



DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
NAVSEAINST 4720.6A
O4P/RAP
Ser 195
3 December 1981

NAVSEA INSTRUCTION 4720.6A

From: Commander, Naval Sea Systems Command
To: All Offices Reporting Directly to COMNAVSEA
Distribution List

Subj: Preliminary and Final Cost Estimates by Industrial Activities for
Ship Alterations (NAVSEA 4720-5, -5A)

Ref: (a) NAVSEAINST 4720.3 of 7 November 1975, Subj: Fleet
Modernization Program; policies, procedures and
responsibilities
(b) NAVSEAINST 4710.3 of 9 April 1976, Subj: Complex Overhaul
Designation and Management
(c) NAVSEAINST 7300.10 of 27 January 1977, Subj: Classification
of Cost Estimates
(d) NAVSEAINST 7600.1 of 20 May 1975, Subj: Fixed Prices;
policies and procedures for

Encl: (1) Sample Tabular Report, NAVSEA 4720-5 or 4720-5A
(2) Sample Report Cover Letter
(3) Sample Format for Funds Increase Requests

1. Purpose

a. To establish requirements for two reports to be furnished by industrial activities prior to the start of a ship's scheduled availability that either indicate the need for adjustment to, or acceptance of, the Planning Estimate established by NAVSEA in the Ship's Alteration Authorization Letter.

b. To define the data required from industrial activities for NAVSEA to act on requests for additional funding.

2. Cancellation. This instruction supersedes NAVSEAINST 4720.6 of 6 June 1977, and cancels report symbols NAVSEA 4720-5B and NAVSEA 4720-5C.

3. Scope. This instruction applies to all ship alterations (SHIPALT) authorized and funded by NAVSEA, including SHIPALT work performed under Master Ship Repair (MSR) contracts. This instruction does not apply to SHIPALTs to be accomplished under contracts to private contractors, which are NAVSEA contracts administered by the Supervisor of Shipbuilding (e.g., Submarine Overhaul Contracts at SUPSHIP Newport News). For the purpose of this instruction: industrial activities include Naval Shipyards (NAVSHIPYD), Ship Repair Facilities (SRF), and Supervisors of Shipbuilding, Conversion and Repair (SUPSHIP); SHIPALTs include Title "K" non-nuclear SHIPALTs, Ordnance Alterations (ORDALT), and authorized Ship Selected Records (SSR) updates.

Existing reporting requirements for nuclear alterations remain in effect.

4. Background. Reference (a) requires that all SHIPALT authorization letters establish a NAVSEA Planning Estimate. Further, these letters must state that this Planning Estimate represents NAVSEA's total fiscal liability for the authorized work, and that this amount is not to be exceeded (nor is work to be undertaken that knowingly will exceed) this Planning Estimate without prior NAVSEA approval. The foregoing refers to NAVSEA's "maximum fiscal liability;" namely, the total SHIPALT Planning Estimate established by NAVSEA, not the estimates for each individual SHIPALT listed in the FMP authorization letter.

Industrial activities have been previously advised that if an activity exceeds, or if work is undertaken by them that knowingly will exceed, this Planning Estimate without prior NAVSEA approval, such work will be considered "unauthorized", and NAVSEA will not consider itself liable for any amount in excess of this approved Planning Estimate. This stipulation is included in the policy portion of this instruction.

The importance of industrial activities adhering to NAVSEA's approved Planning Estimate, or promptly advising NAVSEA of needed adjustments to its approved Planning Estimate, cannot be overstated. Failure to recognize this importance has and will continue inevitably to disadvantage both NAVSEA and the industrial activities. Specifically, in the absence of adherence, or prompt notification of the need for adjustment, NAVSEA's ability to utilize its limited resources to support the industrial activity is severely hampered. Moreover, the collateral ability of the industrial activity to stabilize its work requirements and proceed with minimal delay and disruption is equally hampered. It is in this context that the following policies and procedures are established.

5. Policy

a. The NAVSEA Planning Estimate for authorized SHIPALT work must not be exceeded, nor is work to be undertaken that knowingly will exceed this Planning Estimate, without prior NAVSEA approval.

b. As required by reference (a), when an industrial activity's cost estimate exceeds the NAVSEA Planning Estimate, the industrial activity must advise NAVSEA of (1) the industrial activity's cost estimate for each alteration; (2) the reason for potential cost overruns; and (3) recommended actions to remain within the NAVSEA Planning Estimate. The recommendations by the industrial activity should be based on minimum disruption to the total overhaul package.

c. The industrial activity must advise NAVSEA that the Planning Estimate may be exceeded in adequate time for NAVSEA and the CNO to (1) formulate a SHIPALT work package that will remain within the approved Planning Estimate; or (2) reprogram resources to provide additional funds requested; or (3) adopt a combination of options one and two; or (4) adopt other actions deemed appropriate.

d. If an industrial activity exceeds the approved Planning Estimate or undertakes work that knowingly will exceed the approved Planning Estimate without prior NAVSEA approval, NAVSEA will not consider itself liable for costs in excess of its approved Planning Estimate. If an industrial activity neglects to advise NAVSEA that the Planning Estimate may be exceeded in sufficient time for NAVSEA and the CNO to exercise their management options, then such work may be considered as unauthorized, and NAVSEA may not consider itself liable for costs in excess of its approved Planning Estimate.

e. NAVSEA recognizes that unusual circumstances beyond the direct control of the industrial activity may arise after commencing a ship's availability, or submitting final cost estimates, that may cause the industrial activity to exceed its approved Planning Estimate. NAVSEA must be advised immediately when such circumstances arise. For clarification, unusual circumstances included, but are not limited to: (1) acts of God; (2) strikes; (3) incorrect design products or technical guidance received from sources external to the industrial activity (e.g. PERA); and (4) non-receipt or substitution of material listed on NAVSEA 4720/3 Ship Alteration Material Summary, which in turn causes a disruption in design and/or production schedules.

6. Reports. To ensure standardization, compliance and adequate time for sufficient management review, the following reporting system and Report Symbols are instituted:

a. Preliminary Cost Estimates by Industrial Activities for SHIPALTs (NAVSEA 4720-5)

(1) Frequency--NAVSHIPYD

(a) Complex Overhauls (COH). Reports are due in NAVSEA 45 days before the scheduled start of the Alteration and Repair Verification Conference (ARVC), or 270 days before the scheduled start of the availability, whichever comes first. (Reference (b) pertains.)

(b) Regular Overhauls (ROH), Selected Restricted Availabilities (SRA), Restricted Availabilities (RA). Reports are due in NAVSEA 45 days before the scheduled start of the Work Definition Conference (WDC), or 270 days before the scheduled start of the availability, whichever comes first.

(2) Frequency--SUPSHIPS

(a) Single-Ship Overhauls. Reports are due in NAVSEA 45 days before the scheduled issuance of the solicitation, or 270 days before the scheduled start of the availability, whichever comes first.

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(b) Multi-Ship Overhauls. Reports are due in NAVSEA 45 days before the scheduled start of the WDC, or 270 days before the scheduled start of the availability, whichever comes first.

(3) Content Requirements. The activity shall breakdown its estimated costs for each SHIPALT as follows:

(a) Total Mandays (Mandays for the alteration including design and proratable services. The mandays will be the estimated final expenditure for the total of all direct labor mandays).

(b) Labor/Overhead (Dollars for alteration accomplishment less those associated with design and proratable services).

(c) Material (Dollars for material to be provided by the industrial activity but not including the cost of GFE or material provided at no cost to the industrial activity). Naval Shipyard material cost estimates are included under the stabilized rate concept. Accordingly, NAVSHIPYDs are not required to report estimates in this column.

(d) Proratable Services, when appropriate (Dollars associated with each alteration for such services as crane, rigging, etc.)

(e) Design and Support (Dollar costs for design but excluding costs for basic (first time) alteration class drawings or efforts received at no cost to the industrial activity from PERA or other industrial activities).

(f) Total Cost (Dollar value of labor, overhead and material. This is the sum of (b), (c), (d), and (e) above. Naval Shipyards exclude material, (c) above.

(g) Classification (NAVSHIPYD only) (Cost estimates shall have the appropriate classification symbol entered as a suffix to the "Total Cost" for each alteration. (Reference (c) applies.)

(h) NRC (Provide for each ship alteration which cannot or will not be accomplished the Non-Recoverable Costs (NRC) for material for which no credit can be expected and for design and prefab work in progress or expected to be completed as of approximately 15 days after the date of the report).

(i) Category (Provide status of each alteration by a legend, such as but not limited to, Category Explanation:

1. CAT A, B, C - Alterations designated by same letter should have interfaces by system and arrangements and should be authorized as a group.

alterations. 2. CAT NR - Alteration not related to other

overhaul schedule.) 3. CAT MA - Material availability will not support

(j) Proratable services and the dollar value associated with each item.

(4) Discussion. This report will provide the industrial activity's "Preliminary Cost Estimate." These estimates will not be binding on the industrial activity, but care should be exercised to ensure that the estimates reflect what the activity believes to be a Class "C" estimate. (Reference (c) pertains.) For SUPSHIPS, these estimates should include projected costs of contract modifications (change orders). Understandably, if a sizable disparity exists between the industrial activity's preliminary cost estimate and the approved Planning Estimate, NAVSEA, working closely with the industrial activity, will review the circumstances in order for it and the CNO to exercise the management options addressed in paragraph 5c above.

(a) To assist management in evaluating these cost estimates, the industrial activity should present any important risk assessments, assumptions, or other considerations that were used in developing these estimates; for example: (a) whether a shipcheck was performed for the authorized alteration; (b) whether the estimate was based on the availability or non-availability of working drawings; (c) percentage of working drawings completed; (d) prior experience with, or completion of, the alterations involved; (e) first time SHIPALTs.

(b) As required by reference (a), when the industrial activity's cost estimate of authorized work exceeds the NAVSEA Planning Estimate, the activity will recommend possible actions to remain within the NAVSEA Planning Estimate.

(c) At the time of submitting the preliminary report, NAVSHIPYDs will not request an adjustment in the approved NAVSEA Planning Estimate. SUPSHIPS, however, should request adjustment of the Planning Estimate, or NAVSEA's authorization to proceed, in those cases where funds on hand are not sufficient to cover the anticipated low bid.

(d) Fixed price offers, prepared in accordance with reference (d), may be included in reports submitted by NAVSHIPYDs.

(e) In addition to providing cost estimates, the industrial activity should outline any management problems associated with the alteration work package on which NAVSEA may or may not be able to provide assistance. The problems may include such items as: (a) non-receipt of first time class plans; (b) lack of guidance from PERA;

(c) non-receipt of GFE as scheduled in NAVSEA 4720/3 SHIPALT Material Summary or receipt of substitute GFE requiring design changes; and (d) receipt of conflicting guidance/instructing from NAVSEA or other activities. Detailed technical/engineering problems or guidance should not be included in this report.

a. Final Review Estimates by Industrial Activities for SHIPALTS (NAVSEA 4720-5A)

(1) Frequency--NAVSHIPYDs

(a) COHs. Reports are due in NAVSEA 45 days after the completing the ARVC, or 120 days before the scheduled start of the availability, whichever comes first.

(b) ROHs, SRAs, RAs. Reports are due in NAVSEA 45 days after completing the WDC, or 120 days before the scheduled start of the availability, whichever comes first.

(2) Frequency--SUPSHIPS

(a) Single-Ship Overhauls. Reports are due in NAVSEA 45 days after contract award, or 120 days before the scheduled start of the availability, whichever comes first.

(b) Multi-Ship Overhauls. Reports are due in NAVSEA 45 days after completing the WDC,, or 120 days before the scheduled start of the availability, whichever comes first.

(3) Content Requirements

(a) For NAVSHIPYDs and SRFs, this report should reflect the information required by paragraph 6a(3) above.

(b) Fixed price offers prepared in accordance with reference (d), and submitted to NAVSEA before the due date of NAVSEA 4720-5A, satisfy the requirement for the report.

(c) SUPSHIPS should submit the following information by message in lieu of format provided in enclosure (1):

- (1) NAVSEA prorated portion of award value
- (2) Government Labor and Material Obligations
- (3) List of authorized alterations not included in the award.
- (4) Estimated change order requirements, by fiscal year.

(4) At this time, the industrial activity should, if appropriate, request NAVSEA to adjust its approved Planning Estimate to agree with the industrial activity's final cost estimate. This report should reflect the industrial activity's final estimated costs to accomplish the authorized alteration package, and should be sufficiently accurate to form the basis of an eventual fixed price offer by NAVSHIPYDs, or final price by SUPSHIPS. Except for unusual circumstances, the fixed price offer or final price should be close or equal to this figure plus or minus changes in the authorized scope of work. NAVSEA recognizes that differences may exist between preliminary and final cost estimates primarily because of changes in the status of alteration development. Such differences are expected; however, during the period between reports, the industrial activity should advise NAVSEA of any major revisions in the cost estimates that may be identified.

(a) Naval Shipyards only. Wherein the NAVSHIPYDs are operating under stabilized manday rates all data will be based on these rates. The covering letter will identify the stabilized manday rate used in computing labor/overhead and material.

7. Action

a. Industrial Activities

- (1) Institute internal procedures for complying with this instruction.
- (2) Ensure reports are submitted to arrive at NAVSEA no later than the times specified in paragraph 6 above.
- (3) Report Symbol NAVSEA 4720-5 has been assigned to Preliminary Cost Estimates for SHIPALTS; Report Symbol NAVSEA 4720-5A has been assigned to the Final Cost Estimates for SHIPALTS. These symbols will be indicated on the respective reports as shown on enclosure (1).
- (4) Submit original and three copies of preliminary and final cost estimate reports with cover letter (sample provided as in enclosure (2)) addressed to Commander, Naval Sea Systems Command (SEA 04P), with copy to the appropriate Ship Logistic Division and PERA. If a naval message is used in lieu of a letter, cite SSIC 4720.
- (5) Submit requests for additional funding (after submitting final cost estimates) to arrive in NAVSEA no later than 45 days before the anticipated need date. Such requests are to include, at a minimum, the current NAVSEA estimate for the alterations involved, the new estimate for each alteration, and the reason for the change. Enclosure (3) provides the recommended format for these requests.

b. FMP Financial Management Office, SEA 04P

(1) Act for SEA 04 in his capacity as the Executive Agent for the financial and reprogramming aspects of the FMP.

(2) On receiving of mailed reports, verify that the appropriate Ship Logistic Division has received its copy.

(3) Provide guidance to the Ship Logistic Division relative to the fiscal feasibility and action required.

(4) Review and pass upon the validity of cost items included in the estimated costs of accomplishing SHIPALTs.

(5) If required, reprogram resources to provide the additional funds that may be authorized to the industrial activity.

(6) Provide comments and recommendations to the CNO concerning the fiscal ramifications of changes to the authorized SHIPALTs package.

(7) Review and pass upon financial validity and sufficiency of compensation offered by the Fleet or the CNO to finance large cost increases.

(8) Within 45 days of receiving an industrial activity's preliminary or final cost estimate, confirm NAVSEA's acceptance of the estimate, or provide guidance to the industrial activity.

(9) Authorize adjustments in grants of funds to the industrial activities.

c. Ship Logistic Division, SEA 921, 931, 941, 942, PMS 389, 395, 399

(1) On receiving reports, verify that SEA 04P has received its copy and perform a thorough review to ensure validity of scope and estimated cost of authorized work.

(2) Within 10 days after receiving of reports, provide review comments to SEA 04P. If required, provide recommendations, including reprogramming recommendations, to SEA 04P on the request of the industrial activity for an adjustment to the approved NAVSEA Planning Estimate.

(3) Provide technical commentary and recommendations to the CNO relative to reducing the authorized ship alteration package.

(4) Provide assistance to alleviate urgent problems as reported by the industrial activities.

8. Reports.

a. Report symbol NAVSEA 4720-5 (MIN:ETAUTH) has been assigned to the report of SHIPALT Preliminary Cost Estimates required by paragraph 6a above.

b. Report symbol NAVSEA 4720-5A (MIN;ETAUTH) has been assigned to the report of SHIPALT Final Cost Estimates required by paragraph 6b above.

c. These reports are approved for a period of two years from the date of this instruction.



A. RUFFINI
Principal Deputy Commander for
Logistics

Distribution:
(See page 10)

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Distribution: (2 copies each)
SNDL FB30 NAVSHIPREPFAC
FKP7 NAVSHIPYD
FKP7 NAVSHIPYD PHILA (Code 249B & 870A)
FKP8 SUPSHIP

Copy to: (2 copies unless indicated)
SNDL A3 CNO & OP 43; OP 924L; OP 100D; OP 50 (1); OP 09B1
A4A CHNAVMAT (MAT 02)
21A Fleet Commanders in Chief
22A Fleet Commanders
24 Type Commanders (less 24J)
26A1 COMPHIBGRU TWO
28J2 COMSERVRON THREE (only)
28K1 COMSUBRON (only)
C4K ASW (Code ASW 133 & ASW 12); SPO (NSP 262)
C4U PERA
C37A2 NUSCDET New London only
C37E NPPSDO, NDW
C37F NAVMATDATASYSGRU; NAVSSES DET only
FF8 INSURV
FKA1A COMNAVAIRSYSYSCOM
FKA1B COMNAVELEXSYSYSCOM (ELEX 0119, 01191, 94221) (7)
FKA1F COMNAVSUPSYSYSCOM (SUP 0631F) (5)
FKA6A9 NAVSWC
FKA6A15 NUSC
FKM13 SPCC
FKM17 FLEMATSUPPO
FKM22 NAVPUBFORMCEN (400 and negatives)
FKP1G NAVSHIPWPNSYSENGSTA
FKP7 NAVSHIPYD (PHILA Code 1100 only)
FKP16 NAVSSES
FKR3A NAVAIRENGCEN (Code NE 433)
FT88 EDOSCOL

RESUPSHIP

NAVSEA Special List Y2
SEA 99634 (200)
99642 (2)

Sample of Tabular Report, NAVSEA 4720-5 or NAVSEA 4720-5A

3 DECEMBER 1981

NAVSEA 4720-5 - PRELIMINARY COST ESTIMATES - USS NEVERBUILT (SSN-123) 1/

SHIPALT	BRIEF	TOTAL MANDAYS	LABOR OVERHEAD	MAT'L 2/	PRORATE SERVICE	DESIGN COST	TOTAL COST	CLASS*	NRC	CATEGORY
SSN-291	CO2 Scrubber Improv	800	\$ 114,838	\$ 16,624	\$22,502	\$16,156	\$170,120	C	\$7,800	A
SSN-316	Pressure Drop L. O. Pump Start	220	31,167	4,640	6,067	4,906	46,780	C	1,000	B
SSN-498	Instal Float Swltch L. O. Sump	230	33,964	2,162	6,732	6,052	48,910	C	500	B
SSN-579	Damp Falrwrtr & Free Flood Area	2110	260,732	84,317	52,466	51,155	448,670	D	12,500	NR
SSN-585	Mod Cont RN Stm Root Vlvs	175	22,452	6,032	4,491	4,245	37,220	C	3,000	NR
SSN-636	Instal Total Hydrocarbon Anal	180	26,143	1,564	5,288	5,285	38,280	C	1,000	A
SSN-642	SI Aux Stm Sys	1250	174,706	21,840	35,130	34,124	265,800	D	10,000	NR
SSN-652	AN/WQC-2 Instal	230	33,220	2,515	6,678	6,497	48,910	F	3,000	NR
SSN-737	Switch Box MKII/ MK 48 TORP CAP FCS	1050	140,322	27,411	28,204	27,333	223,270	F	11,000	NR
SSN-759	Radar Mast Wave Guide	80	11,420	689	2,350	2,551	17,010	A	1,000	NR
SSN-610	Type 15 Periscope	391	55,103	6,110	11,092	10,825	83,130	D	9,500	NR
	NRC on cancelled Alts			200		3,000	3,200	A	3,200	-
	TOTAL	6,716	\$904,067	\$174,104	\$181,000	\$172,129	\$1,431,000	C		

Enclosure (1)

NAVSEA 4720-5 PRELIMINARY COST ESTIMATES - USS NEVERBUILT SSN-123 - CON'D 1/

		TOTAL	LABOR/ MANDAYS	OVERHEAD	MAT'L 2/	PRORATE SERVICE	DESIGN	TOTAL COST	CLASS*	NRC	CATEGORY
<u>ORD ALT:</u>											
06223	PROV MK48 TORP CAP	1,050	\$88,670	\$13,450	\$17,675	\$16,405	\$136,100	C	\$7,000	NR	
TOTAL		<u>1,050</u>	<u>\$88,670</u>	<u>\$13,450</u>	<u>\$17,675</u>	<u>\$16,405</u>	<u>\$136,100</u>		<u>\$7,000</u>		
	Allowance List Update	210	\$18,303	\$1,006			\$19,309				
	Selected Record Drawings	160	13,427	900			14,327				
	Selected Record Data	<u>330</u>	<u>27,507</u>	<u>1,501</u>			<u>29,008</u>				
TOTAL		700	\$59,237	\$3,407			\$62,644				

1. For final cost estimate: NAVSEA 4720-5A Final cost Estimates - USS NEVERBUILT (SSN-123)
2. Naval Shipyards leave this column blank

* Naval Shipyards only

Enclosure (1)

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SAMPLE OF REPORTING COVER LETTER

SSN 123/4720
Ser XX-XX
22 March 82

From: Commander, Norfolk Naval Shipyard
To: Commander, Naval Sea Systems Command (SEA 04P)

Subj: Preliminary Cost Estimates (NAVSEA 4720-5 for)
USS NEVERBUILT (SSN-123)

Ref: (a) NAVSEA 360 Day Authorization Letter
(b) Fleet Modernization Program (FMP) dtd or Advance
Planning Letter
(c) NAVSEAINST 4720.6A

Encl: (1) NAVSEA 4720-5 Preliminary Cost Estimates

1. Reference (a) provided NAVSEA's Planning Estimate of \$1,091,057 for authorized non-nuclear SHIPALTs, \$94,358 for ordnance alterations, and \$133,300 for selected ship records. The USS NEVERBUILT is currently scheduled for regular overhaul from 7 July 1981 to 6 March 1982.

2. The preliminary estimated cost to accomplish the non-nuclear SHIPALTs is \$1,431,300. Funds deficit is \$340,243. The preliminary estimated cost to accomplish ORDALTs is \$136,200. Funds deficit is \$41,842. The preliminary estimated cost for updating SSR is \$62,644. Funds surplus is \$70,656.

3. Shipchecks were performed (period 13-18 Nov 80) on all SHIPALTs authorized by reference (a) except SSN-579K which was not programmed in reference (b). The cost reflected for SHIPALTs SSN-579K and 610K are based on prior experience with installations on USS HAVEBUILT (SSN-321). Approximately 60% of the working drawings were completed prior to formulating these estimates; the balance of the drawings are scheduled to be completed within the next ten days. This schedule is subject to revision pending receipt of guidance on SHIPALT SSN-737K from PERA (SS). NAVSHIPYD Norfolk has previously accomplished all SHIPALTs listed except SSN-652K.

- a. SHIPALT SSN-291K-C02 Scrubber Improve
NAVSEA estimated cost \$109,040 - NAVSHIPYD Norfolk
estimates cost \$170,120 (C).

Enclosure (2)

The piping modifications required to accomplish this SHIPALT defy brief description. Approximately 50% of the ships service piping located in the CO2 scrubber room must be removed. Amine coils 1 and 2 and their associated chilled water and condensate drain piping also must be removed. The complexities caused by removal, relocation and addition of major components and the utilization of isolated segments of existing piping contribute to the high estimated costs.

- b. SHIPALT SSN-642K - Sound Isolate Aux Stm Sys NAVSEA estimated cost \$809,700 - NAVSHIPYD NORFOLK estimated cost \$265,800 (D).

This SHIPALT requires removing approximately 220 hard mounted hangers from the auxiliary and H.P. steam drain systems, and reinstalling 285 resilient hangers and mounts. This work includes a combined total of approximately 505 pressure hull welds which will require certification and documentation. The air ejector condenser foundation must also be modified for sound isolation.

4. In accordance with reference (c) paragraph 6a(4)(c), no adjustment in NAVSEA's Planning Estimate is requested at this time. However, if additional funds are not available for full funding, NSY NORFOLK recommends deferring the following SHIPALTS:

SHIPALT	BRIEF
SSN-579K	Damp Fairwtr & Free Flood Area
SSN-498K	Instal Float Switch L.O. Pump
SSN-316K	Pressure Drop L.O. Pump Start

5. Design work is continuing on all approved alterations; NRC are projected to 15 April 1981.

6. Individual SHIPALT estimates required by reference (c) are reflected in enclosure (1).

7. The following items are included under proratable services:

Temporary connections	\$130,917
Crane and rigger	22,923
Storage and handling	4,050
Dock and pier cleanup	2,500
Staging and scaffolding	20,610
TOTAL	<u>\$181,000</u>

Enclosure (2)

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8. The following legend was used in providing status of alterations under the category listing:

A. Should be authorized as a group

B. Should be authorized/cancelled as a group -

NR. ALT not related to other ALTS

9. The stabilized manday rate of \$212.64 for labor material, and overhead was used for the development of the estimates reflected in the attached enclosures.

Copy to:
COMNAVSEASYS COM (Appropriate Ship Logistic Division)

Enclosure (2)

SAMPLE FORMAT FOR
FUNDS INCREASE REQUESTS

USS _____

	SHIPALTS	Other
Current NAVSEA Planning Estimate	_____	_____
Shipyard/SUPSHIP Cost Estimate	_____	_____
Funding required	_____	_____

SHIPALTS	Current P/E	Revise P/E	Reason for Change
A	-	-	(1)
B	-	-	(2)
C	-	-	(3)
D	-	-	(4)

Reasons

- | | | | |
|-----------|----|---|--------|
| (1) S/A A | A. | Install AM2123/V AMP and relocate AM/VRC-46. | 2,900 |
| | B. | Remove/scrap five ea ant fdns. Modify vent duct to clear new AN/URT-23 XMTRS (work not covered in ripout plans.) | 7,150 |
| | C. | Relocate two ea PP-3495A/UG pwr supplies. Inst 19 ea coax BHD conn to secure TTY (not covered in arrangement to meet TEMPEST reqmts). | 3,497 |
| | D. | Relocate two ea vent controllers (not covered in arrangement plans). | 2,650 |
| | E. | Correct many cable ID errors in plan. | 6,505 |
| | F. | Modify fdn to fit CAA7100 RF and relocate pwr panel (incorrect dimension on dwg). | 1,800 |
| (2) S/A B | A. | Plan AR5-303-4652093-B installs 109 Sym 77.4 floor lts but list of matl reflects 79. | 7,500 |
| | B. | Inst missing cable and bkr box (85FT F-4) and interconn cable. Remove dead end wireway cable (925 ft) plan error. | 3,000 |
| | C. | Remove doubler plate not shown on plan. | 2,000 |
| | D. | Scrap expanded metal cage (plan error). | 2,000 |
| | E. | Install addl 130 ft cable not on plan. | 4,000 |
| (3) S/A C | A. | SEA NYMPH SHIPALT relocated the AN/BQR-22A Sonar Receiver Unit. SHIPALT plans call for ship to have AN/BQR system which has a smaller cabinet, therefore, the existing cabinet would not fit. Shipyard is accomplishing intent of SHIPALT 2090 (K) in the area of the cabinet modification. | 11,683 |

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(4) S/A D

- A. Plan errors (flange mat'l omitted from plans). 15,600
- B. Plan AR5-505-4652361-B relocated existing mat'l that was non existent.
- C. Insulation ppg not insulated when sys orig inst.

Enclosure (3)