

# SUBSAFEGRAM 0(P)

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9077  
07Q  
16 Jan 03

Subj: SUBSAFEGRAM POLICY, PROCEDURES, REVIEW, AND UPDATE

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

Encl: (1) List of SUBSAFEGRAMs  
(2) Table of SUBSAFEGRAM Revisions in Effect

1. The SUBSAFEGRAM system provides timely dissemination of information concerning the SUBSAFE Program and provides written background, clarification, and guidance regarding SUBSAFE Program implementation. SUBSAFEGRAMs are not to be used to circumvent the SUBSAFE Liaison Action Request or SUBSAFE Manual Change processes.

2. Enclosure (1) provides a complete list of SUBSAFEGRAMs. Shading in the enclosure indicates SUBSAFEGRAMs that have been canceled. Although not canceled, SUBSAFEGRAM 100 has no retention requirements since it forwards previously issued correspondence. Current revision status of all SUBSAFEGRAMs is provided in enclosure (2).

3. Each time a SUBSAFEGRAM is issued, revised, or canceled, affected pages of enclosures (1) and (2) will be updated. Updated (i.e., replacement) pages of these enclosures will be provided for changeout with the newly published/revised SUBSAFEGRAM or cancellation notice. Enclosure pages are individually dated in the upper right-hand corner to indicate when the page was last updated. This revision of SUBSAFEGRAM 0 cancels and supersedes Revision (O) dated 18 July 2001.

4. Since SUBSAFEGRAMs clarify and guide, they are considered to be within the scope of SUBSAFE Program direction provided by reference (a). No change in contract delivery or completion date in the current negotiated price or amount of any Government contract is authorized.

Subj: SUBSAFEGRAM POLICY, PROCEDURES, REVIEW, AND UPDATE

5. Any recommended changes or questions concerning SUBSAFEGRAMs should be directed to Mr. Neal Zarin, SEA 07QD, phone (C) 202-781-1468 or (DSN) 326-1468, fax 202-781-4683.



T. L. VAN PETTEN  
Director, Submarine Safety and  
Quality Assurance

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DCMA Alexandria, VA (M. J. Costa, Code DCMA-OCT;  
P. George, Code DCMA-OCT)  
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Subj: SUBSAFEGRAM POLICY, PROCEDURES, REVIEW, AND UPDATE

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TRIREFFAC Kings Bay, GA (Repair Officer, Code 411, Code 440)  
Consolidated Launcher Technology-Oceanering International, Inc.,  
Chesapeake, VA (M. Merzwa)  
SIMA Norfolk, VA (Repair Officer, Quality Assurance Officer)  
SIMA San Diego, CA (Repair Officer, Quality Assurance Officer)

Subj: SUBSAFEGRAM POLICY, PROCEDURES, REVIEW, AND UPDATE

Blind copy to:

SEA 05U32  
SEA 04XQ  
SEA 04XQ1B  
SEA 08D  
SEA 92C  
SEA 07Q  
SEA 07Q1  
SEA 07Q2  
SEA 07Q21  
SEA 07QD  
SEA 07QL (9077/10)  
SEA 07QE (2)  
SEA 07TC  
SEA 07TD  
PMS350A  
PMS350A21  
PMS392  
PMS392A1  
PMS392A2  
PMS392A41  
PMS392CA1  
PMS392CA2  
PMS392CA3  
PMS392CA4  
PMS392CM  
PMS395  
PMS395A12  
PMS398T11  
PMS450CSS

## LIST OF SUBSAFEGRAMS

<u>SUBSAFEGRAM NUMBER</u>	<u>TITLE</u>
SSG-0	SUBSAFEGRAM Policy, Procedures, Review, and Update
SSG-1	Activity SUBSAFE Flow Diagram
SSG-2	Local Disposition of Waivers
SSG-3	NAVSEA Pre-Sea Trial Certification Audits; Auditors for
SSG-4	NAVSEA SUBSAFE Certification Audits; Schedule Updates
SSG-5	Internal SUBSAFE Audit Reports and NAVSEA Pre-Sea Trial Certification Audit Reports
SSG-6	Submarine Safety Training Program Review
SSG-7	Message Requirements for Sea Trials and SUBSAFE Certification
SSG-8	SUBSAFE Liaison Action Request (LAR) System
SSG-9	Criteria for Certification of NAVSEA SUBSAFE Auditors
SSG-10	Casualty Due to Lack of Work Controls
SSG-11	REC Closeout Requirements Prior to Sea Trials
SSG-12	Tracking of SUBSAFE Items that are Required to be Submitted to NAVSEA, Design Agent, Ship's Force, Etc., Upon Completion of an Availability
SSG-13	Status of SUBSAFE Training Initiatives
SSG-14	SUBSAFE Functional Audits
SSG-15	Update on K-Monel Issue
SSG-16	SUBSAFE Liaison Action Request (SS LAR) System

## LIST OF SUBSAFEGRAMS (Cont'd)

SSG-17	Reporting of SUBSAFE Matters
SSG-18	Valve Line-up for Hydrostatic Pressure Testing
SSG-19	Interface Re-Entry Control
SSG-20	SUBSAFE Test Status
SSG-21	Hydraulic Oil Cleanliness
SSG-22	Procedure for Maintenance of SUBSAFE Certification on Shipyard-Managed Rotatable Pool Components
SSG-23	Adherence to Proper Maintenance Procedures
SSG-24	SUBSAFE Liaison Action Request (SS LAR) System
SSG-25	Policy and Responsibility for NAVSEA Review of Supervising Authority SUBSAFE Certification Audits
SSG-26	Procedure for Maintenance of SUBSAFE Certification on Shipyard-Managed SSN 688 Class Rotatable Pool Components
SSG-27	Definition of Objective Quality Evidence (OQE)
SSG-28	SUBSAFE Audit Corrective and Preventive Action
SSG-29	Time Limitation Between Completion of the Access to Vital Equipment Inspection and Actual Start Date of Fast Cruise
SSG-30	Report of Loose Fastener on Shaft Seal Housing
SSG-31	SUBSAFE Functional Audit Discrepancies
SSG-32	Minimum Information Required When Requesting Reinstatement of NAVSEA Certification of Material Condition

## LIST OF SUBSAFEGRAMS (Cont'd)

SSG-33	Shipyard Submittal of Deep Dive Test Forms to NAVSEA
SSG-34	SUBSAFE Functional Audit Discrepancies
SSG-35	Requirements for Hull Integrity Fasteners (K-Monel)
SSG-36	Revision of NAVSEA Submarine Safety Certification Auditor Nomination Form
SSG-37	Inspection of Plugs in Seawater Systems
SSG-38	Internal SUBSAFE Certification Audit Reports
SSG-39	Classification of NAVSEA SUBSAFE Functional Audit Observations
SSG-40	Resolution of SUBSAFE Functional Audit Items
SSG-41	SUBSAFE Program Personnel Information
SSG-42	Criteria for Certification of NAVSEA SUBSAFE Certification Auditors
SSG-43	Structural Material Control Requirements
SSG-44	Submittal of Resolutions to Category IA NAVSEA SUBSAFE Certification Audit Recommendations
SSG-45	SUBSAFE Certification Internal Audit and Re-audit Requirements
SSG-46	Reporting Requirements for Access to and Operation of Vital Equipment
SSG-47	Policy for NAVSEA Concurrence with Requests for Conducting SUBSAFE Certification Audits
SSG-48	Deferred SUBSAFE Work to be Accomplished after Delivery
SSG-49	SUBSAFE Functional Audit Discrepancies
SSG-50	Re-Entry Control Review and Reporting Requirements for New Construction Submarines

## LIST OF SUBSAFEGRAMS (Cont'd)

SSG-51	Internal SUBSAFE Certification Audit Reporting Requirements
SSG-52	Policy for Requesting and Scheduling NAVSEA SUBSAFE Certification Audits
SSG-53	Responsibility for Releasing Ship Certification Messages
SSG-54	Resolution of Functional Audit Operational Improvement Observations
SSG-55	SUBSAFE Objective Quality Evidence (OQE) to Support Re-Entry Control
SSG-56	Informing NAVSEA 92Q of SUBSAFE Certification Boundary Book Issues
SSG-57	Policy for Requesting and Scheduling NAVSEA SUBSAFE Certification Audits
SSG-58	Re-Entry Control Requirements for Welding to SUBSAFE Hull Structure
SSG-59	SEA 92Q SS LAR and MCR Policy
SSG-60	Use of SUBSAFE Certification Boundary (SSCB) Books to Determine Re-Entry Control (REC) Requirements
SSG-61	Policy for Reporting Significant Problems Affecting SUBSAFE to NAVSEA 92Q
SSG-62	Broken Lockwire Repair Versus Re-Entry Control
SSG-63	Review of In-Process Work During NAVSEA SUBSAFE Functional Audits
SSG-64	SUBSAFE Record Retention Guidance
SSG-65	Auditor Support for NAVSEA SUBSAFE Certification Audits and Functional Audits
SSG-66	SUBSAFE Deficiencies Identified Subsequent to the Start of Fast Cruise and Prior to the Commencement of Sea Trials

## LIST OF SUBSAFEGRAMS (Cont'd)

SSG-67	Misuse of Non-Age Hardened K-Monel in Critical Applications
SSG-68	Definition of SUBSAFE Work
SSG-69	NAVSEA SUBSAFE Certification Audit Procedures and Findings for Work and Testing that Do Not Meet Minimum Audit Scheduling Requirements
SSG-70	Approval of Deviations/Waivers and Departures From Specification for URO/MRC Requirements
SSG-71	Use of Electronically Transmitted Media for SUBSAFE OQE
SSG-72	Maintenance which Invalidates Unrestricted Operations (URO) Certification
SSG-73	Local Application of Level I Material Identification and Control (MIC) Markings
SSG-74	Material Designators for High-Yield Alloy Steels
SSG-75	Required Actions Upon Exceeding Test Depth
SSG-76	K-Monel Fastener Marking Reference Errors
SSG-77	SUBSAFE Annual Review/Assessment
SSG-78	SUBSAFE Training Program
SSG-79	Clarification of Re-Entry Control (REC) Form Requirements
SSG-80	Policy on SUBSAFE Certification Audits
SSG-81	Use of Level I Certified Material in SUBSAFE Applications
SSG-82	Recertifying SUBSAFE Material from Inactivated Ships
SSG-83	Re-Entry Control Closeout Policy
SSG-84	Policy for Reporting Significant Problems Affecting SUBSAFE to NAVSEA 92Q

**LIST OF SUBSAFEGRAMS (Cont'd)**

SSG-85	SUBSAFE Training
SSG-100	Correspondence that Affects the SUBSAFE Program
SSG-200	Active Precedent-Setting SUBSAFE Departures from Specifications
SSG-300	Summary of Audit Findings

27 Jan 03

TABLE OF SUBSAFEGRAM REVISIONS IN EFFECT

<u>SUBSAFEGRAM Number</u>	<u>Revision in Effect</u>	<u>SUBSAFEGRAM Number</u>	<u>Revision in Effect</u>
0	P	73	-
1-23	X	74	-
24	B	75	X
25-31	X	76	-
32	A	77-78	X
33-54	X	79	-
55	E	80	-
56-61	X	81	A
62	-	82	-
63	X	83	A
64	A	84	-
65-66	X	85	-
67	-	100	J
68-70	X	200	D
71	-	300	B
72	X		

X: SUBSAFEGRAM has been canceled.

SSG-0(P)  
Encl (2)

# SUBSAFEGRAM 24B

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9077  
92Q12  
23 Apr 99

Subj: SUBSAFE LIAISON ACTION REQUEST (SS LAR) SYSTEM

Ref: (a) SUBSAFEGRAM 24A of 27 Jan 95  
(b) NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE) Requirements Manual

Encl: (1) SUBSAFE Liaison Action Request (SS LAR) System Usage Guidance and Form Completion Procedures  
(2) SUBSAFE Liaison Action Request (SS LAR) Form

1. This SUBSAFEGRAM supersedes reference (a).
2. The SS LAR system was established to provide an efficient and rapid means of communicating on SUBSAFE-related issues. This program allows formal, direct, written communication between SUBSAFE Working Group (SSWG) members and SEA 92Q for resolving SUBSAFE Program administrative and technical questions.
3. The SS LAR system should not be used for recommending changes to reference (b). Change recommendations for reference (b) shall be prepared and submitted in accordance with the change procedures stated in Chapter 3 of reference (b) using the SUBSAFE Manual Change Request (MCR) process. The SS LAR system should not be used to adjudicate a noncompliance with an applicable and authorized specification within the SUBSAFE Certification Boundary. A noncompliance must be handled as a Departure from Specifications (DFS) in accordance with reference (b), section 3.4.
4. Enclosure (1) provides general guidance regarding the SS LAR system and procedures for completing a SS LAR form. Enclosure (2) is an example of a blank SS LAR form.
5. Operation of the SS LAR system is considered to be within the purview of SEA 92Q for providing SUBSAFE Program clarification and guidance and is within the scope of existing Government contracts and agreements. A SS LAR response does not authorize any change in the terms, conditions, delivery schedule, price, or amount of any Government contract. In the event that you consider that the SS LAR response represents a change for which you are entitled to an equitable adjustment, you should notify SEA 92Q and comply with the requirements of the Notification of Changes clause paragraph of the contract.

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

Subj: SUBSAFE LIAISON ACTION REQUEST (SS LAR) SYSTEM

Distribution:

COMSUBLANT (LCDR D. Eaton, Code N409)  
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Newport News Shipbuilding, Newport News, VA (D. Conley, Dept. 003)  
Electric Boat Corporation, Groton, CT (R. Scheel, Dept. 320)  
NUWCDIV Newport, RI (D. Borgeson, Code 401)  
NAVSHIPREPFAC Yokosuka, Japan (H. Rollins, Code 130)  
DLA Fort Belvoir, VA (M. J. Costa, Code AQ1A)  
SHAPEC SSN688 Class, Portsmouth, NH (R. Toole, Code 240SH)

Subj: SUBSAFE LIAISON ACTION REQUEST (SS LAR) SYSTEM

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SUPSHIP Groton, CT (Code 201, Code 301)  
SUPSHIP Newport News, VA (Code 201, Code 301)  
Coastal Systems Station, Panama City, FL (Code E05Q)  
COMSUBGRU TWO  
COMSUBGRU SEVEN  
COMSUBGRU EIGHT  
COMSUBGRU NINE  
COMSUBGRU TEN  
COMSUBGRUREP Guam  
COMSUBDEVRON FIVE  
COMSUBDEVRON TWELVE  
COMSUBRON ONE  
COMSUBRON TWO  
COMSUBRON FOUR  
COMSUBRON SEVEN  
COMSUBRON ELEVEN  
COMSUBRON SIXTEEN  
COMSUBRON SEVENTEEN  
COMSUBRON TWENTY  
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NAVSUBSUPFAC NLON (Repair Officer, Technical Library)  
Repair Officer, USS SIMON LAKE (AS 33)  
Repair Officer, USS EMORY S. LAND (AS 39)  
Repair Officer, USS FRANK CABLE (AS 40)  
Repair Officer, USS MCKEE (AS 41)  
TRIREFFAC Bangor, WA (Repair Officer, Code 411, Code 440)  
TRIREFFAC Kings Bay, GA (Repair Officer, Code 411, Code 440)  
Consolidated Launcher Technology, Inc., Chesapeake, VA (M. Merzwa)  
SIMA Norfolk, VA (Quality Assurance Officer)  
SIMA San Diego, CA (Quality Assurance Officer)  
FTSCLANT Norfolk, VA

Subj: SUBSAFE LIAISON ACTION REQUEST (SS LAR) SYSTEM

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SEA 03U32

SEA 04XQ

SEA 04XQ1B

SEA 08D

SEA 92C

SEA 92Q

SEA 92Q1

SEA 92Q13

SEA 92Q2

SEA 92Q4

SEA 92QD

SEA 92QS (9077/10)

SEA 92QE (2)

SEA 92TC

PMS350A

PMS350A21

PMS392

PMS392A1

PMS392A2B

PMS392A331

PMS392A351

PMS392A41

PMS395

PMS395A14

PMS450T1AFT2

**SUBSAFE LIAISON ACTION REQUEST (SS LAR)  
SYSTEM USAGE GUIDANCE AND FORM  
COMPLETION PROCEDURES**

GENERAL GUIDANCE

1. SS LAR correspondence consists of "Requests" and "Responses." The former are used to solicit action and the latter to reply to these requests for action. Each Request or Response shall pertain to only one subject.
2. SS LARs should be generated in Microsoft Word format. Once generated, SS LARs are to be transmitted to NAVSEA via e-mail. NAVSEA will provide a file containing a blank SS LAR form in Microsoft Word format to all activities.
3. After a SS LAR has been electronically transferred to NAVSEA, the originating activity should fax a copy of the signed original SS LAR to SEA 92Q where it will be retained for record purposes. Upon issuing a SS LAR Response, SEA 92Q will fax or e-mail a copy of the Response to the originator and to each SSWG member.
4. All SS LAR Requests and Responses are retained by SEA 92Q in the SS LAR Database Program. This database is accessible for future reference by all SS LAR Software Program users. Users are encouraged to review the database, as well as the list of active SS LARs, prior to submitting a SS LAR to ascertain if the issue has been previously addressed.

**SUBSAFE LIAISON ACTION REQUEST (SS LAR)  
SYSTEM USAGE GUIDANCE AND FORM  
COMPLETION PROCEDURES**

SS LAR FORM COMPLETION PROCEDURE

Utilizing NAVSEA-provided blank forms (Microsoft Word compatible), complete each block of the SS LAR form with the following information:

- Block 1**      **TO:** - The appropriate SSWG member addressee designator. All requests generated outside of SEA 92Q shall be addressed to SEA 92Q.
- Block 2**      **INFO:** - The appropriate SSWG member activity designator(s) as desired. If all SSWG members are info addrees, enter "**ALL**".
- Block 3**      **SERIAL NO.** - Generate an activity-unique serial number as follows:
- a. Requests: The designator of the originating activity followed by a five-digit serial number indicating the chronological order and calendar year of the Request, restarting with 001 at the beginning of each calendar year (e.g., NNSY-001-93).
  - b. Responses: The same serial number used for the Request, followed by the responding activity's designator, and applicable Response version (e.g., NNSY-001-93-92Q(1)). The "(1)" indicates that this is NAVSEA 92Q's first Response. A second, follow-up Response would appear as NNSY-001-93-92Q(2).
  - c. To follow up a Request with additional or revised information, a supplemental Request may be issued, using the same serial number as the original, except for the addition of an alphabetical modifier to indicate that the Request is a supplement (e.g., the first supplement to NNSY-001-93 would be NNSY-001A-93). SEA 92Q's Response to the whole series would then appear as NNSY-001A-93-92Q(1).
- Block 4**      **SUBJECT** - A short title related to the comments (e.g., Seawater Systems Design Criteria). The subject of the Request and corresponding Response should be the same.
- Block 5**      **FORM TYPE** - "**Request**" or "**Response**" as appropriate.
- Block 6**      **PAGE** - Insert the associated page number(s) of the primary document referenced in the SS LAR. This primary reference should be identified as reference (a) in Block 10. Use the top of Block 10 if more space is needed.

**Block 7**      **PARAGRAPH** - Insert the associated paragraph number(s) of the primary document referenced in the SS LAR. This primary reference should be identified as reference (a) in Block 10. Use the top of Block 10 if more space is needed.

**Block 8**      **ISSUE DATE** - The date the Request or Response was released.

**Block 9**      **REQUESTED RESPONSE DATE** - For Requests, insert the desired Response date; allow at least 20 working days from the issue date. For Responses, this block is left blank.

**Block 10**      **COMMENTS/RECOMMENDATIONS** - List applicable references first, followed by any enclosures.

Specifically identify "COMMENTS" and "RECOMMENDATIONS" as such in the text, and number the paragraphs within each section.

Under "**COMMENTS**," describe the issue. Include any necessary background information.

Under "**RECOMMENDATIONS**," indicate specific actions to resolve the issue along with the activity's rationale for these recommendations.

**NOTE:** The original of each Request or Response must be signed at the bottom of this block by a representative of the issuing activity. The copy of the SS LAR to be submitted to NAVSEA via e-mail should have the name of the SS LAR's signatory typed at the bottom of this section.

SUBSAFE LIAISON ACTION REQUEST (SS LAR) FORM

1. TO:	2. INFO:	3. SERIAL NO.	
4. SUBJECT		5. FORM TYPE	
6. PAGE	7. PARAGRAPH	8. ISSUE DATE	9. REQSTD RESP DATE

10. COMMENTS/RECOMMENDATIONS

# SUBSAFEGRAM 32A

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9077  
92Q1  
10 Mar 99

Subj: MINIMUM INFORMATION REQUIRED WHEN REQUESTING REINSTATEMENT OF NAVSEA CERTIFICATION OF MATERIAL CONDITION

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

1. This SUBSAFEGRAM supersedes SUBSAFEGRAM 32 of 6 Jan 89 and provides guidance for a naval Supervising Authority (Supervisor of Shipbuilding or naval shipyard) to ensure that NAVSEA can act expediently on a certification reinstatement request subsequent to the initial certification for sea trials.
2. Reference (a), paragraphs 5.6.1.2.c(1) and 5.6.2.2.d(1), contains notes addressing conditions which result in suspension of NAVSEA certification of material condition required for both new construction and post-major depot availability sea trials. The Supervising Authority reporting actions to obtain reinstatement of NAVSEA certification are also briefly addressed.
3. In responding to a reinstatement request, NAVSEA requires sufficient information to assess the submarine's material condition readiness for certification. Therefore, the Supervising Authority's message or letter requesting reinstatement of NAVSEA's certification of material condition should include the following, as a minimum:
  - a. A positive statement acknowledging that the material condition certification previously granted by NAVSEA was suspended due to deficiencies discovered.
  - b. For each individual deficiency:
    - (1) Identify the specific component, including details of the deficient condition.
    - (2) Identify the apparent cause. Positively state if the cause is not apparent.
    - (3) Corrective actions and subsequent retest results.
  - c. A statement that all work and testing within the SUBSAFE Certification Boundary were satisfactorily accomplished and performed under Re-Entry Control.
  - d. If at-sea tests are required, include a statement addressing how these at-sea tests will be controlled. If a new sea trial agenda is required, reference the NAVSEA approval; if portions of a previously approved sea trial agenda are to be used, identify those portions of the agenda.

Subj: MINIMUM INFORMATION REQUIRED WHEN REQUESTING REINSTATEMENT OF NAVSEA CERTIFICATION OF MATERIAL CONDITION

**Note:** It must be clear that the ship will be operating in accordance with an approved sea trial agenda. All SUBSAFE Deep Dive retests shall be accomplished prior to conducting submerged crash backs, steep angles, and other nonroutine or hazardous evolutions.

e. A statement indicating concurrence of the ship's Commanding Officer (OIC for New Construction) with the message. (This concurrence is acknowledgment that the work identified and performed by the activity is complete and that the approved agenda includes appropriate at-sea tests.)

f. Specifically request that NAVSEA reinstate certification of material condition to allow sea trials to continue in accordance with the approved sea trial agenda.

4. The guidance that is provided in this SUBSAFEGRAM is also applicable to any URO messages/letters.

5. When preparing certification messages, following the reference (a), Appendix B, formats, the information detailed above may be included in the message or it may be forwarded by separate correspondence prior to message submission. The message will report suspension of certification, request reinstatement of NAVSEA certification, and reference any applicable separate correspondence.



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

Subj: MINIMUM INFORMATION REQUIRED WHEN REQUESTING REINSTATEMENT  
OF NAVSEA CERTIFICATION OF MATERIAL CONDITION

Distribution:

COMSUBLANT (LCDR D. Eaton, Code N409)  
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NUWCDIV Newport, RI (D. Borgeson, Code 401)  
NAVSHIPREPFAC Yokosuka, Japan (H. Rollins, Code 130)  
DLA Fort Belvoir, VA (M. J. Costa, Code AQ1A)  
SHAPEC SSN688 Class, Portsmouth, NH (R. Toole, Code 240SH)

Subj: MINIMUM INFORMATION REQUIRED WHEN REQUESTING REINSTATEMENT  
OF NAVSEA CERTIFICATION OF MATERIAL CONDITION

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Subj: MINIMUM INFORMATION REQUIRED WHEN REQUESTING REINSTATEMENT  
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SEA 92Q13

SEA 92Q2

SEA 92Q4

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SEA 92QS (9077/10)

SEA 92QE (2)

SEA 92TC

PMS350A

PMS350A21

PMS392

PMS392A1

PMS392A2B

PMS392A331

PMS392A351

PMS392A41

PMS395

PMS395A14

PMS450T1AFT2

# SUBSAFEGRAM 55E

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9077  
92Q1  
11 Jan 02

Subj: SUBSAFE OBJECTIVE QUALITY EVIDENCE (OQE) TO SUPPORT RE-ENTRY CONTROL

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

Encl: (1) Lists of Standardized SUBSAFE OQE

1. This SUBSAFEGRAM supersedes SUBSAFEGRAM 55D of 20 Dec 01.
2. Paragraph 6.3.2 of reference (a) outlines the purpose of SUBSAFE Re-Entry Control (REC). The paragraph states: "The objective of re-entry control procedures is to provide maximum confidence that any work accomplished within the SUBSAFE Certification Boundary is authorized and executed in accordance with specifications, directives, etc., and is supported by objective quality evidence." There have been numerous questions posed to NAVSEA regarding the type and amount of OQE necessary to support certification of various work processes in SUBSAFE applications. Differing interpretations of paragraph 6.3.2 have resulted in different documentation practices.
3. To standardize OQE throughout the maintenance arena, working groups consisting of SUBSAFE Program Directors and NAVSEA and Fleet personnel have reviewed Technical Repair Standards, Welding/Brazing Standards, MIL-STDs, Repair Process Documents, and reference (a) to identify the key elements to be documented to certify the repair process. Enclosure (1) lists applicable key source document OQE requirements, including additional attributes to be included as part of the SUBSAFE REC process. Enclosure (1) is not all-inclusive; source documents must be reviewed, and all OQE must be generated and retained for the specific repair accomplished.
4. Enclosure (1) is to be used as follows:
  - a. Activities performing SUBSAFE maintenance and repair should use the list, along with the source documents, as a guide in developing OQE records that document work, inspections, and

Subj: SUBSAFE OBJECTIVE QUALITY EVIDENCE (OQE) TO SUPPORT RE-ENTRY CONTROL

tests performed in the SUBSAFE Certification Boundary. The elements listed are technical specifications and process document requirements for a typical repair process. For example, Process (1), Welding, does not list all of the OQE that would be required for a weld repair of a pit. The format for capturing the required data is not prescribed, but must meet the retention requirements of reference (a), section 4.6.10, in addition to the attributes of enclosure (1).

b. Auditors and team leaders conducting either internal or NAVSEA SUBSAFE audits should use the lists to determine what OQE will be reviewed in order to ensure compliance with SUBSAFE requirements. Auditors must review the source documents to ensure that all OQE for a specific repair is retained. Normally, the scope of the audit for an individual work process (e.g., repair of a specific valve) will be focused on the elements on the OQE list. However, evidence of systemic problems or ancillary deficiencies may require expansion of the audit scope.

5. NAVSEA considers that widespread distribution and use of enclosure (1) by all parties involved in the SUBSAFE certification process will increase the degree of compliance with SUBSAFE requirements and the effectiveness of SUBSAFE audits.

6. The NAVSEA point of contact is Mr. Chris DeCamp (SEA 92Q1) at (COM) 202-781-1284 or (DSN) 326-1284.



T. L. VAN PETTEN  
Director, Submarine Safety and  
Quality Assurance

Subj: SUBSAFE OBJECTIVE QUALITY EVIDENCE (OQE) TO SUPPORT RE-ENTRY CONTROL

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Subj: SUBSAFE OBJECTIVE QUALITY EVIDENCE (OQE) TO SUPPORT RE-  
ENTRY CONTROL

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SEA 92QD  
SEA 92QL (9077/10)  
SEA 92QE (2)  
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PMS393A1  
PMS393A2  
PMS393A3  
PMS393A4  
PMS393M  
PMS395  
PMS395A18  
PMS450CSS

**STANDARDIZED SUBSAFE OBJECTIVE  
QUALITY EVIDENCE (OQE) REQUIREMENTS**

<b>NO.</b>	<b>PROCESS</b>	<b>SOURCE DOCUMENT(s)</b>
1	Welding (Structural)	NAVSEA T9074-AD-GIB-010/1688 NAVSEA T9074-AS-GIB-010/271 MIL-STD-2035
2	Welding (Piping)	NAVSEA S9074-AR-GIB-010/278 MIL-STD-2035 NAVSEA 250-1500-1 (NR-1 Only) NAVSEA T9074-AS-GIB-010/271
3	Pipe Joint Brazing	NAVSEA 0924-062-0010 (para 4.6.4.3.1) NAVSEA 0900-LP-001-7000 NAVSEA T9074-AS-GIB-010/271
4	Assembly of Seawater/Sea-Connected Bolted Pressure Boundary Joints and Joints Requiring Controlled Assembly	NAVSEA 0924-062-0010 (para 4.6.4.2.1) NAVSEA S9505-AM-GYD-010 NAVSEA 0902-LP-018-2010 SAE J2270
5	Other SUBSAFE Mechanical Joints	NAVSEA 0924-062-0010 (paras 4.6.4.2.1.1c, 4.6.4.2.2 and 4.6.4.2.3.1)
6	Electrical Hull Fitting and Transducer Installation	NAVSEA 0924-062-0010 (para 4.6.4.2.3)
7	Non-Welded Stud Installation	NAVSEA S9505-AM-GYD-010 SAE J2270
8	Component Repair	NAVSEA 0924-062-0010 (para 4.6.10) Applicable TRS/SMS MIL-STD-2197 NAVSEA S9520-AA-MMA-010
9	Casting Repair	NAVSEA T9074-AD-GIB-010/1688 NAVSEA S9074-AR-GIB-010/278
10	In Shop Pressure Test	NAVSEA 0924-062-0010 (para 4.6.8.3)
11	Drop Test	NAVSEA 0924-062-0010 (para 4.6.8.1) NAVSEA 0924-062-0010 (para 4.6.8.2)
12	Shipboard Pressure Test	NAVSEA 0924-062-0010 (para 4.6.8.1)

Note:

- (1) All process OQE will document the following:
  - a. Ship name and hull number
  - b. System/component worked
  - c. Lead maintenance shop performing the work
  - d. Formal/technical work document
  - e. Traceability to the REC form
  - f. Document all material installed. New material will be specifically listed in accordance with the requirements of section 4.6.6 of reference (a). A standard statement is sufficient to verify reinstallation of material that was not replaced.

1. PROCESS: Welding (Structural)

Required OQE: (See Note (1))

1. Weld location (ship or assembly) and joint identification and drawing (or equivalent description/document):
  - a. Joint identification number (if applicable)
  - b. Drawing number and piece number
  - c. Locally generated document showing joint, if required (must be retained in REC package)
2. Joint design
3. Base material type identification; traceability to records for newly installed material
4. Filler metal type identification
5. Weld procedure identification
6. Joint fitup (i.e., SAT), identification and signature of inspector
7. Heat treatments, minimum preheat and maximum interpass temperature (i.e., SAT)
8. Repair weld documentation (if applicable).
9. Date and time weld ambient temperature is reached (used to determine when subsequent NDT may be accomplished) in accordance with NAVSEA T9074-AD-GIB-010/1688; e.g., for HY and HSLA, MT final inspection of full penetration butt, corner and groove tee welds in pressure hull envelope shall be made no sooner than the same shift 7 days (160 hours) after the weld is complete and has cooled to ambient temperature
10. Size and location of rejectable indications and corrective actions
11. Welder identification and signature of all welders who performed welding on the joint
12. NDT personnel identification, NDT inspections, and equipment in accordance with NAVSEA T9074-AS-GIB-010/271. Acceptance criteria in accordance with T9074-AD-GIB-010/1688. Acceptability/traceability to satisfactory NDT records (signature required of all inspectors involved in the job).

2. **PROCESS:** Welding (Piping and Pressure Vessels)

**Required OQE:** (See Note (1))

1. Weld location (ship or assembly) and joint identification and drawing (or equivalent description/document):
  - a. Joint identification number
  - b. Drawing number and piece number
  - c. Locally generated document showing joint, if required (must be retained in REC package)
2. Joint design
3. Base material type identification
4. Filler metal type identification
5. Weld procedure identification
6. Joint fitup (i.e., SAT)
7. Heat treatments (including preheat, interpass and post weld heat treatment); record minimum preheat and maximum interpass temperature, and post weld heat treatment holding temperature range used for the joint
8. Repair weld documentation (if applicable)
9. Size and location of rejectable indications and corrective actions
10. Welder identification and signature of all welders who performed welding on the joint
11. NDT personnel identification, NDT inspections, and equipment in accordance with NAVSEA T9074-AS-GIB-010/271. Acceptance criteria in accordance with S9074-AR-GIB-010/278 and MIL-STD-2035 (as applicable). Acceptability/traceability to satisfactory NDT records (signature required of all inspectors involved in the joint).

3. PROCESS: Pipe Joint Brazing

Required OQE: (See Note (1))

1. Joint identification number and drawing (or equivalent description/document):
  - a. Joint identification number or equivalent description
  - b. Drawing number and piece numbers
  - c. Locally generated document showing joint, if required (must be retained in REC package)
2. Repair number (when applicable)
3. Braze type (new or used tubing/fitting and if it is a restricted access joint)
4. Base material identification to include generic material/alloy identifier (including traceability no. when applicable)
5. Brazing alloy (grade and type)
6. Joint design (from NAVSEA 0900-LP-001-7000)
7. Satisfactory joint fitup (signature required)
8. Braze procedure identification
9. Brazer identification and braze completion (signature required for all brazers working on joint)
10. NDT personnel identification, NDT inspections required, and results:
  - a. Satisfactory PT/5X of reused pipe/tube/fittings when required (signature required)
  - b. Acceptability/traceability to NDT records (signature required)

**4. PROCESS:** Assembly of Seawater/Sea-Connected Bolted Pressure Boundary Joints and Joints Requiring Controlled Assembly

**NOTE:** Alternate requirements for seat tightness testing are addressed in Process 12.

**Required OQE:** (See Note (1))

1. Joint identification number and drawing (or equivalent description/document):
  - a. Joint identification number and drawing number (if applicable)
  - b. Drawing number and piece numbers
  - c. Locally generated document showing joint if required (must be retained in REC package)
2. Type of joint (e.g., Flanged (F))
3. Size and type of fastener
4. Existing male hull integrity fastener identification - indicate quantity and recognizable marking of existing hull fasteners
5. Joint assembly:
  - a. Satisfactory sealing surface inspection
  - b. Required torque(s) (including reference(s)). Document actual final torque applied. Additionally, document running torque if running torque is measurable using the same wrench required for the final torque increment (e.g., 35 ft-lbs and 3 ft-lbs running torque) for self-locking fasteners 5/8" or less in diameter.
    - c. Record thread lubricant used (e.g., Molykote P37, etc.)
    - d. Satisfactory locking device installation (if applicable)
    - e. Torque wrench/device serial number, range, and calibration due date
    - f. Mechanic's signature verifying compliance with all requirements
    - g. Independent verification signature for compliance with all requirements (when required)

**5. PROCESS:** Other SUBSAFE Pressure Boundary Mechanical Joints and Linkages

**SCOPE:**

1. Other assembled non-pressure boundary mechanical joints within the SUBSAFE Boundary where defined by section 4.6.4.2.3 (e.g., linkages and interlocks)
2. Other assembled union and screw pressure boundary joints in sea-connected or seawater systems in the SUBSAFE Boundary
3. Other assembled union, screw, and bolted pressure boundary joints in non-sea-connected systems within the SUBSAFE Boundary

**Required OQE:** (See Note (1))

1. Joint identification number and drawing or equivalent description/document:
  - a. Joint identification number (if applicable)
  - b. Type of joint (Union (U), Screw (S), Linkage (L), Flange (F), etc.)
  - c. Drawing number and piece numbers
  - d. Locally generated document showing joint (must be retained in REC package)
2. Signature verifying compliance with all requirements for the joint
3. Independent verification signature for compliance with all requirements (when required)

**6. PROCESS:** Electrical Hull Fitting and Transducer Installation

**Required OQE:** (See Note (1))

1. EHF/Transducer number
2. Hole number
3. Drawing and piece numbers
4. Installation procedure
5. Sealing surface inspection (i.e., SAT)
6. Document torque when a torque value is specified by the work specification:
  - a. Required torque (including reference). Document actual final torque applied.
  - b. Torque wrench serial number, range, and calibration due date
  - c. Signature required
7. Document gap measurements if required by the installation procedure (e.g., maintenance standards)
8. Locking device installation (i.e., SAT)
9. Mechanic's signature verifying compliance with all requirements
10. Independent verification signature for compliance with all requirements (when required)

7. **PROCESS**: Non-Welded Stud Installation

**Required OQE**: (See Note (1))

1. Component identification
2. Joint identification number and drawing or equivalent description/document:
  - a. Joint identification number
  - b. Drawing number and piece numbers
  - c. Locally generated document showing joint, if required (must be retained in REC package)
3. Drawing and piece number of fastener
4. Required fastener size, length, and class of fit with signature verifying compliance
5. Signature verifying satisfactory minimum required breakaway torque check
6. Required and actual stud standout
7. Sealant type (manufacturer) and grade (when applicable)
8. Signature verifying compliance with all requirements for installation

8. PROCESS: Component Repair

Required OQE: (See Note (1))

1. Component identification (for RISICs, identify type, location, and item number)
2. Component detail/assembly drawing and revision
3. Repairs performed - identify repair process(es) used. A signature verifying compliance with drawing or repair procedure(s) shall document:
  - a. Minor deficiency correction by machining and/or handworking (see note below)
  - b. Modifications/fabrication of material
  - c. Assembly per procedures when no other documentation requirements apply

Note: Handworking is defined as an action which cleans or polishes a surface by hand to meet acceptance criteria and which does not change the configuration of the item. OQE is not required unless handworking causes a change to configuration that violates plan specifications (e.g., drawings, Maintenance Standards, Tech Manuals, etc.).

4. Epoxy repairs (ball valve manual and other approved epoxy repairs):
  - a. Dimension after machining (if machined) and maximum depth of remaining defects prior to epoxy application
  - b. Remaining wall thickness dimension if critical to ensure that minimum wall thickness was not violated
  - c. Shim dimensions (if installed)
  - d. Final surface dimensional certification (signature verifying compliance with dimensions provided by drawing or procedure)
5. Electroplating repairs:
  - a. Generic base material identification
  - b. Plating material identification
  - c. Dimension after machining (if machined) and maximum depth of remaining defects prior to plating application (for pressure boundary parts)
  - d. Maximum plating thickness shall be specified and compliance that the thickness requirements have been met shall be documented SAT by plater signature
  - e. Acceptability/traceability to NDT records (if applicable)

6. Any inspections or test required to be documented by the process procedure used (e.g., Adhesion Test for electroplating)
7. Signature verifying compliance with process procedures used
8. Independent verification signature for compliance with all requirements (when required)

9. PROCESS: Casting Repair

Required OQE: (See Note (1))

1. Component identification and serialization:
  - a. Component description
  - b. Component drawing number
  - c. Casting ID number (new material only)
  - d. Component NDT inspection category (from NAVSEA S9074-AR-GIB-010/278 or S9074-AD-GIB-010/1688 as applicable)
2. Casting repair process:
  - a. Description of repair
    - (1) Length, width, depth, and location of defect
    - (2) Type of repair performed (e.g., weld, impregnation)
  - b. Casting wall thickness adjacent to the defect
  - c. Material specification including material type, class, and condition
  - d. Weld repair (if applicable)
    - (1) Weld filler material identification
    - (2) Weld procedure number
    - (3) Post weld heat treatment - time /temperature or furnace chart
    - (4) Weld joint identification no.
    - (5) Welder completion signature
  - e. Impregnation (if applicable)
    - (1) Impregnating material
    - (2) Casting stamped or etched "IMP"
3. Acceptability/traceability to satisfactory NDT records
4. Acceptability/traceability to required satisfactory hydrostatic test records
5. Signature verifying compliance with all requirements for repair

10. **PROCESS**: In Shop Pressure Test

**Required OQE**: (See Note (1))

1. Component identification
2. Test reference which provides test criteria including applicable revision
3. Required test parameters: (provided by cognizant technical authority)
  - a. Pressure
  - b. Medium
  - c. Duration
  - d. Sequence
  - e. Acceptance criteria
  - f. Test entry point (if not identified by test procedure)
4. Identify joints required to be inspected during the test or if entire component is tested, so state.
5. Actual test parameters:
  - a. Pressure
  - b. Medium
  - c. Duration
  - d. Sequence
  - e. Test results
6. Test completion signature (indicates satisfactory test, test equipment configuration and calibration, and compliance with test parameters)
7. Verification signature certifying test results

11. **PROCESS**: Drop Test

**Required OQE**: (See Note (1))

1. System or component identification
2. Test equipment: Pressure gauge/instrument gauge range, serial number, and calibration due date (for shipboard tests only)
3. Required test parameters - Pressure, medium, source, duration, acceptance criteria (allowable pressure drop)
4. Verify satisfactory completion of specified valve lineups used supported by either:
  - a. Diagram (showing valve positions), or
  - b. Description of the test area including gags and blanks installed (the valve lineup sheet must be retained)
5. Record applicable temperature(s) at the start and finish of the test that impact the calculation that determine satisfactory test results (if applicable) (e.g., seawater, compartment air, component, etc.)
6. Initial test pressure, final pressure at the end of the test, and final pressure drop corrected for temperature change
7. Test completion signature (indicates satisfactory test, correct test instrumentation, and compliance with test parameters)
8. Verification signature certifying test results and confirmation that correct test instrumentation (when gage OQE is not retained) was used.

**12. PROCESS:** Shipboard Pressure Test

**SCOPE 1:** The attributes provided herein relate to shipboard strength and tightness testing of piping systems and components when the test requires the use of an external pressure source. Structural Tanks and Compartments (including Escape Trunks) are not included.

**SCOPE 2:** For tightness testing accomplished with normal shipboard system lineup (i.e., no external pressure source required), only the attributes marked with an asterisk (\*) are required.

**Required OQE:** (See Note (1))

1. System or component identification\*
2. Test equipment (Primary and secondary pressure gauges):
  - a. Pressure gauge range
  - b. Serial number
  - c. Calibration due date
3. Required test parameters:
  - a. Pressure
  - b. Medium
  - c. Duration\*
  - d. Sequence
  - e. Acceptance criteria\*
4. Verify satisfactory completion of specific valve lineups used, supported by either:
  - a. Diagram (showing valve positions), or
  - b. Description of the test area including gags and blanks installed (the valve lineup sheet must be retained)
5. Identify joints required to be inspected during the test, or if entire component/system is tested, so state\*
6. Record actual test pressure
7. Record actual test duration\*
8. Test completion signature (indicates satisfactory test and compliance with test parameters)\*
9. Verification signature certifying test results\*

10. Additional requirements when alternate test accomplished in lieu of seat tightness testing:

- a. Satisfactory valve seat blue check (gate or globe valve)
- b. Record stack height and backseat cavity dimension (if ball valve or stuffing box requires a specified stack height to achieve required compression)

# SUBSAFEGRAM

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NAVSEA 92Q SSG-62  
Ser 92Q1/108  
17 Apr 95

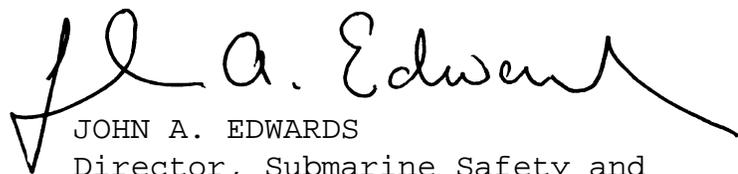
Subj: BROKEN LOCKWIRE REPAIR VERSUS RE-ENTRY CONTROL

1. The purpose of this SUBSAFEGRAM is to clarify Re-entry Control (REC) requirements to replace broken lockwire found on fasteners within the SUBSAFE Boundary.

2. The following guidance is provided.

a. If the cause of the broken lockwire is obvious and casts no doubt on the integrity of fastener tightness, the lockwire may be replaced without re-torquing the fastener. An example of this may be where the lockwire was broken by a person inadvertently striking it with a tool or other object while performing maintenance. Re-lockwiring, in and of itself, does not constitute SUBSAFE work and therefore a REC is not required to accomplish it.

b. If the cause of lockwire breaking is not evident, fastener torque should be checked to confirm the fastener was not disturbed or to restore the correct torque in the event it was. In this case, a REC should be used to document that torque was applied to the fastener.



JOHN A. EDWARDS  
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Quality Assurance Division

Distribution:  
(See page 2)

Subj: BROKEN LOCKWIRE REPAIR VERSUS RE-ENTRY CONTROL

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CO, SUBMEPP Activity Portsmouth, NH (T. Gilmore,  
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NAVSEALOGCEN Mechanicsburg, PA (R. Romanoski, Code N93)  
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SPCC Mechanicsburg, PA (W. Dennis, Code 8454)  
SUPSHIP Groton, CT (W. Falman Jr., Code 100Q) (10)  
SUPSHIP Newport News, VA (G. Caffee, Code 108/208)  
Newport News Shipbuilding, Newport News, VA (R. Slayton,  
Dept. 003)  
General Dynamics/Electric Boat Division, Groton, CT (Dr. A.  
Capotosto Jr., Dept. 320)  
NUWC Newport, RI (D. Borgeson, Code 402)

Subj: BROKEN LOCKWIRE REPAIR VERSUS RE-ENTRY CONTROL

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SUPSHIP Groton, CT (Code 201, Code 301)  
SUPSHIP Newport News, VA (Code 201, Code 301)  
Coastal Systems Station, Panama City, FL (Code 03K)  
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COMSUBGRU TWO  
COMSUBGRU FIVE  
COMSUBGRU SEVEN  
COMSUBGRU EIGHT  
COMSUBGRU NINE  
COMSUBGRU TEN  
COMSUBGRU Representative, Guam  
COMSUBDEVGRU ONE  
COMSUBDEVGRU TWELVE  
COMSUBRON ONE  
COMSUBRON TWO  
COMSUBRON THREE  
COMSUBRON FOUR  
COMSUBRON SIX  
COMSUBRON SEVEN  
COMSUBRON EIGHT  
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SUBSUPFAC NLON (Code 768-R-7)  
Repair Officer, USS HOLLAND (AS 32)  
Repair Officer, USS EMORY S. LAND (AS 39)  
Repair Officer, USS SIMON LAKE (AS 33)  
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Subj: BROKEN LOCKWIRE REPAIR VERSUS RE-ENTRY CONTROL

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SEA 07Q

SEA 07Q1B (W Ribeiro)

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SEA 92QB

SEA 92QC

SEA 92Q1

SEA 92Q2

SEA 92Q4

SEA 92QS

PMS350

PMS350A22 (A. Ford)

PMS393

PMS393A2A (CDR D. Looney)

PMS390T

PMS390TC (J. Lawrence)

PMS395

PMS395A2 (T. Lewis)

PMS396

PMS396A24

PMS396A25 (D. Dwyer)

PMO450A1 (J. Hamel)

# SUBSAFEGRAM 64A

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9077  
07Q12  
10 Dec 02

Subj: SUBSAFE RECORD RETENTION GUIDANCE

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

Encl: (1) SUBSAFE Record Retention Guidelines

1. This SUBSAFEGRAM supersedes SUBSAFEGRAM 64 of 3 Nov 95.
2. Paragraph 4.6.10.1 of reference (a) requires that: "All records developed to support SUBSAFE certification shall be maintained and retrievable by the construction/maintenance activity for the life of the ship or as directed by NAVSEA in writing." There have been numerous requests for NAVSEA to provide additional guidance with regard to which SUBSAFE records field activities are required to retain and whether or not any SUBSAFE records may be disposed of prior to the start of the inactivation availability, which is when NAVSEA has stated that a ship's SUBSAFE certification is terminated.
3. NAVSEA has reviewed the requirements of reference (a), the SUBSAFE Certification Audit Plans, and the SUBSAFE Auditor Guides utilized by NAVSEA to conduct SUBSAFE ship certification audits with respect to what records are required to be generated to support SUBSAFE certification. Enclosure (1) provides a general list of SUBSAFE records that are required to be generated and their associated retention periods.
4. The information in enclosure (1) is provided for guidance. Enclosure (1) is not intended to be an inclusive list of all records that are generated to support SUBSAFE certification. It does not invoke any new requirements for additional SUBSAFE records to be generated and some of the records identified may not be applicable to all classes of submarines. Finally, enclosure (1) does not supersede any record retention requirements which are invoked by other formally issued NAVSEA correspondence, specifications, or standards.

  
for T. L. VAN PETTEN  
Director, Submarine Safety and  
Quality Assurance Division

Subj: SUBSAFE RECORD RETENTION GUIDANCE

Distribution:

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NUWCDIV Newport, RI (D. Borgeson, Code 00SS)  
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SHAPEC SSN688 Class, Portsmouth, NH (R. Toole, Code 240SH)

Subj: SUBSAFE RECORD RETENTION GUIDANCE

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COMSUBRON ONE  
COMSUBRON TWO  
COMSUBRON THREE  
COMSUBRON FOUR  
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COMSUBRON ELEVEN  
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Subj: SUBSAFE RECORD RETENTION GUIDANCE

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SEA 05U32  
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SEA 04XQ1B  
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SEA 92C  
SEA 07Q  
SEA 07Q1  
SEA 07Q12  
SEA 07Q2  
SEA 07Q21  
SEA 07Q4  
SEA 07QD  
SEA 07QL (9077/10)  
SEA 07QE (2)  
SEA 07TC  
SEA 07TD  
PMS350A  
PMS350A21  
PMS392  
PMS392A1  
PMS392A2  
PMS392A41  
PMS392CA1  
PMS392CA2  
PMS392CA3  
PMS392CA4  
PMS392CM  
PMS395  
PMS395A12  
PMS398T11  
PMS450CSS

## SUBSAFE RECORD RETENTION GUIDANCE

**Records that are to be retained for the life of the ship; they are to be retained on-site for five years, and after which time, they may be sent to a Federal Records Center. However, the originating activity retains the responsibility for being able to retrieve these records upon request:**

- Results of all applicable Non-Destructive Testing (NDT) for structural plate, castings, wrought material, fasteners, pipe & tubing, pipe & component welds, flex connectors, brazed & welded joints, structural welds, and weld repairs
- Weld accountability records
- Material certification records (e.g., reports of chemical & mechanical properties for Level I material)
- Applicable URO/MRC data
- Objective Quality Evidence (OQE) of proper fastener torquing (when required by NAVSEA 0924-062-0010)
- SUBSAFE Government Furnished Material List and accompanying certification data summary sheets or an acceptable SUBSAFE Certification Statement (new construction only)
- OQE that the fabrication of all hot & cold formed material was completed in accordance with the appropriate specification and any required NDT has been completed
- Joint identification records for all SUBSAFE joints
- OQE of dimensional control of frames
- Hull circularity data
- OQE of acceptable tapers on structural welds
- OQE that bore diameters on inserts or penetrations are acceptable
- OQE that all required SUBSAFE testing has been conducted and completed in accordance with class test forms
- OQE for any cannibalized material that has been installed during an availability
- Design Review reports and applicable updates, including NAVSEA approval letter for Design Review and Flexibility Analysis
- Current listing of all drawing revisions applicable and where required OQE that NAVSEA has evaluated and approved instances where the ship differs from the latest drawing revision

- Records that reflect the correct status of, justification for, and technical evaluation of all SUBSAFE waivers and deviations. OQE of NAVSEA acceptance of any departure as a permanent repair
- NAVSEA SUBSAFE Certification Audit Reports and associated corrective action
- Naval messages generated by the originating activity certifying the material condition of the ship
- Ship Systems Manuals (SSMS) (maintained by Planning Yard & Forces Afloat)
- Completed REC and work packages

**Records only applicable to Forces Afloat, that are to be retained for the life of the ship:**

- OQE to upgrade material for Level use
- Quality Assurance (QA) forms that provide evidence acceptable materials were utilized and maintenance actions were properly completed
- QA forms for any rejected material that is subsequently accepted for use

**Records that are to be retained for five years after completion of an availability and subsequently may be destroyed:**

- Log verifying satisfactory MT of machined surfaces
- Plate marking records
- SUBSAFE job orders
- List of Hull Integrity Fasteners
- List of new or repaired flexible connectors
- Personnel and equipment qualification records
- Calibration records
- OQE documenting delivery of Selected Record Drawings (SRDS) to the ship
- NAVSEA approval letter of Sea Trial Agenda Internal SUBSAFE Certification Audit
- Surveillance inspection records
- Local discrepancy reports
- Statement that the Steam & Electric Plant Manual (SEPM) and SSMS have been properly updated
- SUBSAFE Certification Audit Plans (SSCAPs)

### **Retention requirements for other miscellaneous records:**

- NAVSEA Functional Audits and the associated corrective actions should be retained on-site for five years, after which time they may be destroyed.
- HMRs should be retained on-site until they are incorporated into the appropriate documentation.
- Vendor certification and source inspection records should be retained for three years.
- The Planning Yard documentation for any drawing changes accomplished by DM, DN, or LAR that have not been incorporated into the latest drawing revision should be retained until the activity verifies that the drawing change has been incorporated.
- Forces Afloat should retain files for all stored lots of controlled material until the material is properly downgraded or returned to the Navy Stock System.
- The Planning Yard should maintain a listing of all SRDs, the SMCB, all SUBSAFE Mapping Drawings, and a list of Design Review hangers and foundations for the life of the ship.
- Records generated to produce miscellaneous SUBSAFE products (e.g., SEOC/SEAKIT) that are not directly associated with a specific submarine shall be retained for a period of seven years after delivery of the product.

# SUBSAFEGRAM

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NAVSEA 92Q SSG-67  
Ser 92Q13/111  
23 April 96

Subj: **MISUSE OF NON-AGE HARDENED K-MONEL IN CRITICAL APPLICATIONS**

Ref: (a) FED-SPEC QQ-N-286 NICKEL-COPPER-ALUMINUM ALLOY, WROUGHT

1. The purpose of this SUBSAFEGRAM is to alert SUBSAFE activities to the need to prevent misuse of non-age hardened K-Monel in critical applications. K-Monel is a precipitation hardenable nickel-copper alloy that combines the superior corrosion resistance of Monel with greater strength and hardness. The improvement in the materials strength and hardness is obtained through a thermal treatment process known as "age hardening".

2. The potential for misuse of K-Monel arises from its availability in both the age hardened and non-age hardened conditions, including from the SUBSAFE/Level I stock system. Reference (a) states, except for cases where nonmagnetic properties are paramount, K-Monel is intended to be age hardened prior to placing the material in service. NAVSEA 92Q has determined that there are no end-use SUBSAFE or Level I submarine applications for non-age hardened K-Monel. Level I K-Monel's availability in the non-age hardened condition is primarily to facilitate machining and to optimize tool life for large volume production activities. Non-age hardened K-Monel shall not be installed in SUBSAFE or Level I submarine applications without undergoing the age-hardening process of reference (a).

3. Recent incidents of its misuse in Level I and SUBSAFE applications indicate that not all activities understand that K-Monel is not intended to be installed in its non-age hardened condition. Recently, a Naval shipyard installed permanent blanking plugs manufactured from Level I non-age hardened K-Monel in place of electrical hull fittings removed from a TRIDENT submarine pressure hull without subjecting the plugs to the necessary age hardening heat treatment process. Audits of Intermediate Maintenance Activities continue to identify the use of non-age hardened K-Monel material (most often of designator KML) and its storage in Level I stocking areas even though these activities do not possess the capability to perform the age hardening process of reference (a).

Subj: MISUSE OF NON-AGE HARDENED K-MONEL IN CRITICAL APPLICATIONS

4. The consequences of installation of non-age hardened K-Monel in SUBSAFE or Level I applications are potentially catastrophic, particularly for hull integrity fasteners. Recipients should evaluate their storage, issue and manufacturing control processes for non-age hardened K-Monel and take appropriate action to ensure that only age hardened K-Monel is installed in SUBSAFE or Level I submarine applications. SUBSAFE activities which are qualified to perform the age hardening process or reference (a) should implement measures to positively control Level I non-age hardened K-Monel as not ready for end-use installation from time of issue until completion of the age hardening heat treatment process. SUBSAFE activities which do not have the capability or the expertise to conduct the age hardening process should eliminate all Level I non-age hardened K-Monel by either downgrading it to non-level or returning it to Navy supply stock.



J. B. SCHRUM  
Director of Submarine Safety  
and Quality Assurance

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Subj: MISUSE OF NON-AGE HARDENED K-MONEL IN CRITICAL APPLICATIONS

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COMSUBRON TWO  
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COMSUBRON SEVEN  
COMSUBRON EIGHT  
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COMSUBRON SEVENTEEN  
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COMSUBRON TWENTY-TWO  
SUBSUPFAC NLON (Code 768-R-7)  
Repair Officer, USS HOLLAND (AS 32)  
Repair Officer, USS SIMON LAKE (AS 33)  
Repair Officer, USS L. Y. SPEAR (AS 36)  
Repair Officer, USS EMORY S. LAND (AS 39)  
Repair Officer, USS FRANK CABLE (AS 40)  
Repair Officer, USS MCKEE (AS 41)  
Repair Officer, IMF Pearl Harbor, HI  
TRIREFFAC Bangor, WA (Repair Officer, Code 411, Code 440)  
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Subj: MISUSE OF NON-AGE HARDENED K-MONEL IN CRITICAL APPLICATIONS

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SEA 07Q  
SEA 07Q1B (W. Ribeiro)  
SEA 08D  
SEA 92Q  
SEA 92QB  
SEA 92QC  
SEA 92Q1  
SEA 92Q11  
SEA 92Q2  
SEA 92Q4  
SEA 92QS (2)  
SEA 92QE (2)  
PMS350  
PMS350A2 (A. Ford)  
PMS393  
PMS393A24 (CDR D. Looney)  
PMS390T  
PMS390TC (J. Lawrence)  
PMS395  
PMS395A2  
PMS396  
PMS396A24  
PMS396A25 (D. Dwyer)  
PMO450A1

# SUBSAFEGRAM

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NAVSEA 92Q SSG-71  
Ser 92Q2/048  
24 Feb 97

Subj: USE OF ELECTRONICALLY TRANSMITTED MEDIA FOR SUBSAFE OQE

Ref: (a) NAVSEA ltr 5100 Ser 92/164 of 27 May 88, Telephone  
Conversations as or in Support of Objective Quality  
Evidence (OQE) for Material Certification  
(b) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE)  
Requirements Manual

1. Reference (a) discontinued the practice of using telephone conversation (TELCON) records as SUBSAFE OQE or supporting data. Reference (a) stated in part that a TELCON "does not qualify as OQE and cannot serve as support for OQE since it is usually an informal summary of a conversation, may document the understanding or interpretation of only one of the participants, and seldom contains concurrence signatures of all the parties involved."

2. The policy of reference (a), established prior to the advent and widespread use of telephone facsimile (TELEFAX or FAX) and electronic mail (E-MAIL), was primarily in response to the growing misuse by audited activities of single-party TELCONs as SUBSAFE OQE justification for not obtaining formal approval of non-conformances and for changing technical requirements. More recently, this policy has been misrepresented as a prohibition to the accurate documentation of technical advice from proper authority when preparing SUBSAFE waivers and deviations.

3. There are circumstances where TELCON and E-MAIL correspondence is considered appropriate in support of OQE as defined by reference (b). These include situations where NAVSEA or other higher authority is providing interpretation or clarification of previously provided written direction and which does not conflict with other established NAVSEA or customer requirements.

4. Recognizing the significant cost and schedule advantages of electronic transmission over more conventional methods of providing record information in support of the SUBSAFE Program, NAVSEA 92Q considers the following documents to meet the reference (b) criteria for OQE or information which supports OQE:

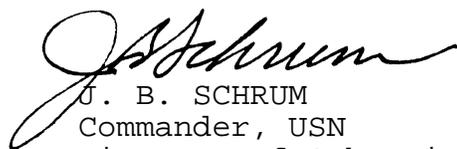
a. TELCON record which includes all of the following for each party cited in the TELCON record: dated original, photocopied, facsimile or electronic signature, legible name, and, command/activity and office/code.

Subj: USE OF ELECTRONICALLY TRANSMITTED MEDIA FOR SUBSAFE OQE

b. E-MAIL printout which includes the transmission header containing the name, activity code and date of each originating, responding or forwarding party.

In each case, the document must stand alone with regard to its addressing of specific platform, system, component and condition along with proper citing of any applicable references or invoked requirements, and must include participation by the party(ies) possessing cognizance and approval authority for the subject matter.

5. Use of the above documents is never acceptable as a method to circumvent any established reporting process such as ship availability certification messages, departures from specifications or Liaison Action Requests.



J. B. SCHRUM  
Commander, USN  
Director of Submarine Safety  
and Quality Assurance

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Newport News Shipbuilding, Newport News VA (D. Conley, Dept. 003)  
Electric Boat Corporation, Groton, CT (R. Scheel, Dept. 320)  
NUWCDIV Newport, RI (D. Borgeson, Code 401)  
NAVSHIPPREPFAC Yokosuka, Japan (G. Takami, Code 130)  
DLA Fort Belvoir, VA (M. J. Costa, Code AQOA)  
SHAPEC SSN 688 Class, Portsmouth, NH (R. Toole, Code 244)

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COMSUBBRON TWENTY  
COMSUBBRON TWENTY-TWO  
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Repair Officer, USS EMORY S. LAND (AS 39)  
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Subj: USE OF ELECTRONICALLY TRANSMITTED MEDIA FOR SUBSAFE OQE

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SEA 92Q  
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SEA 92Q11  
SEA 92Q2  
SEA 92Q4  
SEA 92QS (2)  
SEA 92QE (2)  
SEA 92TB  
SEA 92TC  
PMS350  
PMS350A  
PMS393  
PMS393A25  
PMS393A221  
PMS395  
PMS395A2  
PMS396  
PMS396A24  
PMS396A25  
PMS450A1

# SUBSAFEGRAM

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NAVSEA 92Q SSG-73  
Ser 92Q2/203  
27 Oct 97

Subj: LOCAL APPLICATION OF LEVEL I MATERIAL IDENTIFICATION AND CONTROL (MIC) MARKINGS

Ref: (a) NAVSEA 0948-LP-045-7010 Vol 1, Material Control Standard (Non-Nuclear)  
(b) NAVSEA 0948-LP-045-7010 Vol 2, Material Control Standard (Material Designators)  
(c) NAVSEA 0948-LP-045-7010 Vol 2, Material Control Standard (Material Designators) of Nov 78 (superseded)

1. NAVSEA and Type Commander audits of activities locally administering the Level I program per reference (a) have noted discrepancies in the reapplication of MIC markings since the January 1994 implementation of the revised material designator catalog, reference (b), which superseded reference (c). Reference (b), issued to simplify Level I material identification, reduced the more than 5,000 material designators consisting of three to six letters of reference (c) to just over 200 material designators consisting of three letters and some two letters designators for identifying welding and brazing filler materials. Some of the old three-letter designators of reference (c) correspond to material that is different from that identified by the same three-letter designator of reference (b).

2. The observed discrepancies are due to the incorrect application of new local MIC markings to finished products manufactured from precertified Level I raw stock marked prior to the implementation of reference (b). These errors have resulted in finished products bearing MIC markings with the raw stock's originally assigned material designator per reference (c), followed by the Julian date and Certifying Activity Designator (CAD) associated with the local activity's manufacture of the finished product. Thus, the material designator marked on the finished product is often different from the material designator in effect as of the Julian date marked on the item. Since material designators change with revisions to the designator catalog, and since the catalog revision to be used for validating MIC markings is determined by the Julian date, it is important for the material designator marked on the item to be from the catalog revision in effect on the Julian date marked on the item.

3. The frequently stated reason for activities locally marking a finished product with a MIC marking different from that of the Level I raw stock is to provide traceability back to their manufacturing process. Such remarking is required only in those

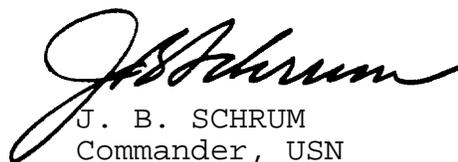
Subj: LOCAL APPLICATION OF LEVEL I MATERIAL IDENTIFICATION AND CONTROL (MIC) MARKINGS

cases where the manufacturing process could change the material's mechanical properties, usually through heat treatment. Otherwise, activities are reminded that paragraph 3.6.2 of reference (a) authorizes the reapplication of the starting material's MIC mark to the finished product. For the manufacture of Level I products from Level I starting material (i.e., raw stock) marked per reference (c), activities desiring to avoid the task of determining the correct new material designator may reapply the starting material's MIC mark in its entirety, provided the manufacturing process did not alter its mechanical properties.

4. This guidance is provided with the full understanding that only traceability to Objective Quality Evidence (OQE) for the starting material's chemical and physical properties rather than for the finished product's manufacturing process may be supported by this marking method. If, however, it is desired that a new MIC marking be assigned to provide traceability to the item's manufacturing OQE (for example, SUBSAFE records of nondestructive testing), activities must ensure that the material designator from reference (b) is applied rather than the old material designator of reference (c).

5. This guidance does not represent any new requirement. It has been a long-standing option of reference (a) to reapply the starting material's MIC mark to manufactured items for which no mechanical properties were altered, and is being reemphasized due to the significant changes of reference (b) and the frequency of misunderstanding and difficulty being observed at fleet and field activities during audits.

6. NAVSEA's point of contact is Mr. Peter Fitch (SEA 92Q21) at (COM) (703) 602-0322 ext. 504 or (DSN) 332-0322 ext. 504.



J. B. SCHRUM  
Commander, USN  
Director of Submarine Safety  
and Quality Assurance

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SEA 92QE (2)  
SEA 92TC  
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PMS392A1  
PMS392A2B  
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PMS392A41  
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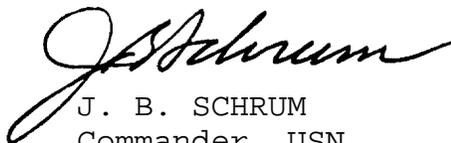
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NAVSEA 92Q SSG-74  
Ser 92Q2/327  
27 Oct 97

Subj: MATERIAL DESIGNATORS FOR HIGH-YIELD ALLOY STEELS

Ref: (a) NAVSEA 0948-LP-045-7010 Vol 2, Material Control  
Standard (Material Designators)

1. Reference (a) assigns material designators to be applied to Level I material upon certification. Reference (a) assigns the material designator "STP" for HY-80 and HY-100 alloy steel materials. Level I material of these alloys is most commonly used in SUBSAFE hull integrity applications.
2. A distinction needs to be made between HY-80 and HY-100 high-yield alloy steels for material verification purposes. Accordingly, material designator "STP" will continue to be used to identify HY-80 alloy steel materials, and the new material designator "STY" is assigned to HY-100 alloy steel materials. HY-100 alloy steel materials already marked with the material designator "STP" are acceptable for use without remarking.
3. The direction of this SUBSAFEGRAM is intended by the NAVSEA Level I Working Group to be implemented immediately. A copy of this SUBSAFEGRAM should be filed with reference (a) until canceled upon incorporation of its direction into reference (a) by the forthcoming issue of Advance Change Notice 1-1.
4. NAVSEA's point of contact is Mr. Brian Hughitt (SEA 92Q2) at (COM) (703) 602-0322 ext. 518 or (DSN) 332-0322 ext. 518.



J. B. SCHRUM  
Commander, USN  
Director of Submarine Safety  
and Quality Assurance

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# SUBSAFEGRAM

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NAVSEA 92Q SSG-76  
Ser 92Q/329  
28 Oct 97

Subj: K-MONEL FASTENER MARKING REFERENCE ERRORS

Ref: (a) NAVSEA S9505-AM-GYD-010, Submarine Fastening Criteria Manual (Non-Nuclear)  
(b) MS18116H, Bolt, Stud and Socketcap Head Screw, Nickel-Copper-Aluminum Alloy  
(c) MIL-S-1222H, Studs, Bolts, Hex Cap Screws, Socket Head Cap Screws and Nuts  
(d) NAVSEA 0948-LP-045-7010, Material Control Standard (Non-Nuclear)

1. Since the issue of reference (a) two errors in the fastener material/markings cross reference criteria of Table 5-1 for NiCuAl (K-Monel) material have been identified. Table 5-1 of reference (a) incorrectly states that:

a. NiCuAl fastener material procured per reference (b) is to be marked either "**K**" or "**K**". Reference (b) actually requires such material to be marked either "**K**" or "<sup>Ni-Cu</sup>**K**".

b. NiCuAl fastener material procured per reference (c) is to be marked "**K**". Reference (c) actually requires such material to be marked "**K**".

2. Reference (a) notes that it is only a compendium of information and existing requirements and is not intended to serve as a specification. References (b) through (d) are the governing specifications upon which the K-Monel fastener material marking criteria of reference (a) are based; and, therefore take precedence over reference (a).

3. This SUBSAFEGRAM will remain in effect until the above errors in reference (a) are corrected during its next regular revision. Until then, a copy of this SUBSAFEGRAM shall be filed with reference (a).

4. NAVSEA's point of contact is Mr. Kerry Frink (SEA 92Q13) at (COM) (703) 602-4819 ext. 525 or (DSN) 332-4819 ext. 525.



J. B. SCHRUM  
Commander, USN  
Director of Submarine Safety  
and Quality Assurance

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# SUBSAFEGRAM 79

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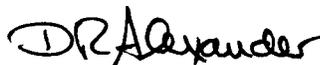
9077  
92Q21  
19 Mar 99

Subj: CLARIFICATION OF RE-ENTRY CONTROL (REC) FORM REQUIREMENTS

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

Encl: (1) Clarification of Re-Entry Control Form Requirements

1. This SUBSAFEGRAM clarifies existing reference (a) SUBSAFE REC Form requirements. Enclosure (1) summarizes the clarifications, which are a result of Public Shipyard Process Action Team meetings held to review and standardize REC Form processing.
2. NAVSEA reiterates that re-entry procedure objectives are to provide maximum confidence that any work accomplished within the SUBSAFE Certification Boundary is properly authorized, executed in accordance with technical requirements, supported by objective quality evidence, and upon completion, certified by a competent authority.
3. NAVSEA point of contact is Mr. Pete Fitch (SEA 92Q21) at (com) (703) 602-0322 ext. 217 or (DSN) 332-0322 ext. 217.



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

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SEA 92QS (9077/10)

SEA 92QE (2)

SEA 92TC

PMS350A

PMS350A21

PMS392

PMS392A1

PMS392A2B

PMS392A331

PMS392A351

PMS392A41

PMS395

PMS395A14

PMS450T1AFT2

## Clarification of Re-Entry Control Form Requirements

1. Paragraph 6.3.2.4.1, REC REVISIONS, requires that a REC be revised whenever one or more of the following occurs:

Requirement	Clarification
6.3.2.4.1.a. There is a change in the scope of the work to be performed within the previously established work boundaries (Figure 6-1, Block 10).	A REC revision is not required for minor repairs incidental to the original scope of work. Minor repairs are defined as epoxy repair, preventive coating application, electroplating, and minor machining. These minor repairs must be authorized by the cognizant authority and documented in the REC package, with appropriate OQE generated and added to REC Block 12 prior to signing REC Block 14.
6.3.2.4.1.b. There is a change in the work boundaries previously associated with the REC (Figure 6-1, Block 11).	A REC revision is not required to delete undisturbed joints. Deletion of joints must be authorized by the cognizant technical authority and documented in the REC package. REC Form Block 11 must be annotated to reflect joint deletions prior to signing REC Block 14.
6.3.2.4.1.c. There is a change in the previously issued testing requirements and/or recertification requirements (Figure 6-1, Blocks 10 and 12).	A REC revision is not required for Nondestructive Testing (NDT) incidental to minor repairs defined above. NDT results must be documented in the REC package.

2. Clarification of REC Form Block Requirements:

a. Block 2. (REC REV). Upon issuance of each REC revision, all prior revisions are canceled and superseded and shall be so annotated and retained as OQE. A REC revision must go through the same approval process as the original REC. REC supplement or continuation sheets shall not be used as an alternative to revision of the REC.

b. Block 9. (JID MAP/DWG WITH REV). The general order of precedence for entering Joint Identification (JID) is:

- (1) JID number from SUBSAFE Joint Mapping Plan, if there is one available.
- (2) JID number from Joint Index Drawing, ship or class, for welding.
- (3) Joint description/JID from Assembly or Arrangement/Installation Drawing. The drawing chosen must adequately portray the joints to be broken.
- (4) Drawings/diagrams from technical manual.

(5) Sketch, where other alternatives do not adequately describe the joints to be broken. (Since the sketch will not be retrievable elsewhere, it must be kept in the REC package as OQE.)

c. Block 10. (WORK TO BE PERFORMED AND WORK REFERENCE DOCUMENTS). Information provided in Block 3 (JO/JCN) does not need to be repeated in Block 10. The description of work on each REC revision shall detail the total revised Scope of Work. Cumulative partial descriptions do not satisfy this requirement.

d. Block 11. (APPLICABLE JOINT NO(s)). Identify the joints authorized to be disturbed. For mechanical joints, only those joints and linkages referred to in SUBSAFE Manual paragraph 4.6.4.2 are required to be listed in this block. The listing of work boundary “end points” in lieu of listing discrete individual joints does not satisfy this requirement.

e. Block 12. (SUPPORTING DOCUMENTATION). For those activities using the Task Group Instruction (TGI) process, Deficiency Logs (DL) do not have to be listed in Block 12, since DLs are integral to the TGI. The TGI should be cited in Block 12 if not already cited in Block 3. QA Forms and other individual OQE records must be listed.

# SUBSAFEGRAM 80

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9077  
92Q1  
28 May 99

Subj: POLICY ON SUBSAFE CERTIFICATION AUDITS

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

Encl: (1) SUBSAFE Work Status Report Form  
(2) Nomination Form for NAVSEA SUBSAFE Certification Auditor

1. This SUBSAFEGRAM supersedes SUBSAFEGRAMs 42B, 57A, 65A, and 69 and is being issued to clarify and consolidate the policy for NAVSEA SUBSAFE Certification Audits (SSCAs) into a single document.

2. Policy for requesting and scheduling NAVSEA SSCAs:

a. Sections 5.5.2.3 and 5.5.3.3 of reference (a) require the Supervising Authority to submit a written request recommending a date for the NAVSEA SSCA. This request must be accompanied by the current status of items a-g of paragraph 5.5.1.4.1 of reference (a). The recommended date must be realistic and viable and based upon a supportable estimate of when the scheduling requirements of section 5.5.1.4.1 of reference (a) will be satisfied. NAVSEA will evaluate the request and provide a written reply formally scheduling the SSCA.

b. Once the SSCA date has been recommended, the SUBSAFE Program Director (SSPD) shall submit updated work status reports, shown in enclosure (1), to NAVSEA 92Q on a weekly basis or as requested by NAVSEA.

c. Compliance with the SSCA scheduling requirements of reference (a) ensures that a sufficient quantity of SUBSAFE work and testing is completed prior to the SSCA to preclude the need for a second NAVSEA SSCA.

d. In the event that the minimum scheduling requirements of reference (a) cannot be met by the scheduled NAVSEA SSCA start date, and NAVSEA determines that rescheduling the SSCA is undesirable, the following procedures will be followed:

(1) Audit sampling shall be from populations based on the minimum scheduling requirements of reference (a) or actual work and testing completion status, whichever is greater. In those audit areas where reference (a) allows for less than 100% completion, the audited activity may select incomplete items for removal from the population prior to NAVSEA sample

Subj: POLICY ON SUBSAFE CERTIFICATION AUDITS

selection. The remaining population size shall meet or exceed the minimum audit scheduling criteria of reference (a). Once the NAVSEA sample is selected, items that are subsequently completed, but were not selected, may not be substituted for an incomplete item that was selected.

(2) Any items required to be audited by NAVSEA, either by sampling selection above or by specification of reference (a) or the applicable SUBSAFE Certification Audit Plan (SSCAP), which are not completed in time to be audited during the scheduled NAVSEA SSCA will be subject to a supplemental audit.

e. Supplemental Audits

(1) The audited activity shall make all necessary arrangements, via SUPSHIP for private shipyards, with the NAVSEA Audit Team Leader for completing supplemental audits of affected incomplete items. All costs associated with performing supplemental audits are the responsibility of the audited activity.

(2) A qualified NAVSEA Auditor will perform supplemental audits and submit their findings and recommendations to NAVSEA 92Q, with a copy to the audited activity, and SUPSHIP for private shipyards, using the standard NAVSEA SSCA card format. NAVSEA 92Q and the audited activity, along with SUPSHIP for private shipyards, should be notified as soon as possible if the supplemental audit effort will exceed three working days.

(3) NAVSEA will review all supplemental audit findings/recommendations for approval and issue the audit card(s) as a revision to the NAVSEA SSCA Report, for all Category I, IA, II, and IIA cards. Category III cards will be reviewed by the Audit Team Leader and provided to the audited activity for record purposes.

3. Auditor support for NAVSEA SSCAs

a. SSCA Auditor Certification

(1) The certification program for SUBSAFE Certification Auditors has been designed to ensure that only qualified auditors and auditor trainees are assigned to NAVSEA SUBSAFE Certification Audits. Candidates for certification are required to successfully complete a two-phase process.

(a) Phase I requires a minimum of three years of experience in the SUBSAFE Program as well as completion of a minimum of three internal SSCAs. Candidates from engineering, procurement, and headquarters activities may request approval from NAVSEA 92Q to substitute specialized SUBSAFE Program and technical experience in lieu of internal SSCA participation to complete Phase I qualification.

Subj: POLICY ON SUBSAFE CERTIFICATION AUDITS

(b) Phase II requires participation, as a trainee, on two NAVSEA audits within a three-year period. Prior to starting Phase II, candidates must submit a completed Auditor Nomination Form, enclosure (2), to NAVSEA 92Q via their activity's SSPD when they are being nominated for an SSCA. Phase II starts when the trainee is selected by NAVSEA 92Q to participate in an audit. The trainee will be assigned to participate in the audit in one of the specific audit areas listed on the nomination form. Candidates for certification as auditors in the radiographic film area must, as a minimum, maintain current certification as a Level II Inspector to the requirements of ASNT SNT-TC-1A (or equivalent) and participate as a trainee on one NAVSEA SSCA.

(2) Upon successful completion of Phases I and II and a positive evaluation by NAVSEA 92Q, candidates will be certified to perform NAVSEA SSCAs. To maintain certification, auditors are required to participate in at least 2 NAVSEA SSCAs every 3 years with no more than 18 months between audits. Participation in one of the following may be substituted for one of the NAVSEA SSCAs:

(a) An activity's Internal SSCA (i.e., Minor Depot Availability SSCA or Major Depot Availability Internal SSCA)

(b) NAVSEA or activity's internal SUBSAFE Functional Audit in the areas of Re-Entry Control, Technical, or In-Process work only

(c) A Submarine TYCOM Fleet Maintenance Activity Assessment (FMAA) as a NAVSEA team member in the areas of Re-Entry Control, Technical, In-Process work, or their equivalent.

(3) An auditor's certification will be suspended if the participation requirements of paragraph (2) above are not met. An auditor whose certification has been suspended will be required to participate in at least one NAVSEA SSCA as a trainee, after which NAVSEA 92Q may reinstate the auditor's certification. If the auditor is suspended for a period greater than two years, the auditor will be placed in an inactive status and will be required to perform the Phase II qualifications actions again to be recertified.

(4) NAVSEA 92Q maintains records of each auditor's participation on NAVSEA and Internal SSCAs, NAVSEA SUBSAFE Functional Audits, and as a NAVSEA representative on TYCOM FMAAs. To enable NAVSEA 92Q to maintain an accurate database of qualified SUBSAFE certification auditors, each activity's SSPD should annually submit to NAVSEA 92Q, not later than 31 January, a list of all qualified certification auditors available to support NAVSEA SSCAs. The list should include name, code, security clearance, e-mail address, current office phone number, area(s) of expertise, and a list detailing internal audit participation since the last list update.

Subj: POLICY ON SUBSAFE CERTIFICATION AUDITS

b. Audit Support Requirements

(1) Each field activity, when requested by NAVSEA 92Q, should nominate qualified auditors based on the following as a minimum:

AUDIT TYPE	SHIPYARDS	ACTIVITIES*	NAVSEA**
New Construction Phase I	2	1	1
New Construction Phase II	3	2	2
DMP, RFO, ERO	4	2	2

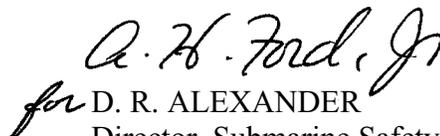
\* Other activities include SUBMEPP, NSWC Philadelphia Division, SUPSHIPS, etc.

\*\* NAVSEA support, as applicable to the nature of the audit, includes the Program Offices (PMS350, PMS392, and PMS395) SEA 04, and technical offices (SEA 92T and SEA 03).

(2) Trainees do not count toward the shipyard's responsibility to provide certified auditors.

(3) The Audit Team Leader will choose the auditors required for the team from the nominees and notify the activities accordingly.

4. The NAVSEA point of contact for this issue is Mr. Chris DeCamp (SEA 92Q1), phone (COM) (703) 602-0322 ext. 535 or (DSN) 332-0322 ext. 535.

  
for D. R. ALEXANDER  
Director, Submarine Safety and  
Quality Assurance

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SEA 92QS (9077/10)

SEA 92QE (2)

SEA 92TC

PMS350A

PMS350A21

PMS392

PMS392A1

PMS392A2B

PMS392A331

PMS392A351

PMS392A41

PMS395

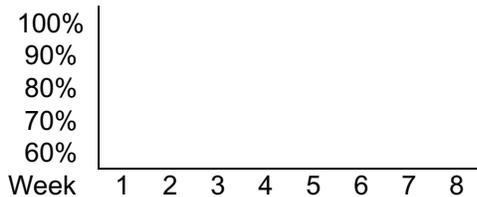
PMS395A14

PMS450T1AFT2

**STATUS OF WORK TO SUPPORT NAVSEA SUBSAFE CERTIFICATION AUDIT  
OF \_\_\_\_\_ SS \_\_\_\_\_ LOCATION:**

Requirements/Submittal Date	1	2	3	4	5	6	7	8
1. Criticality Testing (Scheduled)/Started								
2. Reentry Control Status ( $\geq 95\%$ complete)	Record Raw Numbers & Percentage							
a. No. RECs opened								
b. No. RECs canceled								
c. No. RECs closed								
% complete [c/(a-b)]	%	%	%	%	%	%	%	%
d. RECs with work complete in test phase								
e. RECs with test complete in review phase								
3. Design Review - Initial report submitted to NAVSEA/(ECD)								
4. URO/MRCs - All authorized MRCs completed (Except 022 & 029), and all required reports submitted to NAVSEA and SUBMEPP: 1 2 3 4 5 6 7 8 9 10 13 15 16 19 21 23 25 26 28 35 36 37 38 39 40 41 42 43 44 45 Circle Completed MRCs Cross-out Not Applicable & Not Authorized MRCs								
5. Sea Trial Agenda/DD TF/EMBT Blow TF submitted to NAVSEA (Scheduled)/Actual								
6. Internal SSCA; (ECD) SSCA Report submitted								
7. Test Forms completed, reviewed, and accepted	Record The Percentage of Tests Completed							
a. 100% of OPTests, S&T for MSW/ASW/Normal & EMBT Blow/FC, S&D HYD	%	%	%	%	%	%	%	%
b. 100% of S&T for Hull&BUs/TTs/TDU/SE/MTs	%	%	%	%	%	%	%	%
c. 80% of SS portion of other S&T tests	%	%	%	%	%	%	%	%
d. 70% of SS portion of all OPTests/ Inspections (except SI, AVE, and Compartment and ET Tightness)	%	%	%	%	%	%	%	%
8. Requested Audit Date								
9. Estimated Fast Cruise Date								
10. Estimated Sea Trial Date								

\*REC Closure Plot\*



Notes:

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## Nomination for NAVSEA Submarine Safety Certification Auditor

Name: \_\_\_\_\_ Title / Grade: \_\_\_\_\_

Code: \_\_\_\_\_ Office Phone: \_\_\_\_\_

Organization: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Location: \_\_\_\_\_

Security Clearance / Date: \_\_\_\_\_ Social Security Number: \_\_\_\_\_

Formal Training in Implementation of NAVSEA 0924-062-0010 (yes / no): \_\_\_\_\_

SUBSAFE Program Experience (years / months): \_\_\_\_\_ Area of Expertise: \_\_\_\_\_

Area	Experience		Area	Experience	
	Years	Audits		Years	Audits
<b>I. Structures</b>			<b>III. Testing</b>		
A. Structural Plates			A. Test Performance - EMBT Blow SW Valve/ Hyd Flood Control		
B. Castings			B. Sea Trial Agenda		
C. Wrought Material			C. Maintenance Program (MRC: 15, 16, 19, 22, 25, 26, 29, 36, 37, 38, 39, 40, 41, 42, 43)		
D. Structural Welds					
E. NDT Qualifications					
F. Material Forming					
G. Dimensional Control			<b>IV. Configuration Management</b>		
H. Hull Circularity and Fairness			A. As- Built Condition		
I. Maintenance Program (MRC: 1, 2, 3, 4, 5, 35)			B. Departures from Specification		
			C. SUBSAFE Design Review		
			D. Government Furnished Material (GFM)		
			E. Ship Selected Records		
<b>II. Piping and Components</b>					
A. Piping and Tubing			<b>V. Work Completion</b>		
B. Castings			A. Work Accomplishment		
C. Wrought Material			B. Re-Entry Control		
D. Pipe and Component Welds					
E. NDT Qualifications			<b>VI. Vertical Audit</b>		
F. Fasteners and Mechanical Joints			A. Vertical Audit		
G. Maintenance Program (MRC : 6, 8, 9, 13, 28)					
			<b>VII. Radiographic Film Review</b>		
			A. RT Film Review		

Nominee provide a handwritten statement of why he/she wishes to become a NAVSEA SUBSAFE Auditor:

# SUBSAFEGRAM 81A

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9077  
07Q12  
27 Jan 03

Subj: USE OF LEVEL I CERTIFIED MATERIAL IN SUBSAFE APPLICATIONS

Ref: (a) NAVSEA 0948-LP-045-7010, Material Control Standard  
(Non-Nuclear)  
(b) NAVSEA 0924-062-0010 Rev C CH 1, Submarine Safety  
(SUBSAFE) Requirements Manual  
(c) NAVICP MECHANICSBURG 141123Z JUN 00

1. This SUBSAFEGRAM supersedes SUBSAFEGRAM 81 of 19 Jan 00.

2. The purpose of this SUBSAFEGRAM is to clarify when Level I (LI) material received from the Level I/SUBSAFE (LI/SS) Stock Program is acceptable for use in SUBSAFE applications.

a. LI material received from the LI/SS Stock Program that was certified 1/1/90 or later is acceptable for use in SUBSAFE applications and has been certified to all purchase order requirements (i.e., all nondestructive testing has been accomplished and certified). Departures from specifications, waivers, deviations, additional local tests, or certification statements are not required for this material. This material is not required to have the SS Special Material Identification Code (SMIC) or be marked <SS>. Local receipt inspection should be conducted in accordance with the requirements of paragraph 3.3.5 of reference (a).

b. LI material received from the LI/SS Stock Program that was certified prior to 1/1/90 is acceptable for use in SUBSAFE applications; however, it must be receipt inspected to verify the acceptance attributes of reference (b), Section 2.4 (e.g., <SS> marking, SUBSAFE certification statement, etc.), prior to use.

3. NAVICP discontinued the SS SMIC and the <SS> marking on material via reference (c). However, there may be some residual <SS>-marked material in the system. For material with a Julian date after 1/1/90, the SMIC and <SS> marking are redundant and are not required to be present. Material may have continued to be marked with the SS SMIC and <SS> marking until 8/1/2000 as stated in reference (c).

Subj: USE OF LEVEL I CERTIFIED MATERIAL IN SUBSAFE APPLICATIONS

4. Extra care should be taken when ordering material to ensure the installation of correct parts. Two valves of identical design may have different procurement requirements based on end use. A seawater valve would require radiographic inspection of the cast body if used in a hull integrity application but not if used inboard of the backup valve. Therefore, substituting a different stock number for the drawing stock number can result in the installation of material that is not properly certified for that application. It is important to consult the correct Allowance Parts List to ensure that the correct part is identified.

5. The NAVSEA point of contact for this issue is Mr. Ross Baker (SEA 07Q12), phone (COM) (202) 781-1320 or (DSN) 326-1320.



T. L. VAN PETTEN  
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COMSUBGRU TEN  
COMSUBGRUREP Guam  
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COMSUBBRON ONE  
COMSUBBRON TWO  
COMSUBBRON THREE  
COMSUBBRON FOUR  
COMSUBBRON SEVEN  
COMSUBBRON ELEVEN  
COMSUBBRON SIXTEEN  
COMSUBBRON SEVENTEEN  
COMSUBBRON TWENTY  
COMSUBBRON TWENTY-TWO  
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COMSUBBRONSUPPUNIT New London, CT  
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USS EMORY S. LAND (AS 39) (Repair Officer, Quality Assurance  
Officer)  
USS FRANK CABLE (AS 40) (Repair Officer, Quality Assurance  
Officer)  
NAVIMFAC PACNORWEST (Repair Officer, Code 411, Code 440)  
TRIREFFAC Kings Bay, GA (Repair Officer, Code 411, Code 440)  
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SIMA San Diego, CA (Repair Officer, Quality Assurance Officer)

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SEA 07Q2  
SEA 07Q21  
SEA 07QD  
SEA 07QL (9077/10)  
SEA 07QE (2)  
SEA 07TC  
SEA 07TD  
PMS350A  
PMS350A21  
PMS392  
PMS392A1  
PMS392A2  
PMS392A41  
PMS392CA1  
PMS392CA2  
PMS392CA3  
PMS392CA4  
PMS392CM  
PMS395  
PMS395A12  
PMS398T11  
PMS4351A3  
PMS450CSS

# SUBSAFEGRAM 82

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9077  
92Q1  
2 Feb 00

Subj: RECERTIFYING SUBSAFE MATERIAL FROM INACTIVATED SHIPS

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

Encl: (1) Guidance for Recertifying SUBSAFE Material When  
SUBSAFE Certification Has Lapsed

1. This SUBSAFEGRAM provides guidance for recertification of SUBSAFE material. In most cases, the certification was lost following the start of a ship inactivation availability where the material was not pre-identified and Re-Entry Control (REC) is no longer in effect on the submarine.

2. Reference (a), section 6.5, provides the requirements for transferring SUBSAFE material between ships or activities. Paragraph 6.5.1 addresses transfer of material between SUBSAFE certified submarines on which REC is in effect. Paragraph 6.5.2 addresses transfer of material from a submarine after the start of an inactivation availability, when REC is no longer in effect; however, the material was identified prior to the start of the inactivation availability. Material that was not identified prior to the start of the inactivation must be recertified in accordance with paragraph 6.5.3. Material in this last case is addressed by this SUBSAFEGRAM.

3. Full certification has normally been interpreted to mean complete disassembly of the component and conducting complete chemical and physical inspections of each piece part to ensure that it meets drawing requirements. Because of the time and cost required to accomplish this, it is almost never done. Instead, an activity will inspect the component, make engineering decisions as to the component's suitability for use, and document the nonconformance to allow use of the component in a SUBSAFE application.

4. Enclosure (1) provides guidance for recertifying SUBSAFE material per paragraph 6.5.3 of reference (a).

Subj: RECERTIFYING SUBSAFE MATERIAL FROM INACTIVATED SHIPS

5. NAVSEA point of contact for this SUBSAFEGRAM is Mr. Kerry Frink (SEA 92Q13) at (COM) (703) 602-0459 ext. 525 or (DSN) 332-0459 ext. 525.

  
MARY TOWNSEND-MANNING  
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PMS392A331  
PMS392A351  
PMS392A41  
PMS395  
PMS395A14  
PMS450T1AFT2

GUIDANCE FOR RECERTIFYING SUBSAFE MATERIAL WHEN SUBSAFE  
CERTIFICATION HAS LAPSED

1. The purpose of the recertification process is to achieve maximum reasonable assurance that a component is suitable for reuse in a SUBSAFE application. This includes both watertight integrity and the ability to operate the component in a recovery situation.

2. The recertification process relies on two basic assumptions:

- Components met all certification and technical requirements at the start of the inactivation

and

- Access to the submarine and components is limited and controlled during and following the inactivation.

3. Before a component can be recertified, an evaluation of the criteria that could affect certification must be performed by the activity's Engineering/Quality Assurance personnel. Items that must be considered should include the following as a minimum:

- Length of time the submarine has been in an inactive state
- Access controls that have been exercised on the ship while undergoing inactivation
- Results of the visual inspection (component integrity/lack of tampering, damage, etc.)
- Recognizable significant markings on the material (MIC markings, RT numbers, etc.)
- Availability of historical documentation (DFSSs, URO/MRC reports, TVD, etc.)
- Results of refurbishment of the component, when accomplished
- Prior service application/parameters (pressure, temperature, system applicability)

4. The results of the above actions/evaluation and rationale for acceptability of the component must be documented by an approved nonconformance. The nonconformance shall be provided with the component to allow proper receipt inspection and traceability by the installing activity's REC process. Nonconformances shall be dispositioned in accordance with NAVSEAINST 5400.95.

# SUBSAFEGRAM 83A

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9077  
92QB  
16 Aug 02

Subj: RE-ENTRY CONTROL CLOSEOUT POLICY

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety  
(SUBSAFE) Requirements Manual  
(b) NAVSEA 0902-018-2010, General Overhaul Specifications  
for Deep Diving Submarines (DDGOS), Section 9480

1. This SUBSAFEGRAM is issued to reemphasize to the SUBSAFE community the NAVSEA policy with regard to SUBSAFE re-entry closure.

2. The purpose of SUBSAFE re-entry control is to provide positive assurance that areas entered within the SUBSAFE Certification Boundary are restored to a fully certified condition. Positive assurance is achieved by requiring that all actions necessary to certify the re-entry are completed before the re-entry is closed. There is only one exception to this requirement:

a. When the testing required to certify the re-entry must be done at sea. Under such circumstances, the test is transferred to the Sea Trial Deep Dive test form (for NAVSEA-managed availabilities) or a Departure From Specifications (for TYCOM-managed availabilities), and the re-entry is so annotated and closed. The Sea Trial Deep Dive test form does not have to be approved by NAVSEA prior to closing the re-entry. The Deep Dive test form will list all re-entries that were closed when the test form is submitted to NAVSEA for approval in accordance with references (a) and (b).

**There are no other exceptions or acceptable ways to close a re-entry.**

3. Our predecessors who developed the re-entry control process knew that simple, straightforward requirements enhance the probability of success in any process, especially a process that must be communicated to and executed by a broad spectrum of users. The success of the re-entry process, in no small measure, is due to the simplicity of the fundamental tenets of the process:

Subj: RE-ENTRY CONTROL CLOSEOUT POLICY

a. All re-entries must be closed prior to certification to commence Fast Cruise or Sea Trials, or prior to going to sea.

b. All actions necessary for certification must be complete before the re-entry is closed.

The value of these tenets is intuitively obvious.

4. Re-entry Closure and Testing: The one exception to the re-entry closure requirement noted in paragraph 2 above was devised to address the one circumstance in which 3.a and 3.b are mutually exclusive. Adopting this exception served to establish a discipline within the submarine community that "you never begin Fast Cruise, Sea Trials, or go to sea with open SUBSAFE re-entries." Further, allowing only the one exception established a simplicity of requirements that is easy to communicate, understand, and execute. Adopting other exceptions for reasons of convenience introduces unnecessary and undesirable complexity and robs the process of the very discipline that it is intended to instill.

5. Specifically, the above policy means:

a. Re-entries may not be closed by transferring the recertification testing to a "Test Re-entry."

b. Re-entries may not be closed before nonconformances, waivers, or departures are formally approved. The nonconformances, waivers, or departures will be listed on the re-entry control form.

c. Re-entries may not be closed before Liaison Action Requests (LARs) are formally approved if they are used to accept a nonconforming condition. LARs do not have to be answered prior to re-entry closure if they do not have the potential of impacting the material condition of the ship. Applicable LAR(s) will be listed on the re-entry control form.

d. Re-entries may not be closed before a local review of applicable Maintenance Requirements for Continued Unrestricted Operations to Design Test Depth (URO/MRC) data report forms have been completed and documented. URO/MRC reports reviewed by off-yard activities do not have to be completed, reviewed, or approved prior to re-entry closure.

Subj: RE-ENTRY CONTROL CLOSEOUT POLICY

e. Drawing change-related items (e.g., Selected Record Drawings, Engineering Review Diagrams, updating the Ship's Drawing Index, etc.) do not have to be complete prior to closing re-entries since they do not have the potential to impact the material condition of the ship.

f. SUBSAFE Design Review (SSDR) reports do not have to be completed and approved prior to closing a re-entry. These reports compile and document a review of engineering actions previously performed by a cognizant technical authority.

6. The NAVSEA point of contact for this issue is Mr. Chris DeCamp (SEA 92Q1), phone (COM) (202) 781-1284 or (DSN) 326-1284.



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Subj: RE-ENTRY CONTROL CLOSEOUT POLICY

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SEA 92QE (2)

SEA 92TC

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PMS392A41

PMS393

PMS393A1

PMS393A2

PMS393A3

PMS393A4

PMS393M

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PMS398T11

PMS450CSS

# SUBSAFEGRAM 84

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9077  
92Q2  
9 Feb 01

Subj: POLICY FOR REPORTING SIGNIFICANT PROBLEMS AFFECTING  
SUBSAFE TO NAVSEA 92Q

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

1. Reference (a) requires that NAVSEA 92Q be notified of significant SUBSAFE problems and be provided with information copies of all SUBSAFE-related problem reports. This data supports reference (a) requirements for NAVSEA 92Q to monitor SUBSAFE Program compliance, evaluate SUBSAFE data and information for trends, and make recommendations for program improvements. The resulting analysis and recommendations will be provided to SUBSAFE activities on an annual basis. This SUBSAFEGRAM is issued to clarify the criteria for notifying SEA 92Q of significant SUBSAFE problems and detail the process for submitting data to support NAVSEA 92Q's annual SUBSAFE analysis.

2. Examples of SUBSAFE problems, which may require reporting to SEA 92Q, are:

- Noncompliant work or technical direction resulting in the nonacceptability of material installed within the SUBSAFE boundary including:
  - Incorrect material installed (material type, material identification and control level, dimensions, configuration)
  - Failure to accomplish required recertification actions
  - Incorrect torque applied
  - Loose fasteners
  - Lack of/incorrect Nondestructive Testing (NDT)
  - Incorrect weld technique
  - Improper conduct of testing
  - Material improperly certified at receipt inspection
  - Unqualified welder/NDT operator
  - Incorrect system configuration
  - Lack of objective quality evidence supporting work/material
  - Failure to use specified measuring device

Subj: POLICY FOR REPORTING SIGNIFICANT PROBLEMS AFFECTING  
SUBSAFE TO NAVSEA 92Q

- Inaccurate or missing information/data provided on deliverable SUBSAFE technical documents and/or SUBSAFE documents affecting the certification status of a submarine including:
  - Certification messages
  - CAT I audit card replies
  - Departures
  - Design Review Reports
  - URO/MRC data reports
- Conduct of work within the SUBSAFE boundary without required authorization or re-entry control
- Failure to accomplish scheduled SUBSAFE work (alterations, Alterations and Improvements, job orders)
- Failure to accomplish mandatory SUBSAFE-related inspections (e.g., SUBSAFE Design Review hangers, etc.)
- Failure to accomplish mandatory technical review

This list is not intended to be definitive or all-inclusive, but rather an aid in identifying the types of problems that are considered significant and should be reported to NAVSEA 92Q.

3. Initial notification of significant SUBSAFE problems shall be made immediately (telephone, telefax, or e-mail) and be followed up in writing (letter, memorandum, or established report format). The means by which written notification is provided is at the discretion of the SUBSAFE Program Director or TYCOM Quality Assurance Officer. Methods of reporting may include, but are not limited to, Trouble Reports, Naval Messages, Critique Reports, and Incident Reports. Reports of significant SUBSAFE problems shall provide a detailed assessment of corrective actions taken, to include scope and root cause. Continued follow-up reporting is necessary if the root cause and scope of the noncompliance, and associated corrective actions, have not yet been determined.

Subj: POLICY FOR REPORTING SIGNIFICANT PROBLEMS AFFECTING  
SUBSAFE TO NAVSEA 92Q

4. The SUBSAFE items submitted during the reporting year will be tabulated into a comprehensive listing of significant SUBSAFE issues, to be evaluated/categorized for Major Event status during the subsequent SUBSAFE Working Group (SSWG) meeting held in March. Examples of Major Events are flooding, significant leakage from a SUBSAFE system, a submarine at sea in an uncertified condition, or a deficiency that would have led to a submarine at sea in an uncertified condition.

5. In order to ensure that all significant problems have been evaluated for inclusion in the SSWG discussion, NAVSEA 92Q will validate the data annually by sending a comprehensive, activity-specific list of SUBSAFE problems to each activity for review, no later than 15 January. Activities will be requested to review and validate this list with regard to completeness. Activities should ensure that their responses, including copies of reports not on the listing, are provided to NAVSEA 92Q2 by 31 January.

6. During the March SSWG, activities should be prepared to address their possible Major Events. Results from the SSWG will include a final listing of Major Events for the reporting year. Subsequent data and trending analysis of these Major Events will be presented as NAVSEA 92Q's annual SUBSAFE assessment during meetings with the SUBSAFE Oversight Committee (SSOC), SUBSAFE Steering Task Group (SSSTG) and the SSWG. The hard-copy distribution of this analysis will be made by the September SSWG.

7. NAVSEA point of contact for this SUBSAFEGRAM is Ms. Marion Hall (SEA 92Q2) at (COM) (703) 602-0459 ext. 518 or (DSN) 332-0459 ext. 518.



MARY TOWNSEND-MANNING  
Director, Submarine Safety and  
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Subj: POLICY FOR REPORTING SIGNIFICANT PROBLEMS AFFECTING  
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PMS392A2B  
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PMS392A41  
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PMS395A18  
PMS450CSS

# SUBSAFEGRAM 85

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9077  
92Q  
26 Jul 01

Subj: SUBSAFE TRAINING

Ref: (a) NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE) Requirements Manual  
(b) NAVSEA TL855-AA-STD-010, Naval Shipyard Quality Program Manual  
(c) ANSI/ASQC Q9000 Series  
(d) CINCLANTFLT/CINCPACFLTINST 4790.3, Joint Fleet Maintenance Manual  
(e) NAVSEA ltr 5000 OPR: 92Q21 Ser 92Q/213 of 3 May 90, Minimum Qualification Guidelines  
(f) NAVSEANOTE 5000, Identification of Activities Authorized to Perform SUBSAFE Work  
(g) SUBSAFEGRAM 68A, Definition of SUBSAFE Work  
(h) NAVSEAINST 4855.35, NAVSEA Submarine Safety (SUBSAFE) Functional Audit Program

1. This SUBSAFEGRAM provides details for NAVSEA's assessment of the SUBSAFE training program at activities authorized to perform SUBSAFE work. Training requirements for employees involved in quality programs are contained in references (a) through (d). Advance Change Notice 2-3 to the SUBSAFE Manual formalizes training requirements which have long been audited into the SUBSAFE Program. Specifically, paragraph 2.2.j will state:

Organizations identified in NAVSEANOTE 5000 as qualified to perform SUBSAFE work shall establish and maintain procedures for identifying training needs and provide for training of all personnel performing activities affecting SUBSAFE quality. This shall include periodic SUBSAFE awareness training. Personnel performing specific assigned tasks shall be qualified on the basis of appropriate education, training, and/or experience, as required. Appropriate records of training shall be maintained.

2. The wide variety of organizations performing SUBSAFE work prevents NAVSEA dictating a single format or methodology for SUBSAFE training for all activities. In 1990, reference (e) issued SUBSAFE Minimum Qualification Guidelines to assist naval

Subj: SUBSAFE Training

shipyards in meeting their requirement to provide formal training in quality program requirements applicable to specific work assignments. Where these guidelines have been incorporated into local training programs, they should be retained. Additionally, NAVSEA has provided to field activities those SUBSAFE training materials used by NAVSEA headquarters in their annual awareness training. Although these guidelines and training materials have been provided by NAVSEA, the local SUBSAFE activity has both the prerogative and the responsibility for determining and establishing a SUBSAFE training program suited to their organization. The activity must ensure that the scope of training is sufficient to ensure that work practices and SUBSAFE requirements are known and understood, and that the frequency of training is sufficient to ensure that proficiency is maintained.

3. NAVSEA audits of activities authorized to perform SUBSAFE work, as defined by references (f) and (g), will include a review of the activity's documented training program for personnel involved in SUBSAFE work and a review of the activity's process for selecting and assigning personnel to SUBSAFE work. The NAVSEA reviews will include the following:

a. Examination of the local instruction or directive that describes the local SUBSAFE training program, including how SUBSAFE workers are selected, trained, and qualified, and maintain qualification.

b. Examination of records of training for all personnel performing SUBSAFE work, as well as awareness training records for personnel associated with submarine maintenance.

c. Examination of records of new-employee training and orientation prior to their assignment to SUBSAFE tasks.

d. Examination of the activity's method to assess effectiveness of their training. Typical methods might be written examinations or quizzes, practical examinations or demonstrations, oral examinations, monitoring of training by senior management, or random retention examinations.

e. An evaluation of the activity's training products. This may include learning objectives, curriculum, lesson plans, practical exercises, and read-ahead material.

Subj: SUBSAFE Training

f. An evaluation of the activity's training effectiveness will be determined by conducting a SUBSAFE awareness quiz and by informal interviews of craftsmen, engineers, and quality professionals (as described in reference (h)).

g. Examination of the system used for incorporating lessons learned and recent problems into the SUBSAFE training program.

h. Examination of the auditor training program required by reference (a) to support NAVSEA SUBSAFE Auditors.

4. The NAVSEA point of contact for this issue is Ms. Marion Hall (SEA 92Q2), phone (COM) (202) 781-1235, (DSN) 326-1235, (E-mail) HallMB@navsea.navy.mil.

  
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SEA 92QE (2)

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PMS393A4

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# SUBSAFEGRAM 100J

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4855  
92Q2  
12 Mar 02

Subj: CORRESPONDENCE THAT AFFECTS THE SUBSAFE PROGRAM

Encl: (1) Listing of Correspondence that Affects the SUBSAFE Program  
(2) Consolidated Launcher Technology-Oceanengineering International, Inc. (CLT-OII) Letter of Qualification to do SUBSAFE Work

1. Correspondence affecting the SUBSAFE Program is prepared and distributed by various NAVSEA codes and many field activities. This information is not always passed to the appropriate personnel within the SUBSAFE community. SUBSAFEGRAM 100 is issued to assist in the promulgation of SUBSAFE information that is received by SEA 92Q and considered useful to SUBSAFE Program Directors.

2. Enclosure (1) provides a listing of pertinent correspondence identified since the 12 February 2001 issue of SUBSAFEGRAM 100 (Revision I) and identifies the disposition status of correspondence carried over from previous revisions.

3. Enclosure (2) provides correspondence identifying the SUBSAFE work that CLT-OII is qualified to perform and is provided due to its limited distribution.

4. This SUBSAFEGRAM is not intended as authorization to deviate from any retention requirements specified by the correspondence originator or higher level authority. Additionally, if the receiving activity determines a need for retention based on applicability to the SUBSAFE work performed at their activity, the correspondence should be retained accordingly.



T. L. VAN PETTEN  
Director, Submarine Safety and  
Quality Assurance

Subj: CORRESPONDENCE THAT AFFECTS THE SUBSAFE PROGRAM

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NAVSURFWARCENSHIPSYSSENGSTA Philadelphia, PA (J. Lutz, Code 9601)  
NAVICP Mechanicsburg, PA (R. Smith, Code 845)  
SUPSHIP Groton, CT (W. Falman Jr., Code 100Q)  
SUPSHIP Newport News, VA (E. Pickler, Code 208)  
Newport News Shipbuilding, Newport News, VA (D. Conley, Dept. 003)  
Electric Boat Corporation, Groton, CT (J. Noonan, Dept. 320)  
NUWCDIV Newport, RI (D. Borgeson, Code 00SS)  
NAVSHIPREPFAC Yokosuka, Japan (H. Rollins, Code 130)  
DCMA Alexandria, VA (M. J. Costa, Code DCMA-OCT)  
SHAPEC SSN688 Class, Portsmouth, NH (R. Toole, Code 240SH)

Subj: CORRESPONDENCE THAT AFFECTS THE SUBSAFE PROGRAM

Copy to:

NAVSHIPYD Norfolk, VA (Code 130, Code 240)  
NAVSHIPYD&IMF Pearl Harbor, HI (Code 130, Code 240)  
NAVSHIPYD Portsmouth, NH (Code 130, Code 240)  
NAVSHIPYD Puget Sound, Bremerton, WA (Code 130, Code 240)  
SUPSHIP Groton, CT (Code 201, Code 301)  
SUPSHIP Newport News, VA (Code 201, Code 301)  
COMSUBGRU TWO  
COMSUBGRU SEVEN  
COMSUBGRU EIGHT  
COMSUBGRU NINE  
COMSUBGRU TEN  
COMSUBGRUREP Guam  
COMSUBDEVRON FIVE  
COMSUBDEVRON TWELVE  
COMSUBBRON ONE  
COMSUBBRON TWO  
COMSUBBRON THREE  
COMSUBBRON FOUR  
COMSUBBRON SEVEN  
COMSUBBRON ELEVEN  
COMSUBBRON SIXTEEN  
COMSUBBRON SEVENTEEN  
COMSUBBRON TWENTY  
COMSUBBRON TWENTY-TWO  
COMSUBBRONSUPPUNIT Norfolk, VA  
COMSUBBRONSUPPUNIT New London, CT  
NAVSHIPREPFAC Yokosuka, Japan (Code 130.1, Code 240)  
NAVSUBSUPFAC NLON (Repair Officer, Technical Library)  
USS EMORY S. LAND (AS 39) (Repair Officer, Quality Assurance  
Officer)  
USS FRANK CABLE (AS 40) (Repair Officer, Quality Assurance  
Officer)  
NAVIMFAC PACNORWEST (Repair Officer, Code 411, Code 440)  
TRIREFFAC Kings Bay, GA (Repair Officer, Code 411, Code 440)  
Consolidated Launcher Technology-Oceanering International, Inc.,  
Chesapeake, VA (M. Merzwa)  
SIMA Norfolk, VA (Repair Officer, Quality Assurance Officer)  
SIMA San Diego, CA (Repair Officer, Quality Assurance Officer)

Subj: CORRESPONDENCE THAT AFFECTS THE SUBSAFE PROGRAM

Blind copy to:

SEA 05U32

SEA 04XQ

SEA 04XQ1B

SEA 08D

SEA 92C

SEA 92Q

SEA 92Q1

SEA 92Q2

SEA 92Q21

SEA 92QD

SEA 92QL (9077/10)

SEA 92QE (2)

SEA 92TC

PMS350A

PMS350AX3

PMS350AB21

PMS392

PMS392A1

PMS392A2

PMS392A41

PMS393

PMS393A1

PMS393A2

PMS393A3

PMS393A4

PMS393M

PMS395

PMS395A12

PMS450CSS

**LISTING OF CORRESPONDENCE THAT AFFECTS THE SUBSAFE PROGRAM**

**-ADDED BY SUBSAFEGRAM 100J**

SOURCE	FILE/SERIAL/DATE	SUBJECT	SYNOPSIS	DISPOSITION STATUS
SEA 92TC	NAVSEA ltr Ser 92TC1/003 of 17 Jan 02	Material Control Markings for Corporate Component Repair Program Assets	This letter approved the assignment of new MIC numbers, based on fulfilling the verification requirements in encl (1) of PSNSY ltr Ser 200S/048 of 29 Nov 01, with additional comments from NAVSEA, for components received without traceability markings.	Provided to all impacted activities to maintain.
PSNSY	PSNSY ltr Ser 200S/048 of 29 Nov 01	Material Control Markings for Corporate Component Repair Program Assets	This letter requested authorization of the assignment of new MIC numbers, based on fulfilling verification requirements, for components received without traceability markings.	Provided to all impacted activities to maintain.
NSWCCD-SSES	NSWCCD-SSES ltr Ser 9601/008 of 1 Mar 02	Letter of Qualification to Perform SUBSAFE Work (CLT-OII)	Authorizes Consolidated Launcher Technology (CLT-OII) to perform SUBSAFE work within predetermined guidelines and limitations.	Correspondence provided as enclosure (2). <b>Need for retention based on applicability to the SUBSAFE work performed at your activity.</b>

**-ADDED BY SUBSAFEGRAM 100I**

SOURCE	FILE/SERIAL/DATE	SUBJECT	SYNOPSIS	DISPOSITION STATUS
SEA 92TC	NAVSEAINST C9094.2B, Ser 92TC5/C192 of 11 May 2000	Submarine Sea Water Valve Operating Requirements for Builders and Post Major Depot Availability Sea Trial Test Dives (U)	Updates the instruction to delete references to non-SUBSAFE submarines. It adds information for VIRGINIA and SEAWOLF Class submarines. This instruction formalizes NAVSEA's guidance that all valve cycling requirements be documented in the Deep Dive Test Form.	Provided to all impacted activities to maintain.  NOTE: This correspondence is classified. Contact 92TC to obtain.

**-ADDED BY SUBSAFEGRAM 100H**

SOURCE	FILE/SERIAL/DATE	SUBJECT	SYNOPSIS	DISPOSITION STATUS
NSWCCD-SSES	NSWCCD-SSES ltr 4855 Ser 9601/70 of 16 Jun 99	Memorandum of Agreement for Performance of SUBSAFE Work by CLT-OII	Outlines responsibilities for NSWCCD-SSES and CLT-OII with respect to CLT-OII performing SUBSAFE work under NSWCCD-SSES sponsorship. The MOA requires NSWCCD-SSES to perform functional assessment of CLT-OII and for CLT-OII to develop and maintain a suitable Re-Entry Control Program.	<b>Need for retention based on applicability to the SUBSAFE work performed at your activity.</b>

-ADDED BY SUBSAFEGRAM 100G

SOURCE	FILE/SERIAL/DATE	SUBJECT	SYNOPSIS	DISPOSITION STATUS
SEA 05L	NAVSEA ltr 9505 Ser 03L/296 of 8 Jul 97	NSSN Program, Contract No. N00024-96-C-2100; Clarification of Level I Material Identification and Control Boundaries for Non-Nuclear Sea Water and Sea Connected Systems	Provides clarification of the definitions of "normally open" and "normally closed" non-nuclear seawater and sea connected systems.	This letter gives concurrence to changes in drawings submitted by EB Corp. These changes were in response to the clarification of the MIC boundary.

-ADDED BY SUBSAFEGRAM 100F

SOURCE	FILE/SERIAL/DATE	SUBJECT	SYNOPSIS	DISPOSITION STATUS
SEA 04XQ	4855 OPR 07Q1B Ser 07Q/191 10 MAR 93	LOCAL ANALYSIS REQUIREMENT FOR RECEIPT INSPECTION OF LEVEL I MATERIAL	This letter deletes the local analysis requirement from NAVSEA 0948-LP-045-7010 Rev 2, table 3-2, note 3. Level I assemblies and finished components that have no material specification hardness value or cannot be hardness tested due to size, configuration, or material condition may be certified on the basis of acceptable certification test reports and local chemical analysis. The next revision of NAVSEA 0948-LP-045-7010 will incorporate this change.	This change has not yet been incorporated into NAVSEA 0948-LP- 045-7010.  <b>MAINTAIN correspondence until change is incorporated.</b>



**DEPARTMENT OF THE NAVY**  
NAVAL SURFACE WARFARE CENTER  
CARDEROCK DIVISION

NAVAL SHIP SYSTEMS  
ENGINEERING STATION  
PHILADELPHIA, PA 19112-5083

IN REPLY REFER TO

4855  
Ser 9601/008  
1 Mar 2002

Mr. John Kreider  
Assistant Vice President  
Oceaneering International, Inc.  
501 Prince Georges Boulevard  
Upper Marlboro, MD 20774

Dear Mr. Kreider:

**SUBJECT: LETTER OF QUALIFICATION TO PERFORM SUBSAFE WORK**

NAVSEA Notice 5000, Ser 92Q2/026 of 6 Mar 2000, authorizes NSWCCD-SSES as an activity designated to perform, delegate, and provide qualification for the performance of SUBSAFE work. Established by NSWCCD-SSES ltr Ser 9601/059 of 26 Aug 1997 and stated in NAVSEA Notice 5000 Enclosure (3), Consolidated Launcher Technology, a wholly owned subsidiary of Oceaneering International, Inc. (OII-CLT) is qualified by NSWCCD-SSES to perform SUBSAFE work within defined limitations. This letter updates the existing scope of work previously qualified by NSWCCD-SSES ltr 4855 Ser 9601/019 dated 31 May 2001 to reflect current capabilities and on going qualification processes of OII-CLT.

OII-CLT maintains a continuance of qualification for performance of SUBSAFE work requiring Re-Entry Control (REC) defined by paragraph 6.3.2 of NAVSEA 0924-062-0010, Submarine Safety (SUBSAFE) Requirements Manual. Included is the performance of inspections and tests (including URO/MRC) used to verify work under REC or support maintenance of SUBSAFE certification and work that involves the control of SUBSAFE technical information. A Memorandum of Agreement between NSWCCD-SSES and OII-CLT defined by enclosure (1), attachment (A) of NSWCCD-SSES ltr 4855 Ser 9601/70 dated 16 June 1999 provides amplifying guidance. As stated therein, this qualification applies exclusively to those portions of OII which operate under OII-CLT and the defined OII-CLT Quality Assurance Program.

OII-CLT is authorized to perform SUBSAFE work in accordance with the following:

Note: SUBSAFE work, which is delegated to OII-CLT from other activities, shall be confirmed by NSWCCD-SSES and the delegating activity to be commensurate with the following nature of SUBSAFE work. SUBSAFE work as determined by NSWCCD-SSES to be out of this scope shall require prior NSWCCD-SSES/OII-CLT qualification using the requirements of NAVSEAINST 4855.34, Procedures for Qualification and Authorization of New Activities to Perform SUBSAFE Work. The following SUBSAFE work is permitted:

Encl (2)

SUBJECT: LETTER OF QUALIFICATION TO PERFORM SUBSAFE WORK

- (a) Torpedo tube, torpedo ejection systems, ram pump/turbines
- (b) Trim and drain systems (and associated systems)
- (c) Auxiliary seawater valves
- (d) Diesel seawater valves
- (e) 3 inch launchers and external countermeasures
- (f) Trash disposal unit
- (g) Hatches and watertight doors
- (h) Seawater and hydraulic systems specifically associated with (a) through (g)
- (i) High pressure air systems (excluding EMBT Blow System)
- (j) All electrical hull fittings
- (k) Hull structure; limited to installation, removal, and testing of welded attachments but including repair of base metal NDT defect incident to welded attachment installation or removal. Base metal repair and NDT testing to pressure hull structure specifically for repair of tapped holes is also permitted.
- (l) Service air/Low pressure air
- (m) Snorkel induction and Diesel exhaust systems
- (n) Outboard greasing system
- (o) Solid shafts that penetrate the pressure hull
- (p) Non-sea-connected piping systems which penetrate the pressure hull as defined in paragraph 4.5.14 of the SUBSAFE Requirements Manual
- (q) Pressure hull penetrations as defined in paragraph 4.3.1.1.d of the SUBSAFE Requirements Manual
- (r) Ship control as defined in paragraph 4.5.2.1 of the SUBSAFE Requirements Manual
- (s) High pressure air system piping associated with EMBT Blow System

Note: Items (r) and (s) have qualification plans in place and are awaiting final approval. In addition there are limitations as to scope of work for items (r) and (s). Please contact NSWCCD-SSES for qualification status prior to delegating SUBSAFE work related to paragraphs (r) and (s) to OII-CLT.

The following limitations apply for all SUBSAFE work listed above:

a. Performance of Non-Destructive Testing (NDT) services is limited to Magnetic Particle (MT), Liquid Penetrant (PT), and Visual Examination (VT) and Ultrasonic Inspection (UT). Exclusive use of Scientific Technical (SI-TECH) as a sole private source of NDT is limited to services and products other than the performance of MT, PT, VT and UT.

b. OII-CLT is not authorized to perform or submit for review SUBSAFE Design Review (SSDR) Reports. Documentation of follow-yard alteration actions or generation of Departure From Specifications (DFS) which have potential SSDR impact will be submitted by OII-CLT to NSWCCD-SSES. NSWCCD-SSES shall then process the SSDR or DFS as appropriate.

SUBJECT: LETTER OF QUALIFICATION TO PERFORM SUBSAFE WORK

c. OII-CLT is granted no local technical authority in the disposition of SUBSAFE Departure From Specifications (DFS). Disposition is provided via NSWCCD-SSES or the Supervising Authority. The Supervising Authority for OII-CLT is defined as follows regarding DFS's:

(1) The NAVSEA/NAVSEA managed customers listed in enclosure (1) to NAVSEANOTE 5000 will serve as the Supervising Authority. OII-CLT will provide the ship and ISIC with a copy of the dispositioned waiver/deviation.

(2) NSWCCD-SSES for customers defined as Forces Afloat or activities not listed in enclosure (1) to NAVSEANOTE 5000. OII-CLT will provide the ship and ISIC with a copy of the dispositioned waiver/deviation from NSWCCD-SSES.

d. OII-CLT is not authorized to delegate SUBSAFE work to non-authorized or non-qualified activities or to qualify other activities to perform SUBSAFE work.

e. Request by OII-CLT to expand the scope of their specified qualification shall be presented to NSWCCD-SSES for consideration.

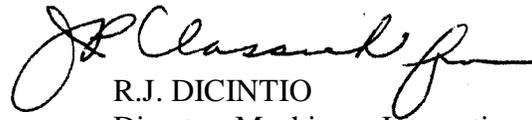
OII-CLT is responsible for providing a work completion/end of availability certification letter at the close of each work evolution. The work completion/end of availability certification certifies all SUBSAFE work performed by OII-CLT was done in accordance with the requirements of NAVSEA 0924-062-0010 and that the ship's certification for unrestricted operations is sustained. The letter will specifically detail OII-CLT RECs (and associated Ship's Force REC numbers) affected, identify any applicable Departures From Specification, Deviations, and/or Waivers and identify URO/MRCs performed either incidental or non-incidental to the assigned repair work.

a. When the customer is Forces Afloat or an activity not listed in enclosure (1) to NAVSEANOTE 5000, OII-CLT will report by letter to NSWCCD-SSES Code 9601, copy to the ship, and the ship's ISIC and TYCOM. NSWCCD-SSES will provide official concurrence to the ship, the ship's ISIC and TYCOM.

b. When the customer is NAVSEA or a NAVSEA managed activity listed in enclosure (1) to NAVSEANOTE 5000, OII-CLT will report by letter to the customer, copy to the ship, the ship's ISIC, TYCOM and NSWCCD-SSES Code 9601. OII-CLT will ensure that the MOA identifies the customer as responsible for officially forwarding this report with concurrence to the ship, the ship's ISIC and the TYCOM.

SUBJECT: LETTER OF QUALIFICATION TO PERFORM SUBSAFE WORK

Activities requiring further information or having questions regarding this arrangement may contact NSWCCD-SSES. Point of Contact for this matter, Mr. J. Lutz, NSWCCD-SSES SUBSAFE Program Director, Code 9601 at (215) 897-7953, (DSN) 443-7953.



R.J. DICINTIO  
Director, Machinery Integration,  
Communications and Networking Department

Copy to:

OII-CLT  
804-D Industrial Avenue  
Chesapeake, VA 23324

NAVSEA 92Q  
COMSUBLANT N409  
COMSUBPAC N473

# SUBSAFEGRAM 200D

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9077  
92Q2  
14 May 02

Subj: ACTIVE PRECEDENT-SETTING SUBSAFE DEPARTURES FROM SPECIFICATIONS

Ref: (a) NAVSEA 0924-062-0010 Rev C, Submarine Safety (SUBSAFE) Requirements Manual  
(b) CINCLANTFLT/CINCPACFLTINST 4790.3, Joint Fleet Maintenance Manual, Volume V

Encl: (1) Active Precedent-Setting SUBSAFE Departures From Specifications

1. This SUBSAFEGRAM supersedes SUBSAFEGRAM 200C of 6 Feb 01.

2. Reference (a), section 3.4.1, provides requirements for processing Departures From Specifications (DFSs) within the SUBSAFE boundary. Reference (b) establishes the conditions by which certain fleet-initiated DFSs meeting the criteria for categorization as MAJOR may be administered as MINOR and dispositioned locally. An example would be a DFS that was previously approved as precedent-setting. In accordance with reference (b), use of a precedent-setting DFS is restricted to the same ship class, system, component, and application. Additionally, to be considered precedent-setting, a DFS must be approved by NAVSEA in writing, and the NAVSEA approval must specifically state that it is a precedent-setting DFS. Specific conditions associated with approval of a precedent-setting DFS will be noted in the NAVSEA approval.

3. Enclosure (1) provides the current list of active, NAVSEA-approved, precedent-setting SUBSAFE DFSs. This list will be periodically updated. If any TYCOM-managed activity considers that other precedent-setting DFSs with SUBSAFE applications exist which are not included in enclosure (1), a copy of the requesting and approving correspondence shall be submitted to NAVSEA 92Q via the appropriate submarine TYCOM for inclusion in this SUBSAFEGRAM. All newly initiated precedent-setting SUBSAFE DFS requests shall be submitted to the cognizant Submarine Program Manager (e.g., PMS350, PMS392, or PMS395) via the approval chain established by reference (a). Copies of precedent-setting DFS correspondence listed in enclosure (1) may be obtained by contacting the originating TYCOM or NAVSEA.

Subj: ACTIVE PRECEDENT-SETTING SUBSAFE DEPARTURES FROM  
SPECIFICATIONS

4. NAVSEA's point of contact is Mr. Kerry Frink (SEA 92Q21) at  
(COM) 202-781-1266, (DSN) 326-1266, or E-Mail:  
FrinkKD@navsea.navy.mil.



T. L. VAN PETTEN  
Director, Submarine Safety and  
Quality Assurance

Distribution:

COMSUBLANT (LCDR D. Trem, Code N409)  
COMSUBPAC (LCDR M. Sumrall, Code N473)  
NAVSHIPYD Norfolk, VA (E. Karkane, Code 200S)  
NAVSHIPYD&IMF Pearl Harbor, HI (M. Takafuji, Code 200S)  
NAVSHIPYD Portsmouth, NH (M. Jacques, Code 200S)  
NAVSHIPYD Puget Sound, Bremerton, WA (E. Stormer, Code 200S)  
SUBMEPP Portsmouth, NH (G. Cordeiro, Code 1802S)  
NAVSEALOGCEN Mechanicsburg, PA (E. Martin, Code N44)  
NAVSURFWARCENSHIPSYSSENGSTA Philadelphia, PA (J. Lutz, Code 9601)  
NAVICP Mechanicsburg, PA (R. Smith, Code 845)  
SUPSHIP Groton, CT (W. Falman Jr., Code 100Q)  
SUPSHIP Newport News, VA (E. Pickler, Code 208)  
Northrop Grumman Newport News, VA (D. Conley, Dept. 003)  
Electric Boat Corporation, Groton, CT (J. Noonan, Dept. 320)  
NUWC DIV Newport, RI (D. Borgeson, Code 00SS)  
NAVSHIPREPFFAC Yokosuka, Japan (D. Vanmeerten, Code 130)  
DCMA Alexandria, VA (M. J. Costa, Code DCMA-OCT)  
SHAPEC SSN688 Class, Portsmouth, NH (R. Toole, Code 240SH)

Subj: ACTIVE PRECEDENT-SETTING SUBSAFE DEPARTURES FROM  
SPECIFICATIONS

Copy to:

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NAVSHIPYD&IMF Pearl Harbor, HI (Code 130, Code 240)  
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NAVSHIPREPFAC Yokosuka, Japan (Code 130.1, Code 240)  
NAVSUBSUPFAC NLON (Repair Officer, Technical Library)  
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NAVIMFAC PACNORWEST (Repair Officer, Code 411, Code 440)  
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Chesapeake, VA (M. Merzwa)  
SIMA Norfolk, VA (Repair Officer, Quality Assurance Officer)  
SIMA San Diego, CA (Repair Officer, Quality Assurance Officer)

Subj: ACTIVE PRECEDENT-SETTING SUBSAFE DEPARTURES FROM  
SPECIFICATIONS

Blind copy to:

SEA 05U32  
SEA 04XQ  
SEA 04XQ1B  
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SEA 92C  
SEA 92Q  
SEA 92Q1  
SEA 92Q2  
SEA 92Q21  
SEA 92QD  
SEA 92QL (9077/10)  
SEA 92QE (2)  
SEA 92TC  
PMS350A  
PMS350AX3  
PMS350AB21  
PMS392  
PMS392A1  
PMS392A2  
PMS392A41  
PMS393  
PMS393A1  
PMS393A2  
PMS393A3  
PMS393A4  
PMS393M  
PMS395  
PMS395A12  
PMS450CSS

Active Precedent-Setting SUBSAFE Departures From Specifications

SSN 637 Class:

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
High Pressure Air System, AHP-518	Parker check valve poppets required to be Level I but were received and installed as non-Level. The poppet was verified to be of the proper generic material by acid spot test and installed in the valve.	COMSUBPAC msg 101514Z Oct 95	666-035-95  TYCOM Ser: CSP 294-95	NAVSEA ltr 4855 Ser 393A252/1285 of 6 Nov 95	NAVSEA DWG 2640384
Main Shaft, Lock Ring Groove	Lock ring groove width machined to 0.624 inches to accommodate 0.621 inch oversized ring.	COMSUBPAC msg 281604Z Nov 95	672-43-95  TYCOM Ser: CSP 351-95	NAVSEA ltr 4855 Ser 393A252/1334 of 18 Dec 95	Sealol Inc. DWG 26343
Auxiliary Sea Water System, Shaft Seals, ASW-495	Replaced software in ASW-495. Requirements are to perform a joint tightness test on body to bonnet union. Unable to perform test due to system configuration. Conducted preliminary leak check on body to bonnet union and seat leakage test with shaft seals at 40 psig. No leakage from body to bonnet union or from seat. Performed a controlled deep dive to certify body to bonnet union and seat leakage test.	QA Form 12, JCN 06166-EM01-2324 dtd 9/11/98	674-17-98	QA Form 12, JCN 06166-EM01-2324 dtd 11 Sep 98	NAVSEA DWG 606-2177934
High Pressure Air System, AHP-510 (MBT 5A Hull Stop)	The ball and seats were replaced on AHP-510. Unable to perform tests to the outboard ports due to ship configuration. Controlled reassembly completed satisfactorily. 100 psi and 4500 psi seat tightness tests of the inboard ports performed satisfactorily. URO 22 on the after group completed satisfactorily. Completed a controlled deep dive to test depth.	QA Form 12, JCN 05724-EA01-8162 dtd 31 Aug 98	676-036-98	QA Form 12, JCN 05724-EA01-8162 dtd 31 Aug 98	NAVSEA DWG 2180714 (L)
No. 2 Periscope, Wiper Retainers	DWG SSN637-400-2143710 Rev J requires that the hex head bolts securing the wiper and wiper retainer to the sleeve and hull fitting be lockwired using the double twist method. The Hex head bolts were secured in place with anaerobic sealant vice lockwire because of inaccessibility of all hex head bolts. Use of anaerobic sealant vice lockwire is an approved method of securing the wiper retainer fasteners on 688 Class hull fittings.	QA Form 12, JCN 20044-OE01-0916 dtd 20 Jul 98	681-017-98	QA Form 12, JCN 20044-OE01-0916 dtd 20 Jul 98	NAVSEA DWG SSN637-400-214 3710 (J)
Drain System, Drain Pump Overboard Hull Insert	NAVSEA DWG 4362242 requires 5/8-11 2B tapped holes in Pc. 12. IMA installed two thin wall inserts in Pc. 12 to repair damaged threads in holes identified in local drawing. PHONCON with NAVSEA PMS390T123 identified use of inserts as best repair method.	COMSUBPAC msg 301544Z Jun 95	682-018-95  TYCOM Ser: CSP 202-95	NAVSEA ltr 4855 Ser 393A252/0809 of 18 Jul 95	NAVSEA DWG 4362242
High Pressure Air System, AHP-525	Parker check valve poppets required to be Level I but were received and installed as non-Level. The poppet was verified to be of the proper generic material by acid spot test and installed in the valve.	COMSUBPAC msg 051604A Oct 95	682-25-95  TYCOM Ser: CSP 291-95	NAVSEA ltr 4855 Ser 393A252/1284 of 6 Nov 95	NAVSEA DWG 2640092
Torpedo Tubes, Breech Door Gasket	MK 67 Torpedo Tube Breech Door Gasket P/N: 3017117 NSN: 5330-00-383-7976 MIL SPEC: MIL-R-15624, substituted for MK 63 Torpedo Tube Breech Door Gasket P/N: 1682777 NSN: 5330-00-603-2900 MIL SPEC: MIL-R-15624. Recommend approval of DFS for use of substitute part based on having same cross-sectional height, center hole diameter, peripheral diameter, hardness rating, material and MIL SPEC.	QA Form 12, JCN 20345-WI01-1389 dtd 7 Oct 98	683-19-98	QA Form 12, JCN 20345-WI01-1389 dtd 7 Oct 98	NAVSEA DWG 487799 (-) Pc. 8
Trim and Drain System, TD-5 Hydraulic Actuator Relief Valve	Holes in the valve body Pc. 14 are required to have a 0.0002 - 0.0007 inch interference fit with dowel pins. Dowel pins are required to be 0.7505 -0.7507 inch diameter. Holes in the hydraulic actuator are required to be 0.0000 - 0.0002 inch clearance with dowel pins. SIMA Norfolk manufactured dowel pins (2) in a "step down shape," 0.7520 inch on one end (both pins) and 0.7667/0.7662 inch on the other end. SIMA Norfolk drilled holes in a new valve body to 0.7515 inch diameter. The valve passed operational test.	QA Form 12, JCN 20350-EA01-2471 dtd 29 Sep 98	SSN686-37-98	QA Form 12, JCN 20350-EA01-2471 dtd 29 Sep 98	NAVSEA DWG 845-218473

Active Precedent-Setting SUBSAFE Departures From Specifications

<b>SYSTEM/ COMPONENT</b>	<b>DFS DESCRIPTION</b>	<b>REQUESTING CORRESPONDENCE</b>	<b>DFS No.</b>	<b>NAVSEA APPROVAL CORRESPONDENCE</b>	<b>AFFECTED SPECS</b>
Auxiliary Seawater System, ASW-63 (Hydraulic Actuator Relief Valve)	SIMA failed to call out URO-25 IAW JFMM. SIMA Norfolk replaced relief valve (Pc. 13), which is the hydraulic operator in the flood control system. SIMA Norfolk evaluated the relief valve and determined that replacing it had no effect on the timing of the actuator. Recommend that when relief valves are replaced on Flood Control hydraulic actuators, URO-25 is not required. Approved without further conditions.	QA Form 12, JCN 20350-EM01-5871 dtd 26 Jan 98	SSN686-1001-98	QA Form 12, JCN 20350-EM01-5871 dtd 26 Jan 98	NAVSEA DWG 2109820 (B)

2

NOTES:

1. Shaded rows are items that have been changed or added since the last issue of SUBSAFEGRAM 200.
2. DFS data in "{ }" indicate other DFSs have been approved as precedent-setting for the same topic and component in that particular Class.

Active Precedent-Setting SUBSAFE Departures From Specifications

SSN 688 Class:

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Diesel Exhaust System, DE-5	The Maintenance Standard requires high and low pressure seat tightness testing of DE-5 following repairs. NAVSEA Precedent setting DFS Ser 393A252/0543 authorized an operational test following controlled assembly and blue checks, but did not specify the test method. PHNSY Waiver/Deviation dtd 28 May 99 specified an operational retest in accordance with SUBMEPP Pre-Availability Test Memorandum 204-001. CSP requested that controlled assembly and blue checks be considered satisfactory without the operational test because the specified operational test requires an abnormal system line-up which risks introducing water into the diesel engine.	QA Form 12, JCN 20202-EA01-0229 dtd 18 Oct 00	SSN-688-020-00	QA Form 12, JCN 20202-EA01-0229 dtd 20 Oct 00	NAVSEA DWG 256101 Rev H; NAVSEA DWG 845-4456141 Rev A
Emergency Main Ballast Tank Blow System, AHP-518 (Vent Check Valve)	Upon disassembly and inspection of the valve, pits with depths of 0.003-0.005 inches were found on the upper and lower o-ring sealing surface. They were electroplated in accordance with MIL-STD-2297.	QA Form 12, JCN 20202-EXTY-7266 dtd 15 Oct 97	688-012-97	QA Form 12, JCN 20202-EXTY-7266 dtd 15 Oct 97	Parker DWG 2640092
Auxiliary Seawater System, #2 ASW Pump	Corrosion noted 360 degrees around primary gland o-ring groove for the mechanical seal. Replacement primary gland received was incorrect part, o-ring groove was epoxy patched.	COMSUBPAC msg 081724Z Jan 93 & COMSUBGRU SEVEN msg 081745Z Jan 93	SSN 692-005-93  TYCOM Ser: CSP 009-93	NAVSEA ltr 9520 Ser 393T1/1269 of 17 May 93	Ingersoll-Rand DWG 11312-F-18 (B)
Emergency Main Ballast Tank Blow System, AHP-518 (Vent Check Valve)	Poppets received from supply for installation in Parker Check Valve (AHP-518) were not Level I as required. The poppets were verified to be of the proper generic material and installed in the valve.	COMSUBPAC msg 261534Z Apr 96	695-005-98  TYCOM Ser: CSP 115-96	NAVSEA ltr 4855 Ser 393A252/0540 of 3 Jun 96	NAVSEA DWG 2640092
No. 1 Periscope Hull Gland	Required stud standout could not be achieved, as per NAVSEA DWG 400-6537775 Rev A. Upon review it was discovered that this hull, and other 688 Class hulls, were built to Rev M vice Rev P of NAVSEA DWG 400-4457251. This departure changes the required stud standout to coincide with as-built drawings.	QA Form 12, JCN 20825-WF01-0614 dtd 24 Nov 98	699-014-98	QA Form 12, JCN 20825-WF01-0614 dtd 24 Nov 98	NAVSEA DWG 400-6537775 (A)
Gravity Drain System, TD-504	Ni-Cu-Al (K-Monel) stem is installed in back-up valve TD-504 instead of the required Ni-Al-Brz. This is an "as arrived" condition. NAVSEA approved this as a permanent DFS but specified that all repairs shall be in accordance with the S9520-AA-MMA-010.	QA Form 12 JCN 20811-EA01-0884 dtd 15 Feb 01	SSN-700-014-01	QA Form 12 JCN 20811-EA01-0884 dtd 27 Sep 01	NAVSEA DWG 255580 Rev T/17
Diesel Exhaust System, DE-5	System configuration prevents hydrostatically testing DE-5 without significant removal of the sail to remove the snorkel transition piece. Ship safety concerns preclude opening VH-4 at test depth to test DE-5. Recommend performing operational pressure test at 200 feet per Snorkel Systems PAT 204-001 and inspecting DE-5 for leakage as an alternate test.	COMSUBLANT msg 080814Z Apr 96	702-008-96  TYCOM Ser: CSL 035-96	NAVSEA ltr 4855 Ser 393A252/0543 of 5 Jun 96	NAVSEA T9512-AC-TRQ- 010; SUBMEPP TP 204-5365

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Service Air System, ALP-218	ALP-218 was disassembled for accomplishment of IMMP MRC 530-A013-01. The piping upstream of ALP-218 and downstream of the hull is not rated to withstand the required test procedure; therefore, due to system configuration, testing for seat leakage and testing of the body to bonnet joint to the required pressure is not possible. NAVSEA DWG 5950611 requires joint tightness "j" test of ALP-218 bonnet to item 6 of NAVSEA DWG 4456141(C), and NAVSEA DWG 2177934 requires seat leakage tests of the disc and the seat. A controlled assembly was conducted. A seat leakage test at normal system pressure (20 psi) was conducted SAT, and an operational pressure test was conducted SAT.	COMSUBLANT msg 151604Z Aug 96	702-016-96  TYCOM Ser: CSL 114-96	NAVSEA ltr 4855 Ser 393A252/1100 of 3 Oct 96	NAVSEA DWGs 5950611, 4456141 (C), & 2177934
Service Air System, ALP-278 and ALP- 279	Unable to complete joint tightness test because these valves discharge directly into the snorkel mast exhaust plenum, which is inaccessible. Ship's Force recommended operational retest of ALP-278 and 279 following a controlled assembly. Approved by NAVSEA as precedent setting on 3/5/01.	QA Form 12, JCN 21001-EA01-0675 dtd 20 Dec 00	SSN-706-032-00	QA Form 12, JCN 21001-QA01-0675 dtd 22 Dec 00	NAVSEA DWG 4456348 Rev G Pc. FL-1 to valve ALP-278/279
Service Air System, ALP-43	ALP-43 has open and inspect periodic maintenance requirements, requiring system retest after restoration. However, due to the system configuration, conducting the required hydrostatic retesting of the valve is not practicable, and as the valve is not normally subject to sea pressure, the alternate requirement for visual inspection of the valve while at depth is not possible. Retesting of the valve was accomplished per the alternate retest requirements in the applicable QA manual with the exception of the at depth visual inspection.	COMSUBPAC msg 191634Z Dec 96	707-027-96, and 707-032-96, and 707-033-96  TYCOM Ser: CSP 333-96 and CSP 326-96 and CSP 329-96	NAVSEA ltr 4855 Ser392A122/0171 of 6 Aug 97	NAVSEA DWG 513-4456348
Service Air System, ALP-24	ALP-24 has open and inspect periodic maintenance requirements, requiring system retest after restoration. However, due to the system configuration, conducting the required hydrostatic retesting of the valve is not practicable, and as the valve is not normally subject to sea pressure, the alternate requirement for visual inspection of the valve while at depth is not possible. Retesting of the valve was accomplished per the alternate retest requirements in the applicable QA manual with the exception of the at depth visual inspection.	COMSUBPAC msg 191634Z Dec 96	707-027-96, and 707-032-96, and 709-013-97, and 715-045-96  TYCOM Ser: CSP 334-96 and CSP 323-96 and CSP 325-96	NAVSEA ltr 4855 Ser392A122/0171 of 6 Aug 97	NAVSEA DWG 513-4456348

4

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Service Air System, ALP-22	System configuration makes hydrostatic test impractical. FMA conducted a controlled assembly of ALP-22 in-place. A joint tightness test to 100% system operational pressure was performed to the inboard side of ALP-22. A standard water test was conducted to the outlet side of ALP-22. Recommend approval as permanent repair to perform a controlled deep dive as alternate retest. NAVSEA approval based on controlled assembly; nominal operating pressure leakage inspection on QA-17 for mechanical joints, seat blue check or dimensional/stack height verification for valve repairs, as applicable; and controlled deep dive leakage inspection.	QA Form 12, JCN 20884-EA01-Z000 dtd 19 Aug 99	708-24-99	QA Form 12, JCN 20884-EA01-Z000 dtd 19 Aug 99	NAVSEA DWG 5950611 (F)
AN/BPS-15H Radar System, Waveguide Window	The Waveguide window is replaced as part of Ship Alteration 4124K. The SHIPALT package does not provide new bolts for the hull penetration assembly. The Waveguide hull penetration uses modified bolts. Eight are used inside the bridge trunk and eight are used inside of the Control Room to retain the Waveguide window in place. The bolts used in the Control Room fit the definition of hull integrity fasteners if the Upper Bridge Hatch is considered the hull valve, and the Waveguide hull penetration is considered the back-up valve. None of the 16 fasteners contain markings of recognizable significance. Acid spot tests confirm the material is NI-CU-AL. All fasteners were satisfactory for reuse. The Waveguide hull Penetration was assembled as a controlled assembly. A 90 psi air blast test was conducted satisfactorily on the hull penetration.	QA Form 12, JCN 20886-EX01-1092 dtd 15 Oct 98	SSN710-045-98	QA Form 12, JCN 20886-EX01-1092 dtd 15 Oct 98	NAVSEA DWG RE-D49478 (C)
Shaft Seal Water System, SSW Piping	The static face sealing surface finishes must be rhr 125 or smoother. Maximum defect size is .008 inch wide x .008 inch long x .004 inch deep with minimum surface defect spacing of 1/32 inch and an average spacing of 3/32 inch. Defect on the flange was 1/64 inch wide x 1/16 inch long x .006 inch deep. General acceptance criteria does not authorize brushplating repair. Recommend accepting brushplating repair as permanent based on satisfactory joint tightness test, and MIL-STD-2197 (SH), Brush Electroplating on Marine Machinery.	QA Form 12, JCN 20887-XX01-1832 dtd 2 Feb 98	711-004-98	QA Form 12, JCN 20887-XX01-1832 dtd 2 Feb 98	NAVSEA DWG SSN688-516- 5007656 (B)
Salvage Air System, SA-4	Unable to perform a joint tightness test of the upper stem to body, and lower stem to body joints of SA-4 due to system configuration. Conducted controlled reassembly of SA-4 satisfactorily. A mechanical joint tightness test was conducted from the seawater side with SA-4 shut inspecting the body to ball seat retainer joint with no leakage reported. Performed a controlled deep dive with no leakage reported.	QA Form 12, JCN 20888-EA01-5705 dtd 21 Jan 98	712-013-98	QA Form 12, JCN 20888-EA01-5705 dtd 21 Jan 98	NAVSEA DWG 845-4456141
Service Air System, ALP-135	ALP-135 has open and inspect periodic maintenance requirements, requiring system retest after restoration. However, due to the system configuration, conducting the required hydrostatic retesting of the valve is not practicable, and as the valve is not normally subject to sea pressure, the alternate requirement for visual inspection of the valve while at depth is not possible. Retesting of the valve was accomplished per the alternate retest requirements in the applicable QA manual with the exception of the at depth visual inspection.	COMSUBPAC msg 161504Z Dec 96	715-046-98  TYCOM Ser: CSP 324-96	NAVSEA ltr 4855 Ser 392A122/0171 of 6 Aug 97	NAVSEA DWG 845-4456141

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Service Air System, ALP-278 and ALP-279	Unable to perform mechanical joint tightness test and seat leakage testing due to system configuration. Additionally, these valves would not be subjected to sea pressure during a controlled dive to test depth.	QA Form 12, JCN 21023-EA01-4887 dtd 7 Jul 97  {QA Form 12, JCN 21690-EA01-2592 dtd 03 Dec 99}	716-016-97  {760-040-99}	QA Form 12, JCN 21023-EA01-4887 dtd 7 Aug 97  {QA Form 12, JCN 21690-EA01-2592 dtd 03 Dec 99}	NAVSEA DWG 810-2177934  {NAVSEA DWG 5960611 (F)}
Steering and Diving System, Stern Diving Plane Ram Packing	During disassembly of Stern Diving Plane, it was found that the shim (Pc. 50) was missing and the backing ring (Pc. 42) was made of Teflon with a thickness of .030 inch. It was found that Pc. 38 and Pc. 39 had two different stock numbers and APLs for different flights of 688 Class submarines. Current gland depth will not allow installation of 5 V-rings of packing. Using either NSN, assembled stack height could not be met. Valve was repaired using 5 V-rings of NSN 5330-01-286-6105 (NSN on SSN 751-773 APL) and a Teflon shim to achieve proper height and crush. NAVSEA approved without further conditions.	QA Form 12, JCN 21024-EA01-6162 dtd 23 Aug 99	717-12-99	QA Form 12, JCN 21024-EA01-6162 dtd 23 Aug 99	NAVSEA DWGs 518-4457082 (P) and 518-4457083 (N)
Main Shaft, Lock Ring Groove	Repairs to the shaft lock ring groove resulted in out of specification dimensions. The forward and aft lock ring grooves were machined to a final dimension of 2.012 inches and 2.025 inches respectively. After reassembly the clearance between the mating ring lock and the groove is .042 and .040 inch respectively. NAVSEA DWG 203-4457003 requirements are a lock ring groove width of 2.000 +.002/-.000 inches, and clearance of 0.052 inch.	COMSUBPAC msg RMG 261504Z Mar 96	717-010-96  TYCOM Ser: CSP 078-96	NAVSEA ltr 4855 Ser 393A252/0489 of 3 Jun 96	NAVSEA DWG 203-4457003
Low Pressure Blow System, ABT-31 (also ABT-32) inlet and outlet flanges	ABT-31 was removed and reinstalled to support hydrostatic test of ABT-8. System configuration does not permit a hydrostatic test without overpressurizing the upstream piping connected to the LP Blower. The inlet and outlet flanged joints on ABT-31 cannot be tested to the required pressure due to the LP Blower not being able to achieve it. Recommend approval of operational joint tightness test during a LP blow, following a controlled assembly. NAVSEA approved without further conditions.	COMSUBRON 11 msg 061501Z Jun 94	721-011-94  TYCOM Ser: CSP 106-94	NAVSEA ltr 9191 Ser 393T1M6/1343 of 27 Jun 94	NAVSEA DWG 529-5950612 (D)
Low Pressure Blow System, ABT-21 (also ABT-20)	Due to ship's configuration and pressure limitations of adjacent piping, Ship's Force was unable to perform hydrostatic joint tightness test to pressure of Item 6 of NAVSEA 4456141. Controlled assembly performed on valve stem. Recommend approval as a permanent repair following satisfactory completion of controlled deep dive. NAVSEA approved based on: 1) controlled assembly, 2) satisfactory controlled deep dive, and 3) satisfactory system operational retest at 100% MAX allowed operating depth/pressure.	QA Form 12, JCN 21101-EA01-5101 dtd 21 Mar 97	722-05-97	QA Form 12, JCN 21101-EA01-5101 dtd 21 Mar 97	NAVSEA DWG 4456141
Towed Array Handling System Valve Stack Assembly, FCUL Stbd Capstan Space	The required hydrostatic test pressure (Note 9 pressure of NAVSEA DWG 4456141 Rev A) for recertification of valve stack assembly is in excess of SSN 688 Class full submergence pressure (Note 6 pressure of NAVSEA DWG 4456141 (A)). Recommend approval of hydrostatic test pressure for valve stack assembly to pressure of Note 6 of DWG 4456141 (A). NAVSEA approved without further conditions.	QA Form 12, JCN 21102-WQ01-1439 dtd 10 Sep 99	723-015-99	QA Form 12, JCN 21102-WQ01-1439 dtd 10 Sep 99	NAVSEA DWG 4456141 (A)

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Vertical Launch System, APV-10-2 and APV-14-2	A 700-pound air test of the missile tube side of the ball valve seat and a joint tightness test of the body to bonnet joint and the stem O-ring are required. Testing could not be completed with missile installed in the tube. Joints were satisfactorily tested using missile compensation air at 4 to 6 pounds. Valve was assembled with new seats and software as a controlled assembly. Valve was tested SAT using 700 psig air applied from the inboard side of the valve. Testing from the missile tube side was completed using 4 to 6 pound missile compensation air. No leakage was detected. Stack heights were SAT and all sealing surfaces were SAT for surface condition. Fastener material and torque were SAT.	COMSUBLANT msg 200834Z Aug 95	723-19-95  TYCOM Ser: CSL 129-95 and CSL130-95	NAVSEA ltr 4855 Ser 393A252/1288 of 20 Nov 95	NAVSEA S6420- BU-MMA-050 (B)
High Pressure Air System, AHP-519, AHP-523, and AHP-524 (Parker Check Valves)	Poppets received from supply for installation in Parker Check Valves (AHP-519, AHP-523, and AHP-524) were not Level I as required. The poppets were verified to be of the proper generic material and installed in the valves.	COMSUBLANT msg 150814Z Mar 96	SSN750-001-96  TYCOM Ser: CSL 026-96	NAVSEA ltr 4855 Ser 393A252/0402 of 13 May 96	NAVSEA DWG 2640092
Shaft Seal Water System, SSW-33	Seat leakage test of SSW-33 required subsequent repairs to disc and seat. Per CINCLANTFLT/CINCPACFLTINST 4790.3, a blue check may be substituted for a seat tightness test for non-SUBSAFE valves only. Unable to perform seat tightness test in port due to system configuration. Also unable to test on controlled deep dive because it would require measuring combined leak rate of SSW-32 and SSW-33. Per NAVSEA 0902-018-2010, a seat blue check for SUBSAFE valves may be substituted for a seat tightness test. Controlled assembly completed SAT. Seat blue check completed SAT with 100% contact achieved.	QA Form 12, JCN 21312-EM01-4104 dtd 15 Jun 98	SSN-751-030-98	QA Form 12, JCN 21312-EM01-4104 dtd 15 Jun 98	NAVSEA DWG 803-2177934 (H)
Diesel Seawater System, DSW-9 and 10	Minor repairs were conducted on DSW-9 and DSW-10. The valves were assembled using controlled assembly procedures, with satisfactory blue checks performed. The seat tightness testing could not be performed without significant disassembly of the ship's sail and diesel exhaust systems. Conditions: valves are to be checked during the initial deep dive.	QA Form 12, JCN 21463-EA01- 3230/3231 dtd 23 Jun 00	SSN 754-015-00	QA Form 12, JCN 21463-EA01- 3230/3231 dtd 23 Jun 00	NAVSEA DWG 803-2177934
Service Air System, ALP-41	The reversible ratchet installed on ALP-41 is not per DDGOS 9480-0, which states that ratchet operators shall not be used on hull/backup valves unless specifically approved by NAVSEA. NAVSEA noted that this DFS is precedent for ALP-41 only.	QA Form 12, JCN 21465-EA01-2679 dtd 2 Nov 00	SSN-757-034-00	QA Form 12, JCN 21465-EA01-2679 dtd 9 Nov 00	NAVSEA DWG 455891 Rev N, Pc. 71
Emergency Main Ballast Tank Blow System, AHP-506	Due to ship configuration and waterborne condition, seat tightness and tightness test of the seat retaining plug could not be performed. Controlled assembly and stack height/compression measurements were completed satisfactorily.	QA Form 12, JCN 21466-EA01-2321 dtd 20 Dec 99	758-048-99	QA Form 12, JCN 21466-EA01-2321 dtd 20 Dec 99	NAVSEA DWG SSN688CL-513- 4456443 (N)
Service Air System, ALP-35 and 36	Due to system configuration and inability to inspect for seat leakage, seat and joint tightness testing from the sea side could not be performed. Recommended for approval based on satisfactory stack heights and seat cavity dimensions, controlled assembly on all joints where testing was not feasible, satisfactory operational test, and satisfactory mechanical joint tightness test to 105 psig of flange joint (FL4) to tailpiece (Pc. 4).	QA Form 12, JCN 21065 dtd 02 Feb 00	SSN 759-027-99	QA Form 12, JCN 21065 dtd 02 Feb 00	MS No. 5510-081- 037 (A)

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Weapons Delivery System, Weapons Control Cable Electrical Hull Penetrations (EHPs)	When replacing the Weapons Control Cable EHPs, NNSY DWG requires MIL-L-8937 to be used. Use of MIL-L-8937 lubricant has been cancelled and replaced with MIL-L-48010D. MIL-L-48010D needs to be cured at over 300 degrees after application. Placing EHP in oven would damage it. Portland Valve Inc., the manufacturer of the EHP, applies a film lubricant IAW MIL-L-23398 during manufacturing process. Manufacturer applies lubricant before shipping. Use of additional lubricant during installation no longer required.	QA Form 12, JCN 21605-WF01-C156 dtd 03 Feb 98	CSP 759-8-98	QA Form 12, JCN 21605-WF01-C156 dtd 03 Feb 98	NNSY DWG 185874R
Trim and Drain System, TD-103	Performance of a sea-side seat tightness test following in-place repairs to TD-103 is not possible due to system configuration.	COMSUBPAC msg 161504Z Apr 96	SSN759-012-96  TYCOM Ser: CSP 102-96	NAVSEA ltr 4855 Ser 393A252/0519 of 4 Jun 96	NAVSEA DWG 508-5923335
Reelable Towed Array Handling System, Valve Stack Flushing Plug	MRC requires the reelable towed array handling system valve stack assembly to be flushed quarterly in port and prior to each underway. Due to JFMM (Original dtd 21 Aug 96), Para. 4.3.6, Note 4, this system requires an operational test to system operating pressure. Based on NAVSEA SE325-CB-MMA-010 Rev (1), Figure 7-3, this MS flushing plug is not actually subjected to sea pressure. The static seal (Pc. 44) and dynamic seal (Pc. 37) prevent sea pressure from reaching the MS plug (Pc. 31). IAW JFMM (Original dtd 21 Aug 96), Para. 4.3.6.k, Note 3, a controlled assembly was completed of the reelable towed array valve stack assembly flushing plug. Recommend approval as a permanent repair without recertification testing. NAVSEA approved without further condition, but noted that impending change to SUBSAFE Manual lists this as an REC exemption.	QA Form 12, JCN "n/a" dtd 16 Jun 99	760-23-99	QA Form 12, JCN "n/a" dtd 16 Jun 99	NAVSEA SE325-CB-MMA-010 (-) Fig. 7-3, Pc. 31
Steering and Diving System, Lower Rudder Cap	Epoxy cap was found loose and extruding from lower rudder during emergent drydocking. Due to time restraints, cap was removed and not returned per plan. NAVSEA approved conditionally upon reinstallation of cap during next drydock availability.	COMSUBRON TWO ZERO msg 081340Z Nov 96	760-031-96  TYCOM Ser: CSL 165-96	NAVSEA ltr 4855 Ser 392A122/0115 of 25 Mar 97	NAVSEA DWG 6015553 (C)
Service Air System, ALP-40	A valve stem received under NSN 4820-01-331-6893 is manufactured from K-monel. In accordance with NAVSEA DWG 255580 Rev T, the stem is required to be Ni-Al-Brz.	QA Form 12, JCN 21691-EA01-2428 dtd 18 Apr 01	SSN-761-011-01	QA Form 12, JCN 21691-EA01-2428 dtd 27 Sep 01	NNS DWG 255580 Revision T, Pc.9
Service Air System, ALP-41	A valve stem received under NSN 4820-01-331-6893 is manufactured from K-monel. In accordance with NAVSEA DWG 255580 Rev T, the stem is required to be Ni-Al-Brz.	QA Form 12, JCN 21691-EA01-2428 dtd 18 Apr 01	SSN-761-012-01	QA Form 12, JCN 21691-EA01-2428 dtd 27 Sep 01	NNS DWG 255580 Revision T, Pc. 8
Low Pressure Blow System, ABT-8	Performance of either a joint tightness test or a deep-dive test for ABT-8 would require the use of check valve ABT-31 as a test boundary. Ship's Force recommended approval of a controlled assembly, operation test, and operational pressure test using the Low Pressure Blower as a satisfactory retest.	QA Form 12, JCN 21691-EA01-2313 dtd 30 Nov 00	SSN-761-022-00	QA Form 12, JCN 21691-EA01-2313 dtd 11 Apr 01	NNS DWG 255577, Pcs. 1, 5, and 9 (stem retainer to body joint)
Service Air System, ALP-40 and ALP-41 (Ship's Whistle Hull and Backup Valve)	Configuration precludes performing inboard to outboard seat leakage test. Approval based on performing satisfactory outboard to inboard seat leakage, controlled assembly, and satisfactory stack heights.	QA Form 12, JCN 21692-EA01-2618 dtd 22 Aug 00	SSN-762-017-00	QA Form 12, JCN 21692-EA01-2618 dtd 22 Aug 00	NAVSEA DWG 513-4456344 Rev T

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Main Shaft, Shaft Lock Ring Groove	Lock ring groove width FWD and AFT is to be 2.000 +/- .005 inches. Lock ring groove width FWD is 2.015 inches (UNSAT). Lock ring groove AFT is 2.018 inches (UNSAT). Allowable clearance between lock ring land and groove is .052 inch with a groove width of 2.018 inches and mating ring with a locking land of 1.980 inches installed. Actual clearance will be .035 inch. For future repairs to the lock ring groove, grooves up to 0.030-inch oversize are acceptable provided the clearance between the groove land and the ring does not exceed 0.052 inch.	COMSUBPAC msg 171604Z Oct 95	762-020-95  TYCOM Ser: CSP 301-95	NAVSEA ltr 4855 Ser 393A252/1298 of 29 Nov 95	MFR DWG 64000 (02A)
Service Air System, ALP-37 and 38 (Induction Head Valve Air Supply)	Ship's Force unable to conduct tests due to ship's configuration. In lieu of required tests for mechanical joint tightness, seat tightness test, and hydrostatic test for seat tightness, Ship's Force pressurized valve for 30 minutes and inspected for external leakage using soap bubble method.	QA Form 12, JCN 21693-EA01-2519 dtd 27 Apr 01	SSN-763-010-01	QA Form 12, JCN 21693-EA01-2519 dtd 28 Apr 01	NNS DWG 255580
Service Air System, ALP-278 and 279	Joint tightness testing could not be performed after minor repairs due to system configuration, and all joints would not be exposed to sea pressure during a deep dive test. A soap bubble test at operational pressure was performed on the stem joint of ALP-279. ALP-278 stem joint was retested by controlled dive to test depth.	QA Form 12, JCN 21693-EA01-2234 dtd 25 Sep 00	SSN-763-011-00	QA Form 12, JCN 21693-EA01-2234 dtd 25 Sep 00	NNS DWG 255580 Rev T
Emergency Main Ballast Tank Blow System, AHP-519	With the valve installed in the system, the valve poppet assembly was replaced. A controlled assembly and satisfactory blue check were conducted. Due to system configuration, a seat leakage test is not feasible with the valve installed in the system. Seat leakage test not conducted. Approved based on controlled assembly with satisfactory blue check of seat.	QA Form 12, JCN 21761-EA1-2304 dtd 02 Aug 98	764-024-98  TYCOM Ser: CSL 197-98	QA Form 12, JCN 21761-EA1-2304 dtd 02 Aug 98	NAVSEA DWG 2640092 Pc. 9
Emergency Main Ballast Tank Blow System, AHP-542	Valve AHP-542 required replacement. Reference drawing (NAVSEA 890003215) is non-deviational. APL 882057435 lists NSN 4820-01-2556617 as replacement part. NSN 4820-01-2556617 is no longer available in stock system. Manufacturer no longer makes required replacement part. Valve was replaced with NSN 4820-01-1155498 Part No. 10140-21 of APL 890003215. This part meets or exceeds all requirements of original part from APL 882057435. A shop hydrostatic test to 6750 psig was conducted satisfactorily and dynamic pressure test was conducted satisfactorily on inlet and outlet joints of AHP-542.	QA Form 12, JCN 21761-EA01-1877 dtd 06 Apr 97	764-40-97	QA Form 12, JCN 21761-EA01-1877 dtd 06 Apr 97	NAVSEA DWG 6777008 (A/AHP- 542)
Torpedo Tube Interlock Slides	NAVSEA DWG 3016934 requires torpedo tube interlock slides to be manufactured from QQ-C-390 Alloy C3. The required material specification has been canceled. In accordance with the Metallic Material Comparison Guide, NAVSEA 0900-LP-038-8010, replacement torpedo tube interlock slides were manufactured using QQ-B-728 Class A as a substitute. For torpedo tube interlock slides, the use of material to specification QQ-B-728 Class A as a substitute for QQ-C-390 alloy C3 is approved as a permanent repair. Additionally, it should be noted that the QQ-B-728 specification has also been canceled and material to that specification will ultimately become unavailable. For clarity, the following material substitutions apply: a. For QQ-C-390 Alloy C3, use ASTM B271, Gr C86500. b. For QQ-B-728, use ASTM B138, Gr C67500.	COMSUBLANT NORFOLK VA RMG 061434Z Dec 96	764-17-96  TYCOM Ser: CSL 175-96	NAVSEA ltr 4855 Ser 392A122/0130	NAVSEA DWG 3016934 (B)

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
BPS-15 EHF Penetration F43-4S	This DFS is provided only for clarification. System configuration makes a 12 psi compartment air test impractical. NAVSEA approved as a permanent repair, but precedence is provided via JFMM (Chg. 3) Vol. V, Para. 6.6.2.q and 7.2.6.	QA Form 12, JCN 21762-OX01-0010 dtd 16 Aug 99	765-048-99	N/A	NAVSEA DWG 7261653
Main Sea Water System, MSW Pump Seal Ring	NAVSEA 6225-QB-MMA-010/(C) required plan clearance between the seal ring assemblies and the shaft sleeve to be 0.005 inch. The assembled dimension was 0.008 inch. COMSUBRON SIX recommends approval as a permanent precedence setting repair, based on discussions with the pump vendor, Ingersoll-Dresser, which indicates the plan specification does not take wear into consideration and that 0.008 inch would be acceptable when reusing sealing assemblies during non-overhaul pump repairs.	COMSUBLANT msg 080824Z Apr 96	SSN765-008-96  TYCOM Ser: CSL 036-96	NAVSEA ltr 4855 Ser 393A252/0502 of 28 May 96	NAVSEA 6225-QB-MMA-010/(C)
Emergency Main Ballast Tank Blow System, AHP-520	The system configuration makes a seat leakage test, required by Vol. V, Part I, Section 5.10.5 of JFMM 4790.3 CH 3, impractical. The authorized alternate test allowed in the JFMM, Vol. V, Part I, Section 7.4.2.b, was partially accomplished. The valve was reassembled using controlled assembly. The joint was visually inspected for leakage during the first pressurization to nominal system operating pressure with no leakage found. Seat blue checks were verified. As written, it appears that this departure applies to set precedent for all classes of submarines, allowing a controlled assembly and controlled deep dive as a retest for replacement/ maintenance of soft-seated EMBT Parker check valve cartridges.	QA Form 12, JCN 21764-EA01-1885 dtd 21 Sep 00	SSN 767-039-00	QA Form 12, JCN 21764-EA01-1885 dtd 21 Sep 00	NAVSEA DWG 413-2650092 (K)
High Pressure Air System, AHP-524	Unable to conduct operational test of AHP-524 due to system configuration. Repairs were conducted with the valve in the system. NAVSEA approved conditionally upon maintenance being shipboard repair involving poppet replacement and satisfactory completion of URO MRC-022.	QA Form 12, JCN 21813-EA01-1353 dtd	772-024-98	QA Form 12, JCN 21813-EA01-1353 dtd	NAVSEA DWG 2640092 (N)
Weapons Delivery system, TD-13 (Torpedo Tube #3 Flood and Drain Valve) (also TD-14, 15, and 16)	Minor in-place repairs have been conducted on backup valve TD-13. Joint tightness testing cannot be performed due to inability to pressurize the system to the required test pressure based on system configuration. Specifically, the torpedo tube muzzle doors will not stay seated during the required test. Additionally, seat tightness test would require opening of the Auxiliary Tank and WRT tank to inspect leakage. Performed a controlled assembly of the valve, a satisfactory 12 psi air drop test from the torpedo tube side, and a satisfactory 25 psi seat tightness test from the WRT side. Stack heights and cavity dimensions satisfactory for seat compression.	QA Form 12, JCN 21831-WI01-0189 dtd 9 Oct 97  {QA Form 12, JCN 21024-WI01-1635 dtd 28 Feb 97}	772-013-97  {717-07-97}	QA Form 12, JCN 21831-WI01-0189 dtd 9 Oct 97  {QA Form 12, JCN 21024-WI01-1635 dtd 28 Feb 97}	NAVSEA DWG 508-5950586 (F)  {NAVSEA DWG 508-5006617 (c)}

10

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Active Precedent-Setting SUBSAFE Departures From Specifications

SSBN 726 Class:

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Emergency Main Ballast Tank Blow System, #1 Main Ballast Tank Vent Valve Operator Hull Gland	Configuration of the Main Ballast Tank Vent Valve does not allow compartment air test or practical alternate test. Completed a controlled assembly of the MBT vent valve stuffing box. Performed a controlled deep dive to test depth.	QA Form 12, JCN 21036-EA01-W399 dtd 19 Jan 97	726-003-97	QA Form 12, JCN 21036-EA01-W399 dtd 19 Jan 97	NAVSEA DWG 4756115
Main Shaft Tube Hull Insert	The 39.62" diameter bore was coated with Enecon Ceramalloy CP+ and two coats of Enecon Ceramalloy CL+ rather than leaving it uncoated and prone to corrosion according to NAVSEA DWG 4695836.	QA Form 12, JCN 21036-EM01D144 dtd 18 Feb 00	SSBN-726-029-00	QA Form 12, JCN 21036-EM01D144 dtd 18 Feb 00	NAVSEA DWG 4695836, Pc. 1
Auxiliary Sea Water System, ASW-43	Epoxied-in CuNi insert was used to repair corroded sealing and mating machined surface per PDS TRB-524A-016-97, rather than a bronze bonnet with a bolted-in seal retainer.	QA Form 12, JCN 21036-EM01-A986 dtd 28 Oct 98	SSBN-726-033-98	QA Form 12, JCN 21036-EM01-A986 dtd 28 Oct 98	NAVSEA DWG 845-2445066
Auxiliary Sea Water System, Stern Seal Retainer	DWG 845-2181282E specifies that Pc. 66, stem seal retainer, be Level I. Pc. 66 of DWG 845-2181282E was replaced with a non-Level item. Per discussion between TRF Bangor and NAVSEA PMS393T, the level N/A part received from supply is correct. Pc. 66 should be level N/A.	COMSUBPAC msg 281514Z Sep 92	SSBN726-849  TYCOM Ser: CSP 309-92	NAVGRAM Ser PMS396/A2-1262 of 20 Nov 92	NAVSEA DWG 845-2181282 (E)
Trash Disposal System, Breech Door Seat and Shim	To obtain correct breech door interlock clearances, the seat (flange) was machined undersize (to allow for a workable shim thickness), and a shim installed under the seat.	RFD/RFW 727-085-96 dtd 26 Nov 96	727-085-96  TYCOM Ser: CSP 315-96	RFD/RFW 727-085-96 dtd 26 Nov 96	NAVSEA DWG 609-4676625, Item 2
Ballast, Canned Lead Bin, Frame 107 STBD (Bilge)	A 12" long crack in the canning plate attachment weld to the Frame 107 frame flange on the outboard lead bin boundary plate between Frames 107 & 108 was weld repaired. This, and all internal lead bins, is in the URO 003 program for UT inspection (12" grid, 96-month periodicity). Recommended to make precedent-setting for wetted internal lead bins that can have their pressure hull plating boundary UT inspected to ensure no loss of plating.	QA Form 12, JCN 21038-EM01-6078 dtd 14 Apr 99 (also see QA Form 12, JCN 21038-EM01-5992 dtd 17 Dec 98)	728-056-98	QA Form 12, JCN 21038-EM01-6078 dtd 14 Apr 99	NAVSEA DWG 121-4674220 (K), 1-22 & 1-52 (Sect View 16A)
Auxiliary Sea Water System, ASW-6/8 Liner	During disassembly for strainer plate lug weld repair, 5 areas of sleeve/bushing seal weld faying surface were found exposed, resulting in through defects in the liner assembly. The liner was not removed nor was the valve body inspected immediately behind the defect. Repairs consisted of: Drilling a drain hole in the valve seat insert (Pc. 34), flushing the liner void with 10 gallons of demineralized water, welding close the defects, restoring eroded bushing/sleeve and insert/sleeve seal welds, joints "J" and "F", evacuating the void behind the liner to 3 mm HG, and installing and seal welding test plugs.	COMSUBPAC msg 230254Z Jan 92	SSBN728-638  TYCOM Ser: CSP 035-92	NAVGRAM Ser PMS396/A2-393 of 20 Mar 92	NAVSEA T0700-AA-PRO-010, URO/MRC-005, paragraph 1E
Missile Compensating Water System, MCW-2/4	Epoxy-coated titanium valve ball was installed with nylon seats. Drawing calls for Teflon-coated titanium valve ball. NAVSEA approved without further conditions.	RFD/RFW 728-28-95 dtd 9 Feb 96	728-28-95  TYCOM Ser: CSP 240-95	RFD/RFW 728-28-95 dtd 9 Feb 96	NAVSEA DWG 803-4384539
Auxiliary Seawater System, #3 ASW Pump Impeller and Washer	Impeller hub faces were machined to restore contact area to corroded surfaces. An additional shim ensures that the impeller discharge ports line up with the diffuser ports and a thicker washer compensates for the loss of impeller hub thickness caused by the machining. NAVSEA approved without further conditions.	QA Form 12, JCN 21039-EM01-A279 dtd 20 Jan 99	729-011-99	QA Form 12, JCN 21039-EM01-A279 dtd 20 Jan 99	Ingersoll-Rand DWG 11228-F-18, impeller and 10727-B-18, washer

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Main Shaft, Shaft Seal Locking Ring Keys	Shaft keys were manufactured to tightly fit the shaft keyways per LAR TRK 031-H-92. Three of the keys are 2.995" in length and one is 2.996", vice 2.998". Three of the keys are .485" thick vice .490" NAVSEA approved without further conditions.	QA Form 12, JCN 21039-EM01-A770 dtd 13 Sep 99	729-055-99	QA Form 12, JCN 21039-EM01-A770 dtd 13 Sep 99	NAVSEA DWG 203-5770271
15L Periscope Mast, Hull Gland	Recommended approval to allow permanent use of O-ring NSN 9Z 5331-00-931-5289 since the O-ring NSN 9Z 5330-01-068-6375 is no longer available in supply system.	QA Form 12, JCN 21039-NE01-B112 dtd 27 Dec 99	SSBN-729-069-99	QA Form 12, JCN 21039-NE01-B112 dtd 27 Dec 99	NAVSEA DWG 400-4674851, Item 23
Auxiliary Sea Water System, ASW-29 Cord	ASW-29 cord threads were oversized and fitted with oversized threaded retainer ring due to corrosion.	COMSUBPAC msg 011544Z Mar 95	729-651-93  TYCOM Ser: CSP 076-95	NAVSEA msg 141439Z Apr 95	NAVSEA DWG 2445312 (H)
Ventilation System, VH-1/3 Valve Body Outboard O-ring Seating	Per DWG 300-4684413(E), VH-1/3 valve body outboard O-ring seating area diameter is 27.984 inches to 27.988 inches. The O-ring seating area was found to be egg shaped. The diametrical measurements were found at points A-F to be: (A) 27.981, (B) 29.989, (C) 27.997, (D) 28.006, (E) 28.000, and (F) 27.997. The O-ring diameter seating area was electroplated with a base of copper 2050 and capped with nickel 2080 to restore concentricity. The area electroplated had not been electroplated previously. Base metal is Inconel clad steel (HY-80). Diametrical measurements after electroplating are: (A) 27.984, (B) 27.981, (C) 27.981, (D) 27.986, (E) 27.984, and (F) 27.981.	COMSUBPAC msg 052224Z Oct 88	SSBN729-256  TYCOM Ser: CSP 334-98	NAVSEA msg 031856Z Nov 88	NAVSEA DWGS 300-4684413 (E) and 300-4684415 (G)
Torpedo Tube #1 Interlock Slide	Per DWG 3016934 Rev D, slide interlock length is 11.062 inches. Machined slide interlock from 11.062 inches to 10.812 inches per 790559 Rev F (New Procurement Plan DIMS). .250 inch were machined from the shim end. Due to high out-of-specification operating pressure on muzzle door interlock mechanism, guidance of TRFB ENG Memo 410/463M-90 was followed. When it was determined that shim thickness of less than .125 inch was required, TRFB ENG Memo 410/485M-90 Rev A was invoked. The slide interlock was removed and shortened .250 inches as shown on NAVORD DWG 790559 Rev F (approved by Waiver W-004, PSNS No. 8395 Ser 260.3/055 & LARR TRB-004-A-91). Slide interlock was reinstalled and half shims installed to meet required hydraulic operating pressure for muzzle door interlock. All retests completed satisfactorily.	COMSUBPAC msg 161534Z May 93	SSBN729-620  TYCOM Ser: CSP 104-93	NAVSEA msg 222222Z May 93	NAVORD DWG 790559 (F) & NAVSEA DWG 3016934 (D)
Bridge Upper Hatch Coaming Lugs	Refurbishment of the upper bridge hatch coaming lugs and locking ring lugs was required due to operational wear causing over travel of the coaming lugs. MRP 1670-81-002 Rev B states that locking ring lugs must not engage trunk coaming lugs beyond coincidence of their centerlines. This means the under travel can decrease, due to wear, to 0.00 inches with no over travel (centerline of locking ring lug passes coaming lug centerline). During refurbishment (lug welding and remachining), the coaming lugs are necessarily increased in thickness by the amount of decrease in locking ring lug thickness caused by normal wear (that has previously occurred) and a skim out to remove irregularities. This was done to maintain/re-establish proper coaming lug to locking ring lug centerline to centerline measurement (under travel). Per section 14-A DWG 4645225 (F), the coaming lug thickness dimension is to be 1.375+/- .002 inches with an underside radius of .2 RAD.	COMSUBPAC msg 161624Z Apr 93	SSBN729-625  TYCOM Ser: CSP 102-93	NAVSEA msg 091252Z Jun 93	NAVSEA DWG 4645225 (F), Section 14-A

12

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Drain System, FWD Shore Power Drain Sleeve	Sleeve, Pc. 106 of DWG 2621-601-09, has (2) holes .62 inch deep, 90 Deg. CSK to .28 DIA, .250-2OUNC-2B, .38 inch (MIN) Full THD Depth drilled & tapped for strainer, Pc. 107 in accordance with DWG 2621-061-09. Due to corrosion of holes in sleeve, Pc. 106 of DWG 2621-601-09, existing holes were plug welded and studs installed for strainer in accordance with PDD TRB-411-066-91 and WISS 022-93. Two new studs were installed: 1 EA 90 Deg. from centerline to PORT, and 1 EA 90 Deg. from centerline to STBD.	COMSUBPAC msg 051534Z Aug 93	SSBN729-654  TYCOM Ser: CSP 192-93	NAVSEA msg 231240Z Sep 93	DWG 2621-601-09, PDD TRB-411-066-91, and WISS
Main Sea Water System, MSW-2 and 4	NAVSEA DWG 6203081 (E) requires a joint tightness pressure test to item (1) of NAVSEA DWG 4640418. NAVSEA 0940-LP-007-9010 (726 Class S&EPM, Change 54, ACN 80) requires a joint tightness test to a pressure 50 psig greater than that of the NAVSEA DWG. Recommended the acceptance of the joint pressure test to the pressure specified in item (1) of NAVSEA DWG 4640418 as a permanent retest.	QA Form 12, JCN 21040-EM01-7480 dtd 10 Jan 00	SSBN 730-008-00	QA Form 12, JCN 21040-EM01-7480 dtd 10 Jan 00	NAVSEA DWGs 2177934, 6203081 (E) and 4640418 (E)
Main Sea Water System, #2 MSW Pump	The MS lists Pcs. 8, 8A, and 10 for mandatory replacement based on excessive corrosion rate in pumps with original impellers. This pump has polymer composite-coated impeller per LAR TRB-008-B-95, which reduced the corrosion rate and allowed reuse of these parts. The mating machined surfaces on the shaft and sleeves lost less than 10% of the contact area. Recommend reuse of parts until next scheduled maintenance. NAVSEA approved without further conditions.	QA Form 12, JCN 21040-EM01-W129 dtd 28 Jan 99	730-002-99	QA Form 12, JCN 21040-EM01-W129 dtd 28 Jan 99	Maintenance Standard 2560- 081-029
Torpedo Tube #2 Slide Valve Barrel Gasket Mating Surface	The slide valve staves and gaskets were replaced, the gasket mating surface was inspected SAT, and later, while moving the slide valve, the barrel gasket was cut. This caused the shop to have to reinstall the gasket using a QA-34. The slide valve was not removed during gasket replacement, so visual inspection could not be conducted. Recommend approval as permanent repair pending impulse tank testing (controlled deep dive). NAVSEA approved without further conditions (same topic as 731-069-98).	QA Form 12, JCN 21040-WI01-W399 dtd 10 Feb 99	730-005-99	QA Form 12, JCN 21040-WI01-W399 dtd 10 Feb 99	NAVSEA DWG 3223989
Steering and Diving System, Stern Diving Guide Piston	NAVSEA DWG 7006697 specifies that the stave grooves shall be machined to the true position within .003" of piston outside diameter. The true position of the machined grooves was not verified and documented as OQE because TRF Bangor lacks the equipment to perform this verification. Although all of the parameters of the true piston for the machined grooves could not be measured, the measurements taken and the machining procedure indicate that the grooves are in fact properly machined to meet the intended use.	QA Form 12, JCN 21040-EA01-V139 dtd 14 May 98	730-015-98	QA Form 12, JCN 21040-EA01-V139 dtd 14 May 98	NAVSEA DWG 545-545-4674753 (as modified by DWG 545- 7006697)
Steering and Diving System, Hull Packings	Molythane packing is required for both the Steering and Diving hull penetrations. The hull packing installed for both Steering and Diving Hull Operating Rods were standard neoprene/cotton sets. The molythane packing is the material that is specified for the SEAWOLF design, but the packing is not available in sizes to fit Trident Class Submarines. The material installed (neoprene/cotton) is the material specified on the original construction drawings.	QA Form 12, JCN 21040-EA01-V069 dtd 05 May 98	730-018-98	QA Form 12, JCN 21040-EA01-V069 dtd 05 May 98	NAVSEA DWG 545-7006699, Item 5
Steering Gear Operating Rod Hull Gland	Steering gear operating hull gland could not be visually inspected during 12 psi compartment test or 90 psi air hose test. A visual inspection must be performed during the first controlled deep dive.	QA Form 12, JCN 21040-EA01-V069 dtd 22 Jun 98	730-083-98	QA Form 12, JCN 21040-EA01-V069 dtd 22 Jun 98	NAVSEA DWG 545-7006699

13

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Stern Diving Operating Rod Hull Gland	Stern gear operating hull gland could not be visually inspected during 12 psi compartment test or 90 psi air hose test. A visual inspection must be performed during the first controlled deep dive.	QA Form 12, JCN 21040-EA01-V139 dtd 22 Jun 98	730-084-98	QA Form 12, JCN 21040-EA01-V139 dtd 22 Jun 98	NAVSEA DWG 545-7006699
Logistic & Escape Trunk, Alum- Bronze Locking Lug Cladding	The locking lug cladding design on the MID LET is per Detail 19-A of DWG 115-4645211 N instead of Detail 19-C. Survey of the casting surface underlying the locking ring found that 50% of the vertical portions of the Aluminum-Bronze cladding located between the individual locking lugs had failed to coalesce with the underlying mild steel cladding. These areas have either broken away from the structure or are attached but bulging due to underlying corrosion. The vertical portion of the cladding located directly below the individual lug is unaffected and is strongly adhered. Recommend approval to remove bulging portions of cladding. NAVSEA approved without further conditions.	QA Form 12, JCN 21041-WK01-0972 dtd 14 May 99	731-029-99	QA Form 12, JCN 21041-WK01-0972 dtd 14 May 99	NAVSEA DWG 115-4645211 (N)
Steering and Diving System, Steering Guide Pin Buttons	DWG 545-7006697 specifies that Items 12 and 13 be made from NI-AL-BRZ (Alloy C63200), but the specified material was not available to support the manufacture of the buttons within the refit schedule. NiCu was used and exceeds the physical properties of the specified material. This upgrade is approved by LAR TRB-029-97. NAVSEA approved without further conditions.	QA Form 12, JCN 21041-EA01-V331 dtd 23 Apr 99	731-031-99	QA Form 12, JCN 21041-EA01-V331 dtd 23 Apr 99	NAVSEA DWG 545-7006697
Sanitary Tank #4 to Frame 33 Top Attachment	A section of Sanitary Tank #4 top plating (Pc. 2-40) was removed where it was attached to pressure hull frame 33. The standing flange (Pc. 2-2) between the tank bottom plate and the frame flange was cropped back to normal with the frame flange. Details of this are shown on enclosure 1 to Eng. Memo 410/357M-97. This connection design is the same as that used for the sanitary #3 mods designed by the Design Agent (EN DS107405 "B"). NAVSEA approved without further conditions.	QA Form 12, JCN 21041-EA01-Y549 dtd 27 Jun 99	731-071-99	QA Form 12, JCN 21041-EA01-Y549 dtd 27 Jun 99	NAVSEA DWG 115-4642647
Auxiliary Sea Water System, ASW-42 Bonnet	An epoxied-in insert was used to repair corroded sealing and mating machined surfaces per PDS TRB-524A-016-97 (F). The insert was designed using the guidance of the Seawater Ball Valve Repair Manual (NAVSEA S9520-AA-MMA-010) for "S" shim-type simultaneous repair of adjacent surfaces. The corroded seal retainer o-ring groove, the bonnet-to-body sealing surface, and the bonnet-centering ring were included in a single epoxied-in CUNI insert. The CUNI insert will provide better corrosion resistance than the existing bronze material. NAVSEA approved without further conditions.	QA Form 12, JCN 21041-EM01-V200 dtd 14 Jun 99	731-072-99	QA Form 12, JCN 21041-EM01-V200 dtd 14 Jun 99	NAVSEA DWG 2445066 (B)
Steering and Diving System, Outboard Bearings & Outboard Couplings	The bearings and coupling were modified (during accomplishment of the applicable MRPs) to install nonmetallic (ORKOT) elements on the bearings surfaces per PDS TRB-5660-035-95. NAVSEA approved without further conditions.	QA Form 12, JCN 21041-EA01-V331 and 21041-EA01-L731	731-089-99	QA Form 12, JCN 21041-EA01-V331 and 21041-EA01-L731	NAVSEA DWGs 545-4674752 and 545-4674753

14

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Steering and Diving System, Operating Rod Bearing Nuts	The nuts installed for Pc. 3 were standard style vice heavy hex. The nuts that fasten the two operating rod bearing halves are required to be heavy hex style. The modified bearing design of TRB PDS 5660-035-95 as approved by LAR TRB-053-B-97 requires that the bearing halves be reduced in diameter to accommodate the Orkot sleeve. However, this reduction in diameter causes an interference of 0.035" maximum between the outer shoulder of the heavy hex nuts and the Orkot bearing sleeve at assembly. Recommend approval to install standard self-locking hex nuts vice heavy hex nuts. NAVSEA approved without further conditions.	QA Form 12, JCN 21041-EA01-V331 and 21041-EA01-L731	731-090-99	QA Form 12, JCN 21041-EA01-V331 and 21041-EA01-L731	NAVSEA DWGs 545-4674761 and 545-4674752
Diesel Sea Water System, DSW-3 and 4 to Hull Liner Assembly Nut	The nuts required machining/filing the corners to an across-the-corner diameter of 0.005 inches rather than those specified on NAVSEA DWG 4695555D.	QA Form 12, JCN 21041-EAJC-W009 dtd 09 Dec 99	SSBN-731-139-99	QA Form 12, JCN 21041-EAJC-W009 dtd 09 Dec 99	NAVSEA DWG 4695555D,Pc-3
Primary 3-Inch Counter Measure Launcher	CL-6 and CL-16 operation was slowed to 2.9 and 2.5 seconds respectively to accommodate a quiet vent modification. With the modification installed, the impulse cylinder would move from the "battery" position back to the "fired" position after operation at depth. NUWC DIV NEWPORT stated that this is known problem that is solved by increasing the operating time of the drain valves	QA Form 12, JCN 21042-WI01-1333 dtd 21 Dec 01	SSBN 732-087-01	QA Form 12, JCN 21042-WI01-1333 dtd 7 Jan 02	SSBN 726 TAB Plate 2-4
Secondary 3-Inch Counter Measure Launcher	CL-7 and CL-17 operation was slowed to 2.5 and 3.0 seconds respectively to accommodate a quiet system vent modification. With the modification installed, the impulse cylinder would move from the "battery" position back to the "fired" position after operation at depth. NUWC DIV NEWPORT stated that this is known problem that is solved by increasing the operating time of the drain valves.	QA Form 12 JCN 21042-WI01-1334 dtd 21 Dec 01	SSBN 732-088-01	QA Form 12 JCN 21042-WI01-1334 dtd 7 Jan 02	SSBN 726 TAB Plate 2-4
Steering and Diving System, Grounding Straps for Rods and Pistons	Grounding straps were installed on the steering and diving guide pistons/operating rods due to a corrosion problem on control surface components, which was attributed to electrical isolation caused by non-metallic self-lubricated bearings. NAVSEA 92T approved this action on DFS SSBN 731-087-99.	QA Form 12, JCN 21042 dtd 17 Apr 01  {QA Form 12, JCN 21041-EA01-L731 dtd 16 Jul 99}  {QA Form 12, JCN 21041-EA01-V331 dtd 16 Jul 99}	SSBN 732-024-00  {731-048-99}  {731-087-99}	QA Form 12, JCN 21042 dtd 2 May 01  {QA Form 12, JCN 21041-EA01-V331 dtd 16 Jul 99}  {QA Form 12, JCN 21041-EA01-L731 dtd 16 Jul 99}	NAVSEA DWG 4674753, Pcs. 1,18,19,20, and 25  {NAVSEA DWGs 4674753 (F), and 7006697 (A)}  {NAVSEA DWG 4674753 (F) Items 1 & 2 and 7006697 (A) Item 5}

15

NOTES:

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Steering Hull Packing	Neoprene-cotton "Vee" ring packing was installed in lieu of Polypak packing required by NAVSEA DWG 4674767. The forward operating rod was made smaller to remove pitting, as approved by MS 5660-081-007. The Polypak packing rings were then found to be too big to fit in the stuffing box without being split, which is not allowed. The neoprene-cotton "vee"-ring packing is the most desired substitute.	QA Form 12, JCN 21042-EA01-V895 dtd 16 Oct 00  {QA Form 12, JCN 21042-EA01-V897 dtd 16 Oct 00}	SSBN 732-066-00  {SSBN-732-067-00}	QA Form 12, JCN 21042-EA01-V895 dtd 16 Oct 00  {QA Form 12, JCN 21042-EA01-V897 dtd 16 Oct 00}	NAVSEA DWG 7006699/Pc. 5  {NAVSEA DWG 7006699/Pc. 5}
Shaft Seal Water System, Shaft Seal Piping Filter	Shop drilled an additional .078" diameter lockwire hole in the shaft seal filter cover. All other dimensions are unaffected. Drawing requires a single .078" diameter lockwire hole. The additional hole is in a non-pressurized/non-stressed area of the filter cover. Weld repair and re-drilling the existing lockwire hole in the cover could potentially distort adjacent o-ring sealing surface. Replacement of the cover solely based on the worn lockwire hole is not considered prudent. The additional hole does not adversely affect the strength or service of the filter. NAVSEA approved additional lockwire hole without further conditions.	QA Form 12, JCN 21042-EM01-7585 dtd 15 Jun 99	732-042-99	QA Form 12, JCN 21042-EM01-7585 dtd 15 Jun 99	CUNO DWG 83068 (.)
Torpedo Tube #3, Muzzle Door Operating Linkage	Equipment modification required to prevent shearing of the retaining pins that hold the operating pins in place.	QA Form 12, JCN 21042-WI01-X987 dtd 11 Jun 98	732-091-98	QA Form 12, JCN 21042-WI01-X987 dtd 11 Jun 98	NAVSEA DWG 3224044
Torpedo Tube #1, Muzzle Door Operating Linkage	Equipment modification required to prevent shearing of the retaining pins that hold the operating pins in place.	QA Form 12, JCN 21042-WI01-X985 dtd 06 Nov 98	732-092-98	QA Form 12, JCN 21042-WI01-X985 dtd 06 Nov 98	NAVSEA DWG 3224044
Auxiliary Sea Water System, ASW-5/7 Bushing	NAVSEA DWG 803-4385049 requires an ID of 5.000 inches to 5.002 inches for Pc. 44 and Pc. 118 to be 0.182 inches to 0.188 inches thick. Pc. 44 was machined to 5.106 inches to meet surface finish condition; Pc. 118 was manufactured to 5.100 inches OD and 0.236 inches thick so as not to exceed 0.010 inch diametrical clearance between Pc. 11 and Pc. 44.	COMSUBPAC msg 130224Z Aug 91	SSBN732-276  TYCOM Ser: CSP 326-91	NAVGRAM Ser 40N/000199 of 13 Sep 91	NAVSEA DWG 803-4385049 (B)
Logistic Escape Trunk (LET), Fwd LET Upper Locking Lugs	NAVSEA DWG 4645266/1 Rev L, DET 17-C requires locking ring lug radius dimensions to be 0.03 inches radius for lugs 1 through 12. Actual radius dimension of lugs 1 through 12 is 0.016 inches. Deviation from specified radius as noted will have no adverse effect on shock or operational requirements. This repair was discussed with NAVSEA 56W14, John Jacobsen.	COMSUBPAC msg 030204Z Mar 92	SSBN732-324  TYCOM Ser: CSP 089-92	NAVGRAM Ser PMS396/A2-562 of 28 Apr 92	NAVSEA DWG 4645266/1 (L), Detail 17-C
Logistic Escape Trunk (LET), Fwd LET Upper Coaming Lugs	NAVSEA DWG 46452111 Rev L, DET 4-E requires coaming lugs radius to be 0.06 inches for lugs 1 through 12. Actual radius dimension of coaming lugs 1 through 12 is 0.016 inches. Deviation from specified radius as noted will have no adverse effect on shock or operational requirements. This repair was discussed with NAVSEA 56W14, John Jacobsen.	COMSUBPAC msg 030144Z Mar 92	SSBN732-326  TYCOM Ser: CSP 091-92	NAVGRAM Ser PMS396/A2-565 of 29 Apr 92	NAVSEA DWG 4645211 (L), Detail 4-E

16

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Steering and Diving Hydraulics System, Stern Diving Hydraulic Cylinder	This cylinder bore has a concentricity of 0.006" to counterbores. The cylinder arrived with a higher concentricity and was operating satisfactorily. Planning Yard LAR response TRB-054-C-93 accepts a concentricity of .011 with certain testing requirements, which have now been incorporated into the Maintenance Standard (MS) post-overhaul test requirements. This cylinder passed all MS leakage and operational tests.	QA Form 12, JCN 21043-EA01-W374 dtd 4 Sep 01	SSBN 733-006-01	QA Form 12, JCN 21043-EA01-W374 dtd 24 Oct 01	NAVSEA DWG 4674764 Rev G Pc. 1 Cylinder
Steering and Diving Hydraulics System, Steering and Diving Control Station Synchronization Gear	The final assembly procedures for the master control station require a hole to be drilled and reamed through the synchro gears to attach the gears to the synchro shaft. A second hole was drilled and reamed 90 degrees from the original hole in the reused gear. This was technically accepted by the TRIDENT Planning Yard by LAR Response TRB-065-01.	QA Form 12, JCN 21043-EE03-A508 dtd 20 Dec 01	SSBN 733-047-01	QA Form 12, JCN 21043-EE03-A508 dtd 11 Jan 02	NAVSEA DWG 4674791, Pc.11
High Pressure Air System, AHP-541	COMSUBLANT/COMSUBPACINST 4588.2A states major repairs as renewal of pressure boundary parts not previously tested require a hydrostatic test for strength and porosity. Pc. 2 (Nut Screen Assembly) of DWG 281-439-001 Rev P was not strength and porosity tested. Pc. 2 is Level I.	NAVGRAM Ser 40N/000212 dtd 24 Sep 91	SSBN733-227  TYCOM Ser: CSP 227-91	NAVGRAM Ser PMS3960/A2-009 dtd 3 Jul 91	NAVSEA DWG 281439-001 (P)
Shaft Sealing System, Shaft Seal Hull Insert	NAVSEA DWG 4862661 requires that the hull insert have a NiCu ring, Pc. 5, on the shaft sealing surface for the aft shaft seal housing, Pc. 1 of NAVSEA DWG 4678531. NAVSEA approved the use of epoxy filling to provide more corrosion resistance on the sealing surface than the original metal.	QA Form 12, JCN 21043-EM01-A009 dtd 05 Jun 00	SSBN-733-023-00	QA Form 12, JCN 21043-EM01-A009 dtd 05 Jun 00	NAVSEA DWG 4862661 and Pc. 5
8J Periscope	Unable to perform 12 psig compartment test and alternate test methods were ineffective at testing the U-cap seals due to inaccessibility. Approved as precedent-setting requiring the controlled assembly and a controlled deep dive to test depth as alternate retest.	QA Form 12, JCN 21043-0C01-Y362 dtd 22 Sep 00	SSBN-733-054-00	QA Form 12, JCN 21043-0C01-Y362 dtd 22 Sep 00	NAVSEA DWG 53711-126- 5792666
Auxiliary Sea Water System, ASW-33 Valve Body  {Auxiliary Sea Water System, ASW-37 Valve Body}  {Auxiliary Sea Water System, ASW-39 Valve Body}	The backseat surface was machined flat with no recess. (1) The Grimsley backseat facing machine used is not well-suited to machine a recess in the backseat. The purpose of the recess is to prevent radial movement of the shim should it become unbonded from the valve body. No top loaded ball valves have been machined at this facility with a recess. The ID of all shims is aligned with the valve bore on installation. (2) The 1 degree +/-15 minutes from vertical backseat angle was not verified. Past practice was to not measure or record the backseat angle after machining because the angle is built into the Grimsley machine and is not adjustable. Recommend approval for installing shims in top-loaded ball valves without a backseat recess and without measuring the backseat angle. NAVSEA approved without further conditions.	QA Form 12, JCN 21043-EM01-Q540 dtd 22 Mar 99  {QA Form 12, JCN 21043-EM01-Q542 dtd 22 Mar 99}  {QA Form 12, JCN 21043-EM01-Q543 dtd 22 Mar 99}	733-005-99  {733-006-99}  {733-007-99}	QA Form 12, JCN 21043-EM01-Q540, dtd 22 Mar 99  {QA Form 12, JCN 21043-EM01-Q542, dtd 22 Mar 99}  {QA Form 12, JCN 21043-EM01-Q543, dtd 22 Mar 99}	NAVSEA DWG 803-4384431 (C)  {NAVSEA DWG 803-4384431 (C)}  {NAVSEA DWG 803-4384431 (C)}

17

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Torpedo Tube #3 Slide Valve Gasket Mating Surface	Visual inspection of slide valve to tube bore gasket sealing surfaces, on the forward end of slide valve and the mating sealing surface on the torpedo tube with slide valve in the closed position, was not done. Slide valve was disassembled to inspect clearances and to replace forward gasket after it was damaged due to galling in the tube bore caused by contact with the slide. Galling was polished out. The slide valve gasket sealing surfaces are not accessible for verification when the slide valve is in place. Recommend approval as permanent upon completion of 12 psi compartment air test and satisfactory completion of controlled deep dive. NAVSEA approved without further conditions.	QA Form 12, JCN 21043-WI01-1118 dtd 16 Nov 99	733-075-99	QA Form 12, JCN 21043- WI01-1118 dtd 16 Nov 99	DWGs 10001/3223993B and 10001/3224036
High Pressure Air System, AHP-88	Pc. 54 of DWG 2641-405-01 was not tested for strength and porosity in accordance with COMSUBLANT/ COMSUBPACINST 4855.2A. Item 17 was received from supply as Level I but was not strength and porosity tested during certification.	COMSUBPAC msg 060414Z Jun 91	SSBN733-183  TYCOM Ser: CSP 515-90	NAVGRAM Ser PMS396A2/1953 of 29 May 91	NAVSEA DWG 2641-405-01
High Pressure Air System, AHP-540	Pc. 2 of DWG 281439-0001 Rev L was not tested for strength and porosity in accordance with COMSUBLANT/ COMSUBPACINST 4855.2A. Pc. 2 is not screen assembly.	COMSUBPAC msg 220024 Jun 91	SSBN733-238  TYCOM Ser: CSP 242-91	NAVGRAM Ser PMS396A2/A2-010 of 3 Jul 91	NAVSEA DWG 281439-0001
Auxiliary Sea Water System, Actuator Pinion Cavity Relief Valves (ASW-1 and ASW-5)	New or existing pinion cavity relief valves may be installed even though their lift pressure is above required specifications. Hydrapower DWG1810-1290 specifies the relief pressure to be 20 psi minimum and 100 psi maximum. The existing relief valve for JCN F606 lifted at 120 psi and new relief valve for JCN F607 lifted at 130 psi. Actuator vendor engineering has indicated that the pinion cavity relief pressure is arbitrary up to the design limit of the pinion cavity bearing cap, and that pinion cavity pressures up to 500 psi would be acceptable. The vendor also indicated that the low maximum pressure is usually specified by the Navy when buying actuators. The most important consideration is that there is overpressure protection, not necessarily the value of that protection.	COMSUBPAC msg 102254Z Jan 92	SSBN733-250  TYCOM Ser: CSP 014-92	NAVGRAM Ser PMS396/A2-278 of 21 Feb 92	Hydrapower DWG 1810-1290
Emergency Main Ballast Tank Blow System, MBT-4A and 4B	Due to ship configuration, unable to perform a 12 psig compartment test of the Engine Room or the alternate 90 psig air blast test. The inspection point is inaccessible due to a welded steel tube and/or fixed support bearing. Approved using controlled deep dive to test depth, checking for leakage every 200 feet (no leakage allowed).	QA Form 12, JCN 21044-EAJC-1802 dtd 20 Mar 00	734-028-00  TYCOM Ser: CSL 160-00	QA Form 12, JCN 21044-EAJC-1802 dtd 20 Mar 00	NAVSEA DWG 4674125 (E)
Emergency Main Ballast Tank Blow System, MBT-5A and 5B	Due to ship configuration, unable to perform a 12 psig compartment test of the Engine Room or the alternate 90 psig air blast test. The inspection point is inaccessible due to a welded steel tube and/or fixed support bearing. Approved using controlled deep dive to test depth, checking for leakage every 200 feet (no leakage allowed).	QA Form 12, JCN 21044-EAJC-1805 dtd 20 Mar 00	734-029-00  TYCOM Ser: CSL 161-00	QA Form 12, JCN 21044-EAJC-1805 dtd 20 Mar 00	NAVSEA DWG 4674131 (G)
Emergency Main Ballast Tank Blow System, MBT 1A and 1B Vent Valves	Unable to perform a 12 psig compartment test or alternate 90 psig air blast test due to ship's configuration. The inspection point is inaccessible. Retest by performing a controlled assembly and controlled deep dive. Precedent setting DFS's (734-028-00, 734-029-00, and 734-30-00) exist for MBT Groups 4, 5, and 6 for the same reason cited. Approved by NAVSEA PMS392A23 on 8/2/01.	QA Form 12, JCN 21365-EAJC-2642 dtd 29 May 01	SSBN-736-032-01	QA Form 12, JCN 21365-EAJC-2642 dtd 2 Aug 01	MS 5630-082-025

18

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Emergency Main Ballast Tank Blow System, MBT-6	Due to ship configuration, unable to perform a 12 psig compartment test of the Engine Room or the alternate 90 psig air blast test. The inspection point is inaccessible due to a welded steel tube and/or fixed support bearing. Approved using controlled deep dive to test depth, checking for leakage every 200 feet (no leakage allowed).	QA Form 12, JCN 21044-EAJC-1808 dtd 20 Mar 00	734-030-00  TYCOM Ser: CSL 162-00	QA Form 12, JCN 21044-EAJC-1808 dtd 20 Mar 00	NAVSEA DWG 4674131 (G)
Auxiliary Sea Water System, ASW-42/43	Valve internals were coated with Palmer Enecon ceramic material. Coatings are applied in erosion-susceptible areas only for protection. NAVSEA approved without further conditions.	QA Form 12, CSL 147-99 dtd 11 May 99  {QA Form 12, CSL 114-98 dtd 30 Apr 99}	735-026-99  {737-016-99}  TYCOM Ser: CSL 114-98	QA Form 12, CSL 147-99 dtd 11 May 99  {QA Form 12, CSL 114-98 dtd 30 Apr 99}	NAVSEA DWG 2445066  {NAVSEA DWG 2445066}
Hull Strainer Assembly	Plug welded corroded threaded holes of strainer assembly 105 of DWG 2621-601-09. Replaced capscrews with 3/8" NiCu studs welded to the sleeve of assembly 105 using 1/8" all around fillet weld. Sleeve is welded to insert at hull penetration hole number 041-458-090P. NAVSEA approved without further conditions.	QA Form 12, JCN 21365-EA01-5048 dtd 20 Oct 99	736-040-99	QA Form 12, JCN 21365-EA01-5048 dtd 20 Oct 99	DWG 2621-601-09
Steering and Diving System, Steering Gear Hull Gland	Conduct a dedicated visual inspection under the following submerged conditions. Near the surface, deep submergence.	COMSUBLANT msg 110834Z Jul 95	SSBN737-011-95  TYCOM Ser: CSL 073-95	NAVSEA msg 071237Z Aug 95	Not Stated
Steering and Diving System, Steering Gear Hull Gland	Conduct a dedicated visual inspection under the following submerged conditions. Near the surface, deep submergence.	COMSUBLANT msg 110824Z Jul 95	737-012-95  TYCOM Ser: CSP 072-95	NAVSEA msg 071238Z Aug 95	Not Stated
High Pressure Air System, AHP-566	Level I alloy steel capscrews were not available, so Level I K-monel capscrews were installed in the bonnet joint of AHP-566. K-monel capscrews are recommended for use in AHP valves located in wetted areas and bilges. This was previously approved as a temporary repair by DFS SSBN-738-001-00	QA Form 12, JCN 21460-EA01-6574 dtd 25 Jul 01	SSBN-738-013-01	QA Form 12, JCN 21460-EA01-6574 dtd 13 Aug 01	NAVSEA DWGs 513-4683618 and 7284885
High Pressure Air System, AHP-520	The ship is waterborne and is unable to perform the seat tightness test. TRF conducted satisfactory blue check and Ship's Force conducted mechanical joint tightness test IAW JFMM, para 6.1.1.j and Table 6-1. No leakage was observed. Also satisfactorily performed URO 22 step 3.A. Recommended a controlled deep dive to test depth to complete retest requirements.	QA Form 12, JCN 21460-EA01-5510 dtd 10 Nov 98	SSBN-738-034-98  TYCOM Ser: CSL 259-98	QA Form 12, JCN 21460-EA01-5510 dtd 10 Nov 98	NAVSEA DWG 2740033 (H), Pc. 3
High Pressure Air System, AHP-523	The ship was waterborne and unable to perform the seat tightness test. Blue check, mechanical joint tightness test, and operational test performed with satisfactory results. Recommended a controlled deep dive.	QA Form 12, JCN 21460-EA01-5641 dtd 10 Nov 98	738-035-98  TYCOM Ser: CSL 260-00	QA Form 12, JCN 21460-EA01-5641 dtd 10 Nov 98	NAVSEA DWG 2740033H/ Seat Poppet (Pc 3)
Steering and Diving System, Stern Planes Inboard Coupling	Unable to record the difference in number of turns required to remove the coupling from the piston and connecting rods due to configuration and bulky components. Due to configuration, it was necessary to install slots similar to those on the forward end of the coupling to allow use of the same anti-rotation holes in the rod to obtain the proper alignment.	COMSUBLANT msg 070834Z Jun 96	738-020-96  TYCOM Ser: CSL 066-96	NAVSEA msg 271231Z Jun 96	NAVSEA DWG 4674765, Pc 2, Detail 20-A

19

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Active Precedent-Setting SUBSAFE Departures From Specifications

SYSTEM/ COMPONENT	DFS DESCRIPTION	REQUESTING CORRESPONDENCE	DFS No.	NAVSEA APPROVAL CORRESPONDENCE	AFFECTED SPECS
Main Sea Water System, #1 and 2 MSW Pump Impellers	Impellers for both pumps were coated with Palmer Enecon ceramic material to reduce galvanic ratio in the pump casing and prevent further corrosion of internal parts. NAVSEA approved without further conditions.	QA Form 12, CSL 94-99 dtd 13 Apr 99  {QA Form 12, CSL 93-99 dtd 09 Apr 99}  {QA Form 12, CSL 63-99 dtd 17 Mar 99}  {QA Form 12, CSL 92-99 dtd 09 Apr 99}	739-010-99  {740-005-99}  {741-010-99}  {742-004-99}	QA Form 12, CSL 94-99 dtd 13 Apr 99  {QA Form 12, CSL 93-99 dtd 09 Apr 99}  {QA Form 12, CSL 63-99 dtd 17 Mar 99}  {QA Form 12, CSL 92-99 dtd 09 Apr 99}	IR DWG 11256-H-18  {IR DWG 11256-H-18}  {IR DWG 11256-H-18}  {IR DWG 11256-H-18}
Shaft Seal Water System, FWD Seal Housing	Inspection of FWD seal housing revealed category "D" pitting in area "U" and category "B" pitting in "Y1" area. Pitting was up to .130" in the "U" area and .025" in the "Y1" area. These areas are not considered strength areas and only serve to retain and seal the o-ring areas. "U," "Y1," and "X1" were machined and epoxy-sprayed to return to plan dimensions. This repair is considered sufficient to reclassify the housing as category "A." NAVSEA approved without further conditions.	QA Form 12, JCN 21461-EM01-1294 dtd 23 Aug 99	739-056-99	QA Form 12, JCN 21461-EM01-1294 dtd 23 Aug 99	NAVSEA DWG 4678532
Low Pressure Air System, Ship's Whistle, Piping between ALP-77 and ALP-78/79	Recommend actual test of joints ALP-11138 and ALP-11117 be to column 2 of Table 6-1 of JFMM vice testing to Item 1 of TPD 6202694.	QA Form 12, JCN 21682-EAJC-C432 dtd 23 Jan 98	740-002-98  TYCOM Ser: CSL 018-98	QA Form 12, JCN 21682-EAJC-C432 dtd 23 Jan 98	NAVSEA DWG 4683494 (F)
Steam Distilling System, SD-5	Subsequent to valve repair, cannot perform "J" pressure test on the inlet flange since the corresponding delta P across the valve diaphragm will damage the diaphragm and the "J" pressure exceeds the normal operating pressure for the Steam Distilling System. The valve maintenance was conducted using a controlled assembly and a satisfactory operational test was conducted on the outlet flange using system pressure. Recommend retest the inlet flange by performing a controlled dive to the maximum normal operating depth of the Steam Distilling Unit.	COMSUBLANT msg 020814Z Aug 96	741-012-96  TYCOM Ser: CSP 103-96	NAVSEA msg 091232Z Sep 96	NAVSEA DWG 4862598 (F)
AN/BPS-16 Surface Search Radar, Mast Seals	Design of BPS-16 Radar Mast and Upper Seals do not allow specified test or alternate test to be accomplished. Controlled assembly performed. Recommend controlled deep dive.	QA Form 12, JCN 21846-NE01-0304 dtd 05 Aug 97	742-05-97	QA Form 12, JCN 21846-NE01-0304 dtd 05 Aug 97	NAVSEA DWG 145-6690433 (B)
TYPE 18 Periscope Assembly	The SUBSAFE Manual requires full certification of all components removed from inactivated ships when material certification has lapsed and material identification and transfer has not been done. The Periscope was still pressurized when received. This gives assurance that tampering did not occur. The existing MIC markings will be transferred during disassembly to controlled material handling documentation to maintain control of certification. The normal detubing, inspecting, evaluating condition, repairing, reassembling and internal pressure testing of the scopes will be done.	QA Form 12, JCN 66604-NE01-A011 dtd 22 Jan 97	RRC-007-97	QA Form 12, JCN 66604-NE01-A011 dtd 22 Jan 97	NAVSEA 0924-062-0010 (C)

20

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# SUBSAFEGRAM 300B

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9077  
92Q2  
20 Feb 2002

Subj: SUMMARY OF AUDIT FINDINGS

Encl: (1) Summary of Audit Findings (January 2001 through  
December 2001)

1. This SUBSAFEGRAM is issued to provide activities involved in SUBSAFE work a summary of findings identified during NAVSEA audits. This information was generated in response to feedback received through the SEA 92Q presentation at the Project Management College. Project management team members expressed an interest in obtaining this information for use as an aid in preventing similar problems on future submarine availabilities.

2. Enclosure (1) provides a brief summary and compilation of findings from SUBSAFE and Deep Submergence Systems Functional Audits and SUBSAFE Certification Audits conducted during the period from January 2001 through December 2001. SUBSAFE Program Directors are requested to disseminate these "lessons learned" to local Project Managers and other cognizant personnel, and to incorporate them into their internal functional audit programs, as appropriate.

3. This SUBSAFEGRAM will be updated and issued annually to address audit findings identified during the previous year.



T. L. VAN PETTEN  
Director, Submarine Safety and  
Quality Assurance

Subj: SUMMARY OF AUDIT FINDINGS

Distribution:

COMSUBLANT (LCDR D. Trem, Code N409)  
COMSUBPAC (LCDR M. Sumrall, Code N473)  
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SUPSHIP Groton, CT (W. Falman Jr., Code 100Q)  
SUPSHIP Newport News, VA (E. Pickler, Code 208)  
Newport News Shipbuilding, Newport News, VA (D. Conley, Dept. 003)  
Electric Boat Corporation, Groton, CT (J. Noonan, Dept. 320)  
NUWCDIV Newport, RI (D. Borgeson, Code 00SS)  
NAVSHIPREPFAC Yokosuka, Japan (H. Rollins, Code 130)  
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SHAPEC SSN688 Class, Portsmouth, NH (R. Toole, Code 240SH)

Subj: SUMMARY OF AUDIT FINDINGS

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SUPSHIP Groton, CT (Code 201, Code 301)  
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COMSUBGRU TWO  
COMSUBGRU SEVEN  
COMSUBGRU EIGHT  
COMSUBGRU NINE  
COMSUBGRU TEN  
COMSUBGRUREP Guam  
COMSUBDEVRON FIVE  
COMSUBDEVRON TWELVE  
COMSUBBRON ONE  
COMSUBBRON TWO  
COMSUBBRON THREE  
COMSUBBRON FOUR  
COMSUBBRON SEVEN  
COMSUBBRON ELEVEN  
COMSUBBRON SIXTEEN  
COMSUBBRON SEVENTEEN  
COMSUBBRON TWENTY  
COMSUBBRON TWENTY-TWO  
COMSUBBRONSUPPUNIT Norfolk, VA  
COMSUBBRONSUPPUNIT New London, CT  
NAVSHIPREPFAC Yokosuka, Japan (Code 130.1, Code 240)  
NAVSUBSUPFAC NLON (Repair Officer, Technical Library)  
USS EMORY S. LAND (AS 39) (Repair Officer, Quality Assurance  
Officer)  
USS FRANK CABLE (AS 40) (Repair Officer, Quality Assurance  
Officer)  
NAVIMFAC PACNORWEST (Repair Officer, Code 411, Code 440)  
TRIREFFAC Kings Bay, GA (Repair Officer, Code 411, Code 440)  
Consolidated Launcher Technology-Oceanering International, Inc.,  
Chesapeake, VA (M. Merzwa)  
SIMA Norfolk, VA (Repair Officer, Quality Assurance Officer)  
SIMA San Diego, CA (Repair Officer, Quality Assurance Officer)

Subj: SUMMARY OF AUDIT FINDINGS

Blind copy to:

SEA 05U32

SEA 04XQ

SEA 04XQ1B

SEA 08D

SEA 92C

SEA 92Q

SEA 92Q1

SEA 92Q2

SEA 92Q21

SEA 92QD

SEA 92QL (9077/10)

SEA 92QE (2)

SEA 92TC

PMS350A

PMS350AX3

PMS350AB21

PMS392

PMS392A1

PMS392A2

PMS392A41

PMS393

PMS393A1

PMS393A2

PMS393A3

PMS393A4

PMS393M

PMS395

PMS395A18

PMS450CSS

<b>MANAGEMENT</b>
<b>AREA: QUALIFICATIONS/TRAINING</b>
There is no clearly fixed responsibility for or method of validating SUBSAFE qualifications of personnel assigned SUBSAFE work.
A material (swipe) test request was reviewed by unqualified personnel.

<b>MATERIAL CONTROL</b>
<b>AREA: RECEIPT INSPECTION</b>
Performance of semiquantitative chemical analysis is not consistently performed.
Local operating instructions do not specifically address corrective action requirements concerning the disposition of previous lots accepted by the skip-lab method when lots fail testing.
Level I material was not properly marked, segregated, or identified as nonconforming.

<b>AREA: MARKING</b>
Level I material located in Retained Material Program storage is incorrectly tagged.

<b>AREA: INSTALLATION/POSTINSTALLATION</b>
Patch taper was not installed in accordance with a NAVSEA drawing.
A QA-20B material installation verification signature was made several days prior to the actual material installation.
Union nut setscrews for emergency main ballast tank blow valves did not comply with drawing specifications or were damaged.

<b>PRODUCTION/FABRICATION</b>
<b>AREA: WELDING</b>
Weld joint design used in pressure hull support structure was not in compliance with specification requirement.
QA-20B records did not include all information required by the uniform industrial process instruction. Block 13 did not list the technique sheet, and Block 17 did not provide evidence that the weld repair site was properly prepared.
A late entry for fitup on the QA-20B for repair of excavations on the pressure hull was made with no explanation.
The root layer of a socket weld joint lacks documentation of filler material, weld procedure, and welder identification.
Liquid penetrant inspection records do not meet specification requirements.

<b>PRODUCTION/FABRICATION (cont.)</b>
<b>AREA: NDT</b>
Pressure hull support structure welds did not receive the required Nondestructive Testing (NDT) inspection.
Rejectable liquid penetrant inspection indications on SA-9 deck fitting were inadequately resolved.
The magnetic particle inspection delay time was incorrectly specified on a QA-20B.
Scanning technique for ultrasonic inspection of hull welds was not properly performed.

<b>AREA: MECHANICAL JOINT/VALVE REPAIR</b>
A torque requirement was changed without adequate technical justification.
A wrong table was used to determine the correct torque of a mechanical joint based on the lubricant used.
Different valve landing dimension criteria was cited for the same valve.
Auxiliary Seawater (ASW) valve dimensional discrepancies were not formally dispositioned.
A piece number recorded on the joint/component assembly record was incorrect.
MIC numbers for new valve bonnets were not listed on the associated QA-34s.
The associated QA-34s for the shipboard assembly and installation of MG-45/135 did not identify the source of the torque value in Block 9 of the forms.
A nut was not torqued properly because the applicable Maintenance Standard was not referenced in a REC Task Group Instruction.
New material installed in a SUBSAFE joint was documented on a joint card for a different joint.
Joint cards in a REC identified the incorrect reference for joint identification numbers.
Certification of documentation of production work was signed prior to mechanical joint assembly certification.
Sealing surface finish was not verified during a controlled assembly.

<b>QUALITY ASSURANCE</b>
<b>AREA: AUDIT</b>
An internal SUBSAFE audit finding was closed based on inadequate corrective actions.

<b>QUALITY ASSURANCE (cont.)</b>
<b>AREA: SURVEILLANCE</b>
Periodic in-process surveillances of work are not being performed.
Unqualified personnel conducted NDT surveillances.

<b>AREA: METROLOGY</b>
An inspector did not verify ultrasonic equipment calibration at the completion of an inspection area, nor does the activity procedure specify this requirement.

<b>RE-ENTRY CONTROL</b>
<b>AREA: NO REC</b>
Deficiencies were identified during a review of signal injector RECs. The correct component IDs and complete piece numbers for pipes and couplings were not identified on the QA-20C.

<b>AREA: REVISION PROCESS</b>
A revision to a REC was not initiated when there was a change in the work boundaries and the testing requirements.

<b>AREA: OTHER DOCUMENTATION ERRORS</b>
Circularity records did not indicate the actual locations for the measurement stations.
REC packages did not provide the correct reference revisions.
Unauthorized pen-and-ink changes were made to frame tolerance acceptance criteria, which resulted in an out-of-tolerance condition.
Supporting documentation that accepted new ball valve material was not documented in Block 16 of the REC form.
The certification for final closeout of RECs did not include all the applicable Objective Quality Evidence (OQE) involving rework.
Quality assurance inspection for a required controlled assembly was not documented.
Production work was certified prior to resolution of a nonconforming condition.
Certification OQE was not listed as recertification criteria on the REC form.
A shipboard REC did not reference the associated shop REC.
A REC log did not indicate closure date on Block 20 for a REC.
The quantity of a mandatory replacement part was not documented.
The required and actual range of test gages used to conduct shipboard testing was not recorded.

<b>RE-ENTRY CONTROL (cont.)</b>
<b>AREA: OTHER DOCUMENTATION ERRORS (cont.)</b>
A correction to a joint assembly record stating "all existing material reinstalled" was signed for three weeks after the joint assembly was completed, and the person's signature was not the mechanic that performed the assembly.
A craftsman signed for test completions that are scheduled to be performed on two other Task Group Instructions (TGIs).
A QA-34 did not document installation of a new ball for MG-135.
Documentation of installed O-rings did not identify what size O-rings were installed.

<b>TECHNICAL</b>
<b>AREA: WORK DOCUMENTS/TECHNICAL DIRECTIVES</b>
Restoration documents referenced incorrect drawing revisions.

<b>AREA: CONFIGURATION MANAGEMENT PROGRAM GUIDANCE/PROCEDURES</b>
Blocks were not marked for configuration control impact or Scope of Certification on Liaison Action Requests as required by the Engineering and Planning Manual.
A TGI contained drawings not listed in the Ship's Drawing Index.

<b>AREA: URO/MRC</b>
URO/MRC 001 Completion Report did not include all relevant correspondence.
URO/MRC 008 report provided inconsistent data.
TD-7/8 was removed, reinstalled, and certified complete without referencing URO/MRC 025 as recertification criteria on the QA-10.

<b>AREA: TESTING</b>
Non-pressure boundary assemblies were inappropriately listed in the Deep Dive Test Form.
Test boundaries and test pressures were not adequately specified on the ASW test form.
A TGI conflicted with Naval Ship's Technical Manual and local general test requirements regarding the use of master and backup test gages.
Local test procedures did not record the actual test pressure obtained as required by SUBSAFEGRAM 55.
A test form used an incorrect drawing revision.
A Deep Dive Test Form did not include the inspection of the No. 1 Impulse Tank cover during the first dive to test depth.