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FF-1040/FFG-1 CLASS SARP PLANNING DOCUMENT.(U)
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Publication 1809-01-3-1717

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FF-1040/FFG-1 CLASS SARP PLANNING DOCUMENT

31 March 1978

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Prepared for PERA (CRUDES)
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PLANNING DOCUMENT

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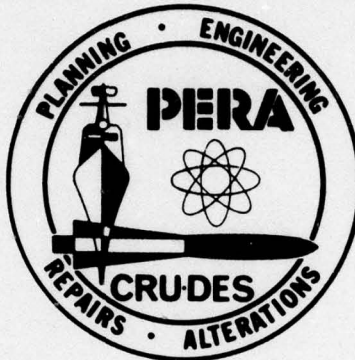
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FF-1040/FFG-1 CLASS SARP PLANNING DOCUMENT



The Class SARP Planning Document does not authorize the accomplishment of ship alteration and repair work on any particular ship of the class. Authorized Work for each ship will be contained in the Baseline SARP for each ship. The Class SARP Planning Document contains duplicate SWLIN sheets within a particular SWBS where variations occur in the class configuration requiring differences in narrative or identification. It is intended that the Class SARP Planning Document be used for standard job order preparation, standard estimates and standard bid specification items on FF-1040/FFG-1 class ships.

31 March 1978

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FF-1040/FFG-1 CLASS SARP

PLANNING DOCUMENT

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PART 1

GENERAL INFORMATION

PART 1

GENERAL INFORMATION

REF: (a) Repair Profile for FF-1040/FFG-1 Class dated October 1977.

1. General

a. The purpose of the SARP Planning Document is to provide a detailed compilation of the overhaul work items, derived from reference (a) including the planned "K", "D" and "F" SHIPALTS. These items will form the Baseline of the total overhaul package. Further refinement and expansion based on the results of the Pre-Overhaul Test and Inspection (POT&I) conducted on each ship will formulate the proposed SARP. The SARP Planning Document will be used as an advanced planning document to assist in job order preparation, advanced material procurement, design work and early decision-making by those activities responsible for supporting and conducting the overhaul prior to definition of the Authorized Ship Alteration and Repair Package (SARP) at the Work Definition Conference. ↗

2. POT&I (Pre-Overhaul Test & Inspection) Program

a. The Pre-Overhaul Test and Inspection Program is conducted for the purpose of accurately determining the need for, and extent of, refurbishment required during overhaul.

b. The Authorized Planning Agent and Ship's Force shall accomplish and evaluate the POT&I using test and inspection documentation provided separately. Actual operation of the ship's systems and equipment during the conduct of the POT&I is a Ship's Force function.

c. A summary of the evaluations and the work required as a result of the evaluations will be included in the proposed SARP.

3. Assignment of Work

The assignment of work in this SARP Planning Document is divided between the Overhaul Activity (SY) and Forces Afloat (FA). Assignment to the Overhaul Activity is an authorization for the Overhaul Activity to institute accomplishment of the indicated action and the basis for starting advance planning and material ordering. Final assignments will be made at time of Work Definition Conference (WDC).

4. Advance Material List

The Advance Material List is developed by the Overhaul Activity for all work items contained in the SARP Planning Document assigned a priority category of 1 or 2. The Overhaul Activity is authorized to procure this material when approved by the customer.

NOTE

Mandatory replacement parts are listed in Appendix A of the Technical Repair Standards (TRS). Contingency replacement parts are listed in Appendix B of the TRS and should be selectively procured based on previous overhaul experience with this item.

Work Priority Categories are defined as follows:

<u>Priority</u>	<u>Definition</u>
1.	Urgent repairs to correct conditions which prevent the ship from operating.
2.	Repairs required to correct deficiencies which seriously impair the effectiveness or reliability of the ship's operation, or which involve the health and safety of personnel.
3.	Repairs of a routine nature; routine tests and inspections.
4.	Convenience items.

5. Assignment

Each line of a SWLIN has a designation in the ASSGMT column, i.e., SY, FA, DF, NA or other (specify). SY is an Overhaul Activity responsible work item and will have a manday estimate. FA is a Forces Afloat responsible work item and is not required to have a manday estimate. Forces Afloat work items scheduled for accomplishment prior to the ship's arrival at the Overhaul Activity will be designated by FA #. DF indicates a work item that has been deferred and NA indicates that the item has not been authorized at the Work Definition Conference. If an assignment other than SY, FA, DF or NA is designated, it will be specifically identified, i.e., NAVSECPHILADIV.

6. Drydock Package

The SARP Planning Document contains standard work items that are usually associated with the drydocking package such as underwater body repairs, sea valves, propellers, etc. The decision to drydock the ship during this availability rests with the Type Commander.

7. Proposed SARP Development

a. The SARP Planning Document is, in effect, a draft of the Proposed SARP and an estimate is required for each line item where the assignment is SY. Do not combine estimates.

b. Minor pen and ink changes to SARP Planning Document SWLIN pages are authorized on an individual ships "Proposed" SARP basis for the purpose of the Work Definition Conference, e.g., NA for SY assignment to clean and inspect CHT tanks, if ship has not had CHT installed.

c. In no case will work be added in with the established SARP Planning Document overhaul items.

d. Additional POT&I resultant work not within the SARP Planning Document boundaries will be reflected by adding item numbers and pages, as required, after the "NOTE" which will appear at the end of each SARP Planning Document SWLIN. An additional estimate is required for this work.

Example: After the last item of Baseline work on a SWLIN additional work as a result of the POT&I will be entered as follows:

5. "Last Baseline Item"

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

	<u>MD</u>	<u>COST</u>	<u>ASSIGMT</u>
6. Replace the following Aux Salt Water Valves.	15		SY
6.1 ASW 143, 135, 122, etc.			

8. Changes

Changes to the SARP Planning Document will be made by PERA (CRUDES) via message, letter or reissue of the SARP Planning Document.

PART 2

PREFACE

PART 2

PREFACE

1. Part 3 of the SARP Planning Document is a complete sequence listing of all the baseline repair work and serves as the primary document to establish the Overhaul Work Repair Package. Part 3 is indexed by Major Ship Systems (see paragraphs 3.0 through 3.9). Each Major Ship System is subdivided into Ship Systems. The Ship Systems are listed at the start of each subsection to Part 3.

Aforementioned work items are contained in the Ship System Work Descriptions (SSWDs) associated with each Ship System in the subsections of Part 3. Each SSWD is identified by the SWLIN designators. The designator identifies:

- a. The affected Ship System.
- b. The type of work (i.e., SHIPALT, ORDALT, maintenance, etc.)
- c. The Customer (i.e., NAVSEA, TYCOM, etc.)

The SWLIN classification, Ship System boundaries, and cost estimating terms used in Part 3 are further defined in the Glossary (Part 6).

Whenever reference is made to a particular SWLIN, an asterisk (*) is used in place of the revision letter, e.g. "... conducted under SWLIN 986L01*".

2. Part 4 of the SARP Planning Document provides a cross-index of source data (Authorized Type Commander Recurrent Items, Shipyard Recurrent Items, Material Inspection Items, etc.), to applicable SWLINS in Part 3.

3. Part 5 of the SARP Planning Document contains a detailed record of all changes made to the SARP Planning Document when authorized.

4. Part 6 of the SARP Planning Document is a Glossary of terms unique to the SARP Planning Document.

PART 2

PREFACE (CONT)

SARP ISSUE

<u>SWLIN</u>	<u>PROPOSED</u>	<u>SWLIN</u>	<u>PROPOSED</u>
111A01	A	311A01	A
114A01	A	311A02	A
123A02	A	314A01	A
123A03	A	324A01	A
161A01	A	341A01	A
161A02	A	342A01	A
161A03	A		
163A01	A		
165A01	A		
167A01	A		
		410A01	A
		421A02	A
		424A01	A
		426A01	A
		426A03	A
		431A01	A
		436A01	A
		437A01	A
		437A02	A
		441A01	A
		441A02	A
		441A03	A
		441A05	A
		441A06	A
		441A07	A
		441A10	A
		445A01	A
		446A01	A
		450A01	A
		450A02	A
		451A01	A
		452A01	A
		453A01	A
		455A01	A
		463A01	A
		464A02	A
		471A01	A
		472A01	A
		482A01	A
		491A01	A
		504A01	A
		505A01	A
		512A01	A
221A01	A		
221A02	A		
231A01	A		
241A01	A		
241A02	A		
243A01	A		
243A02	A		
244A01	A		
244A02	A		
244A03	A		
245A01	A		
251A02	A		
253A01	A		
254A01	A		
254A02	A		
254A04	A		
255A01	A		
255A02	A		
255A03	A		
255A05	A		
255A09	A		
255A10	A		
255A11	A		
255A13	A		
256A01	A		
256A02	A		
256A04	A		
259A01	A		
261A01	A		
261A02	A		
262A01	A		
262A02	A		
262A04	A		

PART 2

PREFACE (CONT)

SARP ISSUE

<u>SWLIN</u>	<u>PROPOSED</u>	<u>SWLIN</u>	<u>PROPOSED</u>
513A01	A	721A01	A
514A01	A	722A01	A
516A01	A	722A02	A
520A01	A	728A01	A
521A03	A	752A01	A
524A02	A		
531A01	A		
531A02	A		
531A03	A		
531A04	A	813A01	A
531A05	A	830A01	A
533A07	A	838A01	A
534A01	A	841A01	A
534A03	A	844A01	A
534A04	A	851A01	A
534A05	A	853A01	A
534A07	A	856A01	A
536A02	A		
541A01	A		
541A03	A		
541A04	A		
551A01	A	980A01	A
551A02	A	982A01	A
551A03	A	985A01	A
551A04	A	986A01	A
551A07	A	986A02	A
555A01	A	986A03	A
562A01	A	990A01	A
566A01	A	991A01	A
572A02	A	992A01	A
581A01	A	993A01	A
583A01	A	997A01	A
583A03	A		
583A05	A		
588A01	A		
593A01	A		
602A01	A		
631A01	A		
633A01	A		
633A02	A		
634A01	A		
655A01	A		

PART 3
SHIP SYSTEM WORK

PART 3.1
MAJOR SHIP SYSTEM 1

MAJOR SHIP SYSTEM 1 - HULL STRUCTURE

111 SHELL PLATING

114 APPENDAGES, SHELL

123 TRUNKS AND ENCLOSURES

161 STRUCTURAL CASTINGS

163 SEA CHESTS

165 SONAR DOMES

167 HULL STRUCTURAL CLOSURES

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	APPENDAGES, SHELL	JCN INDICATED BELOW	TITLE
SWLIN	114A01A	TOTAL SHIPYARD COST	EIC GROUP A101	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Shell Appendages - Accomplish repairs to shell appendages in accordance with the report submitted under SWLIN 986A01* (Item No. 2) and approved by TYCOM. (Reservation)
(Includes skeg, bilge keels and shaft fairwaters.)

SY

2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TRUNKS AND ENCLOSURES	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
123A02A			A904	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Fuel Oil and JP-5 Tanks - Accomplish the following repairs:
 (Includes the structural compartmentation of the tanks and the access manholes.)
 - 1.1 Open and inspect fuel oil/JP-5 tanks. Provide copies of the inspection reports to the Type Commander and ship's Commanding Officer.

Fuel Oil Tanks JP-5 Tanks

- | | |
|---------------------|-----------|
| 5-23-1-F | 4-118-0-J |
| 5-23-2-F | 5-135-0-J |
| 5-29-1-F | 5-135-1-J |
| 5-29-2-F | 5-135-2-J |
| 5-38-1-F | |
| 5-38-2-F | |
| 5-53-1-F | |
| 5-53-2-F | |
| 5-56-1-F | |
| 5-56-2-F | |
| 5-61-0-F (See Note) | |
| 5-106-1-F | |
| 5-106-2-F | |
| 5-118-1-F | |
| 5-118-2-F | |
| 5-130-1-F | |
| 5-130-2-F | |

NOTE: F. O. service tank, 5-51-0-F, applies to AGFF-1 only.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	123A02*	SYSTEM	TRUNKS AND ENCLOSURES
-------	---------	--------	-----------------------

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
-----	--------	-------------	-----	---------	---------	---------	-----

1.2 Accomplish structural repairs authorized as a result of inspection conducted in 1.1 above. (Reservation)

SY 2

NOTE: Preservation covered on SWLIN 631A01*.

2. Pump down, open, clean and inspect L.O. tanks, submit report to Type Commander.

FA 2

L.O. Stowage Tanks

4-94-0-F
4-94-2-F
4-94-4-F

L.O. Settling Tanks

4-94-1-F
4-94-3-F
4-94-5-F

2.1 Refill tanks to proper level with clean certified oil following any authorized repairs.

NOTE:

Main reduction gear sump (5-90-0-F) covered in SWLIN 262A01*

3. JP-5 Service and Drain and L.O. Service Tanks - Accomplish the following repairs:

3.1 Open, clean and inspect below listed JP-5 service and drain and L.O. service tanks. Provide copies of the inspection reports to the Type Commander and Ship's Commanding Officer.

FA 2

Diesel Generator JP-5 Service Tanks

3-129-3-J
3-129-4-J

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	123A02*	SYSTEM	TRUNKS AND ENCLOSURES
-------	---------	--------	-----------------------

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
-----	--------	-------------	-----	---------	---------	---------	-----

JP-5 Drain Tank

4-124-0-J

Diesel Generator L.O. Service Tanks

3-129-1-F
3-129-2-F

3.2 Accomplish structural repairs authorized as a result of inspection conducted in item 3.1 above. (Reservation)

SY 2

NOTE: Preservation covered in SWLIN 631A01*.

NOTE: Additional repairs required to oil waste tanks as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TRUNKS AND ENCLOSURES	JCN INDICATED BELOW	TITLE
SWLIN	123A03A	TOTAL SHIPYARD COST	EIC GROUP A904	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATLS COST \$ ASSIGMT PRI

1. Fresh and Feed Water Tanks - Accomplish the following repairs:
(Includes the structural compartmentation of the tanks and the access manholes.)
- 1.1 Open and inspect three (3) fresh water and four (4) feedwater tanks. Identify necessary repairs and report to Type Commander.

FA 2

Feed Water Tanks Fresh Water Tanks

- | | |
|----------|-----------|
| 5-76-1-W | 5-98-1-W |
| 5-76-2-W | 5-98-2-W |
| 5-95-1-W | 5-130-0-W |
| 5-95-2-W | |

- 1.2 Accomplish structural repairs authorized as a result of inspection performed in 1.1 above.
(Reservation)

SY 2

NOTE: Preservation covered on SWLIN 631A01*.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	STRUCTURAL CASTINGS	JCN INDICATED BELOW	TITLE
SWLIN	161A01A	TOTAL SHIPYARD COST	EIC GROUP AA01	MAINTENANCE AND REPAIR

JCN

ITEM #

DESCRIPTION

M/D

MATL \$

COST \$

ASSIGMT

PRI

1. Stern Tube - Accomplish repairs to stern tube in accordance with report submitted under SWLIN 986A01* (Item No. 2) and approved by Type Commander. (Reservation)

(Includes exterior structural weldments on skin of ship used to house main shafting from interior of ship to exterior, but does not include stern tube bearings or fairwaters.)

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	STRUCTURAL CASTINGS	JCN INDICATED BELOW	TITLE
SWLIN	161A02A	TOTAL SHIPYARD COST	EIC GROUP AA01	*MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Propeller Strut - Accomplish repairs to propeller strut in accordance with report submitted under SWLIN 986A01* (Item No. 2) and approved by Type Commander. (Reservation)

(Includes structural weldments from skin of ship used to house propeller shaft. Does not include strut bearing.)

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER SWLIN	SYSTEM STRUCTURAL CASTINGS	JCN INDICATED BELOW	TITLE MAINTENANCE AND REPAIR
161A03A	TOTAL SHIPYARD COST	EIC GROUP AA01	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 1. Rudder Bearing Trunk - Accomplish repairs to rudder bearing trunk in accordance with report submitted under SWLIN 986A01* (Item No. 2) and approved by Type Commander. (Reservation)

(Includes structural weldment from skin of ship used to house rudder post. Does not include rudder post bearings.)

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SEA CHESTS	EIC GROUP	MAINTENANCE AND REPAIR
163A01A	TOTAL SHIPYARD COST	AB00	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
						SY	2

1. Sea Chests - Accomplish repairs to sea chests including removal, repair and reinstallation of splitter bars, strainers and waster sleeves authorized as a result of inspections conducted under SWLIN 986A01* (Item No. 2). (Reservation)

(Includes structural recess from sea valve connection to hull; splitter bars, strainers, waster sleeves and injection scoops.)

NOTE: Painting covered on SWLIN 631A01*.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SONAR DOMES	JCN INDICATED BELOW	TITLE
SWLIN	165A01A	TOTAL SHIPYARD COST	EIC GROUP AF01	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Sonar Dome - Accomplish repairs to sonar dome in accordance with report submitted under SWLIN 986A01* (Item No. 2) and approved by Type Commander. (Reservation)

(Includes shell plating below dome connection to hull, framing, stiffeners, floors and bulkheads.)

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	HULL STRUCTURAL CLOSURES	JCN INDICATED BELOW	TITLE
SWLIN	167A01A	TOTAL SHIPYARD COST	EIC GROUP AD01	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGNMT PRI

1. Hull Structural Closures - Accomplish repairs to hull structural closures in accordance with report submitted under SWLIN 986A01* (Item No. 2) and approved by Type Commander. (Reservation)

FA 2

PART 3.2

MAJOR SHIP SYSTEM 2

MAJOR SHIP SYSTEM 2 - PROPULSION PLANT

221	PROPULSION BOILERS
231	PROPULSION STEAM TURBINES
241	PROPULSION REDUCTION GEARS
243	PROPULSION SHAFTING
244	PROPULSION SHAFT BEARINGS
245	PROPULSORS
251	COMBUSTION AIR SYSTEM
253	MAIN STEAM PIPING SYSTEM
254	CONDENSERS AND AIR EJECTORS
255	FEED AND CONDENSATE SYSTEM
256	CIRCULATING AND COOLING SEA WATER SYSTEM
259	UPTAKES (INNER CASING)
261	FUEL SERVICE SYSTEM
262	MAIN PROPULSION LUBE OIL

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER SWLIN	SYSTEM	PROPULSION BOILERS	JCN INDICATED BELOW	TITLE
	221A01A	TOTAL SHIPYARD COST	EIC GROUP F101	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Boiler No. 1A - Accomplish the following repairs: SY 2

(Includes casings and extensions, steam and water drums, superheater, internal desuperheater, economizer, external fittings, soot blowers, burners, operating gear, safety valves and valve easing gear, vents, drains, handholes and man-holes.)

1.1 Perform visual inspection of steam drum welds and nozzle connections - grind a 1/4" radius on the following nozzle connections:

- 1.1.1 2 downcomer nozzles
- 1.1.2 8 riser tube nozzles
- 1.1.3 4 water gage nozzles
- 1.1.4 4 datum chamber nozzles
- 1.1.5 3 safety valve nozzles
- 1.1.6 1 steam drum vent nozzle
- 1.1.7 1 steam pressure transmitter nozzle
- 1.1.8 1 steam drum pressure gage connection

1.2 Hydrostatically test at 100% of operating pressure in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1030010-I. Submit report of deficiencies.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	221A01*	SYSTEM	PROPULSION BOILERS						
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI	

1.3 Remove steam drum internals and accomplish the following:

1.3.1 Clean and visually inspect all internals.

1.3.2 NDT internal surface of drum.

1.3.3 Repair/replace all damaged/missing internals/studs.

1.3.4 Ship test desuperheater mechanical joints (in place).

1.3.5 Reinstall all internals.

1.4 Overhaul two (2) gage glasses plus one spare.

2. Boiler No. 1B - Accomplish the following repairs:

(Includes casings and extensions, steam and water drums, superheater, internal desuperheater, economizer, external fittings, soot blowers, burners, operating gear, safety valves and valve easing gear, vents, drains, handholes and manholes.)

2.1 Perform visual inspection of steam drum welds and nozzle connections - grind a 1/4" radius on the following nozzle connections:

2.1.1 2 downcomer nozzles.

2.1.2 8 riser tube nozzles.

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	221A01*	SYSTEM	PROPULSION BOILERS										
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	2.1.1.3	4 water gage nozzles.					
	2.1.1.4	4 datum chamber nozzles.					
	2.1.1.5	3 safety valve nozzles.					
	2.1.1.6	1 steam drum vent nozzle.					
	2.1.1.7	1 steam pressure transmitter nozzle.					
	2.1.1.8	1 steam drum pressure gage connection.					
	2.2	Hydrostatically test at 100% of operating pressure in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1030010-I. Submit report of deficiencies.					
	2.3	Remove steam drum internals and accomplish the following:					
	2.3.1	Clean and visually inspect all internals.					
	2.3.2	NDT internal surface of drum.					
	2.3.3	Repair/replace all damaged/missing internals/studs.					
	2.3.4	Ship test desuperheater mechanical joints (in place).					
	2.3.5	Reinstall all internals.					

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	221A01*	SYSTEM	PROPULSION BOILERS						
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI	

- 2.4 Overhaul two (2) gage glasses.
- 3. Handhole and Manhole Plates and Headers
 - 3.1 Remove all handhole plates - clean, inspect and resurface seats found defective (approximately 50%).
 - 3.2 Ultrasonically test:
 - 3.2.1 Header bottom blow nozzles.
 - 3.2.2 Steam drum blow nozzles.
 - 3.2.3 Superheater header drain and vent nozzles.
- 4. Burner Assemblies - 1A and 1B Boilers - Accomplish a Class "B" overhaul of twelve (12) fuel oil burner barrel assemblies and twelve (12) atomizing assemblies.
(Includes air registers, burner housing, and automatic safety coupling back to but not including oil root valves.)
- 4.1 Inspect and renew sprayer plates.
- 5. Safety Valves - 1A and 1B Boiler
(Includes safety valve body, bonnet assembly, valve internals, pilot actuator, valve harness and valve easing gear.)

SY 2

SY 2

SY 2

CONTINUATION SHEET

SWLIN

221A01*

SYSTEM

PROPULSION BOILERS

SHIP SYSTEM WORK DESCRIPTION

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

5.1 Accomplish a class "B" overhaul to six (6) safety valves and two (2) pilot actuator valves.

5.2 Reinstall and set safety valves.

6. Air Casings - 1A and 1B Boiler

6.1 Preoverhaul test air casing to 60 psi.

6.2 Repair defects found by test.

7. Refractory - 1A and 1B Boiler - Inspect and renew refractory.

8. Superheaters - 1A and 1B Boiler - Drop and respace.

NOTE: Superheater replacement will be based on NAVSEC Philadelphia analysis of x-rays of superheater tube studs.

9. Lay Up - 1A and 1B Boiler

9.1 Upon arrival, drain and dry out boilers. Lay up boiler using dry method in accordance with NSTM Chapter 9510.

9.2 Upon completion of all repairs, drain and dry out boilers. Lay up boiler using dry method in accordance with NSTM Chapter 9510.

SY 2

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	PROPULSION BOILERS						
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI	

10. Post-Repair Tests - Upon the completion of repairs perform the following 1200 psi Propulsion Plant Test Procedures:

- 10.1 Boilers and Safety Valves - 221F1030010-I
 - 10.1.1 If repairs justify a 150% Hydrostatic Test in accordance with NSTM 9510, renew manhole and handhole gaskets after successful test.

10.2 Burners 221F1030010-II

10.3 Nucleonic Water Level Indicator - 221F1030010-III

NOTE: 1200 psi Propulsion Plant Test Procedure No. 200U5000070 (Readiness for Boiler Lightoff) performed in SWLIN 986A02*.

NOTE: Boiler isolation valve repairs covered in the following SWLINS:

- Main Steam - SWLIN 253A01*
- Main Feed - SWLIN 255A11*
- Auxiliary Steam - SWLIN 534A03*
- Bottom/Surface Blow - SWLIN 534A04*

NOTE: Additional repairs required as a result of previous boiler inspection discrepancies and recommendations, and as a result of the POT&I are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION BOILERS	JCN INDICATED BELOW	TITLE
221A02A	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
			F103	

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSIGMT	PRI
	1.	Automatic Combustion Control/Feedwater Control System, Boiler No. 1A and 1B - Class "B" overhaul to include but not limited to the following:				SY	2
	1.1	Overhaul and shop calibrate the following:					
	1.1.1.1	Feed water control valves (MF 11 and 12).					
	1.1.1.2	Fuel oil control valves.					
	1.1.1.3	Steam assist control valves.					
	1.1.1.4	Selector switches.					
	1.1.1.5	Regulators.					
	1.1.1.6	Transmitters.					
	1.1.1.7	Relays.					
	1.1.1.8	Controllers.					
	1.1.1.9	Transfer valves and needle valves.					
	1.1.1.10	Reducing valves.					
	1.1.1.11	Steam supply accelerating regulators.					
	1.1.1.12	Supply cruising regulators.					

CONTINUATION SHEET

SWLIN	221A02*	SYSTEM	PROPULSION BOILERS						
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SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1.1.13 4" air trimmer butterfly valves with positioners and relays for no. 1 and 2 superchargers.

1.2 Calibrate all gages and indicators.

1.3 Inspect all control tubing and fittings for damage, fouling, missing parts and proper connections.

1.4 Perform post-overhaul testing, adjusting and calibration of Automatic Combustion/Feedwater Control System in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1030020 (ACC/FWC General Regulator/General Regulator).

NOTE: Additional repairs required to ACC/FWC sensing line connections and air supply valves immediately upstream of reduced air stations to the supercharger turbine steam valve operators, and associated gages, indicators and instrumentation as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
231A01A	PROPULSION STEAM TURBINES		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
		F800	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	H.P. Turbine - Accomplish the following repairs:				SY	2
	1.1	Inspect H.P. turbine rotor bearings; renew as required. Take and record final bearing clearances.					
	1.2	Inspect and reseal ahead throttle valve.					
	2.	L.P. Turbine - Accomplish the following repairs:				SY	2
	2.1	Inspect L.P. turbine rotor bearings; renew as required. Take and record final bearing clearances.					
	2.2	Inspect and reseal astern throttle valve.					
	3.	Perform post-overhaul testing of H.P. and L.P. Turbines in accordance with 1200 psi Propulsion Plant Test Procedure No. 231F8000070 (Main Turbine and Reduction Gear).				SY	2

NOTE: Additional repairs required to H.P. turbine, L.P. turbine, bedplates and sub-bases, integral piping, operating gear and remote throttle controls as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION REDUCTION GEARS	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
241A01A			FC01	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Propulsion Reduction Gears - Accomplish the following repairs:

1.1 Provide dehumidification for main reduction gears for duration of ROH. SY 2

1.1.1 Install desiccant or refrigerant type dehumidifier on reduction gearcase as soon as gear lube oil system is secured. Humid air inlet shall be attached at a gearcase low point where circulation shall not be impeded.

1.1.2 If silica gel containers are used, containers shall be inspected for oil contamination periodically and replaced as necessary.

1.1.3 In conjunction with ship's force inspect gearcase and rotating elements twice weekly for condition of oil film. Shipyard shall wet internal surfaces with oil spray as necessary and maintain a record of inspection for ultimate distribution to ship's force.

NOTE: Frequency of inspections may be changed as experience indicates.

1.1.4 Dehumidification shall be in effect at all times except when lube oil system/gear unit is in operation.

CONTINUATION SHEET

SWLIN	241A01*	SYSTEM	PROPULSION REDUCTION GEARS						
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

2. Main Thrust Bearing - Accomplish the following repairs: SY 2

2.1 Measure main thrust bearing clearance and submit report to Type Commander and ship's Commanding officer.

2.1.1.1 Set thrust to design minimum if required.

3. Perform post-overhaul testing of Main Thrust Bearing in accordance with 1200 psi Propulsion Plant Test Procedure No. 241FC010140 (Main Thrust and Line Shaft Bearing). SY 2

NOTE: Test to be performed in conjunction with test of Main Propulsion Turbines (SWLIN 231A01*).

NOTE: Additional repairs required to operating gear and machinery guards, auxiliary integral components, gear case ventilation and vapor pipes, lifting gear and oil pans as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN		EIC GROUP	MAINTENANCE AND REPAIR
241A02A	TOTAL SHIPYARD COST	FC01	

JCN ITEM # DESCRIPTION M/D MATL\$ COST\$ ASSIGMT PRI

1. Main Shaft Turning Gear - Perform post-overhaul testing of Main Shaft Turning Gear in accordance with 1200 psi Propulsion Plant Test Procedure No. 241FC010130. (Shaft Turning Gear).

SY 2

NOTE: Additional repairs required to turbine reduction gearing, coupling, motor and motor controller, engaging assembly and brake assembly as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PROPULSION SHAFTING		MAINTENANCE AND REPAIR
243A01A	TOTAL SHIPYARD COST	EIC GROUP	
		FE03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Replace syntron seals and inflatable boot.

SY 2

2. Stern Tube Seal - Perform post-overhaul testing of Stern Tube Syntron Seal in accordance with 1200 psi Propulsion Plant Test Procedure No. 243FE000070 (Stern Tube Syntron Seal).

SY 2

3. Replace packing in two (2) shafting bulkhead stuffing boxes.

FA 2

NOTE: Inspection Phase I of Test Procedure No. 243FE000070 not required if Item 1 is authorized.

NOTE: Additional repairs required to mechanical and inflatable seals, stuffing box and packing gland (does not include stern tube flushing water system covered in SWLIN 524A0 *) as a result of the POT&I and drydock inspections are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION SHAFTING	JCN INDICATED BELOW	TITLE
SWLIN	243A02A	TOTAL SHIPYARD COST	EIC GROUP FE03	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL\$ COST \$ ASSIGMT PRI

1. External Shafting.

(Includes propeller shafting from stern tube seal to aftermost extent, Prairie System air piping and check valve, rotating fairwaters and rope guard. Does not include propeller, propeller nut, bearings and seals.)

1.1 Accomplish repairs to external shafting authorized as a result of inspection performed under SWLIN 986A01* (Item No. 2). (Reservation)

SY 2

1.2 Repair shaft covering that is damaged, incomplete or lacks adherence. Spark test shaft covering. (Reservation)

SY 2

NOTE: Repairs to be accomplished concurrently with SWLINS 243A01* and 255A01*.

NOTE: Full extent of repairs will be determined as a result of the drydock inspection.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION SHAFT BEARINGS	JCN INDICATED BELOW	TITLE
SWLIN	244A01A	TOTAL SHIPYARD COST	EIC GROUP	FE03
			M/D	MATLS
				COST \$
				ASSIGMT
				PRI

JCN ITEM # DESCRIPTION M/D MATLS COST \$ ASSIGMT PRI

1. Line Shaft Bearing - Inspect and check alignment of the line shaft bearing.
 - 1.1 Take bearing reaction readings (water borne).
 - 1.2 Calibrate bearing oil dipstick.
 - 1.3 Replace and stake oil disc (oil ring) screw.
 - 1.4 Check and align bearing oil seal.
 - 1.5 Take and record post-repair bearing clearance readings.

NOTE: Repair to be accomplished concurrently with SWLINS 243A01* and 243A02*.

NOTE: Line shaft bearing 1200 psi Propulsion Plant Test to be performed in conjunction with test of main thrust bearing (SWLIN 241A01*).

NOTE: Additional repairs required to line shaft bearing, pedestal, oil seals and access locking devices as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PROPULSION SHAFT BEARINGS	EIC GROUP	MAINTENANCE AND REPAIR
244A02A	TOTAL SHIPYARD COST	FE03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Stern Tube Bearing - Accomplish repairs to stern tube bearings authorized as a result of inspection conducted under SWLIN 986A01* (Item No. 2). (Reservation)				SY	2

(Includes stern tube bearings and bushings. Does not include stern tube and stern tube flushing system.)

NOTE: Repairs to be accomplished concurrently with SWLINS 243A01*, 243A03*, and 244A03*.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION SHAFT BEARINGS	JCN INDICATED BELOW	TITLE
SWLIN 244A03A	TOTAL SHIPYARD COST		EIC GROUP FE03	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Propeller Strut Bearing - Accomplish repairs to strut bearings authorized as a result of inspection conducted under SWLIN 986A01* (Item No. 2). (Reservation)

(Includes strut bearing and bushings. Does not include strut structure.)

NOTE: Repairs to be accomplished concurrently with SWLINS 243A01*, 243A03*, 244A02* and 245A01*.

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PROPULSORS		MAINTENANCE AND REPAIR
245A01A	TOTAL SHIPYARD COST	EIC GROUP	
		FE06	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Propeller - Accomplish repairs to propeller authorized as a result of inspection conducted under SWLIN 986A01* (Item No. 2). (Reservation) Repairs to include but not limited to the following:

(Includes the propeller, nut and cap, and Prairie System emitter holes and passages.)

- 1.1 Accomplish in-place repair of minor cracks and holes.
- 1.2 Tighten propeller nuts.
- 1.3 Clean Prairie emitter holes and passages.
 - 1.3.1 Repair hub check valve.

NOTE: Repairs to be accomplished concurrently with SWLINS 243A03* and 244A03*

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER SWLIN	SYSTEM TOTAL SHIPYARD COST	COMBUSTION AIR SYSTEM	JCN INDICATED BELOW EIC GROUP	TITLE MAINTENANCE AND REPAIR
251A02A			F103	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Boiler Supercharger 1A - Accomplish a Class "B" overhaul.

(Includes rotor assembly, rotor casing assembly, gas turbine, steam turbine, compressor inlet casing, compressor casing, turbine exhaust casing, starting mechanism, support structure, main lube oil pump, auxiliary lube oil pump and motor, manual lube oil pump, lube oil cooler, starting motor, bearings, combination exhaust and relief valve, speed indicator, overspeed trip assembly, pressure switch, and differential pressure switch.)

1.1 Test in accordance with 1200 psi Propulsion Plant Test Procedure No. 251F1030010 (Supercharger).

2. Boiler Supercharger 1B - Accomplish a Class "B" overhaul.

(Includes rotor assembly, rotor casing assembly, gas turbine, steam turbine, compressor inlet casing, compressor casing, turbine exhaust casing, starting mechanism, support structure, main lube oil pump, auxiliary lube oil pump and motor, manual lube oil pump, lube oil cooler, starting motor, bearings, combination exhaust and relief valve, speed indicator, overspeed trip assembly, pressure switch, and differential pressure switch.)

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	251A02*	SYSTEM	COMBUSTION AIR SYSTEM	
JCN	ITEM #	DESCRIPTION	M/D	MATL \$ COST \$ ASSIGMT PRI

2.1 Test in accordance with 1200 psi Propulsion
 Plant Test Procedure No. 251F1030010
 (Supercharger).

NOTE: Additional repairs required in this SWLIN as a
 result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
253A01A	MAIN STEAM PIPING	EIC GROUP	MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	F700	

JCN ITEM # DESCRIPTION M/D MATL\$ COST\$ ASSIGMT SY PRI

1. Main Steam Valves, 1200 psi - Accomplish a Class "B" overhaul to the valves listed in the following table. A Class "B" overhaul to the valves will include but not be limited to the valve disassembly and renewal of defective/worn seats, discs, stems, bonnets, and replacement of valve stem packing. (Includes entire valve from in line piping joints to and including manual and remote operating gear, valve internals, and associated bypass valves where installed.)

Valve No.	Description	Size and Type	Space	Criticality
MS 1	1A Boiler Main Stop	5" Gate	FR	A
MS 2	1B Boiler Main Stop	5" Gate	FR	A
MS 3	1A Boiler Guard	5" Gate	FR	A
MS 4	1B Boiler Guard	5" Gate	FR	A
MS 5	1A Feed Pump Supply	2" Globe	FR	C
MS 6	1B Feed Pump Supply	2" Globe	FR	C
1	1A Feed Pump Guard	2" Gate	FR	B
2	1B Feed Pump Guard	2" Gate	FR	B
3	#1 SSTG Guard	2" Globe	ER	B
4	#2 SSTG Guard	2" Globe	ER	B
MS 8	Ahead Turbine Guard	6" Gate	ER	A
MS 12	Astern Turbine Guard	4" Gate	ER	A
MS 10	#1 SSTG Supply	2" Gate	ER	C
MS 9	#2 SSTG Supply	2" Gate	ER	C
MS 7	#1 SSTG Supply Cutout	2" Gate	ER	D
MS 11	Main Engine Supply	6" Gate	ER	B

CONTINUATION SHEET

SWLIN

253A01*

SYSTEM

MAIN STEAM PIPING

SHIP SYSTEM WORK DESCRIPTION

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

2. Perform overhaul testing of Main Steam System in accordance with 1200 psi Propulsion Plant Test Procedure No. 253F7000070 (Main Steam System).

2.1 Prerequisites and Pressure Test - Phase I (Arrival) SY 2

2.2 Prerequisites and Pressure Test - Phase I (Post-Repair) SY 2

2.3 Prerequisites and Inspection - Phase I SY 2

2.4 Prerequisites and Operation - Phase III SY 2

2.5 Prerequisites and Operation - Phase IV SY 2

3. Perform overhaul testing of remote valve operators in accordance with 1200 psi Propulsion Plant Test Procedure No. 253F7030070 (Remote Valve Operators).

3.1 Boiler main steam stop - MS 1 and MS 2. SY 2

3.2 Boiler auxiliary steam stop - #1 and #2. SY 2

3.3 Fuel oil service tank suction valves - port and starboard. SY 2

3.4 Fuel oil ballast receiving tank suction/fill valves, 5-53-1-F, 5-53-2-F, 5-106-1-F, and 5-106-2-F. SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	253A01*	SYSTEM	MAIN STEAM PIPING			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT PRI

- 3.5 Fuel oil transfer system CO valve, FR, frame 78S. SY 2
- 3.6 Fuel oil service tank 5-61-0-F, suction valve, LFOSIA. SY 2
- 3.7 Fuel oil transfer system fill control valves - 2 Fwd, 2 Aft. SY 2
- 3.8 Firemain isolation valves, 2-62-2, 2-63-8, 2-78-2 or 4, 2-81-2, 2-118-2, 2-121 or 122-2. SY 2
- 3.9 Valves for eductors (bilge suction, eductor inlet, sea water supply) located in forward eductor room, diesel generator room and after pump room. SY 2
- 3.10 Main drainage bilge suction in fireroom, engine room, shaft alley no. 1 and shaft alley no. 2. SY 2
- 3.11 Main drainage bulkhead stop valves in fireroom and engine room. SY 2
- 3.12 No. 3 fire pump suction and discharge valves, 4-122-1 and 4-127-1 or 3. SY 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CONDENSERS AND AIR EJECTORS	JCN INDICATED BELOW	TITLE
SWLIN	254A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
JCN	ITEM #	DESCRIPTION	M/D	MATL \$
				COST \$
				ASSIGMT
				PRI

1. Perform overhaul testing of Main Condenser and Air Ejectors in accordance with 1200 psi Propulsion Plant Test Procedure No. 254FA010070 (Main Condenser and Air Ejectors).

NOTE: Additional repairs required to main condenser, main air ejectors and air ejector condenser as a result of the POT&I are as follows:

FA 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CONDENSERS AND AIR EJECTORS	JCN INDICATED BELOW	TITLE
SWLIN	254A02A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			310E	

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSIGMT	PRI
	1.	Ships Service Turbogenerator Condensing System - Accomplish the following repairs:				SY	2

1.1 Clean, inspect and conduct hydrostatic test of two (2) ships service turbogenerator condensers in accordance with NSTM Chapter 9460. Submit report of results to Type Commander.

1.2 Gages, Thermometers, SSTG Condensers and Air Ejectors - Repair and Calibrate.

2.	Perform overhaul testing of No. 1 and 2 Ships Service Turbogenerator Condensers and Air Ejectors in accordance with 1200 psi Propulsion Plant Test Procedure No. 254310E0070 (Auxiliary Condenser and Air Ejectors).					SY	2
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NOTE: Additional repairs required to ships service turbogenerator condensers, air ejectors and air ejector condensers as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CONDENSERS AND AIR EJECTORS	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
254A04A			F808	

JCN ITEM # DESCRIPTION M/D MATL\$ COST\$ ASSIGMT PRI

1. Auxiliary Gland Exhaust/Leak-Off Condenser (includes main turbine) - Accomplish a Class "B" overhaul to include but not limited to the following:

- 1.1 Chemically clean sea water side.
- 1.2 Hydrostatically test sea water and steam sides.
- 1.3 Replace defective tubes, repair defective water boxes, shell and tube sheets.
- 1.4 Overhaul and set salt water relief valve.
- 1.5 Replace seals, gaskets and fasteners, and hydro-statically test condenser.
- 1.6 Gages and Thermometers - Repair and calibrate.

2. Perform overhaul testing of the Auxiliary Gland Condenser, Auxiliary Gland Exhauster and SSTG Gland Exhauster in accordance with 1200 psi Propulsion Plant Test Procedure No. 254F8080070 (Gland Exhauster and Condensers). Omit post repair hydro-static test of condenser (covered in Item 1.5).

2.1 Prerequisites and Inspection - Phase I SY 2

2.2 Prerequisites and Operation - Phase II SY 2

2.3 Prerequisites and Operation - Phase III SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	254A04*	SYSTEM	CONDENSERS AND AIR EJECTORS							
JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$	ASSIGMT	PRI		

NOTE: Additional repairs required to auxiliary gland
exhauster and SSTG gland exhauster condensers as
a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	FEED AND CONDENSATE		MAINTENANCE AND REPAIR
255A01A	TOTAL SHIPYARD COST	EIC GROUP F30J	

JCN ITEM = DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Deaerating Feed Tank - Accomplish a Class "B" overhaul of the following valves:

- 1.1 Auxiliary exhaust inlet check valve.
- 1.2 Spray nozzles (16) sixteen.
- 1.3 Pressure relief valve.
- 1.4 Vacuum breaker.

2. Perform overhaul testing of Deaerating Feed Tank in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30J0070 (Deaerating Feed Tank). Omit setting of pressure relief and vacuum breaker (covered in Item 1).

- 2.1 Prerequisites and Pressure Test - Phase I SY 2
- 2.2 Prerequisites and Inspection - Phase I SY 2
- 2.3 Prerequisites and Operation - Phase III SY 2

NOTE: Additional repairs required to deaerating feed tank, sight glass and sample cooler as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	FEEB AND CONDENSATE TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
255A02A		F303	

JCN ITEM = DESCRIPTION M/D MATLS COST \$ ASSIGMT PRI

1. Main Feed Pump No. 1A - Accomplish the following repairs:

1.1 Turbine - Accomplish a Class "B" overhaul.

(Includes turbine, thrust and journal bearings, gears, governor, governor valve, trip valve, lube pumps, turbine driven, electric and hand, L.O. cooler, duplex L.O. strainer, oil pressure switches, controls and trips, low oil pressure and pump suction.)

1.2 Pump - Accomplish a Class "B" overhaul.

(Includes pump, thrust bearing, casing relief valve and coupling.)

1.3 Auxiliary Lube Oil Pump Motor and Controller - Accomplish a Class "B" overhaul.

1.4 Gages - Repair and calibrate.

NOTE: MFP Turbine combined exhaust and relief valves covered in SWLIN 534A01*

SY 2

SY 2

SY 2

SY 2

CONTINUATION SHEET

SWLIN

255A02*

SYSTEM

FEED AND CONDENSATE

JCN

ITEM #

DESCRIPTION

M/D

MATL \$

COST \$

ASSIGMT

PRI

2. Main Feed Pump No. 1B - Accomplish the following repairs:

2.1 Turbine - Accomplish a Class "B" overhaul. SY 2

(Includes turbine, thrust and journal bearings, gears, governor, governor valve, trip valve, lube pumps, turbine driven electric and hand, L.O. cooler, duplex L.O. strainer, oil pressure switches, controls and trips, low oil pressure and pump suction.)

2.2 Pump - Accomplish a Class "B" overhaul. SY 2

(Includes pump, thrust bearing, casing relief valve and coupling.)

2.3 Auxiliary Lube Oil Pump Motor and Controller - Accomplish a Class "B" overhaul. SY 2

2.4 Gages - Repair and calibrate. SY 2

NOTE: MFP Turbine combined exhaust and relief valves covered in SWLIN 534A01*.

3. Perform post overhaul testing of No. 1A and 1B Main Feed Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F3030070 (Main Feed Pump).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	255A03A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			F30H	

JCN ITEM = DESCRIPTION M/D MATL \$ COST \$ ASSGMT PRI

1. Main Condensate Pump No. 1A - Accomplish the following repairs:

1.1 Pump - Accomplish a Class "B" overhaul.

(Includes pump, coupling, base ring and motor support pedestal.)

1.1.1 Replace resilient mounts.

1.1.2 Replace flexible connectors on suction, discharge and vent lines.

1.1.3 Suction and discharge gages - Repair and calibrate.

1.2 Motor - Accomplish a Class "B" overhaul. Replace ground strap.

1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SWLIN		SYSTEM	FEED AND CONDENSATE			
JCN	ITEM #		M/D	MATL \$	COST \$	ASSIGMT PRI

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
2.		Main Condensate Pump No. 1B - Accomplish the following repairs:					
	2.1	Pump - Accomplish a Class "B" overhaul. (Includes pump, coupling, base ring and motor support pedestal.)				SY	2
	2.1.1	Replace resilient mounts.					
	2.1.2	Replace flexible connectors on suction, discharge and vent lines.					
	2.1.3	Suction and discharge gages - Repair and calibrate.					
	2.2	Motor - Accomplish a Class "B" overhaul. Replace ground strap.				SY	2
	2.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	2.3.1	Clean and preserve controller enclosure.					
	2.3.2	Clean and tighten terminals and connectors. Align contactors.					
	2.3.3	Replace defective or deteriorated wiring and components within controller enclosure.					

CONTINUATION SHEET

SWLIN

255A03*

SYSTEM

FEED AND CONDENSATE

SHIP SYSTEM WORK DESCRIPTION

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

3. SY 2

Perform post overhaul testing of No. 1A and 1B Main Condensate Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30H0020 (Main Condensate Pump).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE			
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR			
255A05A			F309				
JCN	ITEM =	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

1. Main Feed Booster Pump No. 1A - Accomplish the following repairs:
 - 1.1 Pump - Accomplish a Class "B" overhaul.
 - (Includes pump, coupling and motor support pedestal.)
 - 1.1.1 Replace resilient mounts.
 - 1.1.2 Replace flexible inserts in flexible connectors (EB joints) on suction and discharge lines.
 - 1.1.3 Replace flexible hose on vent line.
 - 1.1.4 Suction and discharge gages - Repair and calibrate.
 - 1.2 Motor - Accomplish a Class "B" overhaul.
 - Replace ground strap.
 - 1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.3.1 Clean and preserve controller enclosure.
 - 1.3.2 Clean and tighten terminals and connectors. Align contactors.
 - 1.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	FEED AND CONDENSATE			
255A05*					

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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2. Main Feed Booster Pump No. 1B - Accomplish the following repairs:

2.1 Pump - Accomplish a Class "B" overhaul.

(Includes pump, coupling and motor support pedestal.)

2.1.1 Replace resilient mounts.

2.1.2 Replace flexible inserts in flexible connectors (EB joints) on suction and discharge lines.

2.1.3 Replace flexible hose on vent line.

2.1.4 Suction and discharge gages - Repair and calibrate.

2.2 Motor - Accomplish a Class "B" overhaul. Replace ground strap.

2.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

2.3.1 Clean and preserve controller enclosure.

2.3.2 Clean and tighten terminals and connectors. Align contactors.

2.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	255A05*	SYSTEM	FEED AND CONDENSATE						
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI		

3. Perform post-overhaul testing of No. 1A and 1B Main Feed Booster Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F3090020 (Main Feed Booster Pump).

SY 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	255A09A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
JCN	ITEM #	DESCRIPTION	M/D	MATL \$
			COST \$	ASSIGMT
				PRI

1. Ships Service Turbogenerator Condensate Pump No. 1 -
Accomplish the following repairs:

1.1 Accomplish a Class "B" overhaul.

(Includes pump, coupling and motor
adapter.)

1.1.1 Test in accordance with 1200 psi
Propulsion Plant Test Procedure No.
255310C0070 (Auxiliary Condensate
Pump).

1.2 Motor - Accomplish a Class "B" overhaul
to include the following:

1.2.1 Clean, dip, bake and test stator windings.

1.2.2 Replace bearings.

1.2.3 Balance rotating assembly.

2. Ships Service Turbogenerator Condensate Pump No. 2 -
Accomplish the following repairs:

2.1 Pump - Accomplish a Class "B" overhaul.

(Includes pump, coupling and motor
adapter.)

2.1.1 Test in accordance with 1200 psi
Propulsion Plant Test Procedure No.
255310C0070 (Auxiliary Condensate Pump).

FA 2

FA 2

CONTINUATION SHEET

SWLIN

255A09*

SYSTEM

FEED AND CONDENSATE

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

2.2 Motor - Accomplish a Class "B" overhaul to include the following:

- 2.2.1 Clean, dip, bake and test stator windings.
- 2.2.2 Replace bearings.
- 2.2.3 Balance rotating assembly.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	255A10A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			F30K	

JCN ITEM = DESCRIPTION M/D MATL\$ COST \$ ASSIGMT PRI

1. Main Condensate Piping - Accomplish the following:

1.1 Accomplish a Class "B" overhaul of the following valves:

<u>Valve No.</u>	<u>Description</u>	<u>Size and Type</u>
#1	DFT Inlet	5" Butterfly
#13	Cond. Disch. from Air Ejector	5" Butterfly
#24	Mn. Cond. Discharge	3 1/2" Butterfly
#34	Mn. Cond. Discharge	3 1/2" Butterfly
#29	Mn. Cond. Suction	6" Butterfly
#30	Mn. Cond. Suction	6" Butterfly
#14	Bypass	1 1/2" Butterfly
#15	Bypass	1 1/2" Butterfly
CN-7	Mn. Feed Bstr. Pmp. Suction	10" Gate
CN-8	Mn. Feed Bstr. Pmp. Suction	10" Gate

1.2 Perform overhaul testing of Main Condensate System in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30K0130-I (Condensate System).

1.2.1 Prerequisites and Flush - Phase I	SY	2
1.2.2 Prerequisites and Pressure Test - Phase I	SY	2
1.2.3 Prerequisites and Inspection - Phase I	SY	2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	255A10*	SYSTEM	FEED AND CONDENSATE										
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI					

1.2.4 Prerequisites and Operation - Phase III (Turbogenerator)

1.2.5 Prerequisites and Operation - Phase IV (Main Turbine)

1.3 Perform post overhaul testing of Demineralizer (Ion Exchange) System in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30K0130-II (Demineralizer).

1.4 Perform post overhaul testing of Morpholine Injection System in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30K0130-III (Morpholine Injection System).

NOTE: Additional repairs required to piping and valves from main and SSTG condensers, through main and auxiliary air ejector condensers, to the deaerating feed tank and from the freshwater drain collecting tank to the deaerating feed tank as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	255A11A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			F30K	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Feedwater Piping System
 - 1.1 Boiler Feed Stops MF 14 and MF 15, 4" Globe Valves - Accomplish a Class "B" overhaul. SY 2
 - 1.2 Main Feed Valves - Accomplish a Class "B" overhaul of the following valves: SY 2

Valve No. Description Size and Type

- MF 5 & 6 MFBP Discharge 5" Gate
- MF 1 & 3 MFP Suction 5" Gate
- MF 2 & 4 MFP Discharge 5" Gate
- MF 7 MFP Cross-Connect 4" Gate
- MF 8 & 9 Valve up stream of regulators 4" Gate
- MF 12 & 13 Stop check valve down stream from regulators 4" Globe

2. Perform overhaul testing of Feedwater Piping System in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30K0140 (Feed System).

- 2.1 Prerequisites and Flush - Phase I SY 2
- 2.2 Prerequisites and Pressure Test - Phase I SY 2
- 2.3 Prerequisites and Inspection - Phase I SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	255All*	SYSTEM	FEED AND CONDENSATE
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

SY 2

2.4 Prerequisites and Operation - Phase III

NOTE: Additional repairs required to piping and valves from outlet side of deaerating feed tank to boiler feed stop valves as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	FEED AND CONDENSATE		MAINTENANCE AND REPAIR
255A13A	TOTAL SHIPYARD COST	EIC GROUP	TH04

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSIGMT	PRI
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1. Fresh Water Drain Tank Pump No. 1 - Accomplish the following repairs:

1.1 Pump - Accomplish a Class "B" overhaul.
(Includes pump, coupling and motor support bracket.)

1.1.1 Replace resilient mounts.

1.1.2 Replace suction and discharge flexible connections and flexible connection on recirculating line.

1.1.3 Suction and Discharge Gages - Repair and calibrate.

1.2 Motor - Accomplish a Class "B" overhaul to include the following:

1.2.1 Clean and inspect components.

1.2.2 Reinsulate coils, windings and leads.

1.2.3 Install new bearings, renew fasteners.

1.2.4 Shop test.

1.3 Controller - Accomplish a Class "B" overhaul to include the following:

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	FEED AND CONDENSATE				
255A13*						

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 1.3.1 Clean and preserve controller enclosure.
- 1.3.2 Clean and tighten terminals and connectors. Align contactors.
- 1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.
- 2. Fresh Water Drain Tank Pump No. 2 - Accomplish the following repairs:
 - 2.1 Pump - Accomplish a Class "B" overhaul. (Includes pump, coupling, and motor support brackets.)
 - 2.1.1 Replace resilient mounts.
 - 2.1.2 Replace suction and discharge flexible connections and flexible connection on recirculating line.
 - 2.1.3 Suction and Discharge Gages - Repair and calibrate.
 - 2.2 Motor - Accomplish a Class "B" overhaul to include the following:
 - 2.2.1 Clean and inspect components.
 - 2.2.2 Reinsulate coils, windings and leads.
 - 2.2.3 Install new bearings, renew fasteners.
 - 2.2.4 Shop test.

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	255A13*	SYSTEM	FEED AND CONDENSATE
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

2.3 Controller - Accomplish a Class "B" overhaul to include the following: SY 2

2.3.1 Clean and preserve controller enclosure.

2.3.2 Clean and tighten terminals and connectors. Align contactors.

2.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

3. Perform post-overhaul testing of No. 1 and 2 Fresh Water Drain Tank Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 255TH040050 (Fresh Water Drain Tank Pump). SY 2

4. Fresh Water Drain Collecting Tank

4.1 Perform post-overhaul testing of Fresh Water Drain Collecting Tank in conjunction with tests of No. 1 and 2 Fresh Water Drain Tank Pumps performed in Item 3 above. SY 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	CIRCULATING & COOLING SEA WATER	EIC GROUP	MAINTENANCE AND REPAIR
256A01A	TOTAL SHIPYARD COST	FB00	

JCN ITEM # DESCRIPTION M/D MATL\$ COST \$ ASSIGMT PRI

1. Sea Water Circulating System - Accomplish the following repairs:

1.1 Accomplish a Class "B" overhaul of two (2) non-return swing check (flapper) valves in the main condenser circulating water inlet line from the injection scoop and the main circulating pump discharge line to include but not limited to the following:

1.1.1.1 Repair stuffing boxes and packing glands; replace if deteriorated or cracked.

1.1.2 Inspect hinge pin assembly to assure material is monel and that monel nut is properly keyed in place in accordance with NAVSHIPS Technical Manual 0948-047-8010.

1.2 Replace five (5) expansion joints in the main circulating system. Establish reference marks in accordance with NSTM Chapter 9480 and Figure 9480.la.

1.2.1 Scoop injection inlet line.

1.2.2 Main circulating pump discharge line.

1.2.3 Main circulating water overboard discharge line.

1.2.4 Main lube oil cooler inlet.

SY 2

SY 2

CONTINUATION SHEET

SWLIN	256A01*	SYSTEM	CIRCULATING & COOLING SEA WATER
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1.2.5 Main lube oil cooler outlet.

2. Perform overhaul testing of Sea Water Circulating System in accordance with 1200 psi Propulsion Plant Test Procedure No. 256FB090070 (Salt Water Circulating Systems).

- 2.1 Prerequisites and Pressure Test - Phase I SY 2
- 2.2 Prerequisites and Inspection - Phase I SY 2
- 2.3 Prerequisites and Operation - Phase II SY 2

NOTE: Sea water inlet, suction and overboard discharge valves repaired under SWLIN 520A01*.

NOTE: Additional repairs to Main Condenser Circulating Water piping and valves (except injection scoop, overboard discharge sea chest, suction, inlet and discharge valves), SSTG Condenser Circulating Water System piping, valves (except sea suction and overboard discharge valves) and branch piping to main lube oil cooler as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
	CIRCULATING & COOLING SEA WATER		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
256A02A		310E	

JCN **ITEM #** **DESCRIPTION** **M/D** **MATL \$** **COST \$** **ASSGMT** **PRI**

1. Ships Service Turbogenerator Circulating Pump No. 1 -
Accomplish the following repairs:

1.1 Pump - Accomplish a Class "B" overhaul.
(Includes pump assembly and motor adapter.) **SY** **2**

1.1.1 Replace resilient mounts.

1.1.2 Replace suction and discharge flexible hoses.

1.1.3 Suction and Discharge Gages - Repair and calibrate.

1.2 Motor - Accomplish a Class "B" overhaul. **SY** **2**

1.3 Motor Controller - Accomplish a Class "B" overhaul to include the following: **SY** **2**

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	256A02*	SYSTEM	CIRCULATING & COOLING SEA WATER						
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	2.	Ships Service Turbogenerator Circulating Pump No. 2 - Accomplish the following repairs:					
	2.1	Pump - Accomplish a Class "B" overhaul. (Includes pump assembly and motor adapter.)				SY	2
	2.1.1	Replace resilient mounts.					
	2.1.2	Replace suction and discharge flexible hoses.					
	2.1.3	Suction and Discharge Gages - Repair and calibrate.					
	2.2	Motor - Accomplish a Class "B" overhaul.				SY	2
	2.3	Motor Controller - Accomplish a Class "B" overhaul to include the following:				SY	2
	2.3.1	Clean and preserve controller enclosure.					
	2.3.2	Clean and tighten terminals and connectors. Align contactors.					
	2.3.3	Replace defective or deteriorated wiring and components within controller enclosure.					
	3.	Perform post-overhaul testing of No. 1 and 2 SSTG Circulating Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 25631000070 (Auxiliary Condenser Circulating Pump).				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CIRCULATING & COOLING SEA WATER	JCN INDICATED BELOW	TITLE
SWLIN	256A04A	TOTAL SHIPYARD COST	EIC GROUP FB03	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL S COST \$ ASSIGMT PRI SY 2

1. Main Circulating Pump - Accomplish the following:

1.1 Pump - Accomplish a Class "B" overhaul.

(Includes pump assembly and coupling.)

1.2 Turbine - Accomplish a Class "B" overhaul.

(Includes turbine assembly, speed and governing devices.)

1.3 Reduction Gears - Accomplish a Class "B" overhaul.

1.4 Test in accordance with 1200 psi Propulsion Plant Test Procedure No. 256FB030060 (Main Condenser Circulating Pump).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	UPTAKES (INNER CASING)	JCN INDICATED BELOW	TITLE
TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
		F601	

DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

Boiler Uptakes No. 1A - Accomplish the following repairs:

- 1.1 Clean uptakes, remove soot deposits. FA 2
- 1.2 Renew expansion joints. SY 2
- 1.3 Clean uptake drains. SY(A) FA(P) 2

Boiler Uptakes No. 1B - Accomplish the following repairs:

- 2.1 Clean uptakes, remove soot deposits. FA 2
- 2.2 Renew expansion joints. SY 2
- 2.3 Clean uptake drains. SY(A) FA(P) 2

Additional repairs required to uptakes, expansion joints, rain gutters and drains, access plates and covers as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	FUEL SERVICE	JCN INDICATED BELOW	TITLE
26-1A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
		F500	

ITEM DESCRIPTION M/D MATL\$ COST\$ ASSIGMT PRI

1. Fuel Oil Service System Duplex Strainer Assemblies - SY 2

Accomplish a Class "B" overhaul of two (2) fuel oil duplex strainer assemblies to include but not limited to the following:

- 1.1 Polish and lap plug valve.
- 1.2 Machine, true up and refit mating and sealing surfaces.
- 1.3 Replace drain and vent valves.
- 1.4 Hydrostatically test for side-to-side and external leakage.

2. Strainer Spray Shields, Two (2) - Upon completion of repairs to strainers, install shields in accordance with NAVSEA specifications. SY 2

3. Fuel Oil Quick Closing Valve, Boiler 1A (Ball Type Valve) - Accomplish the following repairs: SY 2

- 3.1 Class "B" overhaul and bench test at system operating pressure using clean fresh water to determine leakage rate.

SHIP SYSTEM WORK DESCRIPTION

DESCRIPTION SHEET

261A01*	SYSTEM	FUEL SERVICE
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ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
4.	Fuel Oil Quick Closing Valve, Boiler 1B (Ball Type Valve) - Accomplish the following repairs: 4.1 Class "B" overhaul and bench test at system operating pressure using clean fresh water to determine leakage rate.				SY	2
5.	Replace eighteen (18) 1/2" socket weld angle fuel oil root burner valves.				SY	2
6.	Accomplish post-overhaul testing of the Fuel Oil Service System in accordance with 1200 psi Propulsion Plant Test Procedure No. 261F5070070 (Fuel Oil Service System). 6.1 Prerequisites and Flush - Phase I 6.2 Prerequisites and Pressure Test - Phase I 6.3 Prerequisites and Inspection - Phase I (omit inspection and coating of tanks) 6.4 Prerequisites and Operation - Phase III				SY	2

NOTE: Additional repairs required to piping, valves and fittings from service tanks to and including manifolds, pressure regulators, port use equipment, fuel tank (when not built into hull structure) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

ITEM #	SYSTEM	FUEL SERVICE		JCN INDICATED BELOW	TITLE	M/D	MATL\$	COST \$	ASSGMT	PRI
		TOTAL SHIPYARD COST	EIC GROUP							
261A02A				F503	MAINTENANCE AND REPAIR					

DESCRIPTION

1. Fuel Oil Service Pump No. 1A - Accomplish the following repairs:

1.1 Pump - Accomplish a Class "B" overhaul.
(Includes pump assembly, discharge relief valve coupling and motor pedestal.)

1.1.1 Suction and Discharge Gages - Repair and calibrate.

1.2 Motor - Accomplish a Class "B" overhaul.

1.3 Motor Controller - Accomplish a Class "B" overhaul to include the following:

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

2. Fuel Oil Service Pump No. 1B - Accomplish the following repairs:

2.1 Pump - Accomplish a Class "B" overhaul.

(Includes pump, discharge relief valve, coupling and motor support pedestal.)

SY 2

SY 2

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

DESCRIPTION SHEET

261A02*

SYSTEM

FUEL SERVICE

ITEM #

DESCRIPTION

M/D

MATL \$

COST \$

ASSIGMT

PRI

2.1.1 Suction and Discharge Gages - Repair and calibrate.

2.2 Motor - Accomplish a Class "B" overhaul.

2.3 Motor Controller - Accomplish a Class "B" overhaul to include the following:

2.3.1 Clean and preserve controller enclosure.

2.3.2 Clean and tighten terminals and connectors. Align contactors.

2.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

Fuel Oil Service Pump No. 1C - Accomplish the following repairs:

3.1 Pump - Accomplish a Class "B" overhaul. (Includes pump assembly, discharge relief valve, coupling and motor pedestal.)

3.1.1 Suction and Discharge Gages - Repair and calibrate.

3.2 Motor - Accomplish a Class "B" overhaul.

3.3 Motor Controller - Accomplish a Class "B" overhaul to include the following:

SY 2

SY 2

SY 2

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

DESCRIPTION SHEET

SYSTEM	FUEL SERVICE				
261A02*					

ITEM # M/D MATL \$ COST \$ ASSIGMT PRI

- 3.3.1 Clean and preserve controller enclosure.
- 3.3.2 Clean and tighten terminals and connectors. Align contactors.
- 3.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

6. Perform post-overhaul testing of No. 1A, 1B and 1C Fuel Oil Service Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 261F5030020 (Fuel Oil Service Pumps).

SY 2

NOTE: Additional repairs required in this SWLIN (including in-port service pump motor and controller) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	JCN INDICATED BELOW	TITLE
MAIN PROPULSION LUBE OIL		MAINTENANCE AND REPAIR
TOTAL SHIPYARD COST	EIC GROUP	
262801A	FD00	

M/D MATL\$ COST\$ ASSIGMT PRI

SY 2

SY 2

DESCRIPTION

1. Main Lube Oil Cooler - Accomplish a Class "B" overhaul to include the following:

1.1 Clean and hydrostatically test main lube oil cooler assembly oil and watersides.

1.2 Replace plugged or leaking tubes.

1.3 Replace seals and gaskets, replace defective or deteriorated fasteners.

1.4 Gages and Thermometers - Repair and calibrate.

2. Main Lube Oil System Duplex Strainer - Accomplish a Class "B" overhaul to include the following:

(Includes inlet and outlet gages and tubing, drain and vent valves, plug valve and strainer internals.)

2.1 Polish, lap and refit plug valve.

2.2 Machine, true up and refit mating surfaces.

2.3 Replace broken or missing magnets and repair strainer baskets.

2.4 Repair vent and drain valves to conform to latest requirements for flammable systems.

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	MAIN PROPULSION LUBE OIL	M/D	MATL \$	COST \$	ASSIGMT	PRI
DESCRIPTION						
3.	2.5 Hydrostatically test strainer assembly for side-to-side and external leakage.				SY	2
	2.6 Inlet and Outlet Gages - Repair and calibrate.					
4.	Main L.O. Strainer Spray Shield - Remove and store for reuse. Upon completion of repairs to strainer, reinstall shield in accordance with NAVSEA specifications.				FA	2
	Main L.O. Sump (Tank No. 5-90-0-F) - Pump down, clean, inspect and submit report to Type Commander.					
	4.1 Fill sump to proper level with clean certified oil.					
5.	Perform overhaul testing of Lube Oil Service, Transfer and Purifying System in accordance with 1200 psi Propulsion Plant Test Procedure No. 262FD000070 (Lube Oil Service, Transfer and Purification System).					
	5.1 Prerequisites and Flush - Phase I				SY	2
	5.2 Prerequisites and Pressure Test - Phase I				SY	2
	5.3 Prerequisites and Inspection - Phase I				SY	2
	5.4 Prerequisites and Operation - Phase II				SY	2
	5.5 Prerequisites and Operation - Phase IV				SY	2

SHIP SYSTEM WORK DESCRIPTION

REVISION SHEET

262AD1*	SYSTEM	MAIN PROPULSION LUBE OIL							
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ITEM #

DESCRIPTION

M/D MATL \$ COST \$ ASSIGMT PRI

NOTE: Additional repairs required to main propulsion attached lube oil pump, lube oil piping, valves, heaters, mechanical liquid level indicators, in-line sight flow glasses, piping to and from electrostatic precipitators, regulating valves and orifices, instrumentation, pressure switches (does not include electrical tank level indicators or indicator system, I.C. designated alarms and indicating circuits) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	JCN INDICATED BELOW	TITLE
MAIN PROPULSION LUBE OIL		MAINTENANCE AND REPAIR
TOTAL SHIPYARD COST	EIC GROUP	
	FD01	

DESCRIPTION M/D MATL\$ COST\$ ASSIGMT PRI

1. Main Lube Oil Pump No. () - Accomplish the following repairs:

1.1 Pump - Replace seals, bearings, and shock mounts.

(Includes pump assembly and coupling.)

1.1.1 Suction and Discharge Gages - Repair and calibrate.

1.2 Turbine - Balance rotor, set governor, replace shock mounts, and replace/calibrate gauges and thermometers.

(Includes turbine assembly, speed and governing devices.)

1.3 Align pump and turbine.

2. Main Lube Oil Service Standby Pump - Accomplish the following:

2.1 Pump - Class "B" overhaul.

2.2 Motor - Class "B" overhaul.

2.3 Motor Controller - Class "B" overhaul to include the following:

SY 2

SHIP SYSTEM WORK DESCRIPTION

262A02*	SYSTEM	MAIN PROPULSION LUBE OIL							
		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI		

- 2.3.1 Clean and preserve controller enclosure.
- 2.3.2 Clean and tighten terminals and connectors. Align contactors.
- 2.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

1. Perform post-overhaul testing of Main Lube Oil Service Pumps in accordance with 1200 ;si Propulsion Plant Test Procedure No. 262FD010050 (Main Lube Oil Service Pumps.)

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	JCN INDICATED BELOW	TITLE
MAIN PROPULSION LUBE OIL		MAINTENANCE AND REPAIR
TOTAL SHIPYARD COST	EIC GROUP	
	FD07	

DESCRIPTION M/D MATL\$ COST\$ ASSIGMT PRI

1. Lube Oil Purifier - Accomplish the following repairs:

1.1 Purifier - Accomplish a Class "B" overhaul

SY 2

(Includes pedestal and purifier assembly.)

1.1.1 Replace resilient mounts.

1.1.2 Replace flexible hose assemblies and flexible hose.

1.2 Motor - Accomplish a Class "B" overhaul.

SY 2

1.3 Controller - Accomplish a Class "B" overhaul to include the following:

SY 2

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

1.4 Inlet Pressure Gage and Inlet Thermometer - Repair and calibrate.

SY 2

Perform post-overhaul testing of Lube Oil Purifier in accordance with 1200 psi Propulsion Plant Test Procedure No. 262FD070050 (Lube Oil Centrifugal Purifier).

SY 2

Additional repairs required in this SWLIN as a result of the POT&I are as follows:

PART 3.3

MAJOR SHIP SYSTEM 3

MAJOR SHIP SYSTEM 3 - ELECTRIC PLANT

- 311 SHIPS SERVICE POWER GENERATION
- 314 POWER CONVERSION EQUIPMENT
- 324 SWITCHGEAR AND PANELS
- 341 SSTG LUBE OIL SYSTEM
- 342 DIESEL SUPPORT SYSTEM

AD-A054 222

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SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
311A01A	SHIPS SERVICE POWER GENERATION		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
		310C	

JCN DESCRIPTION M/D MATL\$ COST\$ ASSIGMT PRI

- 1. Ships Service Turbogenerator Set, 60 Hz, No. 1:
- 1.1 Turbine - Accomplish the following repairs:
 - 1.1.1 Electric Hydraulic Governing System - Accomplish a Class "B" overhaul.
 - 1.1.2 Steam Admission Valve (Steam Chest Cover, Valve) and Linkage Assembly - Accomplish a Class "B" overhaul.
 - 1.1.3 Throttle Valve and Steam Strainer - Accomplish a Class "B" overhaul.
 - 1.1.4 Turbine Thrust and Journal Bearings - Replace.
 - 1.1.5 Hone and polish turbine journals.
 - 1.1.6 Overspeed Trip - Clean, inspect, repair and reset.
- 1.2 Reduction Gear - Accomplish the following Repairs:
 - 1.2.1 Journal Bearings - Replace.
- 1.3 Turbine and Reduction Gear, Panel Mounted Gages - Repair and calibrate.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	SHIPS SERVICE POWER GENERATION							
	311A01*								
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	SY	PRI	

1.4 Generator - Accomplish the following repairs:

1.4.1 Stator Windings - Clean (on ship).

1.4.2 Slip Rings - Polish and true up.

1.4.3 Brush Holders and Brushes - Clean holders and replace brushes.

1.4.4 Journal Bearings - Replace.

1.5 Tachometer and Permanent Magnet Generator - Accomplish the following repairs:

1.5.1 Tachometer - Clean, inspect, repair and calibrate.

1.5.2 Permanent Magnet Generator - Accomplish a Class "B" overhaul.

2. Ships Service Turbogenerator Set 60 Hz, No. 2:

2.1 Turbine - Accomplish the following repairs:

2.1.1 Electric Hydraulic Governing System - Accomplish a Class "B" overhaul.

2.1.2 Steam Admission Valve (Steam Chest Cover, Valve) and Linkage Assembly - Accomplish a Class "B" overhaul.

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	SYSTEM	SHIPS SERVICE POWER GENERATION
311A01*		

JCN ITEM # M/D MATL \$ COST \$ ASSIGMT PRI

- 2.1.3 Throttle Valve and Steam Strainer - Accomplish a Class "B" overhaul.
- 2.1.4 Turbine Thrust and Journal Bearings - Replace.
- 2.1.5 Hone and polish turbine journals.
- 2.1.6 Overspeed Trip - Clean, inspect, repair and reset.
- 2.2 Reduction Gear - Accomplish the following Repairs:
 - 2.2.1 Journal Bearings - Replace.
- 2.3 Turbine and Reduction Gear, Panel Mounted Gages - Repair and calibrate.
- 2.4 Generator - Accomplish the following repairs:
 - 2.4.1 Stator Windings - Clean (on ship).
 - 2.4.2 Slip Rings - Polish and true up.
 - 2.4.3 Brush Holders and Brushes - Clean holders and replace brushes.
 - 2.4.4 Journal Bearings - Replace.
- 2.5 Tachometer and Permanent Magnet Generator - Accomplish the following repairs:
 - 2.5.1 Tachometer - Clean, inspect, repair and calibrate.

SY 2
SY 2
SY 2
SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	311A01*	SYSTEM	SHIPS SERVICE POWER GENERATION					M/D	MATL \$	COST \$	ASSIGMT	PRI
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2.5.2 Permanent Magnet Generator - Accomplish a Class "B" overhaul.

NOTE: Meter repairs and calibration covered in SWLIN 324A01*.

NOTE: SSTG Lube Oil System repairs covered in SWLIN 341A01*.

NOTE: Additional repairs required to turbine assembly, speed reduction gear assembly, generator, or generator air cooler (does not include lube oil system and pumps, non-integral condensers or pumps) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SHIPS SERVICE POWER GENERATION		MAINTENANCE AND REPAIR
311A02A	TOTAL SHIPYARD COST	EIC GROUP 3301	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 1. Ship Service/Emergency Diesel Generator Set No. 3A - Accomplish the following repairs:
 - 1.1 Speed Control and Regulating System - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.1.1 Hydraulic governor and actuator.
 - 1.1.2 Load and frequency sensors and amplifier.
 - 1.1.3 Mechanical linkage.
 - 1.2 Fuel Injectors - Accomplish the following repairs:
 - 1.2.1 Clean, inspect and repair ten (10) injectors. Adjust and set.
 - 1.3 Gages and Thermometers - Repair and calibrate the following:
 - 1.3.1 One (1) mechanical tachometer.
 - 1.3.2 Two (2) distant reading thermometers.
 - 1.3.3 Five (5) simplex pressure gages.
 - 1.4 Generator - Accomplish the following repairs:

SY 2
SY 2
SY 2
SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	311A02*	SYSTEM	SHIPS SERVICE POWER GENERATION						
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI		

- 1.4.1 Slip Rings - Clean and polish.
- 1.4.2 Rotor and Stator - Clean (on ship).
- 2. Ship Service/Emergency Diesel Generator Set No. 3B - Accomplish the following repairs:
 - 2.1 Speed Control and Regulating System - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 2.1.1 Hydraulic governor and actuator.
 - 2.1.2 Load and frequency sensors and amplifier.
 - 2.1.3 Mechanical linkage.
 - 2.2 Fuel Injectors - Accomplish the following repairs:
 - 2.2.1 Clean, inspect and repair ten (10) injectors. Adjust and set.
 - 2.3 Gages and Thermometers - Repair and calibrate the following:
 - 2.3.1 One (1) mechanical tachometer.
 - 2.3.2 Two (2) distant reading thermometers.
 - 2.3.3 Five (5) simplex pressure gages.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	SHIPS SERVICE POWER GENERATION	M/D	MATL \$	COST \$	ASSIGMT	PRI
311A02*		DESCRIPTION					

2.4 Generator - Accomplish the following repairs:

2.4.1 Slip Rings - Clean and polish.

2.4.2 Rotor and Stator - Clean (on ship).

3. Perform post-overhaul testing of Ships Service Diesel Generator Set in accordance with 1200 psi Propulsion Plant Test Procedure No. 31233010070 (Emergency Generator). Test includes support systems SWLIN 342A01*

NOTE: Additional repairs required to engine assembly, scavenging air blowers, clutch and power transmission assembly, fuel pump (attached) and filters, generator assembly and excitation system, attached lube oil filter assembly, manual controls and exhaust temperature pyrometer (if installed) (does not include heat exchanger, lube oil coolers, air starting system, sea water circulating pump and system, exhaust piping, air inlet piping and silencer) as a result of the POT&I are as follows:

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
	POWER CONVERSION EQUIPMENT		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
314A01A		4700	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Special Frequency Motor Generator Set, 400 Hz, 30 KW, No. 1 - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2

1.1 Clean rotor and stator windings.

1.2 Polish and true up slip rings.

1.3 Clean brush holders. Replace and seat brushes.

1.4 Clean and visually inspect control cabinets and regulators for burnt, missing, damaged, leaking or worn components, parts, wiring and hardware.

1.5 Conduct insulation resistance tests and replace frayed wiring or defective components. Replace main line contacts.

1.6 Repair and calibrate 0-150 AC voltmeter, 0-300 AC ammeter, 430-470 voltmeter, 0-150 kilowatt meter, 0-200 ammeter, 0-600 voltmeter and synchroscope. Check operation of overload relays.

1.7 Balance rotor with all rotating elements and replace bearings.

1.8 Replace four (4) resilient mounts.

1.9 Replace main line contacts of motor controller.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	POWER CONVERSION EQUIPMENT	M/D	MATL \$	COST \$	ASSIGMT	PRI
314A01*							

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	2.	Special Frequency Motor Generator Set, 400 Hz, 30 KW, No. 2 - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	2.1	Clean rotor and stator windings.					
	2.2	Polish and true up slip rings.					
	2.3	Clean brush holders. Replace and seat brushes.					
	2.4	Clean and visually inspect control cabinets and regulators for burnt, missing, damaged, leaking or worn components, parts, wiring and hardware.					
	2.5	Conduct insulation resistance tests and replace frayed wiring or defective components. Replace main line contacts.					
	2.6	Repair and calibrate 0-150 AC voltmeter, 0-300 AC ammeter, 430-470 voltmeter, 0-150 kilowatt meter, 0-200 ammeter, 0-600 voltmeter and synchroscope. Check operation of overload relays.					
	2.7	Balance rotor with all rotating elements and replace bearings.					
	2.8	Replace four (4) resilient mounts.					

2. Special Frequency Motor Generator Set, 400 Hz, 30 KW, No. 2 - Accomplish a Class "B" overhaul to include but not limited to the following:

- 2.1 Clean rotor and stator windings.
- 2.2 Polish and true up slip rings.
- 2.3 Clean brush holders. Replace and seat brushes.
- 2.4 Clean and visually inspect control cabinets and regulators for burnt, missing, damaged, leaking or worn components, parts, wiring and hardware.
- 2.5 Conduct insulation resistance tests and replace frayed wiring or defective components. Replace main line contacts.
- 2.6 Repair and calibrate 0-150 AC voltmeter, 0-300 AC ammeter, 430-470 voltmeter, 0-150 kilowatt meter, 0-200 ammeter, 0-600 voltmeter and synchroscope. Check operation of overload relays.
- 2.7 Balance rotor with all rotating elements and replace bearings.
- 2.8 Replace four (4) resilient mounts.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	POWER CONVERSION EQUIPMENT					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

3. Special Frequency Motor Generator Set, 400 Hz, 30 KW, No. 3 - Accomplish a Class "B" overhaul to include but not limited to the following:
- 3.1 Clean rotor and stator windings.
 - 3.2 Polish and true up slip rings.
 - 3.3 Clean brush holders. Replace and seat brushes.
 - 3.4 Clean and visually inspect control cabinets and regulators for burnt, missing, damaged, leaking or worn components, parts, wiring and hardware.
 - 3.5 Conduct insulation resistance tests and replace frayed wiring or defective components. Replace main line contacts.
 - 3.6 Repair and calibrate 0-150 AC voltmeter, 0-300 AC ammeter, 430-470 voltmeter, 0-150 kilowatt meter, 0-200 ammeter, 0-600 voltmeter and synchroscope. Check operation of overload relays.
 - 3.7 Balance rotor with all rotating elements and replace bearings.
 - 3.8 Replace four (4) resilient mounts.

NOTE Third MG Set applies to FF-1047 and FF-1049 only.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SWITCHGEAR AND PANELS		MAINTENANCE AND REPAIR
324A01A	TOTAL SHIPYARD COST	EIC GROUP 4100	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Switchboards and Panels SY/FA 2

1.1 Switchboard No. 1S - Accomplish the following repairs:

- 1.1.1 Calibrate the following meters:
 - 1.1.1.1 Three (3) ammeters, AC, 0-1200, 60 HZ.
 - 1.1.1.2 Three (3) voltmeters, AC, 0-600, 60 HZ.
 - 1.1.1.3 Three (3) frequency meters, 56-63 HZ.
 - 1.1.1.4 One (1) watt meter, 0-800 KW.
 - 1.1.1.5 One (1) synchroscope, AB-14.

1.1.2 Clean and repair circuit breakers.

1.2 Switchboard No. 2S - Accomplish the following repairs: SY/FA 2

- 1.2.1 Calibrate the following meters:
 - 1.2.1.1 One (1) ammeter, AC, 0-1200, 60 Hz.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	SWITCHGEAR AND PANELS					
324A01*							

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1.2.1.1.2 One (1) voltmeter, AC, 0-600,
60 HZ.

1.2.1.1.3 One (1) frequency meter, 56-63
HZ.

1.2.1.1.4 One (1) watt meter, 0-800 KW.

1.2.1.1.5 One (1) synchroscope, AB-14.

1.2.2 Clean and repair circuit breakers.

1.3 Switchboard No. 3S - Accomplish the
following repairs:

1.3.1 Calibrate the following meters:

1.3.1.1 Two (2) ammeters, AC, 0-1200,
60 HZ.

1.3.1.2 Two (2) voltmeters, AC, 0-600,
60 HZ.

1.3.1.3 Two (2) frequency meters,
56-63 HZ.

1.3.1.4 Two (2) watt meters, 0-800 KW.

1.3.1.5 One (1) synchroscope, AB-14.

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	324A01*	SYSTEM		SWITCHGEAR AND PANELS										
JCN	ITEM #		M/D	DESCRIPTION	MATL \$	COST \$	ASSIGMT	PRI						

1.3.2 Clean and repair circuit breakers.

NOTE: Additional repairs required to circuit breakers, switches, S/S switchboards, emergency switchboards, panels, (does not include propulsion control switchboards, weapons control switchboards, I.C. switchboards) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
341A01A	SSTG LUBE OIL TOTAL SHIPYARD COST	EIC GROUP 310S	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Ships Service Turbogenerator Lube Oil System, No.
1 - Accomplish the following repairs:

1.1 Attached and Hand Operated Lube Oil Pumps -
Accomplish a Class "B" overhaul. SY 2

1.2 Duplex Lube Oil Strainer - Accomplish a Class
"B" overhaul. SY 2

1.2.1 Vent and Drain Valves - Repair to
conform with latest requirements for
flammable systems.

1.3 Duplex Strainer Shield - Remove and store
strainer spray shield, upon completion of
repairs to strainer reinstall shield in
accordance with NAVSEA specifications. SY 2

2. Ships Service Turbogenerator Lube Oil System, No.
2 - Accomplish the following repairs:

2.1 Attached and Hand Operated Lube Oil Pumps -
Accomplish a Class "B" overhaul. SY 2

2.2 Duplex Lube Oil Strainer - Accomplish a Class
"B" overhaul. SY 2

2.2.1 Vent and Drain Valves - Repair to
conform with latest requirements for
flammable systems.

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	341A01*	SYSTEM	SSTG LUBE OIL	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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2.3 Duplex Strainer Shield - Remove and store strainer spray shield; upon completion of repairs to strainer reinstall shield in accordance with NAVSEA specifications.

SY 2

NOTE: Post-overhaul testing of No 1 and 2 Auxiliary Lube Oil Pumps covered in SWLIN 311A01* with 1200 psi Propulsion Plant Test Procedure No. 311310C0070 (Ships Service Turbogenerator).

NOTE: Additional repairs required to sump tanks, electrostatic precipitators, lube oil cooler, filters, orifice plates, sight glasses, pressure and thermostatic switches, accumulators, and "oil piping" to bearings, governor and speed control systems and trips as a result of POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DIESEL SUPPORT	JCN INDICATED BELOW	TITLE
SWLIN	342A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			3300	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Ships Service Diesel Generator Support Systems,
60 Hz - Accomplish the following repairs:

1.1 Sea Water Circulating Pump - Accomplish a
Class "B" overhaul to include but not limited to:

1.1.1 Replace resilient mounts.

1.1.2 Replace suction and discharge flex hoses.

1.2 Sea Water Circulating Pump Motor - Accomplish
a Class "B" overhaul.

1.3 SSDG Engine No. 1 Fresh Water/Sea Water Heat
Exchanger - Accomplish a Class "B" overhaul
to include but not limited to the following:

1.3.1 Chemically clean sea water and fresh
water sides.

1.3.2 Replace seals, gaskets and fasteners.

1.3.3 Hydrostatically test and repair any
leakage found.

1.4 SSDG Engine No. 1 Lube Oil Coolers -
Accomplish a Class "B" overhaul of two (2)
lube oil coolers to include but not limited
to the following:

1.4.1 Chemically clean water and oil sides.

SY 2

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	DIESEL SUPPORT							
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI		

- 1.4.2 Replace seals, gaskets and fasteners.
- 1.4.3 Hydrostatically test, repair leakage found. (Replace leaking cooler cores.)
- 1.5 SSDG Engine No. 2 Fresh Water/Salt Water Heat Exchanger - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.5.1 Chemically clean sea water and fresh water sides.
 - 1.5.2 Replace seals, gaskets and fasteners.
 - 1.5.3 Hydrostatically test and repair any leakage found.
- 1.6 SSDG Engine No. 2 Lube Oil Coolers - Accomplish a Class "B" overhaul of two (2) lube oil coolers to include but not limited to the following:
 - 1.6.1 Chemically clean water and oil sides.
 - 1.6.2 Replace seals, gaskets and fasteners.
 - 1.6.3 Hydrostatically test; repair leakage found. (Replace leaking cooler cores.)

SY 2

SY 2

NOTE: Diesel support systems testing covered in SWLIN 312A01*.

NOTE: Sea valve repairs covered in SWLIN 520A01*.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	DIESEL SUPPORT										
342A01*	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI					

NOTE: Additional repairs required to sea water piping, lube oil service and transfer piping, fuel oil suction and return piping, non-built-in fuel and water tanks, air starting piping, valves and motors, air inlet and exhaust piping with silencers and mufflers as a result of the POT&I are as follows:

PART 3.4

MAJOR SHIP SYSTEM 4

MAJOR SHIP SYSTEM 4 - COMMAND AND SURVEILLANCE

410	COMMAND AND CONTROL SYSTEMS (FFG-1 Class only)
421	NON-ELECTRICAL/ELECTRONIC NAVIGATION AIDS
424	ELECTRONIC NAVIGATION, ACOUSTICAL SYSTEMS
426	ELECTRICAL NAVIGATION SYSTEMS
431	SWITCHBOARDS FOR I.C. SYSTEMS
436	ALARM, SAFETY AND WARNING SYSTEMS
437	INDICATING, ORDER AND METERING SYSTEMS
441	RADIO SYSTEMS
445	TELETYPE AND FACSIMILE SYSTEMS
446	SECURITY EQUIPMENT
450	SURVEILLANCE, SURFACE SYSTEMS
451	SURFACE SEARCH RADAR
452	AIR SEARCH RADAR
453	AIR SEARCH RADAR (3D) (FFG-1 Class only)

MAJOR SHIP SYSTEM 4 - COMMAND AND SURVEILLANCE (Cont.)

455	IDENTIFICATION (IFF) SYSTEM
463	ACTIVE/PASSIVE (MULTIPLE MODE) SONAR
464	CLASSIFICATION SONAR
471	ACTIVE ECM
472	PASSIVE ECM
482	FIRE CONTROL SYSTEMS (NON-SONAR DATA BASE) (FFG-1 Class only
491	ELECTRONIC TEST, CHECKOUT AND MONITORING EQUIPMENT

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	COMMAND AND CONTROL		MAINTENANCE AND REPAIR
410A01A	TOTAL SHIPYARD COST	EIC GROUP	
		5DBC	

JCN ITEM # DESCRIPTION M/D MATL\$ COST\$ ASSIGMT PRI

1. Weapons Direction Equipment (WDE), Mk 1 MOD 2 -
 Accomplish the following repairs:

1.1 Accomplish a Class "B" overhaul of two (2)
 Missile Control Consoles, Mk 65 MOD 0
 including Control Indicator, Mk 111 MOD 0.

NOTE: Applies to FFG-1 class only.

NOTE: Additional repairs required in this SWLIN as a
 result of the POT&I are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	NON ELECTRICAL/ ELECTRONIC NAVIGATION AIDS	JCN INDICATED BELOW	TITLE
SWLIN	421A02A	TOTAL SHIPYARD COST	EIC GROUP LG00	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATLS COSTS ASSIGMT PRI

SY 2

1. Magnetic Compass - Accomplish compensation of magnetic compasses.

NOTE: Additional repairs required to binnacles, heeling and corrector magnets and holder as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	ELECTRICAL NAVIGATION SYSTEMS	EIC GROUP	MAINTENANCE AND REPAIR
426A01A	TOTAL SHIPYARD COST	LB00	

JCN ITEM # DESCRIPTION M/D MATL\$ COST \$ ASSIGMT PRI

1. MK 19 Gyro Compass - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes gyro compass, binnacle, control cabinets, power supplies, five ship control synchro signal amplifiers, stands, operating gear and integral lighting.)

- 1.1 Replace brushes on meridian and slave gyro.
- 1.2 Clean slip rings on meridian and slave gyro.
- 1.3 Conduct a scorsby test.
- 1.4 Overhaul the following ship control synchro signal amplifiers:
 - 1.4.1 One (1) AN/SPS 10.
 - 1.4.2 One (1) AN/SPS 40.
 - 1.4.3 One (1) No. 1 Control.
 - 1.4.4 One (1) No. 2 Torque.
 - 1.4.5 One (1) AN/WLR-1.
 - 1.4.6 One (1) AN/ULQ-6 (on FF-1040 through FF-1045 only).

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	426A01*	SYSTEM	ELECTRICAL NAVIGATION SYSTEMS
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
		NOTE: Other shipboard synchro amplifiers not covered in item 1.4 will be repaired with their system.					
	2.	MK 19 Gyro Compass Repeaters - Accomplish a Class "B" overhaul of all MK 19 repeaters.					SY 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
426A03A	ELECTRICAL NAVIGATION SYSTEMS		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP LD00	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Dead Reckoning Systems				SY	2

1.1 MK 6 Mod () Dead Reckoning Tracer -
Accomplish a Class "B" overhaul to include
but not limited to the following:

1.1.1 Mechanically and electrically align
equipment.

1.2 NC-2 Plotter

1.2.1 Mechanically and electrically align
equipment.

1.3 Dead Reckoning Analyzer Indicator -
Accomplish a Class "B" overhaul to include
but not limited to the following:

1.3.1 Mechanically and electrically align
equipment.

2. Perform a post-repair shipboard test of the
Dead Reckoning System (DRI, DRAI and NC-2
Plotter) with associated components to include
an inspection, insulation resistance/continuity
check and operational/calibration tests.

SY 2

NOTE: Additional repairs required in this SWLIN
(including field changes to above equipment)
as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER SWLIN	SYSTEM SWITCHBOARDS FOR I.C. SYSTEMS TOTAL SHIPYARD COST	JCN INDICATED BELOW EIC GROUP	TITLE MAINTENANCE AND REPAIR
431A01A		4100	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI 2

1. Main I.C. and ACO Switchboards - Calibrate six (6) meters and reverse power relay.
 - 1.1 One (1) AC volt meter, 0-150.
 - 1.2 One (1) AC ammeter, 0-300.
 - 1.3 One (1) frequency meter, 55-65 HZ.
 - 1.4 One (1) frequency meter, 395-405 HZ.
 - 1.5 One (1) AC volt meter, 0-150 (400 HZ).
 - 1.6 One (1) AC ammeter, 0-150 (400 HZ).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
436A01A	ALARM, SAFETY AND WARNING		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
		M600	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Propulsion Alarm, Safety and Warning Systems - Perform post-overhaul testing of Propulsion Alarm Safety and Warning Systems in accordance with 1200 psi Propulsion Plant Test Procedure No. 436M5000012 (Propulsion Alarm, Safety and Warning System).

NOTE: Additional repairs required to IC Circuits DW, EA, LEC, 2EC, 1ED, EF, EJ, LEK, LEQ, LEW, 2EW, F, FD, LFD, 2FD, LTD, 2TD, 9TD, and 17TD, sensors, panels, switchboards and alarms as a result of POT&I are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
437A01A	INDICATING, ORDER AND METERING TOTAL SHIPYARD COST	EIC GROUP M600	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSGMT PRI

- 1. Indicating, Order and Metering Systems
- 1.1 CKT 6TK Fuel Oil Tank Level Indicator System - SY 2
Accomplish the following repairs:

- 1.1.1 Clean and examine installations for material condition, adequate fastening and satisfactory operation.
- 1.1.2 Adjust and calibrate tank gages.
- 1.1.3 Replace or repair defective components identified as a result of the inspection. (Reservation)

- 1.2 Remote Boiler Water Level Indicators - Overhaul two (2) indicators in the fire room to include but not limited to the following:

- 1.2.1 Repair transmitters and circuitry.
- 1.2.2 Calibrate.

- 2. Perform post-overhaul testing of Propulsion Order and Indicating System in accordance with 1200 psi Propulsion Plant Test Procedure No. 437M6000012 (Ships Propulsion Order and Indicating System). SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	437A01*	SYSTEM
INDICATING, ORDER AND METERING		

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

NOTE: Additional repairs required to ship control and valve control circuits, level indicators, temperature indicators, control panels, electrical and mechanical order and metering systems, transmitters, sensors and counters; IC circuits 4MB, BC, KJ, ME, VS, 7VS, PX, LSB, 2SB, PB, LTK, 1TM, 7TM, 3MB, KM, K, M, MB and TB as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	INDICATING, ORDER AND METERING TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
437A02A		LH07	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. CKT HD/HE Wind Speed and Direction System - Accomplish a Class "B" overhaul of detectors and transmitters to include but not limited to the following:

1.1 Clean, inspect and test for material condition, adequate fastening and satisfactory operation.

1.2 Repair or replace defective components or circuitry.

2. Perform a ckt "HD" and "HE" post-overhaul shipboard test to include an inspection, insulation resistance check and operational/adjustment test of all components.

NOTE: Additional repairs required to indicators and indicator lighting circuitry as a result of the POT&I are as follows:

FA 2

FA 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	RADIO SYSTEMS		MAINTENANCE AND REPAIR
441A02A	TOTAL SHIPYARD COST	EIC GROUP	
		Q900	

JCN ITEM # DESCRIPTION M/D MATL\$ COST\$ ASSIGMT PRI

1. Antenna Tuning Systems

1.1 AN/SRA-12() Filter Assembly - Accomplish a Class "B" overhaul of filter assemblies to include but not limited to the following:

FA 2

1.1.1.1 Mechanically and electrically align equipment.

1.1.1.2 Test in accordance with requirements of .

1.2 AN/SRA-33 Multicoupler - Accomplish a Class "B" overhaul of multicouplers to include but not limited to the following:

SY 2

1.2.1.1 Mechanically and electrically align equipment.

1.2.1.2 Test in accordance with requirements of .

1.3 CU-937/UR Tuner - Accomplish a Class "B" overhaul.

SY 2

1.3.1.1 Visually inspect accomplished work in accordance with criteria of . Operational tests to be performed when coupler is integrated with respective transceiver.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	RADIO SYSTEMS							
441A02*									
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI		

1.4 AN/URA-38 Antenna Coupler - Accomplish a Class "B" overhaul of _____ antenna couplers to include but not limited to the following:

(Includes coupler controls, couplers, and interconnecting cables.)

1.4.1 Mechanically and electrically align equipment.

1.4.2 Test in accordance with requirements of _____.

1.5 AN/SRA-49 Antenna Coupler - Accomplish a Class "B" overhaul of antenna coupler to include but not limited to the following:

(Includes coupler control, coupler, and interconnecting cables.)

1.5.1 Mechanically and electrically align equipment.

1.5.2 Test in accordance with requirements of _____.

1.6 AN/SRA-52 Antenna Coupler - Accomplish a Class "B" overhaul of antenna coupler to include but not limited to the following:

(Includes coupler control, coupler and interconnecting cables.)

SY 2

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	441A02*	SYSTEM	RADIO SYSTEMS	
JCN	ITEM #	DESCRIPTION	M/D	MATL \$ COST \$ ASSIGMT PRI

1.6.1 Mechanically and electrically align equipment.

1.6.2 Test in accordance with requirements of _____.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	RADIO SYSTEMS		MAINTENANCE AND REPAIR
441A03A	TOTAL SHIPYARD COST	EIC GROUP	
		Q000	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	AN/SRA-34 () - Accomplish a Class "B" overhaul.				SY	2
	2.	AN/SRC-23 () - Accomplish a Class "B" overhaul.				SY	2
	3.	CU-1559/SRC - Accomplish a Class "B" overhaul.				SY	2
	4.	AN/SRC-31 - Accomplish a Class "B" overhaul.				SY	2
	5.	AN/SRC-23 - Accomplish a Class "B" overhaul.				SY	2

NOTE: Applies to FF-1047 and FF-1049 only.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	RADIO SYSTEMS		MAINTENANCE AND REPAIR
441A05A	TOTAL SHIPYARD COST	EIC GROUP QB00	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Communications Receivers

1.1 AN-URR-27 VHF Receiver - Accomplish a Class "B" overhaul of one (1) receiver to include but not limited to the following:

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

1.2 R-390()/URR Radio Receiver - Accomplish a Class "B" overhaul of one (1) radio receiver to include but not limited to the following:
(Includes CV-591()/URR converter and receiver.)

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of _____.

1.3 AN/WRR-3 Radio Receiver - Accomplish a Class "B" overhaul of one (1) radio receiver to include but not limited to the following:

1.3.1 Mechanically and electrically align equipment.

1.3.2 Test in accordance with requirements of _____.

FA 2

SY 2

SY 2

CONTINUATION SHEET

SWLIN	SYSTEM					
441A05*	RADIO SYSTEMS					

SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1.4 R-1051()/URR Radio Receiver - Accomplish a Class "B" overhaul of radio receivers to include but not limited to the following:

1.4.1 Mechanically and electrically align equipment.

1.4.2 Test in accordance with requirements of _____.

1.5 AN/SRR-19 Radio Receiver - Accomplish a Class "B" overhaul of one (1) radio receiver to include but not limited to the following:

1.5.1 Mechanically and electrically align equipment.

1.5.2 Test in accordance with requirements of _____.

1.6 AN/URR-44 Radio Receiver - Accomplish a Class "B" overhaul of _____ radio receivers to include but not limited to the following:

1.6.1 Mechanically and electrically align equipment.

1.6.2 Test in accordance with requirements of _____.

SY 2

FA 2

FA 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	441A05*	SYSTEM	RADIO SYSTEMS
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

NOTE: Additional repairs required in this SWLIN
 (including field changes to above equipment)
 as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	RADIO SYSTEMS		MAINTENANCE AND REPAIR
441A06A	TOTAL SHIPYARD COST	EIC GROUP	
		QD00	
JCN	ITEM #	DESCRIPTION	M/D
			MATL \$
			COST \$
			ASSGMT
			PRI

1. UHF/VHF Communications Systems

1.1 AN/SRC-20() Radio Set - Accomplish a Class "B" overhaul of two (2) radio sets to include but not limited to the following:

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

1.2 AN/SRC-21() Radio Sets - Accomplish a Class "B" overhaul of two (2) radio sets to include but not limited to the following:

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of _____.

1.3 AN/URC-9() Radio Set - Accomplish a Class "B" overhaul of three (3) radio sets to include but not limited to the following:

1.3.1 Mechanically and electrically align equipment.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	441A06*	SYSTEM	RADIO SYSTEMS						
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGNMT PRI

1.3.2 Test in accordance with requirements of _____.

1.4 AN/VRC-46 Radio Set - Accomplish a Class "B" overhaul of one (1) radio set to include but not limited to the following:

(Includes AS-1729/VRC antenna, adapter control unit, receiver - transmitter, and inter-connecting cables.)

1.4.1 Mechanically and electrically align equipment.

1.4.2 Test in accordance with requirements of _____.

1.5 AN/URC-4() Radio Set - Accomplish a Class "B" overhaul of _____ radio sets to include but not limited to the following:

1.5.1 Mechanically and electrically align equipment.

1.5.2 Test in accordance with requirements of _____.

NOTE: Additional repairs required in this SWLIN (including field changes to the above equipment) as a result of the POT&I are as follows:

FA 2

FA 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	RADIO SYSTEMS		MAINTENANCE AND REPAIR
441A07A	TOTAL SHIPYARD COST	EIC GROUP	
ITEM #	DESCRIPTION	M/D	MATL \$
			COST \$
JCN			ASSIGMT
			PRI

1. Low Frequency, Medium Frequency and High Frequency Transmitters.

1.1 AN/URT-23() Radio Transmitter - Accomplish a Class "B" overhaul of two (2) transmitters to include but not limited to the following:

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

1.2 AN/URT-24() Transmitter - Accomplish a Class "B" overhaul of one (1) transmitter to include but not limited to the following:

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of _____.

1.3 AN/WRC-1A Radio Transmitter - Accomplish a Class "B" overhaul of one (1) transmitter to include but not limited to the following:

1.3.1 Mechanically and electrically align equipment.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	441A07*	SYSTEM	RADIO SYSTEMS						
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI	

1.3.2 Test in accordance with requirements of _____.

1.4 AN/URT-7() Transmitter - Accomplish a Class "B" overhaul of _____ transmitters to include but not limited to the following:

1.4.1 Mechanically and electrically align equipment.

1.4.2 Test in accordance with requirements of _____.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	RADIO SYSTEMS		MAINTENANCE AND REPAIR
441A10A	TOTAL SHIPYARD COST	EIC GROUP	Qp00

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT SY PRI

1. Satellite Communications

1.1 AN/SSR-1() Satellite Communications Receiver -
 Accomplish a Class "B" overhaul of one (1)
 receiver to include but not limited to the
 following:

(Includes combiner, demodulator, demulti-
 plexer, amplifier - converters, AS-2815/SSR-1 ()
 antennas and interconnecting cables.)

1.1.1 Mechanically and electrically align
 equipment.

1.1.2 Test in accordance with requirements
 of _____.

1.2 AN/WSC-3 UHF Satellite Communication Equipment

1.2.1 Accomplish a Class "B" overhaul of
 two (2) AS-3016/WSC-1 antennas to
 include but not limited to the
 following:

1.2.1.1 Disassemble, clean and inspect
 for damaged and missing
 elements and hardware.

1.2.1.2 Repair or replace damaged
 elements, replace missing
 hardware.

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	RADIO SYSTEMS							
441A10*									

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.2.1.3	Test in accordance with the requirements of _____.					
	1.2.1.4	Preserve exterior in accordance with NSTM Chapter 9190.					
	1.2.2	Accomplish a Class "B" overhaul of two (2) AM-6691/WSC-1 amplifier-filters to include but not limited to the following:				SY	2
	1.2.2.1	Mechanically and electrically align equipment.					
	1.2.2.2	Test in accordance with requirements of _____.					
	1.2.3	Accomplish a Class "B" overhaul of one (1) C-9351/WSC-3 mode control indicator to include but not limited to the following:				SY	2
	1.2.3.1	Mechanically and electrically align equipment.					
	1.2.3.2	Test in accordance with the requirements of _____.					
	1.2.4	Accomplish a Class "B" overhaul of one (1) C-9351/WSC-3 control indicator to include but not limited to the following: (Includes mounting hardware.)				SY	2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	441A10*	SYSTEM	RADIO SYSTEMS						
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 1.2.4.1 Mechanically and electrically align equipment.
- 1.2.4.2 Test in accordance with requirements of _____.
- 1.2.5 Accomplish a Class "B" overhaul to one (1) RT-1107/WSC-3 transceiver to include but not limited to the following:
 - 1.2.5.1 Mechanically and electrically align equipment.
 - 1.2.5.2 Test in accordance with requirements of _____.
- 1.2.6 Accomplish a Class "B" overhaul to one (1) C-9597/WSC-1 antenna control to include but not limited to the following:
 - 1.2.6.1 Mechanically and electrically align equipment.
 - 1.2.6.2 Test in accordance with requirements of _____.

SY 2

SY 2

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TELETYPE AND FACSIMILE	JCN INDICATED BELOW	TITLE
SWLIN	445A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			Q300	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Teletype Systems
 - 1.1 AN/UGC-6() Teletype Set - Accomplish a Class "B" overhaul of _____ teletype sets to include but not limited to the following:
 - 1.1.1 Mechanically and electrically align equipment.
 - 1.1.2 Test in accordance with requirements of _____.
 - 1.1.3 Lubricate in accordance with appropriate technical manual.
 - 1.2 AN/UGC-20() Teletype Set - Accomplish a Class "B" overhaul of _____ teletype sets to include but not limited to the following:
 - 1.2.1 Mechanically and electrically align equipment.
 - 1.2.2 Test in accordance with requirements of _____.
 - 1.2.3 Lubricate in accordance with technical manual.
 - 1.3 AN/UGC-25() Teletype Set - Accomplish a Class "B" overhaul of _____ teletype sets to include but not limited to the following:
 - 1.3.1 Mechanically and electrically align equipment.
 - 1.3.2 Test in accordance with requirements of _____.
 - 1.3.3 Lubricate in accordance with technical manual.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	TELETYPE AND FACSIMILE	M/D	MATL \$	COST \$	ASSIGMT	PRI
445A01*		DESCRIPTION					

- 1.3.1 Mechanically and electrically align equipment.
- 1.3.2 Test in accordance with requirements of _____.
- 1.3.3 Lubricate in accordance with technical manual.
- 1.4 TT-192()/UG Teletype Reperator - Accomplish a Class "B" overhaul of teletype reperforators to include but not limited to the following:
- 1.4.1 Mechanically and electrically align equipment.
- 1.4.2 Test in accordance with requirements of _____.
- 1.4.3 Lubricate in accordance with technical manual.
- 1.5 AN/UCC-1() V Frequency Division Multiplex Terminal - Accomplish a Class "B" overhaul of _____ multiplex terminals to include but not limited to the following:
(Includes converter frequency shifts, and/or keyer frequency shifts, and control attenuators.)

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	SYSTEM	TELETYPE AND FACSIMILE
445A01*		

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1.5.1 Mechanically and electrically align equipment.

1.5.2 Test in accordance with requirements of _____.

1.5.3 Lubricate in accordance with technical manual.

1.6 AN/URA-17() Teletype Converters - Accomplish a Class "B" overhaul of _____ teletype converters to include but not limited to the following:

1.6.1 Mechanically and electrically align equipment.

1.6.2 Test in accordance with requirements of _____.

1.7 CV-2460 Audio Frequency Converter - Accomplish a Class "B" overhaul of _____ audio frequency converters to include but not limited to the following:

1.7.1 Mechanically and electrically align equipment.

1.7.2 Test in accordance with requirements of _____.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SECURITY EQUIPMENT	EIC GROUP	MAINTENANCE AND REPAIR
446A01A	TOTAL SHIPYARD COST	QF00	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Crypto Equipment - Turn in all crypto equipment to designated refurbishment activity for repair and installation of field changes.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

FA 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SURVEILLANCE, SURFACE	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
450A01A			P900	

JCN	ITEM #	DESCRIPTION	M/D	MATL\$	COST \$	ASSIGMT	PRI
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1. Radar Distribution Systems

1.1 SB/SP Radar Switchboard - Accomplish a Class "B" overhaul (in place) of radar switchboard to include but not limited to the following:
 (Includes equipment mounting.)

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

1.2 AN/SPS-T3() Radar Trainer - Accomplish a Class "B" overhaul of radar trainer to include but not limited to the following:

(Includes power supply, simulators, inter-connecting cables and equipment mounting.)

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of _____.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POTS:I are as follows:

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SURVEILLANCE (SURFACE)		MAINTENANCE AND REPAIR
450A02A	TOTAL SHIPYARD COST	EIC GROUP	
		P000	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGNMT PRI

1. Radar Display

1.1 AN/SPA-25() Radar Range Indicator - Accomplish a Class "B" overhaul of _____ Radar Range Indicators to include but not limited to the following:

(Includes equipment mounting.)

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

1.2 AN/SPA-34/36() Indicator Group - Accomplish a Class "B" overhaul of the Indicator Group to include but not limited to the following:

(Includes equipment mounting.)

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of _____.

NOTE: Additional repairs required in this SWLIN (including field changes to the above equipment) as a result of the POT&I are as follows:

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SURFACE SEARCH RADAR	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
451A01A			P100	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Surface Search Radar

1.1 AN/SPS-10() Radar Set - Accomplish a Class "B" overhaul of AN/SPS-10() Radar Set to include but not limited to the following:

(Includes radar receiver-transmitter, voltage regulator, power supply, radar modulator, interconnecting box, indicator adapter, radar set control, remote switching control and equipment mounting.)

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

1.2 AS-936/SPS-10 Antenna Array and Pedestal - Replace AS-936/SPS-10 antenna array and pedestal with restored antenna array and pedestal, or if restored antenna is not available accomplish Class "B" overhaul of AS-936/SPS-10 antenna array and pedestal to include but not limited to the following:

(Includes safety switch, interconnecting cables, slotted line, waveguide, and equipment mounting.)

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM									
	451A01*	SURFACE SEARCH RADAR								
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI			

- 1.2.1 Disassemble the pedestal; examine gears, bearings and oil seals. Replace the parts that evidence excessive wear or other damage.
- 1.2.2 Disassemble the rotary joint; clean and replace any damaged parts.
- 1.2.3 Remove the drive motor and overhaul.
- 1.2.4 Inspect synchros; replace worn brushes and accomplish any other necessary repairs.
- 1.2.5 Reassemble antenna using approved methods to prevent bimetallic corrosion.
- 1.2.6 Paint the antenna in accordance with NSTM Chapter 9190.
- 1.2.7 Conduct operational tests in shop to ensure satisfactory rotation, drive gear performance and ship's heading marker operation.
- 1.3 Check all waveguides, clean oil, water and other foreign matter from guide, ensure that waveguide is satisfactory and conforms to Gen Specs 404.
2. Upon completion of overhaul, reinstall aboard ship and conduct operational tests of surface search radar to ensure satisfactory completion of acceptance test in accordance with NSTM 0901-LP-400-0000, Chapter 400.

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	SYSTEM	SURFACE SEARCH RADAR					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

NOTE: Additional repairs required in this SWLIN
(including field changes to the above equipment)
as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AIR SEARCH RADAR	JCN INDICATED BELOW	TITLE
SWLIN	452A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			P300	

JCN ITEM # DESCRIPTION M/D MATL\$ COST\$ ASSIGMT PRI

1. Air Search Radar

1.1 AN/SPS-40() Radar Set - Accomplish a Class "B" overhaul of AN/SPS-40() Radar Set to include but not limited to the following:

(Includes antenna control, voltage regulator, power supplies, monitors, modulators, amplifiers, control sets, range indicators, dehydrators, compressors, duplexers, dummy loads, heat exchange system, filters closed loop cooling system and equipment mounting.)

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

1.1.3 Cabinet Heat Exchanger - Clean and test.

1.2 AN/SPS-40() Antenna Array - Replace AN/SPS-40() antenna with restored antenna of, if restored antenna is not available, accomplish Class "B" overhaul of AN/SPS-40() antenna to include but not limited to the following:

(Includes antenna switches, equipment mounting, and transmission line, or waveguide.)

SY 2

SY 2

CONTINUATION SHEET

SWLIN

452A01*

SYSTEM

AIR SEARCH RADAR

SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.2.1	Disassemble the pedestal; examine gears, bearings and oil seals. Replace the parts that evidence excessive wear or other damage.					
	1.2.2	Disassemble the rotary joint; clean and replace any damaged parts.					
	1.2.3	Remove the drive motor and overhaul.					
	1.2.4	Inspect synchros; replace worn brushes and accomplish any other necessary repairs.					
	1.2.5	Reassemble antenna using approved methods to prevent bimetallic corrosion.					
	1.2.6	Paint the antenna in accordance with NSTM, Chapter 9190.					
	1.2.7	Conduct operational tests in shop to ensure satisfactory rotation, drive gear performance and ship's heading marker operation.					
	1.3	Check all transmission lines, or waveguides, clean oil, water and other foreign matter from guide, ensure that transmission line is satisfactory and conforms to GEN SPECS 404.					

ITEM #

DESCRIPTION

M/D

MATL \$

COST \$

ASSIGMT

PRI

1.2.1 Disassemble the pedestal; examine gears, bearings and oil seals. Replace the parts that evidence excessive wear or other damage.

1.2.2 Disassemble the rotary joint; clean and replace any damaged parts.

1.2.3 Remove the drive motor and overhaul.

1.2.4 Inspect synchros; replace worn brushes and accomplish any other necessary repairs.

1.2.5 Reassemble antenna using approved methods to prevent bimetallic corrosion.

1.2.6 Paint the antenna in accordance with NSTM, Chapter 9190.

1.2.7 Conduct operational tests in shop to ensure satisfactory rotation, drive gear performance and ship's heading marker operation.

1.3 Check all transmission lines, or waveguides, clean oil, water and other foreign matter from guide, ensure that transmission line is satisfactory and conforms to GEN SPECS 404.

SY

2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	AIR SEARCH RADAR							
452A01*									

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

2

SY

2

2. Conduct shipboard operational tests of AN/SPS-40 () radar and antenna to ensure satisfactory completion of acceptance test in accordance with NSTM Chapter 400.

NOTE: Applies to FF-1040 Class and AGFF-1 only.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AIR SEARCH RADAR (3D)	JCN INDICATED BELOW	TITLE
SWLIN	453A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
JCN	ITEM #	DESCRIPTION	M/D	MATL \$
				COST \$
				ASSIGMT
				PRI

1. Air Search Radar

1.1 AN/SPS-52() Radar Set - Accomplish a Class "B" overhaul of AN/SPS-52() Radar Set to include but not limited to the following:

(Includes antenna control, voltage regulator, power supplies, monitors, modulators, amplifiers, control sets, range indicators, dehydrators, compressors, duplexers, dummy loads, heat exchange system, filters and equipment mounting.)

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

1.1.3 Cabinet Heat Exchanger - Clean and test.

1.2 AN/SPA-72() Antenna Array - Replace AB-942 pedestal and AS-1838/SPA antenna with restored antenna and pedestal or, if restored antenna is not available, accomplish Class "B" overhaul of pedestal and antenna to include but not limited to the following:

(Includes antenna switches, equipment mounting, and transmission line, or waveguide.)

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
453A01*	AIR SEARCH RADAR (3D)						

JCN

ITEM #

- 1.2.1 Disassemble the pedestal; examine gears, bearings and oil seals. Replace the parts that evidence excessive wear or other damage.
- 1.2.2 Disassemble the rotary joint; clean replace any damaged parts.
- 1.2.3 Remove the drive motor and overhaul.
- 1.2.4 Inspect synchros; replace work brushes and accomplish any other necessary repairs.
- 1.2.5 Reassemble antenna using approved methods to prevent bimetallic corrosion.
- 1.2.6 Paint the antenna in accordance with NSTM, Chapter 9190.
- 1.2.7 Conduct operational tests in shop to ensure satisfactory rotation, drive gear performance and ship's heading marker operation.
- 1.3 Check all transmission lines, or waveguides, clean oil, water and other foreign matter from guide, ensure that transmission line is satisfactory and conforms to GEN SPECS 404.

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	SYSTEM	AIR SEARCH RADAR (3D)				M/D	MATL \$	COST \$	ASSIGMT	PRI
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2. Conduct shipboard operational tests of AN/SPS-52 () radar and antenna to ensure satisfactory completion of acceptance test in accordance with NSITM Chapter 400.

NOTE: Applies to FFG-1 Class only.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	IDENTIFICATION (IFF)	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
455A01A			P600	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. MK XII IFF System - Accomplish a Class "B" overhaul to the following components.
 - 1.1 One (1) AN/UPX-27 Interrogator Set.
 - 1.2 One (1) AN/UPA-61.
 - 1.3 One (1) SG-1066/UPX Pulse Generator.
 - 1.4 One (1) MX-8758/UPX Interference Blanker.
 - 1.5 One (1) C-8430/UPX Control Monitor.
 - 1.6 Two (2) AM-1914()/UP Vidio Amplifiers.
 - 1.7 One (1) AN/UPA-59A(V)1 Decoder.
 - 1.8 One (1) AN/UPA-59A(V)2 Decoder.
 - 1.9 One (1) AN/UPM-137() Test Set.
 - 1.10 One (1) AN/APX-72 Transponder.
 - 1.11 One (1) TS-1843/APX Test Set.

2. Replace AS-177()/UPX Antennas.

NOTE: Additional repairs required in this SWLIN (including field changes to the above equipment) as a result of the POT&I are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ACTIVE/PASSIVE (MULTIPLE MODE) SONAR	JCN INDICATED BELOW	TITLE
SWLIN	463A01A	TOTAL SHIPYARD COST	EIC GROUP R100	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT SY PRI

1. Active/Passive (Multiple Mode) Sonar

1.1 Accomplish a Class "B" overhaul of below listed components to include but not limited to the following:

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

1.1.3 Test cabinet blowers, replace defective blowers.

1.1.4 Cabinet Heat Exchangers ~ Acid wash and neutralize, pressure test and certify.

AN/SQS-26BX Sonar System (Includes the following components - Not all inclusive; each particular ship may vary in configuration.)

Unit	
<u>Desig</u>	
1	C-6403 Control Indicator
2	C-6404 Control Indicator
3	OA-7070 Target Tracking Console
4	RO-268 Azimuth Recorder

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	463A01*	SYSTEM	ACTIVE/PASSIVE (MULTIPLE MODE) SONAR
JCN	ITEM #	DESCRIPTION	M/D
			MATL \$
			COST \$
			ASSIGMT
			PRI

5	SM-391 Simulator-Sonar Target Signal			
6	AM-4200 A-F Amplifier			
7	AM-4201 A-F Amplifier			
8	AM-4202 Scanner-Amplifier			
9	R-1295 Sonar Receiver			
10	R-1296 Sonar Receiver-Scanner			
11	MX-6636 Sonar Signal Processor			
12	CU-1813 Converter-Scan Rate			
13	O-1249 Timer-Sweep Generator			
14	CP-796 Computer-Sonar Data			
15	C-6405 Programmer-Sonar Signal			
16-23	T-969 Sonar XMTR			
24	SA-1262 Switch Assembly			
25	TR-203 Sonar Transducer			
26-28	TF-463/U XFMR Power Distr.			
29	PP-4195 Power Supply Assembly			
78	TS-2237A Range Bearing Calibrator			
79	J-2606 Distribution Box			
80	C-6625 Passive Test Control			
81	SG-634A Signal Generator			
82	IP-855 Bearing Range Monitor			
83	PP-4446 Power Supply Assembly			
86	C-6752 Transmitter Control			
87	PP-4447 Power Supply Assembly			
99	Test Set			
	Interconnecting Cables			
	Equipment Mountings			
	All cabinet heat exchangers			

AN/SQS-26 AX(R) Sonar System
 (Includes the following components-Not
 all inclusive; each particular ship may vary in
 configuration.)

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	ACTIVE/PASSIVE (MULTIPLE MODE) SONAR
463A01*		

JCN ITEM # M/D MATL \$ COST \$ ASSIGMT PRI

Unit Desig.	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
1	OA-7706 Surface Channel Display Console					
2	OA-7707 A-Scan Indicator Console					
3	OA-7708 Target Tracking Console					
5	TD-789 Sequential Timer					
6-9	T-905 Sonar Transmitter					
10	C-6750 Transmitter Control					
11	SA-1408 Transmitter or Receive Switch					
12	C-4688A Transmitter Control					
13	PP-3749A Power Supply					
14&15	Step Down XFMR					
17	TF-198 Sonar Transducer					
18&19	AN-4400 Audio Freq Pre-Ampl					
20	MD-664 Sonar Modulator Scanner					
21	AM-4417 Sonar Ampl Modulator					
22	AM-4418 Sonar Ampl Scanner					
23	C-6751 Converter Control					
26	MX-7119 Sonar Signal Processor					
27	Voltage Regulator					
29	PP-3748A Power Supply Assembly					
32	Remote Bypassed Indicator					
35	SM-237A Sonar Target Signal Simulator					
41	PP-3351A Power Supply					
45-48	Electronic Surge Protector					
49	Remote Indicator					
51	O-1302 Pulse-Sweep Generator					
52	J-2140A Distribution Box					
58	PD-90A Motor Generator					
59	MX-7120 Sonar Signal Processor					
68	CV-2020 Scan Rate Converter					
70	PP-4448 Power Supply					
	Interconnecting Cables					
	Equipment Mountings					
	All Cabinet Heat Exchangers					

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	463A01*	SYSTEM	ACTIVE/PASSIVE (MULTIPLE MODE) SONAR
JCN	ITEM #	M/D	MATL \$ COST \$ ASSIGMT PRI

DESCRIPTION

NOTE: Omission of components from above list does not delete the component from the scope of this SWLIN.

2. Louis Allis Power Supply:

2.1 HVMG Sets, Two (2) - Accomplish a Class "B" overhaul to include but not limited to the following:

2.1.1 Install new bearings, seals, gaskets and Klinoxons.

2.1.2 Clean, bake and test the assembly.

2.1.3 Dynamically balance all rotating assemblies.

2.2 MG Cabinet - Accomplish a Class "B" overhaul to include but not limited to the following:

2.2.1 Replace SW flexible hoses.

2.3 Lubrication Stand - Accomplish a Class "B" overhaul to include but not limited to the following:

2.3.1 Clean and hydrostatically test the SW/lube oil heat exchanger.

2.3.2 Replace two (2) cooling system pressure switches.

2.3.3 Overhaul two (2) lube pumps.

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	SYSTEM	ACTIVE/PASSIVE (MULTIPLE MODE) SONAR				
463A01*						
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT PRI

- 2.3.4 Overhaul accumulator.
- 2.3.5 Replace resilient mounts.
- 2.3.6 Replace two (2) check valves.
- 2.3.7 Replace two (2) flexible oil hoses.
- 2.3.8 Test in accordance with requirements of _____.
- 2.4 Static Cabinet - Accomplish a Class "B" overhaul.
- 3. Sonar Dome and Transducer - Accomplish the following repairs:
 - 3.1 Replace defective elements in TR () transducer as listed in POT&I.
 - 3.2 Renew zincs.
 - 3.3 Perform a pre-arrival test of the SDRW pressurization system in accordance with procedures in Chapter 8 NAVSEA 0967-LP-585-8010. Submit a report of repairs required.
 - 3.4 Perform a post overhaul test of the SDRW pressurization system in accordance with procedures in Chapter 8 of NAVSEA 0967-LP-585-8010.

SY 2
SY 2
SY 2
SY 2

NOTE: Additional repairs required in this SWLIN (including field changes to the above equipment) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWL IN 464A02A	CLASSIFICATION SONAR TOTAL SHIPYARD COST	EIC GROUP M700	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

2

SY

1. AN/UNQ-7 () Tape Recorder - Accomplish a Class "B" overhaul of one (1) AN/UNQ-7 () Tape Recorder to include but not limited to the following:

(Includes cabinet, AM amplifier, RD recorder, reproducer, control unit, cabinet.)

1.1 Mechanically and electrically align equipment.

1.2 Test in accordance with requirements of _____.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	ACTIVE ECM	EIC GROUP	MAINTENANCE AND REPAIR
471A01A	TOTAL SHIPYARD COST	N000	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Active ECM, Kadar

1.1 AN/SLA-12/15() Antenna Group - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes port and starboard antenna arrays, controls, waveguides, heaters, mounting hardware and domes).

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of _____.

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET		SYSTEM		ACTIVE ECM			
SWLIN	471A01*						
JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$	ASSIGMT PRI

- 1.2 AN/ULQ-6() Countermeasure Set - Accomplish a Class "B" overhaul of two (2) countermeasure sets to include but not limited to the following:
 - 1.2.1 Mechanically and electrically align equipment.
 - 1.2.2 Test in accordance with requirements of _____.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PASSIVE ECM		MAINTENANCE AND REPAIR
472A01A	TOTAL SHIPYARD COST	EIC GROUP	
		N800	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Passive ECM System

1.1 AN/SLR-12()/Countermeasures Receiving Set -
Accomplish a Class "B" overhaul to include but
not limited to the following:

(Includes control set-amplifier, antenna and
mounting hardware.)

1.1.1 Mechanically and electrically align
equipment.

1.1.2 Test in accordance with requirements
of _____.

1.2 AN/WLR-3 Countermeasures Receiving Set -
Accomplish a Class "B" overhaul to include but
not limited to the following:

(Includes control set-amplifier and
mounting hardware.)

1.2.1 Mechanically and electrically align
equipment.

1.2.2 Test in accordance with requirements
of _____.

SY 2

SY 2

CONTINUATION SHEET

JCN

SWLIN

472A01*

SYSTEM

PASSIVE ECM

ITEM #

DESCRIPTION

M/D

MATL \$

COST \$

ASSIGMT

PRI

SY 2

1.3 AN/WLR-1() Countermeasures Receiving Set, One (1) per ship - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes freq. converters, tuners, cabinets, control storer, azimuth indicator, pulse analyzer, power supplies, switching units, waveguide, pulse generator, test set, interconnection box and cabling, and mounting hardware.)

1.3.1 Mechanically and electrically align equipment.

1.3.2 Test in accordance with requirements of _____.

SY 2

1.4 C-3118()/WLR - Accomplish a Class "B"1 of one (1) C-3118()/WLR to include but not limited to:

(Includes mounting hardware.)

1.4.1 Mechanically and electrically align equipment.

1.4.2 Test in accordance with requirements of _____.

SY 2

1.5 AM-1017()/SLR Magnetic Control Amplifier - Accomplish a Class "B" overhaul of one (1) magnetic control amplifier to include but not limited to the following:

1.5.1 Mechanically and electrically align equipment.

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	472A01*	SYSTEM	PASSIVE ECM
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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	1.5.2	Test in accordance with requirements of _____.				SY	2
	1.6	AS-616()/SLR Antenna - Accomplish a Class "B" overhaul of AS-616()/SLR antenna to include but not limited to the following:					
	1.6.1	Mechanically and electrically align equipment.					
	1.6.2	Test in accordance with requirements of _____.					
	1.7	AS-571()/SLR Antenna - Accomplish a Class "B" overhaul to one (1) antenna.				SY	2
	1.8	AS-899()/SLR Antenna - Accomplish a Class "B" overhaul to one (1) antenna.				SY	2
	1.9	AN/WLA-3() Amplifier Group - Accomplish a Class "B" overhaul (includes control set, amplifier, power supply and mounting hardware).				SY	2
	1.10	66132 A Sword Antennas (two) - Repair/replace.				SY	2
	1.11	66131 Derby Antennas (two) - Repair/replace.				SY	2
	1.12	AN/UNQ-7 Tape Recorder - Accomplish a Class "B" overhaul.				SY	2

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
	FIRE CONTROL (NON-SONAR DATA BASE)		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
482A01A		5000	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Guided Missile Fire Control System, MK 74 MOD 6.

1.1 Accomplish a Class "B" overhaul of one (1) MK 73 MOD 1 director.

(Includes rotating package, amplidyne and control panels.)

1.2 Accomplish a Class "B" overhaul of the AN/SPG-51C Radar Set.

(Includes refurbishing waveguide and cooling system components.)

1.3 Accomplish a Class "B" overhaul of the MK 152 MOD 0 Digital Computer.

1.4 Accomplish a Class "B" overhaul of the MK 72 MOD 0 Signal Data Converter.

NOTE: Applies to FFG-1 Class only.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

SY 2

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ELECTRONIC TEST, CHECKOUT AND MONITORING EQUIPMENT	JCN INDICATED BELOW	TITLE
SWLIN	491A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
JCN	ITEM #	DESCRIPTION	M/D	MATLS
			W000	COST \$
				ASSIGMT
				PRI

FA 2

1. General Purpose Test Equipment - Accomplish the following:

- 1.1 Transport to a certified calibration facility all portable test equipment to ensure that adequate standards are available upon completion of the overhaul to sustain the performance standards throughout the overhaul cycle. Calibration facility shall calibrate all portable test equipment prior to performance standards measurements in accordance with NSTM 9670 at no cost to the Type Commander in accordance with NAVORDINST 4855.14 and NAVSHIPSYSCOMINST 9690.12A. (Includes all general purpose electrical and electronic measuring devices which are not a part of the system. NAVELEX (SPETERL) is the primary source listing of equipment for inclusion in this category and all general purpose electronic test equipment (GPETE).)

NOTE: Repair of test equipment is a user responsibility in accordance with NSTM 9670. Equipment in need of major repairs will require funding by TYCOM.

PART 3.5

MAJOR SHIP SYSTEM 5

MAJOR SHIP SYSTEM 5 - AUXILIARY SYSTEMS

- 504 INSTRUMENTS AND INSTRUMENT BOARDS
- 505 GENERAL PIPING REQUIREMENTS
- 513 MACHINERY SPACE VENTILATION
- 514 AIR CONDITIONING SYSTEM
- 516 REFRIGERATION SYSTEM
- 520 SEA WATER SYSTEMS
- 521 FIREMAIN AND FLUSHING (SEA WATER) SYSTEM
- 524 AUXILIARY SEA WATER SYSTEMS
- 531 DISTILLING PLANT
- 533 POTABLE WATER
- 534 AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX
- 536 AUXILIARY FRESH WATER COOLING SYSTEM
- 541 SHIP FUEL AND FUEL COMPENSATING SYSTEM
- 551 COMPRESSED AIR SYSTEMS
- 555 FIRE EXTINGUISHING SYSTEM

MAJOR SHIP SYSTEM 5 - AUXILIARY SYSTEMS (Cont.)

562 RUDDER

566 STABILIZING FINS

572 SHIP STORES AND EQUIPMENT HANDLING SYSTEMS

581 ANCHOR HANDLING AND STOWAGE SYSTEMS

583 BOAT HANDLING AND STOWAGE SYSTEMS

588 AIRCRAFT HANDLING, SERVICING AND STOWAGE SYSTEMS

593 ENVIRONMENTAL POLLUTION CONTROL SYSTEM

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM INSTRUMENTS & INSTRUMENT BOARDS	JCN INDICATED BELOW	TITLE
SWLIN 504A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Instrumentation - Accomplish the following repairs:
 - 1.1 Calibrate and repair gages (ship to shop) to include propulsion plant, auxiliary and weapon systems. Instruments covered in this SWLIN do not include those instruments assigned shipyard in various system maintenance and repair SWLINS.

FA 2

- 1.1.1 Compound gages
- 1.1.2 Vacuum gages
- 1.1.3 600 psi and above gages
- 1.2 Calibrate Propulsion Plant, Auxiliary and Weapons System gages below 600 psi not assigned shipyard in System Maintenance and Repair SWLINS.
- 1.3 Replace rejected gages which fail to calibrate in Items 1.1 and 1.2 and known defective, broken or missing gages.
- 1.4 Replace known defective, broken or missing thermometers.

FA 2

FA 2

FA 2

NOTE: This SWLIN includes all pressure gages and thermometers in all ship systems. Ship's Force should ensure (by careful review of the SARP), that instruments not specifically assigned Shipyard in various Maintenance and Repair SWLINS are calibrated and within specs for PEB/LOE and subsequent dock and sea trials in accordance with Items 1.1 through 1.4 of this SWLIN.

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	504A01*	SYSTEM	INSTRUMENTS & INSTRUMENT BOARDS
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

NOTE: Item 1.1 will be assigned SY for Naval Shipyard overhauls and TYCOM funds reserved. (Ship's Force will deliver and pick up.)

NOTE: Item 1.1 will be assigned FA total responsibility for private shipyard overhauls.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	GENERAL PIPING REQUIREMENTS		MAINTENANCE AND REPAIR
505A01A	TOTAL SHIPYARD COST	EIC GROUP	
		UG03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Lag piping and machinery in following areas:					
	1.1	Inside machinery box.				SY	2
	1.2	Outside of machinery box.				SY	2
	2.	Prepare lagging priority list for item 1.				FA	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	JCN INDICATED BELOW	TITLE
MACHINERY SPACE VENTILATION		MAINTENANCE AND REPAIR
TOTAL SHIPYARD COST	EIC GROUP	
	T300	

M/D MATL \$ COST \$ ASSIGMT PRI

DESCRIPTION

1. Perform overhaul testing of Machinery Space Ventilation System in accordance with 1200 psi Steam Propulsion Plant Test Procedure No. 513T3000011 (Machinery Space Ventilation).

1.1 Prerequisites and Pressure Test of Boiler Casings - Cold Iron (in conjunction with SWLIN 221A01* and 251A01*).

1.2 Prerequisites and Inspection of Ventilation System and Boiler Outer Casings - Cold Iron.

1.3 Prerequisites and Operation of Ventilation System - Cold Iron.

NOTE: Additional repairs required to Machinery Space Ventilation Systems as a result of POT&I are as follows:

SY 2

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

SHULL NUMBER	SYSTEM	AIR CONDITIONING	JCN INDICATED BELOW	TITLE
514A01A	TOTAL SHIPYARD COST		EIC GROUP T404	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Air Conditioning Plant No. 1 - Accomplish the following repairs:

1.1 Compressor, Chiller and Condenser - Accomplish a Class "B" overhaul to include but not limited to the following:

1.1.1 Replace resilient mounts.

1.1.2 Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses.

1.2 Compressor Motor and Chilled Water Pump Motor - Accomplish a Class "B" overhaul.

1.3 Chilled Water Pump - Accomplish a Class "B" overhaul to include but not limited to the following:

1.3.1 Replace resilient mounts.

1.3.2 Replace suction and discharge flexible hoses.

1.4 Compressor and Chilled Water Pump Motor Controllers - Accomplish a Class "B" overhaul to include but not limited to the following:

SY 2

SY 2

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SYMBOL	SYSTEM	AIR CONDITIONING					
514A01*							

ITEM # M/D MATL \$ COST \$ ASSIGMT PRI

- 1.4.1.1 Clean and preserve controller enclosure.
- 1.4.2 Clean and tighten terminals and connectors; align contactors.
- 1.4.3 Replace defective or deteriorated wiring and components within the controller enclosure.
- 1.5 Refrigerant Piping - Accomplish a Class "B" overhaul to include but not limited to the following:
(Includes tubing, valves, fittings, and instrumentation within the air conditioning plant machinery spaces.)
- 1.5.1 Clean and inspect refrigerant strainers.
- 1.5.2 Replace deteriorated or defective refrigerant valves, piping and fittings. Renew dehydrators.
- 1.5.3 Pressure test and repair refrigerant leaks.
- 1.5.4 Repair and adjust safety and control switches. Repair and calibrate pressure and temperature gages.
- 1.5.5 Clean refrigerant system with an approved tank type cleaner.

SY 2

SHIP SYSTEM WORK DESCRIPTION

SHIP #	514A01*	SYSTEM	AIR CONDITIONING					
ITEM #			DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

- 2. Perform post-overhaul operational test of Air Conditioning Plant No. 1 for a period of forty-eight (48) hours; adjust controls and regulating devices. SY 2

- 3. Air Conditioning Plant No. 2 - Accomplish the following repairs: SY 2
 - 3.1 Compressor, Chiller and Condenser - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 3.1.1 Replace resilient mounts.
 - 3.1.2 Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses.
 - 3.2 Compressor Motor and Chilled Water Pump Motor - Accomplish a Class "B" overhaul.
 - 3.3 Chilled Water Pump - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 3.3.1 Replace resilient mounts.
 - 3.3.2 Replace suction and discharge flexible hoses.
 - 3.4 Compressor and Chilled Water Pump Motor Controllers - Accomplish a Class "B" overhaul to include but not limited to the following:

SHIP SYSTEM WORK DESCRIPTION

SHIP #	514A01*	SYSTEM	AIR CONDITIONING	M/D	MATL \$	COST \$	ASSIGMT	PRI
ITEM #			DESCRIPTION					

3.4.1 Clean and preserve controller enclosure.

3.4.2 Clean and tighten terminals and connectors; align contactors.

3.4.3 Replace defective or deteriorated wiring and components within the controller enclosure.

3.5 Refrigerant Piping - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes tubing, valves, fittings and instrumentation within the air conditioning plant machinery spaces.)

3.5.1 Clean and inspect refrigerant strainers.

3.5.2 Replace deteriorated or defective refrigerant valves, piping and fittings. Renew dehydrators.

3.5.3 Pressure test and repair refrigerant leaks.

3.5.4 Repair and adjust safety and control switches. Repair and calibrate pressure and temperature gages.

3.5.5 Clean refrigerant system with an approved tank type cleaner.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SYMBOL	SYSTEM	AIR CONDITIONING	M/D	MATL \$	COST \$	ASSGMT	PRI
514A01*							
ACN	ITEM #	DESCRIPTION					

4. Perform post-overhaul operational test of Air Conditioning Plant No. 2 for a period of forty-eight (48) hours; adjust controls and regulating devices. SY 2
5. Air Conditioning Plant No. 3 - Accomplish the following repairs: SY 2
- 5.1 Compressor, Chiller and Condenser - Accomplish a Class "B" overhaul to include but not limited to the following:
- 5.1.1 Replace resilient mounts.
- 5.1.2 Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses.
- 5.2 Compressor Motor and Chilled Water Pump Motor - Accomplish a Class "B" overhaul. SY 2
- 5.3 Chilled Water Pump - Accomplish a Class "B" overhaul to include but not limited to the following: SY 2
- 5.3.1 Replace resilient mounts.
- 5.3.2 Replace suction and discharge flexible hoses.
- 5.4 Compressor and Chilled Water Pump Motor Controllers - Accomplish a Class "B" overhaul to include but not limited to the following: SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	AIR CONDITIONING					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

5.4.1 Clean and preserve controller enclosure.

5.4.2 Clean and tighten terminals and connectors; align contactors.

5.4.3 Replace defective or deteriorated wiring and components within the controller enclosure.

5.5 Refrigerant Piping - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes tubing, valves, fittings and instrumentation within the air conditioning plant machinery spaces.)

5.5.1 Clean and inspect refrigerant strainers.

5.5.2 Replace deteriorated or defective refrigerant valves, piping and fittings. Renew dehydrators.

5.5.3 Pressure test and repair refrigerant leaks.

5.5.4 Repair and adjust safety and control switches. Repair and calibrate pressure and temperature gages.

5.5.5 Clean refrigerant system with an approved tank type cleaner.

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	SYSTEM	AIR CONDITIONING							
514A01*									

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGNMT	PRI
	6.	Perform post-overhaul operational test of Air Conditioning Plant No. 3 for a period of forty-eight (48) hours; adjust controls and regulating devices.				SY	2
	7.	Air Conditioning Plant No. 4 - Accomplish the following repairs:					
	7.1	Compressor, Chiller and Condenser - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	7.1.1	Replace resilient mounts.					
	7.1.2	Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses.					
	7.2	Compressor Motor and Chilled Water Pump Motor - Accomplish a Class "B" overhaul.				SY	2
	7.3	Chilled Water Pump - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	7.3.1	Replace resilient mounts.					
	7.3.2	Replace suction and discharge flexible hoses.					
	7.4	Compressor and Chilled Water Pump Motor Controllers - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	AIR CONDITIONING								
514A01*										
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI			

7.4.1.1 Clean and preserve controller enclosure.

7.4.2 Clean and tighten terminals and connectors; align contactors.

7.4.3 Replace defective or deteriorated wiring and components within the controller enclosure.

7.5 Refrigerant Piping - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes tubing, valves, fittings and instrumentation within the air conditioning plant machinery spaces.)

7.5.1 Clean and inspect refrigerant strainers.

7.5.2 Replace deteriorated or defective refrigerant valves, piping and fittings. Renew dehydrators.

7.5.3 Pressure test and repair refrigerant leaks.

7.5.4 Repair and adjust safety and control switches. Repair and calibrate pressure and temperature gages.

7.5.5 Clean refrigerant system with an approved tank type cleaner.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	514A01*	SYSTEM	AIR CONDITIONING						
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

8. 8. SY 2

Perform post-overhaul operational test of Air Conditioning Plant No. 4 for a period of forty-eight (48) hours; adjust controls and regulating devices.

NOTE: Repairs to sea water and chilled water piping and valves as a result of POT&I are covered in SWLIN 514A02*.

NOTE: Repairs to cooling coils and thermostatic flow valves as a result of POT&I are covered in SWLIN 514A03*.

NOTE: Additional repairs required in this SWLIN as a result of POT&I are as follows:

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	514A01*	SYSTEM	AIR CONDITIONING						
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI	

9. Air Conditioning Plant No. 5 - Accomplish the following repairs:

9.1 Compressor, Chiller and Condenser - Accomplish a Class "B" overhaul to include but not limited to the following:

9.1.1 Replace resilient mounts.

9.1.2 Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses.

9.2 Compressor Motor and Chilled Water Pump Motor - Accomplish a Class "B" overhaul.

9.3 Chilled Water Pump - Accomplish a Class "B" overhaul to include but not limited to the following:

9.3.1 Replace resilient mounts.

9.3.2 Replace suction and discharge flexible hoses.

9.4 Compressor and Chilled Water Pump Motor Controllers - Accomplish a Class "B" overhaul to include but not limited to the following:

SY 2

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	AIR CONDITIONING
514A01*		

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

9.4.1.1 Clean and preserve controller enclosure.

9.4.2 Clean and tighten terminals and connectors; align contactors.

9.4.3 Replace defective or deteriorated wiring and components within the controller enclosure.

9.5 Refrigerant Piping - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes tubing, valves, fittings, and instrumentation within the air conditioning plant machinery spaces.)

9.5.1 Clean and inspect refrigerant strainers.

9.5.2 Replace deteriorated or defective refrigerant valves, piping and fittings. Renew dehydrators.

9.5.3 Pressure test and repair refrigerant leaks.

9.5.4 Repair and adjust safety and control switches. Repair and calibrate pressure and temperature gages.

9.5.5 Clean refrigerant system with an approved tank type cleaner.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	514A01*	SYSTEM	AIR CONDITIONING			
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	10.	Perform post-overhaul operational test of Air Conditioning Plant No. 5 for a period of forty-eight (48) hours; adjust controls and regulating devices.				SY	2

NOTE: Air Conditioning Plant No. 5 applies to FFG-1 Class only.

NOTE: Repairs to sea water and chilled water piping and valves as a result of POT&I are covered in SWLIN 514A02*.

NOTE: Repairs to cooling coils and thermostatic flow valves as a result of POT&I are covered in SWLIN 514A03*.

NOTE: Additional repairs required in this SWLIN as a result of POT&I are as follows:

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	514A01*	SYSTEM	AIR CONDITIONING			
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	11.	Air Conditioning Plant No. 5 (12 Ton) - Accomplish the following repairs:					
		11.1 Compressor, Chiller and Condenser - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
		11.1.1.1 Replace resilient mounts.					
		11.1.1.2 Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses.					
		11.2 Compressor Motor and Chilled Water Pump Motor - Accomplish a Class "B" overhaul.				SY	2
		11.3 Chilled Water Pump - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
		11.3.1 Replace resilient mounts.					
		11.3.2 Replace suction and discharge flexible hoses.					
		11.4 Compressor and Chilled Water Pump Motor Controllers - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2

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CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	514A01*	SYSTEM	AIR CONDITIONING	
JCN	ITEM #	DESCRIPTION	M/D	MATL \$ COST \$ ASSIGNMT PRI

11.4.1 Clean and preserve controller enclosure.

11.4.2 Clean and tighten terminals and connectors; align contactors.

11.4.3 Replace defective or deteriorated wiring and components within the controller enclosure.

11.5 Refrigerant Piping - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes tubing, valves, fittings, and instrumentation within the air conditioning plant machinery spaces.)

11.5.1 Clean and inspect refrigerant strainers.

11.5.2 Replace deteriorated or defective refrigerant valves, piping and fittings. Renew dehydrators.

11.5.3 Pressure test and repair refrigerant leaks.

11.5.4 Repair and adjust safety and control switches. Repair and calibrate pressure and temperature gages.

11.5.5 Clean refrigerant system with an approved tank type cleaner.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	514A01*	SYSTEM	AIR CONDITIONING	M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #	DESCRIPTION						
	12.	Perform post-overhaul operational test of Air Conditioning Plant No. 5 (12 Ton) for a period of forty-eight (48) hours; adjust controls and regulating devices.					SY	2
	13.	Air Conditioning Plant No. 6 (12 Ton) - Accomplish the following repairs:						
		13.1 Compressor, Chiller and Condenser - Accomplish a Class "B" overhaul to include but not limited to the following:					SY	2
		13.1.1 Replace resilient mounts.						
		13.1.2 Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses.						
		13.2 Compressor Motor and Chilled Water Pump Motor - Accomplish a Class "B" overhaul.					SY	2
		13.3 Chilled Water Pump - Accomplish a Class "B" overhaul to include but not limited to the following:					SY	2
		13.3.1 Replace resilient mounts.						
		13.3.2 Replace suction and discharge flexible hoses.						
		13.4 Compressor and Chilled Water Pump Motor Controllers - Accomplish a Class "B" overhaul to include but not limited to the following:					SY	2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWL/IN	SYSTEM	AIR CONDITIONING	M/D	MATL \$	COST \$	ASSIGMT	PRI
514A01*							

DESCRIPTION

- 13.4.1 Clean and preserve controller enclosure.
- 13.4.2 Clean and tighten terminals and connectors; align contactors.
- 13.4.3 Replace defective or deteriorated wiring and components within the controller enclosure.
- 13.5 Refrigerant Piping - Accomplish a Class "B" overhaul to include but not limited to the following:
(Includes tubing, valves, fittings and instrumentation within the air conditioning plant machinery spaces.)
- 13.5.1 Clean and inspect refrigerant strainers.
- 13.5.2 Replace deteriorated or defective refrigerant valves, piping and fittings. Renew dehydrators.
- 13.5.3 Pressure test and repair refrigerant leaks.
- 13.5.4 Repair and adjust safety and control switches. Repair and calibrate pressure and temperature gages.
- 13.5.5 Clean refrigerant system with an approved tank type cleaner.

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	514A01*	SYSTEM	AIR CONDITIONING						
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

14. Perform post-overhaul operational test of Air Conditioning Plant No. 6 (12 Ton) for a period of forty-eight (48) hours; adjust controls and regulating devices. SY 2

NOTE: Air Conditioning Plants No. 5 (12 Ton) and No. 6 (12 Ton) apply to FF-1047 and FF-1049 only.

NOTE: Repairs to sea water and chilled water piping and valves as a result of POT&I are covered in SWLIN 514A02*.

NOTE: Repairs to cooling coils and thermostatic flow valves as a result of POT&I are covered in SWLIN 514A03*.

NOTE: Additional repairs required in this SWLIN as a result of POT&I are as follows:

CONTINUATION SHEET

SWLIN

516A01*

SYSTEM

REFRIGERATION

SHIP SYSTEM WORK DESCRIPTION

JCN ITEM = M/D MATL S COST \$ ASSIGMT PRI

- 1.8 Pressurize, test and repair refrigerant piping/tubing and valves. SY 2
- 1.9 Clean and inspect strainers. SY 2
- 1.10 Replace dehydrators. SY 2
- 1.11 Clean Freon System with an approved tank type cleaner. SY 2
- 1.12 Perform twenty-four (24) hour operational test, adjust control switches and test safety devices. SY 2

2. Refrigeration Plant No. 2 - Accomplish the following repairs:

- 2.1 Compressor and Condenser - Accomplish a Class "B" overhaul to include but not limited to the following: (Includes coupling.) SY 2
 - 2.1.1 Replace compressor suction and discharge (one (1) each) braided metal connections.
- 2.2 Compressor Motor - Accomplish a Class "B" overhaul. SY 2
- 2.3 Controller - Accomplish a Class "B" overhaul to include but not limited to the following: SY 2
 - 2.3.1 Clean and preserve controller enclosure.

CONTINUATION SHEET

SWLIN		SYSTEM		REFRIGERATION	
516A01*					

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	2.3.2	Clean and tighten terminals and connectors. Align contactors.					
	2.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.					
	2.4	Replace resilient mounts.				SY	2
	2.5	Repair and calibrate gages, thermometers and indicators.				SY	2
	2.6	Clean and inspect pressure switches.				SY	2
	2.7	Replace deteriorated salt water piping and valves.				SY	2
	2.8	Pressurize, test and repair refrigerant piping/tubing and valves.				SY	2
	2.9	Clean and inspect strainers.				SY	2
	2.10	Replace dehydrators.				SY	2
	2.11	Clean Freon System with an approved tank type cleaner.				SY	2
	2.12	Perform twenty-four (24) hour operational test, adjust control switches and test safety devices.				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SEA WATER	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
520A01A			T800	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Sea Valves					
	1.1	Accomplish a Class "B" overhaul of all sea valves larger than 4½ in.				SY	2
	1.2	Accomplish a Class "B" overhaul of all sea valves 4½ in. and smaller.				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FIREMAIN AND FLUSHING (SEA WATER)	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
521A03A			T801	

JCN **ITEM #** **DESCRIPTION** **M/D** **MATL \$** **COST \$** **ASSGMT** **PRI**

- 1. Fire Pump No. 1 (MD - Accomplish the following repairs:
 - 1.1 Pump - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.1.1 Replace resilient mounts.
 - 1.1.2 Replace suction and discharge flexible connectors.
 - 1.1.3 Suction and Discharge Gages - Repair and calibrate.
 - 1.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.2.1 Clean, bake and test stator windings.
 - 1.2.2 Replace bearings.
 - 1.2.3 Balance rotating assembly.
 - 1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.3.1 Clean and preserve controller enclosure.
 - 1.3.2 Clean and tighten terminals and connectors. Align contactors.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	521A03*	SYSTEM	FIREMAIN AND FLUSHING (SEA WATER)
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGNMT PRI

1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

1.4 Pump Check and Discharge Valves - Accomplish a Class "B" overhaul to include but not limited to:

1.4.1 Valve body and flanges; replace gaskets and fasteners.

1.4.2 Replace seats/disc, repack discharge valve stem.

1.4.3 Hydrostatically test.

NOTE: Suction valve covered in SWLIN 520A01*.

2. Fire Pump No. 2 (MD) - Accomplish the following repairs:

2.1 Pump - Accomplish a Class "B" overhaul to include but not limited to the following:

2.1.1 Replace resilient mounts.

2.1.2 Replace suction and discharge flexible connectors.

2.1.3 Suction and Discharge Gages - Repair and calibrate.

2.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	FIREMAIN AND FLUSHING (SEA WATER)			
521A03*					

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	2.2.1	Clean, bake and test stator windings.					
	2.2.2	Replace bearings.					
	2.2.3	Balance rotating assembly.					
	2.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	2.3.1	Clean and preserve controller enclosure.					
	2.3.2	Clean and tighten terminals and connectors. Align contactors.					
	2.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.					
	2.4	Pump Check and Discharge Valves - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	2.4.1	Valve body and flanges; replace gaskets and fasteners.					
	2.4.2	Replace seats/disc; repack discharge valve stem.					
	2.4.3	Hydrostatically test.					

NOTE: Suction valve covered in SWLIN 520A01*.

CONTINUATION SHEET

SWLIN	521A03*	SYSTEM	FIREMAIN AND FLUSHING (SEA WATER)			
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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	3.	Fire Pump No. 3 (MD) - Accomplish the following repairs:				SY	2
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	3.1	Pump, Flexible Coupling and Motor Support Bracket - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
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3.1.1 Replace resilient mounts.

3.1.2 Replace suction and discharge flexible connectors.

3.1.3 Suction and Discharge Gages - Repair and calibrate.

	3.2	Motor - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
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3.2.1 Clean, bake and test stator windings.

3.2.2 Replace bearings.

3.2.3 Balance rotating assembly.

	3.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
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3.3.1 Clean and preserve controller enclosure.

3.3.2 Clean and tighten terminals and connectors. Align connectors.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	FIREMAIN AND FLUSHING (SEA WATER)			
521A03*					

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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3.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

3.4 Pump Check and Discharge Valve - Accomplish a Class "B" overhaul to include but not limited to:

3.4.1 Valve body and flanges, replace gaskets and fasteners.

3.4.2 Replace seats/disc, repack discharge valve stem.

3.4.3 Hydrostatically test.

NOTE: Suction valve covered in SWLIN 520A01*.

4. Perform post-overhaul testing of No. 1, 2 and 3 Fire Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 521T8010020 (Fire Pumps).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DISTILLING PLANT		MAINTENANCE AND REPAIR
531A01A	TOTAL SHIPYARD COST	EIC GROUP	
		TK03	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT SY PRI

1. Distilling Plant No. 1 - Accomplish a Class "B" overhaul.

(Includes evaporator and distiller frame, demisters and tie rods, weldings and fasteners, water boxes and baffles, sealing surfaces, seawater heater and after condenser, air ejector assembly, desuperheater and flow nozzle assembly, drain regulator and hot well, brine eductor, three way (distillate) trip valve, distillate water meter, pressure relief valves three (3), Y strainers, and pressure gage panel.)

1.1 Acid clean and hydrostatic test system.

1.2 Perform post-overhaul testing of Distilling Plant in accordance with 1200 psi Propulsion Plant Test Procedure No. 531TK030070 (Distilling Plant). (Test includes distiller feed, heater drain, and distillate pumps).

2. Distilling Plant No. 2 - Accomplish a Class "B" overhaul.

(Includes evaporator and distiller frames, demisters and tie rods, weldings and fasteners, water boxes and baffles, sealing surfaces, seawater heater and after condenser, air ejector assembly, desuperheater and flow nozzle assembly, drain regulator and hot well, brine eductor, three way (distillate) trip valve, distillate water meter, pressure relief valves three (3), Y strainers, and pressure gage panel.)

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	531A01*	SYSTEM	DISTILLING PLANT	
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 2.1 Acid clean and hydrostatic test system.
- 2.2 Perform post-overhaul testing of Distilling Plant in accordance with 1200 psi Propulsion Plant Test Procedure No. 531TK030070 (Distilling Plant). (Test includes distiller feed, heater drain, and distillate pumps).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DISTILLING PLANT		MAINTENANCE AND REPAIR
531A02A	TOTAL SHIPYARD COST	EIC GROUP	
		TK03	

JCN ITEM # DESCRIPTION M/D MATL\$ COST \$ ASSIGMT PRI

- 1. Distiller Feed Pump No. 1 - Accomplish the following repairs:
 - 1.1 Pump - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.1.1 Bearings - Replace. SY 2
 - 1.1.2 Wearing Rings - Replace.
 - 1.1.3 Replace suction and discharge flexible hoses.
 - 1.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.2.1 Clean, bake and test stator windings.
 - 1.2.2 Replace bearings. SY 2
 - 1.2.3 Balance rotating assembly.
 - 1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.3.1.1. Clean and preserve controller enclosure. SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	531A02*	SYSTEM	DISTILLING PLANT				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

- 1.3.2 Clean and tighten terminals and connectors. Align contactors.
- 1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.
- 2. Distiller Feed Pump No. 2 - Accomplish the following repairs:
 - 2.1 Pump - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 2.1.1 Bearings - Replace.
 - 2.1.2 Wearing Rings - Replace.
 - 2.1.3 Replace suction and discharge flexible hoses.
 - 2.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 2.2.1 Clean, bake and test stator windings.
 - 2.2.2 Replace bearings.
 - 2.2.3 Balance rotating assembly.
 - 2.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

SY 2

SY 2

SY 2

CONTINUATION SHEET

SWLIN

531A02*	SYSTEM	DISTILLING PLANT
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 2.3.1 Clean and preserve controller enclosure.
- 2.3.2 Clean and tighten terminals and connectors. Align contactors.
- 2.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

3. Replace resilient mounts for distiller feed pumps bed plate.

SY 2

NOTE: Pump testing covered in SWLIN 531A01*.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DISTILLING PLANT	EIC GROUP	MAINTENANCE AND REPAIR
531A03A	TOTAL SHIPYARD COST	TK03	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT SY PRI

1. Distiller Heater Drain Pump No. 1 - Accomplish the following repairs:

1.1 Pump - Accomplish a Class "B" overhaul to include but not limited to the following:

- 1.1.1 Bearings - Replace.
- 1.1.2 Wearing Rings - Replace.

1.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:

- 1.2.1 Clean, bake and test stator windings.
- 1.2.2 Replace bearings.
- 1.2.3 Balance rotating assembly.

1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

- 1.3.1 Clean and preserve controller enclosure.
- 1.3.2 Clean and tighten terminals and connectors. Align contactors.
- 1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	531A03*	SYSTEM	DISTILLING PLANT			
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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2. Distiller Heater Drain Pump No. 2 - Accomplish the following repairs: SY 2

2.1 Pump - Accomplish a Class "B" overhaul to include but not limited to the following:

2.1.1 Bearings - Replace.

2.1.2 Wearing Rings - Replace.

2.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:

2.2.1 Clean, bake and test stator windings.

2.2.2 Replace bearings.

2.2.3 Balance rotating assembly.

2.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

2.3.1 Clean and preserve controller enclosure.

2.3.2 Clean and tighten terminals and connectors. Align contactors.

2.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

CONTINUATION SHEET SHIP SYSTEM WORK DESCRIPTION

SWLIN	531A03*	SYSTEM	DISTILLING PLANT
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

NOTE: Pump testing covered in SWLIN 531A01*.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	531A04*	SYSTEM	DISTILLING PLANT	
JCN	ITEM #	DESCRIPTION	M/D	MATL \$
				COST \$
				ASSIGMT
				PRI

SY 2

2. Distillate Pump No. 2 - Accomplish the following repairs:

2.1 Pump - Accomplish a Class "B" overhaul to include but not limited to the following:

2.1.1 Bearings - Replace.

2.1.2 Wearing Rings - Replace.

2.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:

2.2.1 Clean, bake and test stator windings.

2.2.2 Replace bearings.

2.2.3 Balance rotating assembly.

2.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

2.3.1 Clean and preserve controller enclosure.

2.3.2 Clean and tighten terminals and connectors. Align contactors.

2.3.3 Replace defective or deteriorated wiring and components within the controller enclosures.

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	531A04*	SYSTEM DISTILLING PLANT	
JCN	ITEM #	DESCRIPTION	M/D MATL \$ COST \$ ASSIGMT PRI

NOTE: Pump testing covered in SWLIN 531A01*.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DISTILLING PLANT	JCN INDICATED BELOW	TITLE
SWLIN	531A05A			TOTAL SHIPYARD COST

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Main Overboard Brine Pump No. 1 - Accomplish the following repairs:					2

1.1 Pump - Accomplish a Class "B" overhaul to include but not limited to the following:

1.1.1 Bearings - Replace.

1.1.2 Wearing Rings - Replace.

1.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:

1.2.1 Clean, bake and test stator windings.

1.2.2 Replace bearings.

1.2.3 Balance rotating assembly.

1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

1.3.1 Clean and preserve controller enclosure.

1.3.2. Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	531A05*	SYSTEM DISTILLING PLANT			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$
				ASSIGMT	PRI

2. Main Overboard Brine Pump No. 2 - Accomplish the following repairs:

2.1 Pump - Accomplish a Class "B" overhaul to include but not limited to the following:

2.1.1 Bearings - Replace.

2.1.2 Wearing Rings - Replace.

2.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:

2.2.1 Clean, bake and test stator windings.

2.2.2 Replace bearings.

2.2.3 Balance rotating assembly.

2.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

2.3.1 Clean and preserve controller enclosure.

2.3.2 Clean and tighten terminals and connectors. Align contactors.

2.3.3 Replace defective or deteriorated wiring and components within the controller enclosures.

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
534A03A	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
		TH03	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Auxiliary Steam System - Accomplish the following repairs:

1.1 Steam Reducing Valves - Accomplish a Class "B" overhaul of the following reducing valves:

(Includes bypass and bypass guard valves.)

1.1.1 1½ in. 1200/595 psi reducing valve.

1.1.2 1½ in. 1200/605 psi reducing valve.

1.1.3 1½ in. 1200/135 psi reducing valve.

1.1.4 2 in. 1200/8½ psi reducing valve.

1.2 1200 psi Valves - Accomplish a Class "B" overhaul to the valves listed in the following table to include but not limited to valve disassembly and renewal of defective/worn seats, discs, stems, bonnets, and replacement of valve stem packing. Includes entire valve from in line piping joints to and including manual and remote operating gear.

SY 2

SY 2

NOTE: Welded in valves shall be repaired in place unless repairs require shop facilities.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX
534A03*		

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

Valve No.	Description	Size/Type
1	1A Auxiliary Stop	2½ in. Gate
8	1B Auxiliary Stop	2½ in. Gate
2	1A Auxiliary Guard	2½ in. Gate
9	1B Auxiliary Guard	2½ in. Gate
3	1A Supercharger Supply	2 in. Gate
10	1B Supercharger Supply	2 in. Gate
4	1200/595 psi Reducer Inlet	1½ in. Gate
5	1200/135 psi Reducer Inlet	1½ in. Gate
6	1200/8.5 psi Reducer Inlet	2 in. Gate
7	1200 psi Auxiliary Steam Crossover	2 in. Gate
11	1200/605 psi Reducer Inlet	1½ in. Gate
12	1A Supercharger Trip Valve	2 in. Gate
13	1B Supercharger Trip Valve	2 in. Gate
14	1200/595 psi Reducer Outlet	1 in. Gate
15	1200/135 psi Reducer Outlet	1½ in. Gate
16	1200/8.5 psi Reducer Outlet	2 in. Gate
21	1200/605 psi Reducer Outlet	1 in. Gate

2. Perform overhaul testing of Auxiliary Steam System in accordance with 1200 psi Propulsion Plant Test Procedure No. 534TH000140 (Auxiliary Steam System).

- 2.1 Prerequisites and Pressure Test - Phase I SY 2
- 2.2 Prerequisites and Inspection - Phase I SY 2
- 2.3 Prerequisites and Operation - Phase III SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX									
534A03*	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI				

NOTE: Remote operators tested in SWLIN 253A01*

NOTE: Additional repairs required to piping and valves in the 1200 psi Auxiliary Steam System and 150 psi Auxiliary Steam System within propulsion machinery spaces as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY SPACE	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
534A05A			TH04	

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSIGMT	PRI
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1. Steam Drain Collecting System

1.1 Perform overhaul testing of Steam Drain Collecting System in accordance with 1200 psi Propulsion Plant Test Procedure No. 534TH000150 (Steam Drain Collecting System).

1.1.1 Prerequisites and Pressure Test - Phase I (HP Drain Sys)

1.1.2 Prerequisites and Inspection - Phase I

1.1.3 Prerequisites and Operation - Phase III

NOTE: Additional repairs required to all piping and valves in the high and low pressure drain systems, fresh water system, inspection tank drain system and steam whistle drain system within propulsion machinery spaces as a result of the POT&I are as follows:

FA 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX	JCN INDICATED BELOW	TITLE
SWLIN	534A07A	TOTAL SHIPYARD COST	EIC GROUP TH03	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	Main Turbine Gland Seal and Vent System.					
	1.1	Gland Seal Regulating Valve and Air Pilot Controller - Accomplish a Class "B" overhaul.				SY	2
	1.2	Gland Seal Excess Steam Unloading (Dump) Valve and Air Pilot Controller - Accomplish a Class "B" overhaul.				SY	2
	2.	Perform post-overhaul testing of Gand Seal and Vent System in accordance with 1200 psi Propulsion Plant Test Procedure No. 534TH030070 (Gland Seal and Vent System). Test includes main turbine and SSTG gland seal and vent system SWLIN 534A08*.				SY	2

NOTE: Additional repairs required to piping and valves in the Gland Seal and Vent System for the main turbines, gages and gage tubing and control air tubing and valves as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	AUXILIARY FRESH WATER COOLING	EIC GROUP	MAINTENANCE AND REPAIR
536A02A	TOTAL SHIPYARD COST	TB04	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	AN/SPS-40 Radar Cooling System - Accomplish the following repairs:					
	1.1	Fresh Water Circulating Pumps and Motors, Two (2) - Accomplish a Class "B" overhaul.				SY	3
	1.2	Heat Exchanger, Three (3) - Accomplish a Class "B" overhaul.				SY	3
	1.3	1½ Inch Duplex Strainer, One (1) - Accomplish a Class "B" overhaul.				SY	3
	1.4	1½ Inch Temperature Control Valves, Two (2) - Accomplish a Class "B" overhaul.				SY	3
	1.5	Flexible Hoses (Aeroquip, 12 Inches Long), Four (4) - Replace; reuse end fittings.				SY	3
	1.6	Demineralizer, One (1) - Accomplish a Class "B" overhaul.				SY	3
	1.7	3-Way Temperature Regulating Valve, One (1) - Accomplish a Class "B" overhaul.				SY	3
	1.8	Flush Radar Cooling System and perform hydrostatic test.				SY	2
	1.9	Accomplish 1200 psi Propulsion Plant Test Procedure No. 536PG000010.				SY	2

NOTE: Above repairs do not include the SPS-40 () closed loop system in radar room. Repair of that system is covered in SWLIN 452A01*.

CONTINUATION SHEET

SWLIN	536A02*	SYSTEM	AUXILIARY FRESH WATER COOLING
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SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	2.	AM/SQS-26 Sonar Cooling System - Accomplish the following repairs:					
	2.1	Circulating Pumps and Motors, Two (2) - Accomplish a Class "B" overhaul.				SY	3
	2.2	Heat Exchangers, Three (3) - Accomplish a Class "B" overhaul.				SY	3
	2.3	3 Inch Duplex Salt Water Strainer, One (1) - Accomplish a Class "B" overhaul.				SY	3
	2.4	2½ Inch, 40 psi Relief Valve, One (1) - Accomplish a Class "B" overhaul.				SY	3
	2.5	2 Inch Fresh Water Temperature Control Valve, One (1) - Accomplish a Class "B" overhaul.				SY	3
	2.6	1½ Inch Chill Water Temperature Control Valve, One (1) - Accomplish a Class "B" overhaul.				SY	3
	2.7	Deminerizer, One (1) - Accomplish a Class "B" overhaul.				SY	3
	2.8	Accomplish 1200 psi Propulsion Plant Test Procedure No. 536RB000010.				SY	3
	2.9	Gages and Thermometers - Repair and calibrate seven (7) pressure gages and three (3) thermometers.				SY	3

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	536A02*	SYSTEM	AUXILIARY FRESH WATER COOLING					M/D	MATL \$	COST \$	ASSIGMT	PRI
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DESCRIPTION

NOTE: Additional repairs required in this SWLIN to fresh water pumps No. 1 and 2, motors and controllers, chilled water/fresh water heat exchanger, valves, piping, salt water duplex strainer, temperature regulators, constant flow regulators, low flow alarm, salinity indicator alarm, demineralizer (includes cooling pumps in the windlass room), fresh water expansion tank in the mack and fresh water piping, valves, flow indicators and hoses to sonar cabinets as a result of the POT&I are as follows:

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	536A02*	SYSTEM	AUXILIARY FRESH WATER COOLING
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

3. NTDS Cooling Water System - Accomplish the following repairs:

3.1 Cooling Water Pump No. 1 and No. 2 - Accomplish a Class "B" overhaul to include but not limited to the following:

- 3.1.1.1 Wearing Rings - Renew.
- 3.1.1.2 Shaft Sleeves - Renew.
- 3.1.1.3 Packing - Renew.

3.2 Cooling Water Pump Motor No. 1 and No. 2 - Accomplish a Class "B" overhaul to include but not limited to the following:

- 3.2.1 Motor Bearings - Renew.
- 3.2.2 Stator - Clean, dip and bake.
- 3.2.3 Rotor - Balance.

3.3 Clean, flush and test CW/DW heat exchanger.

3.4 Install flexible hoses vice fixed piping to inlet and outlet of heat exchanger.

3.5 Renew suction and discharge hoses on distilled water circulating pumps No. 1 and 2.

SY 2

SY 2

SY 2

SY 2

SY 2

CONTINUATION SHEET

SWLIN		SYSTEM	
536A02*		AUXILIARY FRESH WATER COOLING	

SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	3.6	Repair/calibrate Barton flow meter. Calibrate high temperature alarm switch. Set switch to cut in at 95 degrees and cut out at 90 degrees.				SY	2
	3.7	Clean, flush and test distilled water piping system.				SY	2
	3.8	Calibrate thermometers and gages.				SY	2
	3.9	Barnstead Demineralizer - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	3.9.1	Oxygen Removal Cartridges - Renew.					
	3.9.2	Mixed Bed Cartridges - Renew.					
	3.9.3	Filter Membrane - Renew.					
	3.9.4	Conductivity Analyzer - Calibrate.					

NOTE: NTDS Cooling System applies to FF-1047 and FF-1049 only.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I ac follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SHIP FUEL AND FUEL COMPENSATING	EIC GROUP	MAINTENANCE AND REPAIR
541A01A	TOTAL SHIPYARD COST	TD09	

JCN ITEM # DESCRIPTION M/D MATL\$ COST\$ ASSIGMT SY PRI

1. Fuel Oil Transfer Pump - Accomplish the following repairs:
 - 1.1 Pump - Accomplish a Class "B" overhaul.
 - 1.2 Motor - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.2.1 Clean, bake and test stator windings.
 - 1.2.2 Replace bearings.
 - 1.2.3 Balance rotating assembly.
 - 1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:
 - 1.3.1 Clean and preserve controller enclosure.
 - 1.3.2 Clean and tighten terminals and connectors. Align contactors.
 - 1.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	541A01*	SYSTEM	SHIP FUEL AND FUEL COMPENSATING
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1.4 Test in accordance with 1200 psi Propulsion Plant Test Procedure No. 541TD090060 (Fuel Oil Transfer Pump).

NOTE: Additional repairs required to pump, coupling, motor support pedestal, motor and motor controller as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
541A03A	SHIP FUEL & FUEL COMPENSATING TOTAL SHIPYARD COST	EIC GROUP TD06	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Fuel Oil Filling System					
	1.1	Perform overhaul testing of the Fuel Oil Filling, Transfer and Stripping System in accordance with 1200 psi Propulsion Plant Test Procedure No. 541TD000070 (Fuel Oil Fill, Transfer and Stripping System).					
	1.1.1	Prerequisites and Flush - Phase I				SY	2
	1.1.2	Prerequisites and Pressure Test - Phase I (Arrival)				SY	2
	1.1.3	Prerequisites and Pressure Test - Phase I (Post Repair)				SY	2
	1.1.4	Prerequisites and Inspection - Phase I (Omit inspections and coating of tanks - see SWLIN 123A02*).				SY	2
	1.1.5	Prerequisites and Operation - Phase III				SY	2

NOTE: Additional repairs required to fuel oil piping, valves and vave manifolds associated with taking or discharging fuel oil to/from the ship as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SHIP FUEL & FUEL COMPENSATING	EIC GROUP	MAINTENANCE AND REPAIR
541A04A	TOTAL SHIPYARD COST	TD08	

JCN **ITEM #** **DESCRIPTION** **M/D** **MATL \$** **COST \$** **ASSIGMT** **PRI**

1. Fuel Oil Transfer System

NOTE: Post-overhaul testing of the Fuel Oil Transfer System in conjunction with 1200 psi Propulsion Plant Test Procedure No. 541TD000070 performed in SWLIN 541A03*.

NOTE: Additional repairs required to fuel oil transfer piping, valves and valve manifolds associated with transfer of fuel oil within the ship as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	COMPRESSED AIR	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
551A01A			TF01	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. High Pressure Air System - Accomplish the following repairs:

1.1 Chemically clean and inspect the entire system in accordance with NSTM 9490.

1.1.1 Repair and calibrate all H.P. air system gages.

1.1.2 Clean, inspect and test high pressure air flasks and separators, record data, certify and install test data plates on the following:

Air Flasks

<u>Qty</u>	<u>Space/Compt. No</u>
1	ASROC Control Station (1-51-2-C)
2	Diesel Generator Rm. No. 2 (3-118-0-E)
2	5/38 H.P. Air Station (1-108-6)
1	Engine Room at H.P. Air Compressor (5-78-0-E)
1	Fire Room at H.P. Air Compressor (5-65-0-E)

Separators

<u>Qty</u>	<u>Space/Compt. No.</u>
1	Engine Room at H.P. Air Compressor (5-78-0-E)
1	Fire Room at H.P. Air Compressor (5-65-0-E)

NOTE: Additional repairs required to high pressure air piping and valves, dehydrators and associated drains, relief valves, pressure regulating and reducing valves as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
551A02A	COMPRESSED AIR TOTAL SHIPYARD COST	EIC GROUP TF03	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Low Pressure Air Systems - Accomplish the following:					
	1.1	Perform overhaul test of Low Pressure/Control Air System in accordance with 1200 psi Propulsion Plant Test Procedure No. 551TF000070 (Low Pressure/Control Air System).					
	1.1.1	Prerequisites and Flush - Phase I				SY	2
	1.1.2	Prerequisites and Pressure Test - Phase I				SY	2
	1.1.3	Prerequisites and Inspection - Phase I				SY	2
	1.1.4	Prerequisites and Operation - Phase II				SY	2

NOTE: Additional repairs required to low pressure and control air piping from cutout valve upstream from the pressure regulator valves to the actuated valves; dampers; motors; pneumatic cylinders, etc.; air and moisture separators; filters; associated cutout and bypass valves; (does not include air pilot controllers, air-actuated valves and air motors) as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	551A03*	SYSTEM	COMPRESSED AIR
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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- 1.5.3 Automatic drain hose. SY 2
- 1.6 Attached gage board. Repair and calibrate gages. SY 2
- 2. High Pressure Air Compressor No. 2 - Accomplish the following repairs:
 - 2.1 Compressor - Accomplish a Class "B" overhaul. SY 2
 - 2.2 Compressor Motor - Accomplish a Class "B" overhaul. SY 2
 - 2.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following: SY 2
 - 2.3.1 Clean and preserve controller enclosure.
 - 2.3.2 Clean and tighten terminals and connectors. Align contactors.
 - 2.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.
 - 2.4 Replace resilient mounts. SY 2
 - 2.5 Replace the following flexible connectors: SY 2
 - 2.5.1 H.P. air discharge hose.

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	551A03*	SYSTEM	COMPRESSED AIR
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	2.5.2	Cooling water supply and discharge assemblies.					
	2.5.3	Automatic drain hose.					
	2.6	Attached gage board. Repair and calibrate gages.				SY	2
	3.	Perform post-overhaul test of No. 1 and 2 High Pressure Air Compressors in accordance with 1200 psi Propulsion Plant Test Procedure No. 550TF010060 (High Pressure Air Compressor).				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	COMPRESSED AIR	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
551A04A			TF00	

JCN **ITEM #** **DESCRIPTION** **M/D** **MATL \$** **COST \$** **ASSIGMT** **PRI**

1. Low Pressure Air Compressor No. 1 and No. 2 -
 Accomplish a Class "B" overhaul including motors,
 controllers and switches.

1.1 Calibrate gages and thermometers.

1.2 Replace resilient mounts.

1.3 Replace flexible hoses.

1.4 Perform post-overhaul test of No. 1 and
 No. 2 Low Pressure Air Compressors in
 accordance with 1200 psi Propulsion
 Plant Test Procedure No. 550TF030022
 (Low Pressure Air Compressor).

SY 3

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
551A07A	COMPRESSED AIR		MAINTENANCE AND REPAIR
	TOTAL SHIPYARD COST	EIC GROUP	
		N704	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	Prairie Masker Air Compressor No. 1 - Accomplish the following repairs:					
	1.1	Compressor and Turbine - Accomplish a Class "B" overhaul.				SY	2
	1.2	Lube Water Pump - Accomplish a Class "B" overhaul.				SY	2
	1.3	Lube Water Pump Motor - Accomplish a Class "B" overhaul.				SY	2
	1.4	Lube Water Pump Motor Controller - Accomplish a Class "B" overhaul.				SY	2
	1.5	Gages and Thermometers - Repair and calibrate.				SY	2
	2.	Prairie Masker Air Compressor No. 2 - Accomplish the following repairs:					
	2.1	Compressor and Turbine - Accomplish a Class "B" overhaul.				SY	2
	2.2	Lube Water Pump - Accomplish a Class "B" overhaul.				SY	2
	2.3	Lube Water Pump Motor - Accomplish a Class "B" overhaul.				SY	2
	2.4	Lube Water Pump Motor Controller - Accomplish a Class "B" overhaul.				SY	2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	551A07*	SYSTEM	COMPRESSED AIR
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	2.5	Gages and Thermometers - Repair and calibrate.				SY	2
	3.	Emitter Belt - Clean and test belt holes while ship is drydocked. Clear plugged holes.				SY	2
	4.	Wind Box - Accomplish a Class "B" overhaul.				SY	2
	4.1	Overhaul inlet check valve.					
	5.	Perform post-overhaul testing of No. 1 and 2 Prairie Masker Air Compressor in accordance with 1200 psi Propulsion Plant Test Procedure No. 550N7040020 (Prairie Masker Compressor).				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FIRE EXTINGUISHING	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
555A01A			T900	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Fire Fighting Systems

- 1.1 Perform post-overhaul testing of and certify Main Machinery Spaces Fire Fighting System in accordance with 1200 psi Propulsion Plant Test Procedure No. 555T9000070 (Fire Fighting in Main Machinery Spaces). Provide ship Commanding Officer with copy of completed test procedure.

SY 2

NOTE: Certification shall be in accordance with 1200 psi test and certification manual.

NOTE: Additional repairs required to foam cans, foam solution tanks, proportioners, carbon dioxide/chemical systems (fixed or portable) as a result of POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	STABILIZING FINS		MAINTENANCE AND REPAIR
566A01A	TOTAL SHIPYARD COST	EIC GROUP	TR00

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Fin Stabilizer (Starboard) No. 1 - Accomplish the following repairs:

1.1 Hydraulic Power Unit Pump, One (1) - Accomplish a Class "B" overhaul to include but not limited to the following:

1.1.1 Replace bearings, seals, gaskets, "O" rings and damaged fasteners.

1.1.2 Replace damaged or worn bushings, sleeves and other internal parts found defective.

1.1.3 Repair coupling, install new lube seals.

1.1.4 Repair relief valves and adjust lift pressure.

1.2 Resilient Mounts - Replace.

1.3 Flexible Connectors - Replace the following:

1.3.1 Pump to RAM.

1.3.2 Gage lines.

1.3.3 Grease lines.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	566A01*	SYSTEM STABILIZING FINS	
JCN	ITEM #	DESCRIPTION	M/D MATL \$ COST \$ ASSIGMT PRI

1.4 Hydraulic Power Unit Motor, One (1) - Accomplish a Class "B" overhaul to include but not limited to the following:

- 1.4.1 Clean, bake and test stator windings.
- 1.4.2 Replace rotor bearings.
- 1.4.3 Balance rotating assembly.

1.5 Motor Controller, One (1) - Accomplish a Class "B" overhaul to include but not limited to the following:

- 1.5.1 Clean and preserve controller enclosure.

1.5.2 Clean and tighten terminals and connectors. Align contactors.

1.5.3 Replace defective or deteriorated wiring and components within the controller enclosure.

1.6 Clean and flush hydraulic system including oil reservoir, drain and fill piping; replace system filters. Sample system and certify clean.

- 1.6.1 Repair and calibrate system gages.

SY 2

SY 2

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	566A01*	SYSTEM	STABILIZING FINS			
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.7	Ram Assembly (Starboard) - Accomplish a Class "B" overhaul.				SY	2
	1.8	Replace fin hull shaft seals.				SY	2
	2.	Fin Stabilizer (Port) No. 2 - Accomplish the following repairs:					
	2.1	Hydraulic Power Unit Pump, One (1) - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	2.1.1	Replace bearings, seals, gaskets, "O" rings and damaged fasteners.					
	2.1.2	Replace damaged or worn bushings, sleeves and other internal parts found defective.					
	2.1.3	Repair coupling, install new lube seals.					
	2.1.4	Repair relief valves and adjust lift pressure.					
	2.2	Resilient Mounts - Replace.				SY	2
	2.3	Flexible Connectors - Replace the following:				SY	2
	2.3.1	Pump to RAM.					
	2.3.2	Gage lines.					
	2.3.3	Grease lines.					

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	DESCRIPTION	MATL S	COST \$	ASSIGMT	PRI
566A01*	STABILIZING FINS					

JCN ITEM =

- 2.4 Hydraulic Power Unit Motor, One (1) -
Accomplish a Class "B" overhaul to include
but not limited to the following:
 - 2.4.1 Clean, bake and test stator windings.
 - 2.4.2 Replace rotor bearings.
 - 2.4.3 Balance rotating assembly.
- 2.5 Motor Controller, One (1) - Accomplish a
Class "B" overhaul to include but not
limited to the following:
 - 2.5.1 Clean and preserve controller
enclosure.
 - 2.5.2 Clean and tighten terminals and
connectors. Align contactors.
 - 2.5.3 Replace defective or deteriorated
wiring and components within the
controller enclosure.
- 2.6 Clean and flush hydraulic system including
oil reservoir, drain and fill piping; replace
system filters. Sample system and certify
clean.
 - 2.6.1 Repair and calibrate system gages.
- 2.7 Ram Assembly (Port) - Accomplish a Class
"B" overhaul.

SY 2

SY 2

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	566A01*	SYSTEM	STABILIZING FINS
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

2.8 Replace fin hull shaft seals. SY 2

NOTE: Additional repairs required to stabilizer fins, hull fin shaft bearings, hydraulic piping system valves, hand hydraulic drain and filling pump and reservoir, gyro control assembly, gyro synchro amplifier and receiver units and indicators as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	583A01*	SYSTEM	BOAT HANDLING AND STOWAGE
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 2.2 Replace motor bearings; clean and bake stator windings.
- 2.3 Clean, tighten terminals and connections, replace and align contactors in motor controller.
- 2.4 Smooth brake drum surfaces, replace brake friction linings; repair and free up brake operating linkages.
- 2.5 Inspect gearing, remove burrs and raised surfaces, adjust thrust and clearances.
- 2.6 Perform post-overhaul static, dynamic and working load tests in conjunction with test of davit.

NOTE: Additional repairs required to motor whale boat, handling and stowage equipment as a result of the POT&I are as follows:

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	583A03*	SYSTEM	BOAT HANDLING AND STOWAGE	
JCN	ITEM #	DESCRIPTION	M/D	MATL \$
				COST \$
				ASSIGMT
				PRI

- 2.1 Replace bearings, sleeves, bushings and lube seals in gearcase, drum shaft assembly, spooling device and clutch mechanism.
- 2.2 Replace motor bearings; clean and bake stator windings.
- 2.3 Clean, tighten terminals and connections, replace and align contactors in motor controller.
- 2.4 Smooth brake drum surfaces, replace brake friction linings; repair and free up brake operating linkages.
- 2.5 Inspect gearing, remove burrs and raised surfaces, adjust thrust and clearances.
- 2.6 Perform post-overhaul static, dynamic, and working load tests in conjunction with test of davit.

NOTE: Additional repairs required to 26 ft. personnel boat, and handling and stowage equipment as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	ENVIRONMENTAL POLLUTION CONTROL	EIC GROUP	MAINTENANCE AND REPAIR
593A01A	TOTAL SHIPYARD COST	A904	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Sewage collection, holding and transfer tanks (CHT).

(Includes the structural compartmentation of the tanks and the access manholes.)

1.1 Clean and inspect CHT tanks.

1.1.1 Inspect tank coating for blisters, peeling and deterioration.

1.1.2 Inspect level sensors for material condition and operability.

1.1.3 Inspect washdown system for material condition and operability.

1.1.4 Submit report of conditions to Type Commander and Ship's Commanding Officer.

1.2 Accomplish structural repairs authorized as a result of the inspection performed in 2.1 above. (Reservation)

NOTE: Coating of tanks covered on SWLIN 631A01*.

NOTE: Applicable only if SHIPALT FF-1040-180K or FFG-1-178K has been previously accomplished.

SY 2

SY 2

PART 3.6

MAJOR SHIP SYSTEM 6

MAJOR SHIP SYSTEM 6 - OUTFIT AND FURNISHINGS

602 HULL DESIGNATING AND MARKING

631 PAINTING

633 CATHODIC PROTECTION

634 DECK COVERING

655 LAUNDRY SPACES

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
	HULL DESIGNATING AND MARKING		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
602AC1A		UF08	

JCN ITEM = DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Machinery, Valve, Pipe and Cable Markings

(Includes label plates and tags, pipe and machinery identification stencils, safety and warning plates and markings, Damage Control classification labels and plates, instructional diagrams and plates.)

1.1 Replace illegible, missing or incorrect warning, instructional, safety and component identification labels, tags and plates on machinery, equipment, valves and fittings. FA 2

1.2 Replace missing, illegible or incorrect cable tags on electrical and electronic cables and wiring. FA 2

1.3 After completion of interior compartment painting, restore identifying and direction-of-flow markings on piping.

1.3.1 Compartments painted by shipyard. FA 2

1.3.2 Compartments painted by ship's force. FA 2

NOTE: See SWLIN 631A01* Painting.

2. At commencement of overhaul, submit a list to Type Commander of items which are beyond the capability of Forces Afloat. FA 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PAINTING	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
631A01A			UF00	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Hull Painting
 - 1.1 Sandblast and paint the entire underwater area of ship, including appendages and inaccessible voids from keel to six (6) inches above the upper boot top line.
 - 1.1.1 Clean and wire brush all main and auxiliary sea chest and hull openings. Paint in conjunction with hull painting.
 - 1.2 Stage, remove paint and paint ships hull from upper boot top limits to main deck edge. Cut in and paint hull markings.
2. Fresh and Feedwater Tanks - After the completion of structural repairs, prepare, prime and paint interior surfaces of tanks in accordance with NSTM Chapter 9190, Paragraph 9190.171.

FA 2
3. Fuel Oil Tanks - Sandblast and paint seventeen (17) fuel oil tanks.

SY 2
4. JP-5 Tanks - Prime and paint selected areas of four (4) JP-5 tanks.

SY 2
5. Chain Locker Preservation - After removal of anchor chains prepare chain locker and apply inorganic zinc coating, MIL-P-23236, Type I, Class 3, Post-Curing type in accordance with NSTM Chapter 9190.

SY 2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	631A01*	SYSTEM	PAINTING			
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

SY 3

- 6. Machinery Space Bilges
 - 6.1 Prepare and chemically clean the following bilge areas in the Engineering Spaces:
 - 6.1.1 5-62-0-E, Fire Room
 - 6.1.2 5-78-0-E, Engine Room
 - 6.1.3 3-118-0-E, Diesel Gen. & A/C Room
 - 6.1.4 3-141-0-E, Steering Gear Room
 - 6.1.5 5-95-0-Q, Shaft Alley No.1
 - 6.1.6 5-106-0-Q, Shaft Alley No. 2
 - 6.1.7 4-119-0-E, Pump Room
 - 6.1.8 5-20-0-Q, Eductor Room
 - 6.2 Apply high performance paint system to cleaned bilge areas in above spaces including piping, supports, braces, hangers, structural members, foundations and hull plating below the lower level floor plating and in the same horizontal plane.
- 7. Prepare surfaces and replace missing/deteriorated vermiculite paint in accordance with NSTM 9190.164 in the following spaces:
 - 7.1 2-5-0-1C, Flammable liquid store room

FA 3

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	SYSTEM	PAINTING				
631A01*						
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT PRI

- 7.2 5-62-0-E, Fire Room
- 7.3 5-78-0-E, Engine Room
- 7.4 5-106-0-Q, Shaft Alley No. 2
- 7.5 4-38-1-A, Store Room
- 7.6 4-44-1-A, Store Room
- 7.7 4-49-0-A, Store Room
- 7.8 3-150-1-A, Store Room
- 7.9 3-147-2-A, Store Room
- 7.10 3-138-2-A, Store Room
8. Sandblast and paint the following voids in accordance with NSTM 9190.113
- 8.1 2-B-0-V
- 8.2 5-14-0-V
- 8.3 5-95-4-V
- 8.4 5-141-0-V
9. Sandblast and paint peak tank (5-5-0-W) in accordance with NSTM 9190.113.
10. Clean, mask, prime and paint upper and lower level in Engine and Fire Rooms.

SY 3

SY 3

SY 3

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	SYSTEM	PAINTING						
631A01*								

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

NOTE: To be completed prior to reinstallation of equipment removed during overhaul. (Includes foundations for machinery removed by shipyard and forces afloat).

NOTE: Additional preservation and painting of interior and exterior surfaces and areas of hull, super-structure structural and non-structural bulkheads, overheads, decks, foundations, bedplates, and tank tops, bilges, escape and loading trunks, machinery and equipment as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CATHODIC PROTECTION	JCN INDICATED BELOW	TITLE
SWLIN	633A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			1106	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Cathodic Protection System (Sacrificial) - Replace all zinc anodes.

(Includes zinc anodes and fasteners on ship's under water body, and appendages.)

NOTE: Bolted type to be installed vice welded strap type to facilitate replacement by divers.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER SWLIN	SYSTEM	CATHODIC PROTECTION TOTAL SHIPYARD COST	JCN INDICATED BELOW	TITLE MAINTENANCE AND REPAIR
	633A02A		EIC GROUP 1106	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Cathodic Protection System (Impressed Current)

(Includes impressed current anodes, power supply, amplifier control, shafting and rudder grounding straps.)

1.1 Replace deteriorated or damaged impressed current anodes, shafting and rudder grounding straps in accordance with report submitted under SWLIN 986A01* (Item No. 2) and approved by Type Commander.

1.2 Clean, inspect and test power supply and amplifier control.

1.3 Clean and tighten terminals and connections, replace frayed or deteriorated wiring.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I and drydock inspection are as follows:

SY 2

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	LAUNDRY SPACES	JCN INDICATED BELOW	TITLE
SWLIN	655A01A	TOTAL SHIPYARD COST	EIC GROUP 1A01	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Laundry Equipment

1.1 Washer-Extractor - Replace with new unit.

SY 2

NOTE: If replacement unit is not available, Class "B" over-haul.

1.2 Replace five (5) flex hoses on washer extractor.

SY 2

1.2.1 One (1) hot water hose.

1.2.2 One (1) cold water hose.

1.2.3 One (1) salt water hose.

1.2.4 One (1) drain hose.

1.2.5 One (1) metal steam hose.

NOTE: Additional repairs required to washers, presses and irons, dryers, marking machines, shelves and bins, baskets, tubs, scales, lockers, tables and chairs as a result of the POT&I are as follows:

PART 3.7

MAJOR SHIP SYSTEM 7

MAJOR SHIP SYSTEM 7 - ARMAMENT

- 721 LAUNCHING DEVICES (MISSILES AND ROCKETS)
- 722 MISSILE, ROCKET, AND GUIDANCE CAPSULE HANDLING SYSTEMS
- 728 MISSILE HEATING, COOLING, TEMPERATURE CONTROL SYSTEM
- 752 TORPEDO HANDLING SYSTEM

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	LAUNCHING DEVICES (MISSILES AND ROCKETS)	JCN INDICATED BELOW	TITLE
721A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
		JJ00	

DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 1. Guided Missile Launching System MK 22 MOD 0 (TARTAR)
 - 1.1 Two (2) Motor - Generators - Accomplish a Class "B" overhaul. SY 2
 - 1.2 Train and elevation drive motors - Accomplish a Class "B" overhaul. SY 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

722A01A	SYSTEM	MISSILE, ROCKET, AND GUIDANCE CAPSULE HANDLING	JCN INDICATED BELOW	TITLE
	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
			JF00	

M/D MATLS COST \$ ASSIGMT PRI

1. ASROC Handling Equipment - Perform static and dynamic load testing; inscribe label plates with data and date test performed and affix to equipment tested. (Reference Documents OP 2173, Vol 1, 2, 3; OP 4; OP 5; NS 0901-LP-700-0000; NSTM Chapter 700; OD 44941.)

- 1.1 Boom
- 1.2 MK 75/0 sling
- 1.3 MK 99/0 sling
- 1.4 MK 102/0 sling
- 1.5 MK 42/1 hand truck
- 1.6 MK 42/2 hand truck
- 1.7 MK 45/0 hand truck
- 1.8 Hoist

2. Perform a visual inspection of MK 28/1 truck adapters for any damage.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

FA 2
FA 2

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	MISSILE, ROCKET, AND GUIDANCE CAPSULE HANDLING	JCN INDICATED BELOW	TITLE
TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
72302A		JF00	

DESCRIPTION

M/D

MATL \$

COST \$

ASSIGMT

PRI

SY 2

1. ASROC Direct Loader - Perform static and dynamic load testing; inscribe label plates data and date test performed and affix to equipment tested - ASROC direct loader. (Reference NS 0975-LP-000-4010, Type 1; OP 4; OP 5; NS 0901-LP-700-0000; NSTM Chapter 700.)

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	MISSILE HEATING, COOLING, TEMPERATURE CONTROL	JCN INDICATED BELOW	TITLE
TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
728A01A		TB04	

ITEM - DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. ASROC Heating and Cooling System - Accomplish the following repairs:
 - 1.1 ASROC Seawater Heat Exchanger - Accomplish a Class "B" overhaul to include but not limited to:
 - 1.1.1 Disconnect and remove one (1) ASROC cooling sea water heat exchanger.
 - 1.1.2 Chemically clean heat exchanger sea water and fresh water sides to remove growth and foreign matter.
 - 1.1.3 Conduct hydrostatic test of heat exchanger in accordance with NAVSEA 997-000-4010 to determine repairs required.
 - 1.1.4 Replace leaking or plugged tubes. Install new zincs, plugs, seals and gaskets. Renew defective fasteners.
 - 1.2 ASROC Heater - Accomplish a Class "B" overhaul to include but not limited to:
 - 1.2.1 Disconnect and remove one (1) ASROC heater.
 - 1.2.2 Chemically clean heat exchanger steam and fresh water side to remove foreign matter.

SY 2

SY 2

SHIP SYSTEM WORK DESCRIPTION

SYSTEM MISSILE HEATING, COOLING, TEMPERATURE CONTROL	M/D MATL \$ COST \$ ASSIGMT PRI
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- 1.2.3 Conduct hydrostatic test of heat exchanger to determine repairs required.
- 1.2.4 Replace leaking or plugged tubes. Install new plugs, seals and gaskets. Renew defective fasteners.
- 1.3 Clean, flush and hydro the ASROC heating and cooling system while heat exchanger and heater are removed. Submit a report of hydro results to Type Commander.
- 1.4 Recharge cooling system, test operate, submit a report of test result to Type Commander.

SY 2
SY 2

NOTE: Additional repairs required to circulating pumps, coolant piping, proportioners and valves, expansion tank, temperature controls and alarms, and flow controllers as a result of the POT&I are as follows:

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	TORPEDO HANDLING	JCN INDICATED BELOW	TITLE
TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
		JF01	

M/D MATL\$ COST\$ ASSIGMT PRI

FA 2

DESCRIPTION

1. Torpedo Handling Equipment - Perform static and dynamic load testing; inscribe label plates with data and date test performed and affix to equipment tested: (Reference OP 2173, Vol 1, 2, 3; OP 4; OP 5; NS 0901-LP-700-0000; NSTM Chapter 700; CD 44941).

1.1 Two (2) torpedo dollies MK 24.

1.2 MK 2 loading tray.

1.3 Handling slings.

1.4 Torpedo handling boom

1.5 Pneumatic torpedo hoist.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

PART 3.8

MAJOR SHIP SYSTEM 8

MAJOR SHIP SYSTEM 8 - INTEGRATION/ENGINEERING - PUBLIC SHIPYARDS

813	PLANNING AND PRODUCTION CONTROL
830	DESIGN SUPPORT
838	DESIGN/ENGINEERING LIAISON
841	TESTS AND INSPECTIONS CRITERIA AND PROCEDURES
844	COMBAT SYSTEMS CHECKOUT CRITERIA AND PROCEDURES
851	MAINTENANCE
853	SUPPLY SUPPORT
856	TECHNICAL MANUALS AND OTHER DATA

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	PLANNING AND PRODUCTION CONTROL	JCN INDICATED BELOW	TITLE
ELMAGLA	TOTAL SHIPYARD COST	EIC GROUP UD00	MAINTENANCE AND REPAIR

ITEM: DESCRIPTION M/D MATL \$ COST \$ ASSGMT PRI

1. Ship's Force Overhaul Management System (SFOMS)
 - 1.1 Maintain SFOMS throughout the duration of the overhaul. (Type Commander funds only) FA
 - 1.2 Provide training, documentation, and technical assistance in the SFOMS implementation. PERA
 - 1.3 Provide services in support of SFOMS in accordance with the PERA (CRUDES) tasking letter. SY

2. Funds and Planning Estimates
 - 2.1 For Type Commander planning and fund control purposes, provide estimated manday and dollar costs to the Type Commander at the below listed stages of overhaul and planning availability: SY
 - 2.1.1 Pre-arrival (prior conference action).
 - 2.1.2 Post-arrival (based upon conference action).
 - 2.1.3 25% point (after major repairs have been determined for inspections).
 - 2.1.4 With fixed price offer or at 50% point if not fixed priced.
 - 2.1.5 75% point when not fixed priced.

SHIP SYSTEM WORK DESCRIPTION

SHIP SYSTEM SHEET	SYSTEM	PLANNING AND PRODUCTION CONTROL
811461*		
ITEM #		

M/D MATL \$ COST \$ ASSIGMT PRI

DESCRIPTION

2.1.1.6 One week after completion when not fixed price.

2.1.1.7 With departure report.

2.2 Shipyard requests for change in established planning estimates as a result of periodic reviews required above and for supplements to basic work package shall:

2.2.1 Reference the last established planning estimate.

2.2.2 Provide the cost of the change and new total planning estimate.

2.2.3 Provide detailed justification and reasons for situation requiring the change, i.e., revised scope of repairs, supplementary work requests, wage increases, etc.

NOTE: In order to reduce paper work and in lieu of voluminous work books, planning estimate required for the various stages of overhaul listed under item 2.1 above may be forwarded in the following listing:

Workline No. 2K/JCN Mandays Labor Material Total Remarks

OR

2K/JCN Brief Mandays Labor Material Total Remarks

SHIP SYSTEM WORK DESCRIPTION

ITEM #	SYSTEM	PLANNING AND PRODUCTION CONTROL	M/D	MATL \$	COST \$	ASSIGMT	PRI
		DESCRIPTION					

1. Advance Planning Documents
 - 1.1 Prepare and issue a POT&I Plan. PERA
 - 1.2 Prepare and issue a POT&I Report. SY
 - 1.3 Provide services to prepare and issue a SARP. SY
 - 1.3.1 Maintain SARP as a current and accurate document; revise and re-issue as necessary.

NOTE: Performance of POT&I covered on SWLIN 986A01*, Item 1.

SHIP SYSTEM WORK DESCRIPTION

SYSTEM	DESIGN SUPPORT	JCN INDICATED BELOW	TITLE
U6000	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
		U600	

M/D MATL \$ COST \$ ASSIGMT PRI

1. Hull Vibration Survey

1.1 During post repair trial conduct hull vibration survey and forward report of results to ship and Type Commander.

2. Design and Engineering Services

Provide Design and Engineering services during over-haul as follows:

2.1 Design Division Test Documentation

2.2 Design Division Test Coordination

2.3 Plan Printing and Reproduction

NOTE: Plan Preparation/Revision is covered by the individual jobs requiring this service.

SY

SY

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FF-1040/FFG-1 CLASS SARP PLANNING DOCUMENT.(U)
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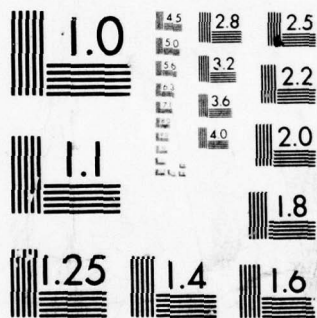
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DESIGN/ENGINEERING LIAISON		MAINTENANCE AND REPAIR
838A01A	TOTAL SHIPYARD COST	EIC GROUP	
		UB00	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 1. Electronic and Ordnance Equipment SY
- 1.1 Provide Combat Systems Division Engineering Services to assist Ship's Force and production shops with repairs to electronic and ordnance equipment.
- 2. Design/Engineering Liaison SY
- 2.1 Provide design liaison services.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TESTS AND INSPECTIONS CRITERIA AND PROCEDURES	JCN INDICATED BELOW	TITLE
841A01A	TOTAL SHIPYARD COST		EIC GROUP U60A	MAINTENANCE AND REPAIR

JCN

ITEM #

DESCRIPTION

M/D MATL \$

COST \$

ASSIGMT

PRI

1. Boiler Feedwater Analysis Procedure

FA

1.1 Prior to and upon completion of overhaul, certified Steam Generating Plant Inspector observe feedwater sampling and analysis techniques employed by Ship's Force to determine compliance with standards in NSTM Chapter 9560.

1.2 Independently analyze samples of feedwater to verify Ship's Force analysis.

1.3 Inspect boiler chemistry laboratory and reagents for condition of equipment and its proper use.

2. Submit report of analysis and procedures with recommendations to ship's Commanding Officer with copy to Type Commander.

FA

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	COMBAT SYSTEMS CHECKOUT CRITERIA AND PROCEDURES	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
844A01A			D609	

JCN **ITEM #** **DESCRIPTION** **M/D** **MATL \$** **COST \$** **ASSIGMT** **PRI**

SY

1. **Combat Systems Checkout (Documentation)**

1.1 Provide criteria and test forms for checkout and test of electronics equipment and systems, weapons systems and weapons control systems.

1.2 Develop procedures and provide guidance for checkout and test of:

- 1.2.1 Gun Fire Control Systems
- 1.2.2 Underwater Battery Fire Control Systems
- 1.2.3 Missile Fire Control Systems
- 1.2.4 Composite Weapons System Alignment
- 1.2.5 Electronics equipment and systems

2. Certify the multiple components and systems comprising the complete combat system in compliance with latest applicable documentation regarding proper operation, alignment, accuracy of function and sequence of events.

SY

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	MAINTENANCE	JCN INDICATED BELOW	TITLE
SWLIN	851A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
JCN	ITEM #	DESCRIPTION	M/D	MATL \$
			DE00	COST \$
				ASSIGMT
				PRI

1. Maintenance Engineering

1.1 Provide completed bearing clearance data sheets to Ship's Force on data sheets suitable for Ship's Force retention, prior to completion of overhaul.

1.1.1 Includes propulsion turbines, reduction gears and shafting, steering including rudder, and ship's service power generation equipment which have been opened repaired or replaced by the shipyard during the overhaul.

SY

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
853A01A		UE05	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

SY

1. Supply Support

- 1.1 Provide consumable supplies such as sanding discs, wire brushes, etc. for use on power tools by Ship's Force.
- 1.2 Prepare and distribute allowance/load list of off-loaded allowance items.
- 1.3 Prepare and distribute revised allowance/load lists for equipments installed or modified during the overhaul period.

PART 3.9
MAJOR SHIP SYSTEM 9

MAJOR SHIP SYSTEM 9 - SHIP ASSEMBLY AND SUPPORT SERVICES - PUBLIC SHIPYARDS

980 CONTRACTUAL AND PRODUCTION SUPPORT

982 TRIALS

985 FIRE AND FLOODING PROTECTION

986 TESTS AND INSPECTIONS

990 CONSTRUCTION SUPPORT

991 STAGING, SCAFFOLDING AND CRIBBING

992 TEMPORARY UTILITIES AND SERVICES

993 MATERIAL HANDLING AND REMOVAL

997 RYDOCKING

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CONTRACTUAL AND PRODUCTION SUPPORT	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
980A01A			DB00	

JCN **ITEM #** **DESCRIPTION** **M/D** **MATL \$** **COST \$** **ASSIGMT** **PRI**

1. Assist Ship's Force

1.1 In accordance with Type Commander Authorization establish a job order to provide 100 man-days of industrial assistance to Ship's Force for use as directed by the Commanding Officer through the appropriate agency in the shipyard.

SY

2. Minor Assist Work

2.1 In accordance with Type Commander Authorization establish a job order to provide for unforeseen minor contingencies in the performance of authorized work, without excessive paper work, by the issuance of a "Minor Assist Work" job order. This job order authorizes production shops to charge for direct labor expended in unanticipated but necessary production assistance incidental to authorized work. Assist work charged to this job order will not exceed four (4) man-hours per incident.

SY

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	TRIALS		MAINTENANCE AND REPAIR
982A01A	TOTAL SHIPYARD COST	EIC GROUP	
		U500	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

SY

1. Dock Trials Conduct post overhaul Dock Trial in accordance with 1200 psi Propulsion Plant Test Procedure No. 200U5010061.

1.1 Ascertain the exact condition of the machinery of the ship after repairs and alterations are complete and report any defect, deficiency or maladjustment.

2. Sea Trials - Conduct post overhaul sea trial.

SY

2.1 Determine that all work has been completed and the ship and its equipment are ready for sea in all respects. Applicable procedures include:

2.1.1 Machinery - 1200 psi Propulsion Plant Test Procedure No. 200U5050070.

2.1.2 Ordnance/Electronics -

2.2 Take and record data on test forms, and submit required reports.

NOTE: NAVSEA 0901-LP-094-0000 Chapter 094 provides guidance.

NOTE: Correction of deficiencies covered under SWLIN 990A01*.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	FIRE AND FLOODING PROTECTION		MAINTENANCE AND REPAIR
985A01A	TOTAL SHIPYARD COST	EIC GROUP	
		U801	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Fire Protection

1.1 Provide following fire protection services:

1.1.1.1 Install and maintain a temporary fire alarm system during the overhaul period. Remove it prior to ship's completion.

1.1.2 Provide fire watch personnel at each hot work site as required by shipyard.

1.1.3 Provide and maintain fire extinguishers for Ship's Force fire watches throughout the availability.

1.1.4 Overhauling activity provides fire watch services, at each hot work site, above a set maximum number per shipyard shift which are to be provided by Ship's Force. Maximum number of Ship's fire watches to be determined at pre-arrival conference.

SY

FA

SY

SY

NOTE: Temporary services are covered on SWLIN 992A01*.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TESTS AND INSPECTIONS	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
986A01A			UE00	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Conduct pre-overhaul tests and inspections (POT&I). SY
2. Conduct underwater body pre-overhaul test and inspections for the following systems, submit a report of repairs required by WBS and Item No. to SY

NOTE: Authorized repairs are to be reported and funded under the applicable repair SWLIN.

<u>WBS</u>	<u>Item</u>	<u>System</u>	<u>COMNAVSURFLANT Routine Item</u>
111	01	Shell Plating	9110-2
114	01	Shell Appendages	9110-2
161	01	Stern Tubes	9430-1
161	02	Shaft/Propeller Struts	9440-1
161	03	Rudder Bearing Trunk	9240-2
163	01	Sea Chests	9120-1
165	01	Sonar Domes/Rubber Window	9190-4
167	01	Hull Structural Closures	
243	03	External Shafting	9430-1
244	02	Stern Tube Bearing	9430-1
244	03	Strut Bearing	9430-1
245	01	Propeller	9440-1
562	01	Rudder	9240-2
566	01	Fin Stabilizers (Fins, Shaft and Hull Penet)	
633	02	Cathodic Protection Anodes	9190-4

NOTE: Item 2 covers inspection costs. Drydocking costs covered under SWLIN 997A01*.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TESTS AND INSPECTIONS	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
986A01A			UE00	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Conduct pre-overhaul tests and inspections (POT&I). SY
2. Conduct underwater body pre-overhaul test and inspections for the following systems, submit a report of repairs required by WBS and Item No. to _____ . SY

NOTE Authorized repairs are to be reported and funded under the applicable repair SWLIN.

Satisfies COMNAV/SURFPAC
Standard Work Item

WBS	Item	System	
111	01	Shell Plating	2106 aq
114	01	Shell Appendages	2106 aq
161	01	Stern Tubes	
161	02	Shaft/Propeller Struts	
161	03	Rudder Bearing Trunk	
163	01	Sea Chests	
165	01	Sonar Domes/Rubber Window	
167	01	Hull Structural Closures	
243	03	External Shafting	2106 au
244	02	Stern Tube Bearing	
244	03	Strut Bearing	
245	01	Propeller	2106 at
562	01	Rudder	2106 as
566	01	Fin Stabilizers (Fins, Shaft and Hull Penet)	
633	02	Cathodic Protection Anodes	2106 ar

NOTE Item 2 covers inspection costs. Drydocking costs covered under SWLIN 997A01*.

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

JCN	SWLIN	986A02*	SYSTEM	TESTS AND INSPECTIONS	M/D	MATL \$	COST \$	ASSIGMT	PRI
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DESCRIPTION

3.1 Provide technical and laboratory services to inspect and test materials used in connection with production work, including Level 1 materials.

4. Tempest Inspection

SY

4.1 Perform post overhaul Tempest inspection in accordance with MIL-STD-1680 (Ships).

5. Inspection Services

SY

5.1 Provide inspection services as specified in NAVSHIPSINST 7600.26B of 19 June 1970. These services include the inspection and test of productive work and associated engineering or technician requirements for quality control or assurance action required by an external technical authority or specified by a customer. Also included are inspection services required to determine production work to be accomplished (open and inspection work), services incidental to arrival inspection tests, sea trials, dock trials and inspection work only, performed for the customer.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	990A01*	SYSTEM	CONSTRUCTION SUPPORT		
JCN	ITEM #		DESCRIPTION	M/D	MATL \$
					COST \$
					ASSIGNMT
					PRI

3. Propulsion Examination Board (PEB) Discrepancies SY

3.1 Correct discrepancies resulting from preliminary PEB inspection (SWLIN 986A02*) as authorized by Type Commander.

3.2 Correct discrepancies resulting from PEB inspection.

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
991A01A	STAGING, SCAFFOLDING AND CRIBBING		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
		0806	

JCN **ITEM #** **DESCRIPTION** **M/D** **MATLS** **COST \$** **ASSGMT** **PRI**

SY

1. Staging and Routine Drydock Work

1.1 This work item covers staging, cranes and brows, forklifts, portable platforms, and rolling scaffolds, to accomplish the following inspections, repairs, blasting and painting, while the ship is in drydock:

- 1.1.1 Underwater Hull; Inspection
- 1.1.2 Underwater Body; Clean and Paint
- 1.1.3 Freeboard; Clean and Paint
- 1.1.4 Sea Valves; Repair
- 1.1.5 Sea Chests; Inspection
- 1.1.6 Propeller; Inspection
- 1.1.7 Propulsion Shaft; Inspection
- 1.1.8 Cathodic Protection System; Inspection
- 1.1.9 Rudder; Fin Stabilizers, etc.; Inspection
- 1.1.10 Weldments; Inspection and Repair
- 1.1.11 Sonar Transducer and Dome; Replace or Inspection and Test

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN	992A01*	SYSTEM	TEMPORARY UTILITIES AND SERVICES
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JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

- 1.1.13 Install and maintain gangways, catwalks, and all staging, temporary lifelines and stanchions required for safe access to work areas. While in drydock this will include the following (or equivalent):
 - 1.1.13.1 Nylon or rope webbing attached securely, top and bottom, to the lifelines around the full perimeter of both the main deck and above where necessary.
 - 1.1.13.2 Nylon or rope webbing or a net rigged below, affixed to all brows and brow approaches.
- 1.2 Provide services of gas test engineer as required during the overhaul.
- 2. Temporary Messing and Berthing SY
- 2.1 Provide temporary messing and galley facilities and berthing facilities (if required).
- 3. Defuel and Refuel Ship SY
- 3.1 Provide equipment for removal of all fossil fuels from ship (N.S. and N.D. fuel oil, JP-5, marine diesel, etc.) including transportation for proper stowage and sludge barge service. Includes fuel analysis and a report to the cognizant codes and the ship's Commanding Officer.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	992A01*	SYSTEM	TEMPORARY UTILITIES AND SERVICES
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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NOTE: NSTM Chapter 9550 provides guidance and provides for refueling ship prior to lightoff and dock trials.

4. Portable Tools for Ship's Force work. SY

4.1 Provide portable tools for Ship's Force work.

5. Provide 50,000 gallons of certified boiler feed-water and services for loading. SY

NOTE: Crane and rigging services are covered on SWLIN 993A01*.

NOTE: The cost of temporary services which are uniquely related to specific repairs shall be charged to the job order for those repairs.

NOTE: Temporary services shall be disconnected at the earliest date mutually agreeable to the Commanding Officer and the Shipyard after they are no longer needed.

NOTE: Appropriate OPNAVINST for provision of ship-to-ship connections and services provide guidance. Example: OPNAVINST 9930.1C (Ship-to-Shore Water Connections).

NOTE: Fire protection services are covered on SWLIN 985A01*.

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

JCN	SWLIN	SYSTEM	MATERIAL HANDLING AND REMOVAL	
993A01*				
ITEM #			DESCRIPTION	M/D
				COST \$
				ASSIGMT
				PRI

- 2.2 Warehouse space, facilities and materials handling equipment for the proper and secure storage of off-loaded allowance items and material received during the overhaul period.
- 2.3 Packing and preservation services for the packaging or repackaging of allowance list material.
- 2.4 Technical reference books and civilian technical assistance for identification of material.

NOTE:

Approval of ship's Commanding Officer must be obtained prior to shipyard utilization of ships onboard spare parts and allowance material. The shipyard is responsible for the timely replacement of spares or other allowance material obtained from ship's OBRP.

- 3. Conduct Supply Operation Assistance Program (SOAP).
- 4. Crane and Rigging Services - Provide crane and rigging services in support of production shops and Ship's Force industrial effort.

FA

SY

SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DRYDOCKING	JCN INDICATED BELOW	TITLE
SWLIN	997A01A	TOTAL SHIPYARD COST	EIC GROUP D80A	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGMT PRI

1. Dock and Undock Ship

1.1 Prepare graving dock, floating drydock or marine railway; dock ship; undock ship and clean graving dock, drydock or marine railway after final docking/hauling. NSTM Chapter 9970 provides guidance.

1.2 Provide the Commanding Officer with Docking Report information required by NSTM Chapter 9070. Prepare propeller docking report, NAVSHIPS 223.4 (NAVSHIPS Report Symbol 9070-2, required by NSTM Chapter 9440).

NOTE: ALL staging provided by SWLIN 991A01*.

NOTE: ALL temporary services provided in SWLIN 992A01*.

SY

PART 4

WORK LIST ITEM CROSS INDEX

Part 4 To Be Provided

At a Latter Date

PART 5
RECORD OF CHANGES

RECORD OF CHANGES FOR ISSUE - (DATE OF ISSUE)

SMLIN	DESCRIPTION OF CHANGE	AUTHORITY
(SMLIN affected by change)	(Brief description of change)	(Document authorizing change)

PART 6
GLOSSARY

PART 6

GLOSSARY

Calibration - The process by which Standards and Calibration Laboratories and qualification activities compare a standard (test or measuring equipment or instrument) with a standard of higher accuracy to ensure that the former is within specified limits throughout its entire range. The calibration process involves the use of approved instrument calibration procedures and includes adjustments or incidental repair necessary to bring the standard or instrument being calibrated within specified limits.

Classification of Repair or Overhaul - The following definitions from NAVSHIPINST 4790.1 Change 4, 9 July 1973 apply to terms used in SARP, Part 3.

1. **Class A** Work which requires such overhaul or repairs, modifications, field changes, ORDALTS or SHIPALTS, as will sustain or improve the operating and performance characteristics of the system, sub-system or component being repaired or altered to meet its most recent design and technical specifications for that item.

It is intended that the end product be in "like-new" condition in appearance as well as in operation and performance. All manufacturers' and technical manual performance standards and specifications unless superseded by proper authority, will be met as will all technical documentation. The repair activity will demonstrate that the end product successfully meets all performance criteria specified by the governing specifications. Defining an overhaul as Class "A" means that all actions required to meet the definition is applicable to all components, sub-systems and systems whether machinery/electrical/hull, electronics or weapons, without regard to equipment cost, size or complexity. Thus, a Class "A" overhaul of a 10 horsepower motor is just as much Class "A" as that of a radar set or a boiler, although the demands on resources differ greatly.

2. **Class B** Work which requires such overhaul or repairs as will restore the operating and performance characteristics of a system, sub-system or component to its "original" design and technical specifications. If it is required

PART 6

GLOSSARY (CONT)

2. **Class B (Cont)** to restore the operating and performance characteristics of an item to other than its original design and technical specifications, it must be so specified and the performance criteria defined. SHIPALTS, ORDALTS, field changes and modifications, even if applicable, are not to be accomplished unless specified by the Customer. Maintenance adjustment and calibration routines specified by authority, are required. The repair activity will demonstrate that the end product successfully meets all performance criteria specified by the governing specifications.
3. **Class C** Repair work on a system, sub-system or component specified by the work request or that work required to correct the particular deficient conditions or malfunctions specified by the Customer. The repair activity must demonstrate that the work requested has been accomplished or that the conditions/malfunctions described have been corrected, but the repairing activity has no responsibility for the repair or proper operation of the associated components of the equipment or for the operation of the system/sub-system equipment as a whole.
4. **Class D** Work associated with "Open, Inspect and Report" type of work request where the Customer cannot be specific about what is or may be wrong with the item. This Class of work is intended to be diagnostic in nature and thus depending on the type of equipment, may require various tests, followed by inspection to assist in a complete diagnosis. The repair activity will report findings, recommendations and cost estimates to the Customer for authorization prior to any repair work being accomplished. When requested by the Customer, minor repairs and adjustments may be accomplished without prior authorization to the extent specified.
5. **Class E** Work required to incorporate all alterations and modifications specified for a designated system, sub-system or component. The repair activity will demonstrate the successful checkout of the work accomplished to assure compliance with the performance standards established for the modification only to the extent of the work performed. When required by the Customer, the repair activity will conduct system tests to prove system operability through affected interfaces. Repairs, if any, are minor in nature.

PART 6

GLOSSARY (CONT)

Cost Estimating - The following definitions apply to the cost estimating terms used in SARP, Part 3.

1. **M/D** - Man-days for the work in the direct accomplishment of the applicable SWLIN and directly chargeable to Customer funds.

2. **MATL \$** - Costs, in dollars, for all material (includes all equipment components, assemblies, contractor support, etc.) provided by the Shipyard for accomplishment of the SWLIN. The cost does not include Government Furnished Material (GFM) and centrally procured Long Lead Time Material (LLTM) provided to the Shipyard.

3. **Cost \$** - The sum, in dollars, of M/D and Material Costs to be charged to the Customer for work accomplished.

4. **Total Shipyard Cost** - The total SWLIN cost (in dollars) directly chargeable to Customer funds.

Customer - An activity (e.g., NAVSEA, Type Commander) that possesses the authorization and funds for the accomplishment of overhaul work.

EIC (Equipment Identification Code) - An alphanumeric code used in the 3-M (Maintenance and Material Management) System to identify system, sub-system, and the equipment on which maintenance is performed. The EIC and its relation to the 3-M System is further defined by Maintenance Data Collection System EIC Manual.

Overhaul Activity - Activity responsible to the Customer for the accomplishment of the overhaul work. Overhaul Activity will be the Naval Shipyard or Supervisor of Shipbuilding as designated by CNO.

Forces Afloat Activities - Ship's Company, Tenders, DATC/FMAG, MOTU and other such agencies as arranged by the Type Commander.

Grooming - The process of alignment, adjusting and replacing marginal parts within an operational unit or system so that the unit or system will meet the tolerance requirements. This is not to be interpreted as a refurbishment or restoration of a unit or system.

JCN (Job Control Number) - A 13 digit alphanumeric code which correlates 3-M System documents submitted on a specific work item. The first five digits identify the ship, are common to all SWLIN's, and are not repeated throughout the SARP. Only the last eight digits appear in each SWLIN (Work Request Number).

PART 6

GLOSSARY (CONT)

Overhaul Maintenance - The process of servicing equipment for the purpose of retaining it in operational condition. Overhaul maintenance normally includes lubricating, adjusting, calibrating, cleaning and replacement of certain consumable parts. Overhaul maintenance is distinguished from "refurbishment" in that overhaul maintenance preserves or restores equipment to such a condition that it may be effectively utilized for its designed purpose without appreciable adding to its permanent value or prolonging its intended life.

Refurbishment - Restoring equipment in accordance with specified standards for the purpose of extending its operational life. It normally includes disassembly, inspection, cleaning, replacement of parts, reassembly, and inspection and testing.

Ship System - A combination of parts, assemblies and components on a ship to perform a specific function or functions. The Ship System used in the SARP provides manageable hardware units suited to overhaul work. NAVSHIPS 0900-039-9010 defines the numbering, contents and boundaries of the Ship Systems used (see SWBS).

SWBS (Ship Work Breakdown Structure) - A single language numbering structure for defining Ship System Boundaries (NAVSHIPS 0900-039-9010).

SWLIN (System Work List Item Number) - A seven digit alphanumeric code used in SARP, Part 3 to identify overhaul work on a Ship System basis. The SWLIN is further defined in Attachment (1).

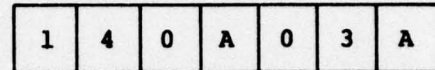
Tested - The process (using a comparator) Forces Afloat utilizes to analyze gages, to determine proper operation. These gages are labeled to indicate date tested, due date, and initials of person performing test.

WLI (Work List Item) - Is the source of the individual items such as ShipAlts, Trial Board Item, etc.

SWLIN STRUCTURE

SWLIN - A seven digit alphanumeric code used in SARP Part 3 to identify overhaul work on a Ship System basis. SWLIN will also be used to refer to the contents of the pages of a given system. The SWLIN is further defined in the following sample:

Sample SWLIN:



Applicable Ship System - SWBS
(Ships Work Breakdown Structure)
Number derived from NAVSHIPS 0900-039-9010

Customer and Type of Work - Single Letter
indicating the following:

- A - TYCOM Maintenance and A & I Items, non-Nuclear
- B - TYCOM Maintenance, Nuclear
- C - TYCOM Alteration, etc., non-Nuclear
- D - NAVSEA Alteration, non-Nuclear
- E - NAVSEA Alteration, Nuclear
- F - NAVSEA OrdAlts
- G - TYCOM Alteration, etc., Nuclear
- H - Administrative/Services (Prorated all Customers), non-Nuclear
- J - NAVSEA Miscellaneous
- K - Administrative/Services (DSA funded)
- L - Administrative/Services (Prorated all Customers)
- M - PERA
- N - NAVLEX

Sequential Number - Two digit number, from 01 through 99, assigned to each SWLIN of work in a Ship System. For example, this would be the third SWLIN of work in Ship System No. 140 (Superstructure).

SWLIN Revision - Single letter indicating the current revision of the SWLIN. The letter A is used for the initial publication of the entire SARP.

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