references (b), (e), and (g) to delete heat exchanger tubes from the SUBSAFE boundary.

b. Revise reference (h) to clarify that condenser tube plugs are not "plugs opened to sea below 200 feet" and therefore excluded from Level I requirements.

Until these changes are invoked all activities shall comply with existing requirements summarized in paragraphs 2 and 3 above.

5. NAVSEA considers this SS LAR series closed.

Program Office Technical Concurrence

Signature Code Date

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<i>Jm Zahenc</i>	393 TM	11/10/92
<i>M. M. Sid</i>	396 T2	11/15/92

J.P. [Signature]
SEA 929, 1/15/92

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: ALL	3. SERIAL NO. PNSY-001-95	
4. SUBJECT: POST INSTALLATION TESTING OF HULL FITTINGS		5. FORM TYPE REQUEST	
6. PAGE 4-50	7. PARAGRAPH 4.6.8.3	8. ISSUE DATE 12/18/95	9. REQSTD RESP DATE 1/19/96

10. COMMENTS/RECOMMENDATIONS

Ref: (a) COMSUBLANT/COMSUBPACINST 4855.2B CH1 QA Manual
 (b) NAVSEA 0902-018-2010 Submarine Deep Diving General Overhaul Specifications
 (c) NAVSEA 0924-062-0010 Rev C Submarine Safety (SUBSAFE) Requirements Manual

1. Portsmouth Naval Shipyard performs work on various SUBSAFE components for the fleet (e.g. Electrical Hull Fittings, Hatch repairs etc.) Portsmouth has identified a conflict in specification requirements between the testing required by reference (a) and the testing required by reference (b) as interpreted in accordance with response to SSLAR PNSY-007-89 and NAVSEA ltr Ser PMS393T/0185 of 12 Jan 89.

2. Section 3.8.5 and 3.8.6 of reference (a) allow exemptions and alternative retest requirements for work in the hull integrity boundary. For example, electrical hull fittings in the sphere only require a 12 psig air test and no subsequent deep dive test to test depth in accordance with note 17 of Section 3.8.6 of reference (a). Another example: After restoration of a hatch, the only tightness retest required is a 12 psig compartment/trunk test in accordance with note 25 of Section 3.8.6. Section 3.8.6 of reference (a) provides many other exemptions from tightness testing to test depth.

3. Reference (c) requires that SUBSAFE testing be conducted in accordance with various testing programs, e.g., references (a) and (b). NAVSEA has interpreted that repair and restoration of hull integrity items require a completion test or alternative/modified completion test and a deep dive to certify hull joints subjected to sea pressure in response to SSLAR PNSY-007-89-92Q1 of Apr 8, 93 and by NAVSEA ltr Ser PMS393T/0185 of 12 Jan 89.

4. Portsmouth requests NAVSEA review the requirements in reference (a) and (b) and resolve the disparity of testing requirements between the two documents, i.e., either allow the exemptions for both the fleet and shipyards, or require both the fleet and shipyards to require a deep dive to certify hull joints subjected to sea pressure.

D. J. Rooney

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PNSY	2. INFO: ALL	3. SERIAL NO. PNSY-001-95-92Q(1)	
4. SUBJECT: POST INSTALLATION TESTING OF HULL FITTINGS		5. FORM TYPE RESPONSE	
6. PAGE 4-50	7. PARAGRAPH 4.6.8.3	8. ISSUE DATE 9/4/98	9. REQSTD RESP DATE 1/19/96

10. COMMENTS/RECOMMENDATIONS

- Ref:
- (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual
 - (b) NAVSEA 0902-018-2010, General Overhaul Specifications for Deep Diving SSBN/SSN Submarines
 - (c) COMSUBLANT/COMSUBPACINST 4855.2B CH1 QA Manual
 - (d) SSLAR PNSY-007-89-92Q (1)
 - (e) NAVSEA ltr Ser PMS393T/0185 of 12 Jan 89
 - (f) CINCLANTFLT/CINCPACFLTINST 4790.3 Joint Fleet Maintenance Manual (JFMM)

1. PNSY-001-95 stated reference (a) requires the retesting of work within the hull integrity boundary to be conducted in accordance with the requirements of references (b) & (c). However, PNSY identified a conflict between the requirements of references (b) and (c) with respect to whether or not a controlled deep dive is necessary to recertify the tightness of hull integrity items which are subjected to sea pressure. PNSY's interpretation of the retest requirements of reference (b) is that all hull integrity items which are worked during an availability are to be subjected to a controlled deep dive. NAVSEA concurred with this interpretation via references (d) and (e). PNSY noted that reference (c) identifies other testing alternatives (e.g. a 12 psig air compartment/tank pressurization/completion test) to satisfy the tightness requirement. PNSY requested NAVSEA review references (b) and (c) and resolve the disparity in the retest requirements of the two documents.

2. NAVSEA does not concur with PNSY's interpretation of references (b) and (c). Both require a completion test and a visual inspection during the first controlled dive. With the promulgation of reference (f), reference (c) was canceled. Reference (f) requires a completion test and a visual inspection during the first controlled dive. Actual testing requirements are contained in NAVSEA drawing 126-5792666 which is referenced in the JFMM and the DDGOS.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. PNSY-001-95-92Q(1)

COMMENTS/RECOMMENDATIONS

3. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature Code Date

Steven L. Fite

92TC

9-1-98

Robert J. Gray

03432

9/03/98

J. Chan, Sec 92Q
9/4/98

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: SSPDS	3. SERIAL NO. PNSY-002-96
4. SUBJECT: BOLTED PRESSURE BOUNDARY JOINTS		5. FORM TYPE REQUEST
6. PAGE 4-43	7. PARAGRAPH 4.6.4.2.1.1B	8. ISSUE DATE 1/22/96
		9. REQSTD RESP DATE 2/22/96

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual

1. Section 4.6.4.2.1.1b of reference (a) details required objective quality evidence for mechanical joints. Some of the subparagraphs require clarification. Portsmouth requests NAVSEA concur with the following interpretations:

a. Paragraph 4.6.4.2.1.1b(2) requires the system or component to be identified. Where the joint number is preceded by an abbreviation of the system (e.g., ASW-90121F), the ASW is sufficient to identify the system and meet the requirement of item (2).

b. Paragraph 4.6.4.2.1.1b(3) requires the joint number. Where a joint number is not provided in as-built drawings or alteration drawings, a joint number would require a Liaison Action Request for each joint resulting in increased cost of each availability.

c. Paragraph 4.6.4.2.1.1b(4) requires the size and type of fastener. The size is interpreted to mean the nominal diameter (e.g. 1/2 inch, 750 inch) and does not include the length of the fastener.

d. Paragraph 4.6.4.2.1.1b(5) requires joint material (e.g., flange, component, etc.) markings and fastener markings per NAVSEA 0948-LP-045-7010, where applicable. This requirement only applies to new material installed by the activity. For hull integrity fasteners, markings will be documented for both existing and new material as required by paragraph 4.6.5.3. Existing material shall be documented in accordance with section 4.6.6.

e. Paragraph 4.6.4.2.1.1b(8) requires torque wrench/tightening device serial number and calibration date. (It is not clear if "calibration date" is the date the item was calibrated or the date the item is due for calibration.) Either date will be acceptable as objective quality evidence.

Note: Both dates are traceable from the serial number.

2. Paragraph 4.6.4.2.1.1c requires non-sea-connected/seawater SUBSAFE piping for all classes to have items 1 through 5 be identified. This requirement applies to non-sea-connected/"non"-seawater SUBSAFE piping.

Request NAVSEA concur with PNS interpretations above or provide additional clarification.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PNSY	2. INFO: ALL	3. SERIAL NO. PNSY-002-96-92Q(1)
4. SUBJECT: BOLTED PRESSURE BOUNDARY JOINTS		5. FORM TYPE RESPONSE
6. PAGE 4-43	7. PARAGRAPH 4.6.4.2.1.1B	8. ISSUE DATE 4/8/98
		9. REQSTD RESP DATE 2/22/96

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety
(SUBSAFE) Requirments Manual

1. PNSY-002-96 states that some of the subparagraphs in section 4.6.4.2.1.1b. of reference (a) require clarification and requests NAVSEA to concur with their following interpretations of what the mechanical joint record shall identify.

a. Para 4.6.4.2.1b(2) requires the system or component to be identified. Interpretation: Where the joint number is preceded by an abbreviation of the system (e.g., ASW-90121F), the abbreviation (ASW) is sufficient to identify the system and meet the requirement.

b. Para 4.6.4.2.1.1b(3) requires the joint numbers. Interpretation: A unique description of the joint is satisfactory in lieu of a joint number, where a joint number is not provided in as-built drawings.

c. Para 4.6.4.2.1.1b(4) requires the size and type of fastener. Interpretation: The "size" requirement refers nominal diameter (e.g., 1/2 inch, .750 inch) and does not include the length of the fastener.

d. Para 4.6.4.2.1.1b(5) requires joint material markings and fastener markings per NAVSEA 0948-LP-045-7010, where applicable. Interpretation: This requirement applies only to new material installed by the activity. For hull integrity fasteners, markings will be documented for both existing and new material in accordance with section 4.6.5.3 of reference (a). Existing material shall be documented in accordance with section 4.6.6 of reference (a).

e. Para 4.6.4.2.1.1b(8) requires torque wrench/tightening device serial number and calibration date. Interpretation: Either the date the item was calibrated or date the item is due for calibration is acceptable as OQE since both dates are traceable from the serial number.

f. Para 4.6.4.2.1.1c requires non-sea-connected/seawater SUBSAFE piping for all classes to have OQE items 1 through 5 identified. In actuality, the requirement applies to non-sea-connected/"non"-seawater SUBSAFE piping.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. PNSY-002-96-92Q(1)

COMMENTS/RECOMMENDATIONS

2. NAVSEA concurs with the above interpretations, except that 1.e should require the calibration due date vice calibration date to allow the inspector or mechanic to know that the item is still in calibration without going back to the record.

3. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature Code Date

Robert Jones

03432

5/28/98

McCann
92Q 4/3/98

Jim Zamboni

92TC

5/29/98

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: <p style="text-align: center;">NAVSEA</p>	2. INFO: <p style="text-align: center;">ALL</p>	3. SERIAL NO: <p style="text-align: center;">PNSY-005-96</p>	
4. SUBJECT: <p style="text-align: center;">CLARIFICATION OF SUBSAFE BOUNDARY</p>		5. FORM TYPE: <p style="text-align: center;">Request</p>	
6. PAGE: <p style="text-align: center;">4-21</p>	7. PARAGRAPH: <p style="text-align: center;">4.5.1.1.C</p>	8. ISSUE DATE: <p style="text-align: center;">02/02/96</p>	
9. REQSTD RESP DATE: <p style="text-align: center;">03/29/1996</p>			

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual

1. Paragraph 4.5.1.1c of reference (a) provides the general SUBSAFE boundary definition for linkage in the sea-connected emergency flood control system. Section 4.6.4.2.3 establishes documentation requirements for mechanical joints including linkages.

2. There are other components in SUBSAFE systems which include linkages to operate those components (e.g., valves DEX-1 on USS Dolphin (AGSS-555) and ABT hull valves on SSN 637 Class Submarines). Currently the manual is clear that the requirements of Section 4.6.4.2.3 applies to the linkages within the SUBSAFE boundary, however there are linkages which exist to operate SUBSAFE components and are not described as being in the boundary by the SUBSAFE Manual or the SUBSAFE Certification Boundary Books (SSCBs).

3. Request NAVSEA determine if the OQE requirements of Section 4.6.4.2.3 apply to linkages for SUBSAFE valves where the linkages are not described as being within the SUBSAFE boundary by the SUBSAFE Manual boundary definitions or identified as SUBSAFE on plates or figures within the SSCBs. If so, please identify the population of components these apply to and initiate revision of the SSCBs.

D. J. Rooney

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: <p align="center">PNSY</p>	2. INFO: <p align="center">ALL</p>	3. SERIAL NO: <p align="center">PNSY-005-96-92Q(1)</p>
4. SUBJECT: <p align="center">CLARIFICATION OF SUBSAFE BOUNDARY</p>		5. FORM TYPE: <p align="center">Response</p>
6. PAGE: <p align="center">4-21</p>	7. PARAGRAPH: <p align="center">4.5.1.1.C</p>	8. ISSUE DATE: <p align="center">01/05/2000</p>
9. REQSTD RESP DATE: <p align="center">03/29/1996</p>		

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual

1. PNSY-005-95 notes that item 4.5.1.1.c of reference (a) provides the general SUBSAFE boundary definitions for linkages in the sea-connected Emergency Flood Control System and section 4.6.4.2.3, on OQE requirements for "other" SUBSAFE mechanical joints, includes reference to linkages as an example. PNSY indicates there are SUBSAFE component operating linkages in other systems besides Emergency Flood Control (e.g. valves DEX-1 on USS DOLPHIN AGSS-555) and ABT hull valves on SSN 637 class submarines) and that these linkages are not identified by either reference (a) or the SUBSAFE Certification Boundary (SSCB) Books as being in the SUBSAFE boundary. PNSY requests that NAVSEA:

a. Determine if the OQE requirements of section 4.6.4.2.3 apply to linkages for SUBSAFE valves where the linkages are not identified by reference (a) or the SSCB Books as being within the SUBSAFE Boundary.

b. Identify the population of linkages and initiate revision to the SSCB Books if the answer to 1.a is "yes".

2. NAVSEA has determined that linkages identified in paragraph 1 are not in the SUBSAFE boundary and the OQE records of reference (a) section 4.6.4.2.3 are not required. In these cases linkages are equivalent in function to the handwheels which currently have no specific SUBSAFE Certification attributes.

3. NAVSEA considers this SS LAR series closed.

Program Technical Concurrence

Signature	Code	Date
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<i>Steve Setis</i>	92TC	1-4-00
<i>Robert Flynn</i>	SEA05032	1/4/00

Mary Townsend-Manning
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

Mary Townsend-Manning
 1/4/00

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: SSPDS	3. SERIAL NO. PNSY-006-96
4. SUBJECT: EXCEPTIONS TO THE SUBSAFE BOUNDARY		5. FORM TYPE REQUEST
6. PAGE 4-33	7. PARAGRAPH 4.5.8.1B	8. ISSUE DATE 2/2/96
9. REQSTD RESP DATE 3/29/96		

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C Submarine Safety (SUBSAFE) Requirements Manual

1. Paragraph 4.5.8.1b of reference (a) provides exceptions to the SUBSAFE boundary for the Outboard Grease System. One of those exceptions are the replacement of grease fittings.

2. PNS recommends NAVSEA evaluate the applicability of SUBSAFE boundary exceptions for grease fittings in other systems (e.g., Stern diving system).

3. Request NAVSEA add the exception to the SUBSAFE boundary for grease fittings in other systems (e.g., Stern diving system). The grease fittings allow connection of the grease gun to the component/system, but does not affect performance, durability, reliability, maintainability, interchangeability, effective use or operation, weight or appearance, health or safety, system design parameters such as schematics, flows, pressures, or temperatures, or integrity of the component. Requiring a REC to replace a grease fitting does not provide additional objective quality evidence that the component has received the proper greasing in accordance with maintenance procedures. Therefore, adding the exception will enable the replacement of broken/wornout grease fittings with new ones with out controlled work and certification procedures and may be done in conjunction with the scheduled maintenance procedures.

D. J. Rooney

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PNSY	2. INFO: ALL	3. SERIAL NO. PNSY-006-96-92Q(1)	
4. SUBJECT: EXCEPTIONS TO THE SUBSAFE BOUNDARY		5. FORM TYPE RESPONSE	
6. PAGE 4-33	7. PARAGRAPH 4.5.8.1B	8. ISSUE DATE	9. REQSTD RESP DATE 3/29/96

10. COMMENTS/RECOMMENDATIONS

Ref: (a) Submarine Safety (SUBSAFE) Requirements Manual,
NAVSEA 0924-062-0010, Rev C

Comments:

1. SSLAR PNSY-006-96 states that paragraph 4.5.8.1.b of reference (a) specifically excludes the grease fittings in the Outboard Grease System from the SUBSAFE boundary. PNSY requested that NAVSEA extend this grease fitting exclusion to other systems within the SUBSAFE boundary. PNSY noted that the grease fittings allow connection of a grease gun to the component/system but do not affect the performance, durability, reliability, maintainability, interchangeability, effective use or operation, weight or appearance, health or safety, system design parameters, or integrity of the component. In addition, PNSY stated that requiring a REC to replace a grease fitting does not provide additional OQE that the component has received the proper greasing in accordance with the maintenance procedures.

2. NAVSEA has reviewed a sample of grease lines and grease fittings which penetrate the pressure hull on SSBN726, SSN688, and SEAWOLF Class submarines and determined that the failure of a grease line or grease fitting external to the pressure hull would not result in flooding into these classes of ships. In order for flooding into the ship to occur the grease valve associated with the grease fitting would also have to fail. In addition, for all systems reviewed while preparing this response the grease valves were determined to be 1/4" valves and therefore the failure of the grease fitting & valve would not result in flooding into the ship through a hole 0.6 inch diameter or greater. NAVSEA has also reviewed the SSBN 726, SSN 688, and SEAWOLF Class SSCB Books and determined that none of the grease fittings associated with grease lines that penetrate the pressure hull are depicted in red. Therefore, NAVSEA concurs with PNSY that the replacement of grease fittings in SUBSAFE systems does not require a REC. It is also NAVSEA's determination that since these grease fittings do not meet the general SUBSAFE boundary criteria of reference (a) and they are not depicted in the Class SSCB books as SUBSAFE items, no revisions to reference (a) is required.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. PNSY-006-96-92Q(1)

COMMENTS/RECOMMENDATIONS

3. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrance
Signature Code Date

McCann 5/4/98
Seq. 92Q

Robert J. Long

03432

4/17/98

Jim Lawrence

92TC

4/17/98

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: SSPDS	3. SERIAL NO. PNSY-007-96	
4. SUBJECT: LIST OF WROUGHT MATERIAL		5. FORM TYPE REQUEST	
6. PAGE 5-10	7. PARAGRAPH 5.5.1.4.2Q	8. ISSUE DATE 2/12/96	9. REQSTD RESP DATE 3/29/96

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual
(b) NAVSEA ltr Ser 92QC\183 of 11 Jul 95, SUBSAFE Certification Audit Plan (SSCAP) for SSN 688 Class Depot Modernization Periods and Overhauls

1. Paragraph 5.5.1.4.2q of reference (a) requires a list of Wrought Material be developed by the overhaul facility for use during NAVSEA SUBSAFE Certification audits. The list provides data to the level required by Section 4.6.11. The qualifying note requires, for post new construction availabilities, identification of only newly installed items or those existing items worked during the availability. PNS requests NAVSEA concur with the following interpretation.

2. Records for new and existing wrought material installed must be in an auditable form and traceable from the documentation identified by the re-entry control system. This is currently accomplished without a specific list of wrought material on SSN 688 Class availabilities at Naval Shipyards.

3. The current audit guides issued to support reference (b) are set up to permit audit of wrought material using the existing material documentation systems (e.g., joint cards, mechanical component repair records or material installation records). A specific list of wrought material is not required. These records are either attached to the REC or traceable from the REC in an auditable form. Section 4.6.6 of reference (a) requires disturbed material which is not replaced to be identified as "existing", except hull integrity fasteners. This material is documented on the local material documentation forms (e.g., joint cards, mechanical component repair records, etc.)

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO.PNSY-007-96

COMMENTS/RECOMMENDATIONS

4. The current system in place for documenting new and existing wrought material has been audited in accordance with the latest NAVSEA SUBSAFE Certification Audit Plan, issued by reference (b), and NAVSEA Audit Guides. PNS interprets that since there has been no change in the SSCAP or Audit Guides, the current method of wrought material documentation is satisfactory and the list requirement applies to new construction where the SSCAP is set up to audit wrought material using a list of wrought material required by reference (a).

D. J. Rooney

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PNSY	2. INFO: ALL	3. SERIAL NO. PNSY-007-96-92Q(1)	
4. SUBJECT: LIST OF WROUGHT MATERIAL		5. FORM TYPE RESPONSE	
6. PAGE 5-10	7. PARAGRAPH 5.5.1.4.2Q	8. ISSUE DATE 4/8/98	9. REQSTD RESP DATE 3/29/96

10. COMMENTS/RECOMMENDATIONS

Ref: (a) Submarine Safety (SUBSAFE) Requirements Manual
NAVSEA 0924-062-0010, Rev C
(b) NAVSEA ltr Ser 92QC/183 dtd 11 Jul 95, Subj: SUBSAFE
Certification Audit Plan (SSCAP) for SSN 688 Class
Depot Modernization Periods and Overhauls

Comments:

1. SSLAR PNSY-007-96 noted that paragraph 5.5.1.4.2.q of reference (a) requires that a list of Wrought Material, which provides the information detailed in section 4.6.11 of reference (a), be developed for use during NAVSEA SUBSAFE Certification Audits. However, there is a clarifying note which accompanies paragraph 5.5.1.4.2.q that only newly installed items or those existing items worked during an availability need to be identified on the list of Wrought Material. PNSY stated that interpretation of the intent of this requirement is that all records for new and existing wrought material must be in a form suitable for audit and traceable from the documentation identified by the re-entry control system. This can currently be accomplished by the public shipyards without generating a specific List of Wrought Material. In addition, the current audit guides issued to support reference (b) are set up utilize existing material documentation systems (e.g. joint cards, mechanical component repair records, or material installation records) for the audit of wrought material and do not require that a sperate List of Wrought Material be generated. PNSY requested that NAVSEA concur that since there have been no changes to reference (b) or it's associated audit guides and the current system for auditing wrought material at public shipyards has been validated by previous SUBSAFE Certification Audits the requirement to generate a specific List of Wrought Material is not applicable for availabilities at public shipyards.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO.

COMMENTS/RECOMMENDATIONS

2. NAVSEA has reviewed Section 5.5.1.4.2 of reference (a) and determined that the requirements to generate a List of Wrought Material was only intended to be applicable for post-SSN 21 Class submarines. NAVSEA 92Q will initiate a Manual Change Request for paragraph 5.5.1.4.2.g of reference (a) to add a note to this effect. NAVSEA 92Q will also initiate a Manual Change 2 (Contd) Request for paragraph 5.5.1.4.2 of reference (a) to clarify the requirements with respect to what class specific lists are required to be generated to support NAVSEA SUBSAFE Certification Audits and where the list of lists will be documented.

3. NAVSEA considers the SSLAR series closed.

Program Office Technical Concurrence

Signature Code Date

Jim Lawrence
Robert Flury

92TC

4/8/98

SEA0243

4/8/98

Mr. Conn, Sea 92Q
4/21/98

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: SSPDS	3. SERIAL NO. PNSY-008-96
4. SUBJECT: SUBMARINE SAFETY CERTIFICATION BOUNDARY BOOK		5. FORM TYPE REQUEST
6. PAGE 4-56	7. PARAGRAPH 4.6.9.1	8. ISSUE DATE 2/7/96
9. REQSTD RESP DATE 3/29/96		

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual

1. Paragraph 4.6.9.1a of reference (a) requires any noted deficiency or discrepancy of the SSCB Book to be identified to the Design Yard/Planning Yard for immediate correction with a copy to NAVSEA 92Q. Paragraph 4.6.9.1.3c requires any noted deficiency in the SSCB Book to be identified to NAVSEA, or its designated activity, for resolution.
2. PNS interprets these two requirements to mean the following:
 - a. Any noted deficiency or discrepancy of the SSCB Book shall be identified to the Planning Yard of the Submarine. The deficiency shall also be identified to NAVSEA 92Q.
3. Request NAVSEA concur with PNS interpretation above or provide additional clarification.

D. J. Rooney

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PNSY		2. INFO: ALL		3. SERIAL NO. PNSY-008-96-92Q(1)	
4. SUBJECT: SUBMARINE SAFETY CERTIFICATION BOUNDARY BOOK				5. FORM TYPE RESPONSE	
6. PAGE 4-56		7. PARAGRAPH 4.6.9.1		8. ISSUE DATE 4/8/98	
9. REQSTD RESP DATE 3/29/96					

10. COMMENTS/RECOMMENDATIONS

Ref: (a) Submarine Safety (SUBSAFE) Requirements Manual
NAVSEA 0924-062-0010, Rev C

Comments:

1. SSLAR PNSY-008-96 stated that paragraph 4.6.9.1.a of reference (a) requires that when an activity identifies an error in a SUBSAFE Certification Boundary (SSCB) Book it be reported to the Design Yard/Planning Yard with a copy to NAVSEA 92Q. However, PNSY also noted that paragraph 4.6.9.1.3.c requires any noted deficiency in the SSCB Book to be identified to NAVSEA, or its designated activity, for resolution. PNSY requested that NAVSEA concur with the following interpretation of these requirement: "Any noted deficiency or discrepancy of the SSCB Book shall be identified to the Planning Yard of the submarine. The deficiency shall also be identified to NAVSEA 92Q."

2. NAVSEA concurs with PNSY's interpretation that any SSCB Book discrepancies that are identified should be reported to the Design Yard/Planning Yard for correction and additionally a copy of the discrepancy should be forwarded to NAVSEA 92Q for information. NAVSEA 92Q will initiate a manual change request to consider deleting paragraph 4.6.9.1.3.c of reference (a) to clarify this requirement.

3. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature	Code	Date
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<i>Jim Lawrence</i>	9272	4/8/98
<i>Robert Jones</i>	SEA10343	4/8/98

McCann, SEA 92Q
4/21/98

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: 92Q	2. INFO: SSPDS	3. SERIAL NO. PNSY-010-96
4. SUBJECT: LIST OF CASTNGS REQUIRING RADIOGRAPHIC INSPECTION		5. FORM TYPE REQUEST
6. PAGE 5-9	7. PARAGRAPH 5.5.1.4.2	8. ISSUE DATE 2/7/96
9. REQSTD RESP DATE 3/29/96		

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C Submarine Safety (SUBSAFE) Requirements Manual

1. Paragraph 5.5.1.4.2 of reference (a) requires the shipyard to produce a list of castings requiring radiographic inspection. The amplifying note requires the Shipyard to identify only newly installed items or those existing items worked during the availability.

2. PNS interprets this requirement to list only those castings requiring radiography to not include those castings obtained from government furnished material/equipment (GFM/GFE) programs (e.g., Advanced Equipment Repair Program (AERP)) where the material is certified by another activity prior to being shipped with the certification documentation to the Shipyard for installation. (This material has been pre-certified in accordance with Section 4.6.12a of the SUBSAFE Manual. Other programs which apply are listed in paragraph 4.6.12a.) Included in this GFM/GFE population is Rotatable Pool Program Material.

3. PNS also interprets this requirement for listing existing items repaired to only include those parts where the repair required radiographic inspection. Therefore the list would not include those castings which were removed for interference or were repaired inaccordance with the Technical Repair Standard and did not require radiographic inspection during or as a result of the repair.

4. Request NAVSEA concur with PNS interpretation above or provide additional clarification.

D. J. Rooney

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PNSY	2. INFO: ALL	3. SERIAL NO. PNSY-010-96-92Q(1)
4. SUBJECT: LIST OF CASTINGS REQUIRING RT FOR SS AUDITS		5. FORM TYPE RESPONSE
6. PAGE 5-9	7. PARAGRAPH 5.5.1.4.2	8. ISSUE DATE 4/8/98
9. REQSTD RESP DATE		

10. COMMENTS/RECOMMENDATIONS

Ref: (a) Submarine Safety (SUBSAFE) Requirements Manual,
NAVSEA 0924-062-0010, Rev C

Comments:

1. SSLAR PNSY-010-96 noted that paragraph 5.5.1.4.2 of reference (a) requires the shipyard to produce a Listing of Castings Requiring RT for use during SUBSAFE Certification Audits. However, there is an amplifying statement that accompanies this paragraph that only newly installed items and those existing items that are worked during the availability need to be identified on this list. PNSY requested that NAVSEA concur with the following interpretations of the requirement for this list:

a. Castings obtained from government furnished material/equipment (GFE/GFM) programs (e.g. Advanced Equipment Repair Program (AERP), rotatable pools) where the material is pre-certified by another activity in accordance with the requirements of Section 4.6.12 of reference (a) are not required to be identified on this list.

b. Existing castings which are worked during an availability are only required to be identified on this list if the repairs conducted required RT. Therefore the list would not include those castings which were removed for interference or were repaired in accordance with the Technical Repair Standard and did not require RT during or as a result of the repair.

2. NAVSEA has reviewed several Class Baseline SUBSAFE Certification Audits Plans along with their associated Audit Guides and concurs with PNSY. It is NAVSEA's intent that the List of Castings Requiring RT, prepared to support NAVSEA SUBSAFE Certification Audits, is only required to identify newly installed castings & those which due to the scope work performed during the availability were RT inspected by the activity. Castings provided as pre-certified GFE/GFM with the appropriate OQE required by paragraph 4.6.12.c and those existing items which were worked but did not require subsequent RT inspection do not have to be identified on this list.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM			
1. TO: NAVSEA 92Q	2. INFO: SSPDs	3. SERIAL NO.: PNSY-002-99	
4. SUBJECT: Post Installation Testing of Electrical Hull Testing			5. FORM TYPE: Request
6. PAGE: NA	7. PARAGRAPH: NA	8. ISSUE DATE: 06-01-99	9. REQSTD RESP DATE: 07-01-99
10. COMMENTS/RECOMMENDATIONS:			
<p>An issue has been identified during a short availability. Mechanical work was accomplished on TR-317 transducers and some of the transducers were replaced with transducers which were ready for installation. There was no structural work done and all work was considered to be minor as defined by the JFMM.</p> <p>JFMM Vol V-II-6 specifies the testing requirements and procedures for fleet work. Paragraphs 6.1.2 and 6.1.3 provide exemptions / alternatives to Non-Nuclear Test Requirements. Specifically paragraph 6.1.3 indicates that paragraph 6.7 of Part II, Chapter 6, provides testing requirements for non-nuclear piping systems, pressure hull structure integrity fittings, and submarine antenna systems. It provides test requirements which may be used when more authoritative requirements are not available, are incomplete, or where the situation precludes performing the required tests and a suitable substitute must be provided.</p> <p>Paragraph 6.5.2 requires strength, mechanical joint completion, and tightness tests to be performed on piping systems and components and provides a list of typical documents used to determine test pressures and operational requirements.</p> <p>Paragraph 6.6.1 provides exemption/alternative test requirements (Non-Nuclear) and indicates that the required test may not be able to be performed. The following exemption/alternative tests have been developed in order to properly re-certify the system or component. These tests are non-nuclear and includes the note: If a maintenance certification record/re-entry control is closed by transferring at sea testing to a DFS (e.g., controlled dive to test depth for test of a periscope hull gland, controlled dive for test of a sea connected system (e.g., Main seawater (MSW), Aux Seawater (ASW), the ship will be restricted in depth as required in paragraph 4.3.5 of Part II, Chapter 4.</p> <p>Paragraph 6.6.2.a indicates for minor repairs, alternative testing is Allowed. Major repairs require strength testing. Paragraph 6.6.2.a requires a controlled assembly of the joint(s), a visual inspection of the joint During first system pressurization to nominal/system operating pressure, And for submarine sea-connected systems, a minor DFS to document the lack Of retest and clearance of the DFS will require joints to be visually Inspected at each incremental depth during the first controlled dive. No Leakage allowed.</p>			

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

Paragraph 6.6.2.f indicates hull glands (e.g., cable stuffing tubes, Shaft/mast packing glands, electrical/electronic hull fittings), hatches, Watertight doors. When hull glands, hatches, and watertight doors cannot Be 12 psi compartment air tested, the following is considered an Acceptable alternative. The note with this paragraph specifies "NAVSEA Drawing 126-5792666 also contains information regarding testing of Submarine tanks and compartments. This includes the requirements to Accomplish a satisfactory completion test (12 psi drop or acceptable Alternate test) AND a satisfactory structural integrity test (controlled Dive to test depth) for hull glands normally subjected to sea pressure.

Paragraph 6.7 (specifically referred to by paragraph 6.1.3 for hull Fittings) indicates that the performance of tests iaw these reqmts will constitute a Sat test and a DFS will not be required unless specifically required as Part of the alternative test. Table 6-2 is applicable in this case.

Table 6-2 (Hull glands, cables, shafts, masts) sends you to Notes 3, 4, And 5 and special notes 13, 14 & 15. Note 4 sends you back to Section 6.6 Which implies that a deep dive test is required. Notes 13, 14 & 15 imply That the only testing that is required is a 12 psig compartment air test Of the gland or the use of an alternative test.

Drawing 126-5792666-B SUBMARINE COMPARTMENTS AND TANK TESTING REQUIREMENTS Note 3.E requires all hull penetrations worked to be re-tested by a Controlled dive to test depth in addition to the 12 psig compartment test.

Request that NAVSEA review the above requirements and provide a single interpretation to the Shipyards and the Fleet. Specifically the interpretation of the requirements to test minor work on hull fittings. Is a completion 12 psig test and a subsequent deep dive test to test depth Required? Or is just a 12 psig test required to test an EHF that has had Minor work accomplished and no subsequent deep dive?

There have been different interpretations of the written words between Activities and NAVSEA. Request the interpretation be issued prior to 1 Jul, 99.

/s/

M. E. Jacques

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PNSY		2. INFO: ALL		3. SERIAL NO. PNSY-002-99-92Q(1)	
4. SUBJECT: Post Installation Testing of Electrical Hull Fittings				5. FORM TYPE Response	
6. PAGE N/A		7. PARAGRAPH N/A		8. ISSUE DATE 07/09/1999	
9. REQSTD RESP DATE 07/01/1999					

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA Drawing 126-5792666, Submarine Compartments and Tank Testing Requirements
 (b) CINCLANTFLT/CINCPACFLTINST 4790.3, Joint Fleet Maintenance Manual
 (c) SS LAR PNSY-001-95-92Q(1)

1. SS LAR PNSY-002-99 stated that a difference of interpretation exists between NAVSEA and field activities in regard to the requirements of references (a) and (b) for post-installation testing of electrical hull fittings. Specifically, PNSY requested NAVSEA review and clarify the requirements for performance of a controlled deep dive after the installation of electrical hull fittings (EHFs).

Resolution

1. NAVSEA has reviewed references (a) and (b). Reference (b) Vol V Part II, paragraph 6.6.2 includes the Note "NAVSEA Drawing 126-5792666 also contains information regarding testing of submarine tanks and compartments. This includes the requirement to accomplish a satisfactory completion test (12 psi drop test or acceptable alternate test) and a satisfactory structural integrity test (controlled dive to test depth)." This note was referenced in the Request. As previously stated in reference (c), both a completion test and a controlled deep dive are required per reference (a) to recertify all hull fittings worked.

Program Technical Concurrence:

Name	Code	Date
----- <i>Steve Pitts</i>	----- <i>92TC</i>	----- <i>6/25/99</i>
<i>Robert Gray</i>	<i>SEA03432</i>	<i>7/6/99</i>

Approved:

DR Alexander
 D.R. Alexander
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NAVSEA	2. INFO: ALL SSPDs	3. SERIAL NO. PNSY-003-99
4. SUBJECT: Inboard Joint Fasteners		5. FORM TYPE Response
6. PAGE 4-46	7. PARAGRAPH 4.6.5	8. ISSUE DATE 06/07/99
9. REQSTD RESP DATE 07/09/99		

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE) Requirements Manual
 (b) NAVSEA 0902-018-2010, General Overhaul Requirements for Deep Diving Submarines (DDGOS)

There is a conflict in specifications which results in fasteners which are not in accordance with Non-Deviation Drawings or fasteners which do not comply with references (a) and (b).

Section 4.6.5 of reference (a) defines hull integrity fasteners as male threaded items such as bolts, socket head cap screws, studs, and bolt studs which are loaded by the differential between sea pressure and internal atmospheric pressure and which are part of pressure hull integrity components or of systems penetrating the pressure hull structure, from the pressure hull to and including the inboard side of the backup valve or equivalent. This section requires the male threaded fasteners to be manufactured from nickel-copper-aluminum alloy (Kmonel) in accordance with MIL-STD-1222, certified and marked in accordance with NAVSEA 0948-LP-045-7010. The fasteners shall also be a constant strength design in accordance with MIL-S-1222, or as specified by NAVSEA. The SUBSAFE manual is invoked in each work package in SWLIN 061A01.

Section 9090-3e of reference (b) requires for services involving hull integrity against the sea, energy absorption shall be provided by making the mounting studs, bolt studs and stud bolts of essentially uniform strength throughout their length and defines some methods to make fasteners uniform strength.

Section 9090-3h of reference (b) requires for services involving integrity of the hull against the sea that the threaded fasteners to made of nickel-copper-aquminum alloy (Kmonel) conforming to the requirement of MIL-STD (MS18116) and MIL-SPEC (MIL-S-1222). The fasteners shall meet the uniform strength requirements of section 9090-3e and for cap screw configuration should be of the self-locking type, as specified in MIL-F-18240.

Section 9020-1 of reference (b) requires a deviation or waiver, or a liaison action record (LAR) to approve deviations from non-deviation (ND) drawings. ACN M2-99 to section 9020-1 of reference (b) modifies the configuration control requirements and allows disposition of the deviation or waiver locally and requires the Shipyard to assess the items to be designated as Technical Variance Documentation (TVD).

There are instances in the SSN 688 Class Design where the inboard flange of the backup valves, per the drawing, does not require constant or uniform strength fasteners. For example, non-deviation drawing 4455253 requires the use of item F-112 (bolt, hex head) to assemble flange F-120 to the valve for the inboard joint of the backup valve MSW-25/37 & MSW-26/38. This configuration does not comply with the current revision of the SUBSAFE manual or the DDGOS as the fasteners are not a constant strength design or essentially uniform strength throughout their length. The cause of this conflict appears to be the new construction requirements. The inboard joints were not treated as hull integrity joints or hull integrity fasteners as indicated in the SSN 688 Class Sea Trial Certification Booklet. They were a Type II certification and therefore they were not required to be designed using constant strength fasteners. This was reflected in the arrangement drawings.

Periodically, the submarines arrive with constant strength fasteners which are not in accordance with the drawing, but comply with the references (a) & (b). Both situations require a waiver as the specifications conflict with each other.

The conflict between the new construction requirements and the current overhaul and maintenance requirements results in the following issues:

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO:

NAVSEA

2. INFO:

ALL SSPDs

3. SERIAL NO.

PNSY-003-99

10. COMMENTS/RECOMMENDATIONS (cont)

a: If the submarine arrives with a SUBSAFE joint that has essentially uniform strength fasteners (e.g., studs and nuts, but the non-deviation drawing requires non-constant strength fasteners installed and deviate from the drawing, except by processing a waiver or LAR. If the constant strength fasteners require replacement due to a problem with one or more fasteners, the activity could replace the constant strength fasteners with non-constant strength fasteners per the ND drawing. The Shipyard is obligated to process non-conforming documentation for either case because of the conflicting specifications.

If the submarine arrives with a SUBSAFE inboard joint of the backup valve that has fasteners per ND drawing, but not of a constant strength design, there is currently no NAVSEA program to modify the ship to install new constant length fasteners (e.g., A&I or Ship Alteration etc.). Are these fasteners supposed to be replaced to comply with references (a) & (b) or are the non-constant strength fasteners to be placed back into the ship to comply with the ND drawing? Reading references (a) & (b), it appears that a waiver or LAR is required for either situation.

Request NAVSEA approval to allow local acceptance of constant strength fasteners in the inboard joint of the backup valves where new construction drawings require non-constant strength fasteners (without processing a waiver or LAR) when in compliance with references (a) & (b), provided all fasteners within the joint are the same type.

Request NAVSEA approval to allow local acceptance of existing non-constant strength fasteners in the inboard joint of the backup valves where specified by ND drawings (without processing a waiver or LAR), provided all fasteners within the joint are the same type.

A 9 July 99 response date is requested.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NAVSEA	2. INFO: ALL SSPDS	3. SERIAL NO. PNSY-003-99-92Q(1)
4. SUBJECT: INBOARD JOINT FASTENERS		5. FORM TYPE Response
6. PAGE 4-46.1	7. PARAGRAPH 4.6.5	8. ISSUE DATE 11/04/1999
9. REQSTD RESP DATE 07/09/1999		

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, CH 1 Submarine Safety (SUBSAFE) Requirements Manual
 (b) NAVSEA 0902-018-2010 General Overhaul Specifications for Deep Diving Submarines (DDGOS)

SSLAR PNSY-003-99 states there is a conflict in specifications which results in fasteners which are not in accordance with Non-Deviation Drawings or fasteners which do not comply with references (a) and (b).

NAVSEA does not concur with PNSY's interpretation that there is a conflict between the requirements of references (a) and (b). The Technical requirements are the same although the wording used is different.

1. Ref: (a), para 4.6.5.2a states that "Hull integrity fasteners shall be manufactured from K-Monel in accordance with MIL-S-1222, or as specified by NAVSEA. Ref: (b), Section 9090-3-h specifies "Threaded fasteners shall be made of nickel-copper-aluminum alloy (K-Monel), conforming to the requirements of Mil. Std. MS-18116 and Mil. Spec. Mil S-1222". Ref: (b), Section 9090-3-e states "Fasteners having changes in cross sectional area, such as headed bolts, are acceptable if the cross-sectional changes are not abrupt and an essentially uniform strength fastener cannot be used." Fasteners listed on drawings are approved for use.

2. Ref: (a), para 4.6.5.2b states "Studs and bolt studs shall be a constant strength design in accordance with MIL-S-1222." Bolts and socket head cap screws are not required to be constant strength. Ref: (b) Section 9090-3-e states " For services involving hull integrity against the sea energy absorption shall be provided by making the mounting studs, bolt-studs and stud-bolts of essentially uniform strength throughout their length.

The submarine has all constant strength fasteners of the same type within a joint, but the new construction drawing requires non-constant strength fasteners, the joint is acceptable per references (a) and (b). If the submarine has all non-constant strength fasteners within the same joint in accordance with the Non-Deviation Drawing, the joint is acceptable. NAVSEA does not require a waiver or LAR.

NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature

Code

Date

Jeff Clark

0503

10/28/99

Steve Sites

92TC

10/28/99

D.R. Alexander

D.R. ALEXANDER
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NAVSEA 92Q	2. INFO: ALL	3. SERIAL NO. PNSY-004-99
4. SUBJECT: EMBT Blow System Test Requirements		5. FORM TYPE Request
6. PAGE 4-17	7. PARAGRAPH 4.4.2.3.3	8. ISSUE DATE
		9. REQSTD RESP DATE 08/06/1999

10. COMMENTS/RECOMMENDATIONS

Paragraph 4.4.2.3.3 of the SUBSAFE Manual requires "Where work done on the EMBT Blow System consisted of routine repairs, cleaning, and testing such that the blow rate or distribution is not affected, the EMBT Blow System shall be tested to demonstrate proper operation by conducting a static blow (Dockside Operation of EMBT Blow System Valves) in accordance with URO/MRC-022.

Because of SUBSAFEGRAM 72, PNS has been requiring a static blow test to be done prior to REC certification for all work within the boundaries that is pressurized during a static blow (e.g., mechanical joints, union joints, etc.). Upon completion and certification of this test, we have been certifying the population of RECs. This is a conservative decision which was done because there was not identification or understanding of NAVSEA's extent and interpretation of SSG 72 with respect to URO/MRC-022.

There is maintenance on the EMBT Blow System, which has no effect on the static blow test, and is certified by the tightness test of the EMBT Blow System which is traceable from the REC package. For example: removing the strainer covers for the strainer downstream of AHP-529 to do a contamination check. Removal and reinstallation of a pressure transducer.

This is an area where the specific wording in the SUBSAFE Manual appears to be all inclusive, without regard to the difference between tightness testing and the static blow test which actually tests the EMBT Blow System Valves to ensure they operate properly, and the tightness test of the system, and not the individual entry into the system and restoration and certification of that entry.

The benefit to this interpretation is: Work that is done such as strainer open and reinstallation, or transducer removal and replacement RECs may be closed and certified prior to the accomplishment of the URO/MRC 022 Static Blow Test. Currently we must pile up the RECs until this system test is accomplished and then certify the RECs.

Request NAVSEA approve this interpretation to allow the individual component or entry certification be completed without listing the system test on the REC. The system test is tracked as part of the system re-certification in the integrated test plan, and should not be listed on each individual REC unless the work of that REC is being proved by the test.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: <p align="center">PNSY</p>	2. INFO: <p align="center">ALL</p>	3. SERIAL NO: <p align="center">PNSY-004-99-92Q(1)</p>	
4. SUBJECT: EMBT Blow System Test Requirements		5. FORM TYPE: <p align="center">Response</p>	
6. PAGE: <p align="center">4-17</p>	7. PARAGRAPH: <p align="center">4.4.2.3.3</p>	8. ISSUE DATE: <p align="center">12/21/1999</p>	9. REQSTD RESP DATE: <p align="center">08/06/1999</p>

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual

1. PNSY requests that NAVSEA approve the individual component or entry certification be completed without listing the system test on the REC. PNSY states "The system test is tracked as part of the system re-certification in the integrated test plan, and should not be listed on each individual REC unless the work of that REC is being proven by the test." PNSY has been requiring a static blow test prior to REC certification for all work within boundaries pressurized during a static blow, which was done because there was no identification or understanding of NAVSEA's extent and interpretation of SSG 72 with respect to URO/MRC-22.

2. Resolution: NAVSEA does not agree with this interpretation for the following reason:

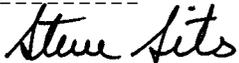
(a) The clarification provided by SSG-72 was incorporated into ref (a), Chg 1 paragraph 4.4.2.3.3, which states: "At a minimum, conduct the remote static blow in Accordance with the applicable portions of URO/MRC 022 to retest those portions of the system affected by the work".

(b) Paragraph 6.3.2.3 requires that all actions necessary to recertify the breach of the SUBSAFE boundary, including testing, must be accomplished prior to REC closure, therefore the static blow test required by paragraph 4.4.2.3.3 must be documented in the REC package.

3. Due to the variety of maintenance actions on the EMBT Blow System which may occur during an availability, conduct of the URO as required by paragraph 4.4.2.3.3 is a mandatory requirement due to the criticality of the blow system. It is not the intent to require duplicate tightness testing. However, RECs must remain open until the system URO/MRC Static Blow Test has been completed.

4. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature	Code	Date
	92TC	12/21/99
	0503	12/21/99

MARY TOWNSEND-MANNING
Commander, USN
Director Submarine Safety
and Quality Assurance



SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NAVSEA	2. INFO: ALL SSPDS	3. SERIAL NO: PNSY-005-99	
4. SUBJECT: Torque Requirements		5. FORM TYPE: Request	
6. PAGE: 4-43	7. PARAGRAPH: 4.6.4.2.1	8. ISSUE DATE:	9. REQSTD RESP DATE: 10/29/1999

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010 Rev C, CH 1, ACN 2-1, Submarine Safety (SUBSAFE) Requirements Manual.

(b) NAVSEA S9505-AM-GYD-010, Submarine Fastening Criteria (Non-Nuclear)

(c) SAE J2270 Ship Systems and Equipment - Threaded Fasteners-Inspection, Test, and Installation Requirements.

There is a conflict in requirements for threaded fastener inspection and tests for the installation of studs, requiring resolution.

Section 4.6.4.2.1.c of reference (a) requires procedures for fastener tightening, including torque values where applicable, flange alignment, flange joint acceptance, reuse of fasteners and visual inspections, shall be in accordance with reference (b). Section 3-37 of reference (b) provides requirements for the installation of studs with anaerobic locking compound, and after curing of the compound, the stud should not rotate and should be otherwise in accordance with DOD-STD-1371.

DOD-STD-1371 B was cancelled by Notice 3 of 3 September, 1998, and superseded by SAE J2270. The notice indicates that when DOD-STD-1371 is specified for inspecting studs locked with anaerobic thread locking compound, instead use the "Stud Installation Verification" paragraph of SAE J227, subject to any approval requirements of the contract invoking the use of DOD-STD-1371.

SAE J2270 Rev 1996-01 was the current revision when DOD-STD-1371 was superseded. The values in table 5, proof load torque values for fasteners installed with anaerobic compound conflict with the values in reference (b). Which values should be used? Currently PNS is using both values.

SAE J2270 Rev Oct 1998 has been issued since the DOD-STD-1371 was superseded. Section 2.1.1 of SAE J2270 Rev Oct 1998 indicates that in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. (NOTE: Reference (b) is a reference cited in SAE J2270 Rev Oct 1998). This implies that other paragraphs of reference (b) are superseded by SAE J2270 Rev Oct 1998, but there is no indication in the commercial specification that the government has approved this later change to the specification, as now there are additional conflicts between reference (b) and the SAE J2270. Reference (b) is invoked by the SUBSAFE Manual, and SAE J2270 is not mentioned in the SUBSAFE Manual.

The new SAE J2270 does not define when Quality Assurance Test Requirements, Inspection Requirements are required to be done or need to be documented. There is no applicable government addendum to the specification to indicate when and what tests are required, leaving it up to the procuring activity to determine the applicability of tests and inspections.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO:

NAVSEA

2. INFO:

ALL SSPDS

3. SERIAL NO:

PNSY-005-99

10. COMMENTS/RECOMMENDATIONS (CONT)

Request NAVSEA determine if SAE J2270 Rev Oct 1998 has been reviewed and approved by NAVSEA for use in SUBSAFE applications.

Request NAVSEA determine the hierarchy of references (a), (b), and (c) and applicability to SUBSAFE Mechanical Joints.

Request NAVSEA determine the required inspections, tests, and documentation required in references (b) and (c).

A 29 Oct 99 response date is requested.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PNSY	2. INFO: ALL SSPDS	3. SERIAL NO: PNSY-005-99-92Q(1)	
4. SUBJECT: Torque Requirements		5. FORM TYPE: Response	
6. PAGE: 4-43	7. PARAGRAPH: 4.6.4.2.1	8. ISSUE DATE: 01/05/2000	9. REQSTD RESP DATE: 10/29/1999

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010 Rev C, CH 1, ACN 2-1, Submarine Safety (SUBSAFE) Requirements Manual.

(b) NAVSEA S9505-AM-GYD-010, Submarine Fastening Criteria (Non-Nuclear)

(c) SAE J2270 Ship Systems and Equipment - Threaded Fasteners-Inspection, Test, and Installation Requirements.

1. SS LAR PNSY-005-99 states there is a conflict in requirements for threaded fastener inspection and tests for the installation of studs.

PNSY requested the following:

(a) Determine if SAE J2270 Rev Oct 1998 has been approved by NAVSEA for use in SUBSAFE applications.

(b) Determine the hierarchy of references (a), (b), and (c) and applicability to SUBSAFE Mechanical Joints.

(c) Determine the required inspections, tests, and documentation required in reference (b) and (c).

2. NAVSEA has reviewed references (a), (b), and (c) and concurs there is a conflict between references (b) and (c) regarding "Resistance Test Breakaway Torque Values for Sealants". NAVSEA provides the following direction: Any breakaway torque test value from any table whose use is APPROVED by the Navy is satisfactory for use when establishing a check value for a specific stud diameter. The procedure for selecting the location and number of studs to be tested, the test application requirements, etc., is always taken from SAE J2270, just as it was previously taken from DOD-STD-1371. The Navy has approved the test value table in reference (c), Table 3-2 of reference (b), and tables appearing in Shipyard process instructions developed for new construction by Newport News Shipbuilding and Electric Boat Corporation. Once an activity establishes a methodology that satisfies SAE J2270, they can pick a test value from any of the Navy approved sources. All the values fall within the acceptable range and are technically acceptable.

3. Reference (a) is the governing document for all SUBSAFE work. Reference (a) establishes that Reference (b) or any NAVSEA approved bolting procedure is acceptable.

4. Inspection, test and documentation

(a) Inspection/test shall be in accordance with paragraph 3-37 of reference (b) and paragraph 6.6.6 and 6.6.7 of reference (c).

(b) A record of accomplishment documenting material used and satisfactory torque test is required. Documentation can be included on the joint record form required by reference (a) para. 4.6.4.2.1.1 for assembly of the joint.

5. Reference (b) will be changed to reflect that DOD-STD-1371 has been superceded by reference (c).

6. NAVSEA considers this SS LAR series closed.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO:

PNSY

2. INFO:

ALL SSPDS

3. SERIAL NO:

PNSY-005-99-92Q(1)

Program Office Technical Concurrence

Signature

Code

Date

Steve Pitts

SEA92TC

11/29/99

Phil J. Long

SEA 05432

1/3/00

Mary Townsend-Manning 1/3/00

Mary Townsend-Manning
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM			
1. TO: NAVSEA 92Q	2. INFO: SSPDs	3. SERIAL NO: PNSY-001-00	
4. SUBJECT: Use of Subcontractors for GFE/GFM Refurbishment			5. FORM TYPE: Request
6. PAGE: 6-2 thru 6-17	7. PARAGRAPH: 6.3.2	8. ISSUE DATE:	9. REQSTD RESP DATE: 15 Dec 00
<p>10. COMMENTS/RECOMMENDATIONS:</p> <p>Ref (a) SSLAR SMEPP-001-92-92Q(1) (b) SSLAR PNSY-001-93-92Q(1) (c) NAVSEA 0924-062-0010 REV C, CH1, ACN 2-1 & 2-2</p> <p>1. In reference (a), NAVSEA required Naval activities to use re-entry control requirements in performing GFE/GFM refurbishment. NAVSHIPYD PTSMH requested in reference (b) that the difference in re-entry control requirements puts Naval activities at a competitive disadvantage relative to private vendors in bidding work, and requested NAVSEA approve applying the same re-entry control requirements to Naval activities as those applied to private vendors for the same work. NAVSEA disapproved the request and required Naval activities to use a re-entry control process per reference (c) for restoration of SUBSAFE components.</p> <p>2. Portsmouth Naval Shipyard as well as other Naval activities are starting to partner with other private contractors to accomplish SUBSAFE work. During peak work load periods, Naval activities may obtain private contractor services to accomplish SUBSAFE work (e.g., Electric Boat). Electric boat does not use a re-entry control process per reference (c) to accomplish restoration of previously SUBSAFE certified components. They have an internal control process that provides similar to that referred to in reference (b) for private contractors.</p> <p>3. Request NAVSEA allow Naval activities to subcontract work to other private vendors who have a quality system that meets the requirements referred to in references (a) and (b). A 15 Dec 00 response is requested.</p>			
Comments/Recommendations Continued:			

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PNSY		2. INFO: ALL		3. SERIAL NO. PNSY-001-00-92Q(1)	
4. SUBJECT: USE OF SUBCONTRACTORS FOR GFE/GFM REFURBISHMENT				5. FORM TYPE RESPONSE	
6. PAGE 4-63, 6-2		7. PARAGRAPH 4.6.12, 6.3.2		8. ISSUE DATE 3/21/01	
				9. REQSTD RESP DATE 12/15/00	

10. COMMENTS/RECOMMENDATIONS

- Ref: (a) SS LAR PNSY-001-00
 (b) SS LAR SMEPP-001-92Q(1)
 (c) SS LAR PNSY-002-93-92Q(1)
 (d) NAVSEA 0924-062-0010, Rev C, Submarine Safety (SUBSAFE) Requirements Manual
 (e) NAVSEANOTE 5000 Ser 92Q2/026 6 March 2000, Activities Authorized to Perform SUBSAFE Work

1. Reference (a) requested that NAVSEA allow Naval activities to subcontract refurbishment of SUBSAFE GFE/GFM to private vendors that do not utilize a Re-entry Control process. This request is based on the guidance of references (b) and (c) which indicates that private vendors may utilize a quality control system analogous to REC.

2. Reference (d) requires that all SUBSAFE work be accomplished using re-entry control procedures. Reference (b) and (c) were issued to allow activities not listed in reference (e) to do SUBSAFE work without Re-entry control by administering a work control program that produces OQE similar to Re-entry control and having the components recertified by a qualified activity.

3. NAVSEA grants Portsmouth Naval Shipyard's request to allow Naval activities to subcontract work to other private vendors who have a quality system that meets the requirements referred to in references (b) and (c). However, when SUBSAFE work is performed on GFE/GFM components by any vendor or activity qualified by NAVSEANOTE 5000 to administer a Re-entry Control system NAVSEA considers the Re-entry Control process described in reference (d) section 6.3.2 to be required. This applies to all activities, both private as well as naval activities.

4. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature

Code

Date

[Handwritten Signature]
[Handwritten Signature]

05033

2/26/01

92TC

2/26/01

MARY TOWNSEND-MANNING
 CAPT (S), USN
 Director Submarine Safety
 and Quality Assurance

Mary Townsend-Manning 3/15/01

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 92Q	2. INFO: ALL	3. SERIAL NO. PSNSY-006-93
4. SUBJECT TORPEDO TUBE BLOW AND VENT MANIFOLD AND FLOOD AND		5. FORM TYPE REQUEST
6. PAGE 9-38	7. PARAGRAPH 9.6.1.1	8. ISSUE DATE 12/23/93
9. REQSTD RESP DATE 01/23/94		

10. COMMENTS/RECOMMENDATIONS

SUBJECT: (cont'd) DRAIN VALVE HYD ACTUATORS FOR SSBN 726 CL

Ref: (a) S9SSB-X9-SCB-010/SSCB SSBN 726 CL
 (b) 516-4682210(D) SH 11 Diag Ships Svc Hyd Torp Svc Arrgt
 (c) NAVSEA 0924-062-0010(B) Ch-1
 (d) PYIR EB Ser No. 698-0000 (attached)

1. Fig I-7 and III-6 of ref (a) shows the "C1" hydraulic connections to hydraulic operators for the torpedo tube blow/vent manifolds (ALP-177 and 178) and the flood/drain valves (TD-13 thru 20) in "RED". Review of ref (b) reveals that subject hydraulic connections do not perform any SUBSAFE function in terms of emergency flood control. In addition, these connections do not meet the boundary definition of para 9.6.1.1 of ref (c), since failure of these actuators would not result in loss of emergency remote power operation.

2. Ref (d) obtained Planning Yard concurrence that subject connections are not SUBSAFE and do not require Re-entry Control procedures.

3. Ref (d) tasked PSNS to follow-up this matter with a SS LAR to NAVSEA 92Q. Request NAVSEA concurrence regarding this issue.

Jan W Brunson
1/20/94

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: PSNSY	2. INFO: ALL	3. SERIAL NO. PSNSY-006-93-92Q(1)
4. SUBJECT TT BLOW & VENT, FLOOD & DRAIN HYD ACT 726 CLASS		5. FORM TYPE RESPONSE
6. PAGE 9-38	7. PARAGRAPH 9.6.1.1	8. ISSUE DATE 02/27/95
9. REQSTD RESP DATE		

10. COMMENTS/RECOMMENDATIONS

- Ref:
- (a) Submarine Safety Certification Boundary Book (U),
SSBN 726 Class Submarines,
NAVSEA S9SSB-X9-SCB-010/(C) SSCB, Rev A
 - (b) NAVSEA Drawing #516-4682210(D) SH 11, Diag Ships Svc
Hyd Torp Svc Arrgt
 - (c) NAVSEA 0924-062-0010 Rev B Chg 1, Submarine Safety
(SUBSAFE) Requirements Manual
 - (d) Planning Yard Information Request (PYIR) EB Ser No.
698-0000
 - (e) Submarine Safety Certification Boundary Book, SSN 688
Class Submarines, NAVSEA S9SSN-XT-SBB-010

Comments:

1. SSLAR PSNSY-006-93 states that a discrepancy exists between references (a) & (b) regarding whether or not the connections to the hydraulic operators for the torpedo tube blow/vent manifolds, ALP-177/178, and the flood drain valves, TD-13 thru 20, depicted as "C1" in Figures I-7 & III-6 of reference (a) are within the SUBSAFE boundary. PSNSY noted that the subject connections are depicted in red in reference (a). However, PSNSY's review of reference (b) concluded that the subject connections do not perform any SUBSAFE function in terms of Emergency Flood Control. In addition, PSNSY stated that since the failure of these actuators would not result in the loss of Emergency Remote Power Operations, they do not meet the SUBSAFE boundary definition of paragraph 9.6.1.1 of reference (c). Finally, reference (d) obtained the Planning Yard's concurrence that the subject connections are not SUBSAFE and when worked do not require that re-entry control be invoked. PSNSY requested that NAVSEA concur with the Planning Yard's and PSNSY's interpretation of the SUBSAFE boundary with respect to these hydraulic connections.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. PSNSY-006-93-92Q(1)

COMMENTS/RECOMMENDATIONS

2. NAVSEA has reviewed references (a)-(d) and does not concur with PSNSY and the Planning Yard that the connections to the hydraulic operators for the torpedo tube blow/vent manifolds, ALP-177/178, and the flood drain valves, TD-13 thru 20, are not within the SUBSAFE boundary. The hydraulic supply lines (P33, P35, P42, P44) connect to the subject manifolds and valves thru the muzzle door interlock valves (HS-908, HS-912, HP-1001, HP-1002). In turn, the hydraulic supply to shut the muzzle door is connected to the Emergency Flood Control System. The subject valves and manifolds when commanded to the open position thru their C1 connections are utilizing normal hydraulics which is connected to the Emergency Flood Control System. Therefore, failure of the connections identified above would depressurize the Emergency Flood Hydraulics System, and NAVSEA considers the connections to be within the SUBSAFE boundary. The connections are correctly depicted on Plates I-7 & III-6 of reference (e).

3. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Code	Signature	Date
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3907c

Jm2 Concurrence

2/23/95

*Dm W. Johnson
9208 2/27/95*

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NAVSEA	2. INFO: ALL SSPDS	3. SERIAL NO. PSNSY-002-99	
4. SUBJECT: IDENTIFICATION OF HULL INTEGRITY FASTENERS		5. FORM TYPE Request	
6. PAGE 4-46	7. PARAGRAPH 4.6.5.2.c.	8. ISSUE DATE 07/01/1999	9. REQSTD RESP DATE 08/06/1999

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 REV C, Submarine Safety (SUBSAFE) Requirements Manual
(b) NAVSEA 0948-LP-045-7010, VOL 1, Rev 2, Material Control Standard (Non-Nuclear)

1. Section 4.6.5.2.c. of reference (a) details required objective quality evidence for reused hull integrity fasteners. Hull integrity fasteners must be marked legibly with symbols of recognizable significance (e.g., .k.). Unmarked or illegibly marked hull integrity fasteners shall be replaced with one exception: studs in hull liners or component bodies not removed may remain if generic material testing confirms proper generic material.

2. Appendix C of reference (b) specifies color coding on each hull integrity fastener in addition to the kind of material, manufacturer's symbol, and traceability number. The color coding of the fastener indicates Level I acceptance and satisfactory completion of the required verification tests.

3. Hull Integrity studs can be installed with the marked end of the stud into the threaded hole, leaving only the color coded end of the stud exposed. In order to perform a generic material test (e.g. acid spot test) on the flat end of the stud, the color coding would need to be partially, if not entirely, removed.

4. PSNSY interprets Section 4.6.5.2.c to include that symbols of recognizable significance includes "Pink" color coding in accordance with reference (b) as this indicates K-Monel fasteners.

Request NAVSEA concur with PSNSY interpretation above or provide additional clarification.

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: PSNSY		2. INFO: ALL SSPDS		3. SERIAL NO. PSNSY-002-99-92Q(1)	
4. SUBJECT: IDENTIFICATION OF HULL FASTENERS				5. FORM TYPE Response	
6. PAGE 4-46		7. PARAGRAPH 4.6.5.2.c.		8. ISSUE DATE 8/4/99	
9. REQSTD RESP DATE 08/06/1999					

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual
 (b) NAVSEA 0948-LP-045-7010, Vol 1, Rev 2, Material Control Standard (Non-Nuclear)

PSNSY requests NAVSEA clarification of Section 4.6.5.2.c of reference (a), Hull Integrity fasteners marked legibly with symbols of recognizable significance (e.g., .k.). PSNSY requests clarification of Appendix C of reference (b), color coding of Hull Integrity fasteners.

NAVSEA concurs that Level 1 fasteners manufactured in accordance with applicable specifications shall be color coded after acceptance per Table C-1 of ref (b). Markings shall remain legible following color coding.

NAVSEA does not concur pink color coding is a symbol of recognizable significance without proper markings. Unmarked studs must be verified by generic testing and to preclude future reinspection, the studs may be marked with the letters KM and the testing activity's assigned Level 1 CAD.

NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence:

Signature	Code	Date
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<i>Steve Sits</i>	92TC	7/28/99
<i>Robert J. Long</i>	SEA03432	7/30/99

D.R. Alexander
 D.R. ALEXANDER
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 92Q	2. INFO: 393T	3. SERIAL NO. SMEPP-001-92
4. SUBJECT RE-ENTRY CONTROL FOR AERP/TRIPER COMPONENTS		5. FORM TYPE REQUEST
6. PAGE 6-2 thru 6-17	7. PARAGRAPH 6.3.2	8. ISSUE DATE 08/20/92
9. REQSTD RESP DATE 10/01/92		

10. COMMENTS/RECOMMENDATIONS

Reference: (a) NAVSEA ltr ser 92Q/201 of Jun 92

1. NAVSEA 92Q, in Reference (a), provided comments on the corrective actions taken by SUBMEPP. One comment on Item Vert-03 states that Re-entry Control (REC) should be invoked for refurbishment of AERP and TRIPER SUBSAFE work. This comment is based on SEA 92Q's interpretation of Section 6 of the SUBSAFE Manual (Rev. B). SUBMEPP does not agree with this interpretation, and as written, the REC requirements of Section 6 are not applicable to refurbishment of GFE such as AERP and TRIPER. This LAR provides SUBMEPP's interpretation of the requirements of Section 6 and requests NAVSEA concurrence with our current certification process for AERP components.

2. Paragraph 6.6.3.1.c of the SUBSAFE Manual specifically tasks shipyards to implement a re-entry control procedure in accordance with the requirements therein. Paragraph 6.3.2 states, "Once a submarine has been SUBSAFE certified for unrestricted operation to design test depth, re-entry control procedures shall be used to control work within the SUBSAFE Certification Boundary." Since AERP components are removed and reinstalled under shipyard REC procedures, it is the shipyard that controls work within the SUBSAFE certification boundary of a certified ship.

3. SUBMEPP provides a fully certified AERP component to the shipyard as GFE. The SUBSAFE Manual (sections 7.3.5.1 and 8.5.2.2.1) specifies that field elements of the Navy that furnish GFE/GFM for use within the SUBSAFE boundary shall certify the equipment/material and maintain auditable records on the certified GFE/GFM. The certifying activity shall also be responsible for preparing the certification statement stating the GFE/GFM meets the intent of the SUBSAFE Manual and is adequate for unrestricted operation to design depth. SUBMEPP fully complies with this requirement by providing certification statements to installing activities for all SUBSAFE AERP components and maintaining all applicable records in auditable form.

4. Paragraph 6.3.2 of the SUBSAFE Manual states that the objective of re-entry control procedures is provided maximum

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. SMEPP-001-92

COMMENTS/RECOMMENDATIONS

confidence that any work within the SUBSAFE certification boundary is properly authorized, executed, and verified by objective quality evidence (OQE). The OQE will verify:

- a. Work was specifically authorized and planned.
- b. Actual work was properly accomplished and required documentation was completed and verified correct.
- c. Documentation and certification was reviewed for accuracy and completeness by an independent party.
- d. Testing documentation was reviewed for accuracy and completeness.
- e. All REC certifications were reviewed for correctness and verified complete.

Procedures invoked by SUBMEPP in shipyard tasks and vendor contracts provide the above required maximum assurance that work is properly accomplished and verified and meet the intent of paragraph a-c, above. OQE obtained and retained by SUBMEPP verifies the above attributes as follows:

- a. Tasks, refurbishment instructions, and TRSs invoked on the shipyards and vendors provide deliberate authorization and planning for work accomplished.
- b. Completion of TRS and other invoked forms and sign-off sheets verify that the actual work was accomplished in accordance with specified instructions.
- c. Documentation and certification for work accomplished are reviewed by SUBMEPP component engineers to ensure accuracy and completeness.
- d. All testing documentation is reviewed by SUBMEPP component engineers to ensure accuracy and completeness.
- e. Engineering supervisors review and sign the AERP component final inspection check off sheet after the component engineer has certified his acceptance of all documentation and certifications received from the shipyard/vendor. This review verifies the form is correct and complete.

5. The following sections of the current SUBSAFE Manual requirements for REC do not address refurbishment of AERP or

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. SMEPP-001-92

COMMENTS/RECOMMENDATIONS

other GFE/GFM:

Section 6.3.2.4 (Re-entry Control Form and Instruction Matrix) does not address:

- o vendors accomplishing refurbishments
- o Public shipyard responsibilities for AERP. These would have to be added to table 6-1 as current responsibilities are not correct for AERP components.

6. Based on the above discussions SUBMEPP, as a field element of Navy that provides GFE, concludes that existing certification procedures for AERP meet the intent of the SUBSAFE Manual and that the SUBSAFE Manual REC procedures were not intended for use in GFE/GFM component refurbishments. We request NAVSEA concurrence with current SUBMEPP procedures for certification of SUBSAFE AERP components.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: SMEPP		2. INFO: ALL		3. SERIAL NO. SMEPP-001-92-92Q(1)	
4. SUBJECT RE-ENTRY CONTROL FOR AERP/TRIPER COMPONENTS				5. FORM TYPE RESPONSE	
6. PAGE 6-2 thru 6-17		7. PARAGRAPH 6.3.2	8. ISSUE DATE 04/08/93		9. REQSTD RESP DATE

10. COMMENTS/RECOMMENDATIONS

Ref: (a) NAVSEA ltr 9090 Ser 92/119 of 30 Apr 91
 (b) Submarine Safety (SUBSAFE) Requirements Manual,
 NAVSEA 0924-062-0010, Rev B

Comments:

1. SSLAR SMEPP-001-92 requested NAVSEA concurrence with current SUBMEPP procedures which currently do not include provisions for re-entry control (REC) of SUBSAFE AERP components. This request concludes that existing certification procedures for AERP meet the intent of reference (b) and that the reference (b) REC procedures were not intended for use in GFE/GFM component refurbishment and TRIPER SUBSAFE work.

2. NAVSEA has reviewed SUBMEPP's current procedures for certification of SUBSAFE AERP components and does not concur that the intent of reference (b), section 6.3.2 is being met. For Navy activities, NAVSEA considers work controls and data recording/reporting requirements under a REC to be required for work performed on AERP/TRIPER components or other GFE/GFM used within the SUBSAFE boundary. These technical and administrative requirements are to be invoked on any naval activity that performs work on items within a SUBSAFE boundary so that SUBSAFE requirements are emphasized and certification is consistently maintained.

3. For private vendors accomplishing refurbishments, NAVSEA concurs that the requirements of reference (b) are not directly invoked and SUBMEPP should continue to invoke requirements that are analogous to those established by reference (b).

4. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence
 Signature Code Date
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Jm Lawrence 393TC 3/25/93

J.P. [Signature]
 XEP 924 4/8/93

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: NAVSEA 92Q	2. INFO: ALL	3. SERIAL NO: SMEPP-001-00	
4. SUBJECT: NON-WATERTIGHT COVERS IN NON-PRESSURE HULL PLATE		5. FORM TYPE: Request	
6. PAGE: 4-5	7. PARAGRAPH: 4.3.1.1.a	8. ISSUE DATE: 07/28/2000	9. REQSTD RESP DATE: 08/28/2000

10. COMMENTS/RECOMMENDATIONS:

Ref: (a) NAVSEA 0924-062-0010, Rev C, ACN 2-2
 (b) NAVSEA Dwg. No. 100-5858188 M, SSN688 Class Non-Pressure Hull Aft FR 119
 (c) NAVSEA Dwg. No. 100-4640655 J, SSBN Trident Class Non-Pressure Hull Plating FR 135 to 156
 (d) NAVSEA Dwg. No. 123-4645246 D, SSBN Trident Class Flat Plate Manhole Exterior
 (e) NAVSEA Dwg. No. 113-4863679 C, SSBN Trident Class Foundation Clear Box Aft

Comments:

1. During SUBMEPP's review of change 7 to the SSN688 Class SUBSAFE Certification Boundary Book (SSCB) applicable to SSN719-725, 750 and later, references (a) and (b) were reviewed. During this review, the SUBMEPP engineer observed that there is a non-watertight cover in the non-pressure hull plating in an area where the plating is acting as pressure hull support structure and is therefore SUBSAFE (detail 6-8A of reference (b)). SUBMEPP has two concerns with this:

1. Reference (b) does not clearly identify whether this cover is SUBSAFE, and
2. The hole in the non-pressure hull plating acting as pressure hull support structure is not compensated.

2. Taking this a step further, SUBMEPP reviewed TRIDENT drawings and found a similar situation. Reference (c) identifies non-pressure hull plating acting as pressure hull support structure from 15" forward of FR 139 to 15" aft of Fr 140: this agrees with the TRIDENT SSCB. Reference (d), plan view 17-A details a non-watertight cover in the non-pressure hull in an area where the plating is acting as pressure hull support structure and is therefore SUBSAFE. In this case, reference (d) clearly does not identify this cover as SUBSAFE. SUBMEPP concerns are similar to those above:

1. Reference (d) does not identify this cover as SUBSAFE, and
2. The hole in the non-pressure hull plating acting as pressure hull support structure is not compensated. (A hole in the non-pressure hull plating for a cleat box, reference (e), less than 2" away from the cover shown in reference (d), is compensated and the drawing is properly marked to indicate the SUBSAFE portions.)

Recommendations:

1. NAVSEA determine whether the uncompensated covers of reference (b) and (d) are within the SUBSAFE boundary.
2. NAVSEA evaluate the need for compensation of these covers.

R. Thran
 SUBMEPP 1802S

SUBSAFE LIAISON ACTION REQUEST (SSLAR) FORM

1. TO: SUBMEPP		2. INFO: ALL		3. SERIAL NO. SMEPP-001-00-92Q(1)	
4. SUBJECT: NON-WATERTIGHT COVERS IN NON-PRESSURE HULL PLATE				5. FORM TYPE Response	
6. PAGE 4-5		7. PARAGRAPH 4.3.1.1.a		8. ISSUE DATE 11 Oct 00	
				9. REQSTD RESP DATE 8/28/00	

10. COMMENTS/RECOMMENDATIONS

- Ref: (a) NAVSEA 0924-062-0010, Rev C, ACN 2-2
 (b) NAVSEA Dwg No. 100-5858188 M, 688 Class Non-Pressure Hull Aft FR 119
 (c) NAVSEA Dwg No. 100-4640655 J, SSBN Trident Class Non-Pressure Hull Plating FR 135-156
 (d) NAVSEA Dwg No. 123-4645246 D, SSBN Trident Class Flat Plate Manhole
 (e) NAVSEA Dwg No. 113-4863679 C, SSBN Trident Class Foundation Cleat Box

1. During a review of Change 7 to the SSN688 Class SUBSAFE Certification Boundary Book (SSCB), applicable to SSN719-725, 750, and later, references (a) and (b) were reviewed by SUBMEPP. The SUBMEPP engineer observed that there is a non-watertight cover in the non-pressure hull plating in an area where the plating is SUBSAFE and acting as pressure hull support structure. Upon further review SUBMEPP found that the hole for this cover is not compensated. SUBMEPP also reviewed TRIDENT drawings and found a similar situation in reference (c), including detail drawings, references (d) and (e). Reference (d) details a non-watertight, non-compensated cover in the SUBSAFE portion of the non-pressure hull plating. Reference (e) details a non-watertight compensated cover in close proximity to the previous cover. In reference (e) SUBSAFE components are clearly labeled (hull plating and compensating insert), however, reference (d) is not marked SUBSAFE and no components are marked as SUBSAFE. SUBMEPP asks if the uncompensated covers of references (b) and (d) are within the SUBSAFE boundary and for NAVSEA to evaluate the need for compensation of these covers.

2. NAVSEA has determined that non-watertight covers located in the SUBSAFE area of the non-pressure hull plating acting as pressure hull support structure are not required to be SUBSAFE.

3. In reference to SUBMEPP's second question, NAVSEA has determined that the original structural analysis of the hull demonstrated the adequacy of the non-pressure hull plating to meet the applicable requirements. The non-compensated plating surrounding the covers in the non-pressure hull support structure is structurally adequate and does not require additional reinforcement.

4. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

SUBSAFE Office Concurrence

Signature Code Date

Jeffrey Clark

OS033

04 Oct 00

Steve Sits

92TC

06 Oct. 00

Mary Townsend-Manning

MARY TOWNSEND-MANNING
 Commander, USN
 Director Submarine Safety
 and Quality Assurance

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 92Q2	2. INFO: SOSG /396T /393T /07Q	3. SERIAL NO. SOSG-001-90
4. SUBJECT CONTRACTOR USE OF NAVAL SUPPLY SYS MATERIAL		5. FORM TYPE REQUEST
6. PAGE	7. PARAGRAPH	8. ISSUE DATE 03/16/90
		9. REQSTD RESP DATE 05/31/90

10. COMMENTS/RECOMMENDATIONS

Discussion:

The contractors are being strongly encouraged by new contracts to use the Naval Supply System to purchase material for use on submarines. This material will then become "Contractor Furnished Material" and not GFE. 0010A and the Supply system rules clearly say that certs will not be supplied on a routine basis. This is OK for GFE. But when we go to certify a ship we expect to have the contractor provide vendor certs for contractor furnished equipment and material. However, when the vendor is the US Government, certs may not be available.

With the large amount of Government excess material currently within the Supply system and in the Naval shipyards, I expect that we will be seeing more "formerly Government material" that's now Contractor furnished material.

B. ACTION REQUEST:

Please advise as to the acceptability of accepting CFE/M (formerly GFE/GFM) without "normal" certification.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: SOSG	2. INFO: ALL	3. SERIAL NO. SOSG-001-90-92Q(1)
4. SUBJECT CONTRACTOR USE OF NAVAL SUPPLY SYSTEM MATERIAL		5. FORM TYPE RESPONSE
6. PAGE	7. PARAGRAPH	8. ISSUE DATE 05/18/94
9. REQSTD RESP DATE		

10. COMMENTS/RECOMMENDATIONS

- Ref:
- (a) Submarine Safety (SUBSAFE) Requirements Manual, NAVSEA 0924-062-0010, Rev B
 - (b) Deviation # D-0040, General Dynamics Corporation, Electric Boat Division, dtd 20 May 1993
 - (c) Material Control Standard (Non-Nuclear), NAVSEA 0948-LP-045-7010

Comments:

1. SSLAR SOSG-001-90 stated that Shipbuilders are being encouraged in new contracts to purchase material from the Naval Supply System for use in submarines. Material purchased by a Shipbuilder through the supply system is classified as Contractor Furnished Equipment/Material (CFE/M) and therefore the Shipbuilder must obtain certification records from the supplier and/or perform receipt inspections and tests to verify the material type. However, as stated in paragraph 2.4 of reference (a), certified material supplied by the Naval Supply System is routinely supplied without the supporting certification records. This practice does not permit the Supervisor of Shipbuilding to certify a ship since vendor certification documents are not available for all CFE/M. SOSG requested that NAVSEA advise them on the acceptability of certifying CFE/M, obtained from the Naval Supply System, without "normal" certification.

2. Subsequent to submitting SOSG-001-90 to NAVSEA reference (b) was forwarded to SOSG by EBDiv. Reference (b) requested that EBDiv be allowed to consider SUBSAFE and/or Level I material purchased from the Naval Supply System as pre-certified material that is to be controlled in accordance with Section 2.4 of reference (a) and/or Section 3.3.5 of reference (c). For SUBSAFE/Level I material obtained from Naval Supply System this would be consistent with the certification requirements currently invoked on the public shipyards by references (a) & (c). SOSG approved reference (b) on 20 June 1993.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM (cont.)

3. SERIAL NO. SOSG-001-90-92Q(1)

COMMENTS/RECOMMENDATIONS

3. NAVSEA has reviewed references (a), (b), & (c) and considers that certified Level I/SUBSAFE material purchased for new construction from the Naval Supply System, or any other NAVSEA approved Level I/SUBSAFE certifying activity, should be treated as pre-certified material and the only material certification inspections required of the shipbuilder are those specified in references (a) & (c) for pre-certified material. Therefore, NAVSEA does not consider it necessary for EBDiv to obtain a deviation to procure pre-certified Level I/SUBSAFE material for new construction from an approved certifying activity without the supporting certification documentation normally required with CFE/M.

4. NAVSEA considers this SSLAR series closed.

Program Office Technical Concurrence

Signature Code Date

Jm Lawrence

393TC

5/16/94

J. A. Edward

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: 350A	2. INFO: SOSG /92Q /92Q2 /07Q	3. SERIAL NO. SOSG-002-90
4. SUBJECT CONTRACTOR USE OF NAVAL SUPPLY SYSTEM MATERIAL		5. FORM TYPE REQUEST
6. PAGE 3-10	7. PARAGRAPH 3.4	8. ISSUE DATE 03/22/90
9. REQSTD RESP DATE 06/30/90		

10. COMMENTS/RECOMMENDATIONS

A. DISCUSSION:

The Contractors are being strongly encouraged by new contracts and regulations to use the Naval Supply System to purchase material for use on submarines. Additionally, Naval shipyards, recently MINSY, issued a catalogue of "excess" material that the private yards were encouraged to purchase. Much of this material is Level I/SUBSAFE. Some of it purchased by MINSY and some obtained from the Naval Supply System.

When this material comes into the private shipyard it will be considered as Contractor Furnished Equipment/Material (CFE/M).

The guidance in 0010A and the Supply system rules clearly state that material certification will NOT be supplied on a routine basis. This is generally OK for GFE/GFM. However, when we go to certify a ship, we expect that the Contractor will be able to provide vendor certs for contractor furnished material. When the vendor is the US Government, material certs may not be available.

B. ACTION REQUEST:

Please advise as to the acceptability of accepting CFE/M (formerly GFE/GFM) without "normal" certification.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO: SOSG SOSNN	2. INFO: NNS /EB /92Q /05	3. SERIAL NO. SOSG-002-90-350(1)
4. SUBJECT CONTRACTOR USE OF NAVAL SUPPLY SYSTEM MATERIAL		5. FORM TYPE RESPONSE
6. PAGE	7. PARAGRAPH	8. ISSUE DATE 12/20/90
9. REQSTD RESP DATE		

10. COMMENTS/RECOMMENDATIONS

COMMENTS:

SSLAR SOSG-002-90 stated that contractors are being encouraged by new contracts and regulations to use the Naval Supply System to purchase material for use on submarines. Recently, Mare Island Naval Shipyard issued a catalog of "excess" material that the private yards were encouraged to purchase. Much of this material is Level I/SUBSAFE (LI/SS), some of it purchased by Mare Island and some obtained from the Naval Supply System. When this material comes into the private yard, it will be considered Contractor Furnished Equipment/Material (CFE/M). SSLAR SOSG-002-90 stated that material certification is not supplied on a routine basis, which is acceptable for Government Furnished Equipment/Material (GFE/M). However, when the Supervisor goes to certify a ship, the contractor is required to provide vendor certification documents for CFE/M. When the vendor is the Government, these certification documents may not be available. SOSG requested PMS350's position of the propriety of accepting CFE/M without "normal" certification.

RESOLUTION:

1. Private shipyards may use material procured from Government activities for SEAWOLF Class new construction within the following constraint:

- o The shipbuilder is required to meet all requirements of the applicable contract and the Specifications for Building Submarines, SEAWOLF Class. Shipbuilders shall treat any Government activity as any other vendor that provides material. This includes procuring the necessary Objective Quality Evidence (OQE) from the Government activity to support SUBSAFE certification.

2. This response was generated in conjunction with SSLAR SOSG-001-90-92Q(1).