

**ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION**

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 01/21/2011	CONTRACT NO. DTMA1H08005	ORDER NO. GAAMNC2011006
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ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0003AE	<p>Admin Office: U. S. DOT Maritime Administration Gulf Div. Acquisition Office, MAR 380.3 500 Poydras Street, Suite 1223 Hale Boggs Building New Orleans LA 70130-3396</p> <p>Accounting Info: 70X1710SXX.2011.81105GRJAC.1105000000.25417. 61006600 / 701105GRJAC000 Period of Performance: 02/17/2011 to 04/30/2011</p> <p>COST REIMBURSABLE - CAPE JACOB</p> <p>FY11 OPER Deactivation Project No. MNC-JAC11-2012A Account No. 020-012</p> <p>This task order is issued for the solicitation of bids to carry out Project No. MNC-JAC11-2012A, Deactivation, as noted below, and in accordance with the attached specification. The Ship Manager recommendation for award shall be submitted to MarAd wihtin thirty (30) days.</p> <p>Deactivation at the completion of operations at the conclusion of exercise/mission "PREPO" for the Cape Jacob, for the period commencing at arrival at Alameda, CA on or about February 17, 2011 and continuing up to and through April 30, 2011. Dates may change depending on the schedule/mission requirements prior to arrival.</p> <p>Line Item 0001: Deactivation - Technical Requirement Accomplish technical requirements for all Deactivation items. This will include all general services and work items required to be done to deactivate the vessel as listed in the attached specifications which include SR #s 1003036-1003083, and, 1003086, and/or other requirements for Continued ...</p>				0.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$0.00

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	<p>completion of the deactivation.</p> <p>Total Costs: -0-</p> <p>Line Item 0002: Deactivation - Supplemental Growth Supplemental growth work on the original work items in the deactivation package and for supplemental growth work that may arise during the deactivation period.</p> <p>Total Cost: -0-</p> <p>ALL WORK IS TO BE ACCOMPLISHED IN ACCORDANCE WITH THE ATTACHED DEACTIVATION SPECIFICATION.</p> <p>The total amount of award: \$0.00. The obligation for this award is shown in box 17(i).</p>					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$0.00

Matson[®]

Navigation Company

SS CAPE JACOB

DEACTIVATION SPECIFICATION



Matson Government Services
1521 Pier C Street
Long Beach, California 90813
(562) 495-8690

**DEACTIVATION SPECIFICATION
S. S. CAPE JACOB**

MARAD DESIGN C3-S-1U
MARAD HULL NUMBER 94

NEW PORT NEWS SHIP BUILDING
NEW PORT NEWS, VIRGINIA.
HULL NUMBER. 551
BUILT 1/1961

OFFICIAL NUMBER 287232
ABS ID NUMBER 6200860
IMO NUMBER 5057931
CALL SIGN WJBA

Date: February 21, 2011

Performance Period: February 21 - April 18, 2011

Performance Place: Pier 3 Alameda, California, Outboard of the SS Admiral Callahan

VESSEL PARTICULARS

Length Overall	565' 00"
Length Load Waterline (about)	537' 00"
Length Between Perpendiculars	528' 00"
Breadth, Extreme	76' 2-1/8"
Breadth, Molded	76' 00"
Depth Molded to Main Deck at Side at Low Point of Shear	44' 06"
Depth Molded to Second Deck at Side at Low Point of Shear	35' 03"
Shear, Fwd (Main Deck)	10' 02"
Shear, Aft (Main Deck)	05' 06"
Ht of Midships Houses (Parallel to Main Deck)	08' 06"
House Top	08' 03"
Draft, Design to Keel Bottom	29' 10"
Draft, Scantling, to Keel Bottom	37' 07-1/8"
Light Ship	8,360 T
Deadweight	12,790 T
Displacement, Keel (Design)	21,120 T

INDEX:

Contract Specifications # 1

	Page No.
1-01: Deactivation - General Services	6-8
1-02: Ventilation openings & Weather deck closures	9-15
1-03: Pumps – Motors Disconnect, Draining and Soft Packing	15-17
1-04: Main Propulsion Turbines	17-18
1-05: Main Engine LO System	18
1-06: Emergency Diesel Generator Temporary Lay Up	18-19
1-07: Turbo Generators	19-21
1-08: Diesel and Fuel Oil Remaining on Board Vessel	21
1-09: Rudder, Shaft Locking and Stern Gland packing	21-22
1-10: Cargo Gear Disable & Service	23
1-11: Shrink Wrap – Deck & Bridge Equipments	23-25
1-12: Hatch Covers	25
1-13: Fire Dampers	25-26
1-14: Deck Drains and Scuppers	26-27
1-15: Water Line Markings	27
1-16: Valves – Secure and Lock	27-28

Contract Specifications #2

2-01: Hull Blanking	29-32
2-02: Drying of Main Steam System	32-33
2-03: Machinery & Piping System Draining	33-35
2-04: HVAC-Steam/Hot Water Heating & Chilled Water Systems	35-36
2-05: Potable Water System Piping/Pressure & Heating Tanks	36-37
2-06: Sanitary Flushing and Piping System	37-38
2-07: Bilges, Bilge Wells, Bilge Drains and Tanks	39
2-08: Engine Room cleaning	39-40
2-09: Pressure Vessel Cleaning	40-41
2-10: MSD System: Deactivation and Lay-up	41-42
2-11: Distillers Drying and Lay-up	42-43

Contract Specifications #3

3-01: Life Boats	43-44
3-02: Life Rafts	44-45
3-03: Hazardous Waste Survey & Cleanup	45-46
3-04: Tank Soundings, Tables and Labels	46-47
3-05: Dunnage Removal	47
3-06: Ships Equipment Removal and Stowing	47-48
3-07: Securing Storage Spaces - Keying and Locks	48-49
3-08: Ships Equipment Removal and Stowing	49

Contract Specifications # 4

4-01: Dehumidification	50-54
4-02: P/S Boiler Deactivation - Fire Side Target DH	54-55
4-03: P/S Boiler Deactivation - Water Side	56-57
4-04: Cathodic Protection Service	57-58
4-05: Refrigeration System Deactivation	58-59
4-06: CO2 Deactivation & Fire Fighting Equipment Deactivation	59-60
4-07: Temporary Power System	60-63
4-08: Flooding and Smoke Alarms System	63-65
4-09: Batteries & Chargers	65-66
4-10: GMDSS & Bridge Electronics, Gyro System Disabling	66-69
4-11: Layup MG Sets	N/A
4-12: Extermination	69

Contract Specifications # 5 MCDS Deactivation

5-01: General Requirements	70-71
5-02: Power Module Diesel Generator Room	71-73
5-03: Power Module Electrical Equipment Area	73-75
5-04: MCDS Ventilation Systems	75-76
5-05: Fire Extinguishing Systems	76-77
5-06: MCDS Module Top Equipment	77-79
5-07: Equipment Module Unrep Equipment Area	79-80
5-08: Equipment Module Compressor Area	81-82
5-09: Kingpost Module	82-83
5-10: Gypsy Winch	83-84
5-11: Control Module	84
5-12: Dehumidification	85-88

101 DEACTIVATION: GENERAL SERVICES

1. ABSTRACT

This item describes the General Services to be provided by the contractor during the entire period of deactivation.

1. REFERENCES/ENCLOSURES

1.1 Ships drawings and Tech manuals

2. ITEM LOCATION/DESCRIPTION/QUANTITY

2.1 Location: Alameda, CA. Army pier 3, alongside MARAD ship Admiral Callaghan.

2.2 Description/Quantity: SS Cape Jacob for Lay-up/ SS Cape Jacob will be outside ship/ 60 days of deactivation.

3. DEFINITIONS

3.1 None

4. STATEMENT OF WORK

4.1 Fire Protection

4.1.1 Contractor to provide qualified fire watch personnel and supply portable fire extinguishers at all times in each area/compartments where burning and/or welding is being done. Ship's extinguishers will not be used.

4.1.2 Contractor to provide and install a minimum of two fire protection stations (temporary, portable "X-MAS" type) on the upper deck and/or at work sites. Each fire station shall have a 400-GPM capacity and 450 feet of 2-1/2" fire hoses with fire nozzles activated for the entire contract period.

4.1.3 During all industrial activity, provide a roving fire watch who shall maintain a logbook, recording conditions found while checking the vessel at hourly intervals (minimum). This log may be checked by Owner's Representative at any time and shall be delivered to Owner's Representative upon vessel's departure from Contractor's repair facility.

5.2 Gangway

5.2.1 Contractor is to furnish, set up and maintain an approved safe gangway. The gangway shall be complete with rails, lighting and a safety net from main deck of Adm. Callahan to the main deck of Cape Jacob.

5.3 GAS FREE CERTIFICATES (ABS/USCG)

5.3.1. Contractor to provide gas-free certificates, "Safe for Personnel, Safe for Hot Work," as well as daily "Competent Person" reports for any areas requiring burning or welding. Those areas requiring entry for inspection, not hot work, shall be certified "Safe for Personnel, Not Safe for Hot work." Only a certified "Gas Chemist" or "Competent Person" as defined by USCG regulations shall issue certificates. Provide all labor and material to clean and ventilate the spaces for certification. Owner's Representative shall be provided with copies on a daily basis.

5.4 DECK COVERING PROTECTION

5.4.1. The areas below are to be covered with protective covering.

- Galleys
- Mess rooms
- Crew's Lounge
- Pantries
- Hospital
- Radio Room
- Pilot House
- All other offices
- All passageways
- All stairs including landings

5.5 TEMPORARY LIGHTING

5.5.1 Temporary lighting is to be provided for each particular application, by the Contractor in all work areas.

5.6 COMPRESSED AIR

5.6.1 Contractor to supply dry, filtered, oil and water free, compressed air (including hoses). Contractor is not to connect air hoses/manifold to the ship's service air system. Prior to vessel's departure from the yard, disconnect and remove compressed air equipment.

5.6.2 Contractor to supply enough pressure to reach long distances of piping of various diameter for drying job.

5.7 PORTABLE TOILETS

5.7.1 Contractor to provide portable toilets for use as vessel's systems are not operational (two units). One unit shall be placed on the vessel near the E/R and another unit on the main deck for ship's personnel's use.

5.7.2 Contractor shall provide additional toilets on pier for shipyard personnel use at contractor's cost. Units shall be serviced and cleaned daily.

5.8 DEBRIS COLLECTION

5.8.1 Contractor to furnish labor and facilities to remove debris and garbage daily from vessel, in areas affected by work during this contract.

5.9 VENTILATION

5.9.1 Contractor to provide all portable blowers and ducting for ventilation required for safety of Contractor's and ship's assigned working personnel during contract period, including inspection of tanks and compartments by Regulatory Bodies and Owner's Representatives.

5.10 GANG BOXES

5.10.1 Contractor to make and provide Gang Boxes, of size 6 feet long x 3 ½ wide x 2 feet high, 3/16 inches thick steel with handles strong enough to be able to lift in and out of the engine room. Total of six (6) at various levels of engine room for loose gear removed from pumps, valves and equipments disabled. The gang boxes will be tagged as to location and contents. Prepped and painted to provide protection from long lay up in DH conditions.

6. DELIVERABLES

6.1 None.

102. VENTILATION OPENINGS & WEATHER DECK CLOSURES

1.0 ABSTRACT

1.1 This item describes the servicing of all ventilation openings serving areas under dehumidification.

2.0 REFERENCES

2.1 Ships drawings and Instruction Manuals.

3.0 ITEM LOCATION/DESCRIPTION

3.1 LOCATION

3.1.1 Onboard SS Cape Jacob and main deck forward and aft of house.

3.2 DESCRIPTION/QUANTITY

3.2.1 The windows and doors approximately 40.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 The contractor to service all ventilation openings serving areas under dehumidification not fitted with gasket and hinged metal covers are to be sealed using a vinyl "Protective Sealing System" (PSS).

5.2 This sealing system is to consist of a strippable vinyl-plastic applied and cured in place over each opening.

5.3 Openings that do not have any ready-made surface on which the vinyl can be applied shall have a webbing applied first and the vinyl sealing system applied over the webbing.

5.4 The sealing system shall be applied to a minimum dry film thickness of 40 mils.

5.5 A maintenance kit shall be provided to the Port Engineer, compatible with the vinyl sealing system is to be supplied, with instructions, for use in making minor repairs to the closures.

5.6 Only the emergency generator cooling air inlet and outlet openings shall be closed using a blank cover that will seal tightly, but can be removed and replaced by one man, using simple hand tools, when the generator engine is to be test operated.

5.7 Blanks, which were removed at activation, may be reused if their use will be cost effective and provide proper sealing.

5.8 All screen covers and louvers are to be inspected for damage and any repairs made to place them in good condition.

5.9 Port lights, windows, scuttles, manholes, weather tight and watertight doors, including cargo space and storage space vents etc., shall provide for airtight closures.

5.10 Access to midship house is to be limited to one port and one stbd. door on main deck level.

5.11 Access door is to be painted bright yellow.

5.12 All other doors in midship house are to be secured with the strong back secured with the carriage bolt and wing nut.

5.13 Watertight doors shall be proven tight by chalk testing. Any doors needing repair and adjustment to pass the chalk test will be covered by Change Order. All dogs to be freed up and greased. Sealing compounds shall not be used for sealing watertight doors.

5.14. Exterior "weather tight" doors on port and starboard sides of wheelhouse to be made air tight with proper sealing material.

5.15 Any other ventilation openings not provided with airtight closures shall also be fitted with the vinyl sealing system.

5.16 Windows that are designed to be open for ventilation on the Upper, Boat and Bridge Decks are to be sealed.

5.17 Windows without permanent shades in Upper, Boat and Bridge deck to have interior plywood 1/8 " installed to keep out UV rays.

5.18 The following is a list of openings, which can be used as a check off list requiring blanking and sealing Main Deck and above:

A. Flying Bridge (05 Level)

ENGINE ROOM INTAKE PLENUM

Six (6) Screens 72" X 34" each

Two (2) Screens 55" x 34" each

One (1) Screen 50" x 34"

Two (2) Screens 30" x 34" each

ENGINE ROOM EXHAUST (STACK LOUVERS)

Eight (8) Openings 62" x 52" each

WHISTLE

One (1) Opening 18" diameter

FIRE DAMPER VENT GOOSENECKS

One (1) 24" x 24"

One (1) 16" x 9"

ESCAPE PIPING (ON STACK)

Two (2) 12" diameter

B. Bridge (04) Level

LOUVERED QUARTER VENTILATION

Two (2) Openings 15" x 24"

SANITARY VENT

One (1) 2 1/2" diameter

C. Cabin Deck (03) Level

SANITARY VENTS

Four (4) 2 1/2" diameter

D. Boat Deck (02 Level)

SANITARY VENTS

Five (5) 2 1/2" diameter
One (1) 3/4" diameter

DECK LOCKER VENTS

Four (4) 6" diameter

E. Upper Deck (01 Level)

LOUVERED VENTS

One (1) 36" x 51"
One (1) 36" x 55"
One (1) 12" x 18"
One (1) 53" x 53"
One (1) 65" x 48"

SANITARY

Six (6) 2 1/2" diameter
Three (3) 3/4" diameter

DECK LOCKER VENTS

One (1) 6" diameter

F. Main Deck

SANITARY

Sixteen (16) 2 1/2" diameter
Four (4) 3/4" diameter

POTABLE WATER TANK VENTS PORT/STARBOARD

Two (2) 6" diameter

G. Forecastle Deck. FR.-5 to FR.-20

GOOSENECKS

Paint Room, Fr.-5, Port 10" diameter 3 dogs
Bosun Stores, Fr-8, STBD 10" diameter 3 dogs
Bosun Stores, Fr-6, STBD 5" diameter 2 dogs
Bosun Stores, Fr-14, Port 5" diameter 2 dogs
Lamp Room, Fr-18, Port 5" diameter 2 dogs
Bosun Stores, Fr-5, STBD 8" diameter 3 dogs
Anchor Windlass, FR-12 Port 8" diameter 3 dogs
Anchor Windlass, Fr-19, STBD 25"x25" 12 dogs

H. Winch house Aft #2 Hatch, FR.-58 to FR.-62, Forecastle Deck

VERTICAL VENTS

Natural Sup, Fr-59 STBD 28" X 43", 10 Dogs
Exh. Sys #53, Fr-62, 16" diameter 3 dogs
Exh. Sys #54, Fr-62, 16" diameter 3 dogs

I. Forecastle Aft Bulkhead, FR.-65, Main Deck

NATURAL VENTS

Paint Locker STBD, Fr-65, 28" x 8" 8 dogs
Deck Locker Port, Fr-64, 5" x 6" 2r - 87

Port 36" x 64"		12 dogs
Exh Sys #47, Fr-89, STBD	24" dia.	3 dogs
Exh Sys #46, Fr-89, Port	24" dia.	3 dogs
Exh Sys #48, Fr-89, STBD	16" dia.	3 dogs
Sch Sys #18, Fr-98, Port	7" x 43"	10 dogs

GOOSENECK

Natural Sup, Fr-67, 6' Port	28" x 28"	12 dogs
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J. Winch house Aft of #3 Hatch, Fr.-86 to Fr.-96, Main Deck

VERTICAL VENTS

Sup Sys #17, Fr-94 STBD	31" x 43"	10dogs
Sup Sys #17, Fr-96 STBD	37" x 43"	12dogs
Sup Sys #17, Fr-96 STBD	43" x 19"	8 dogs
Sup Sys #19, Fr-94, Port	31" x 43"	10 dogs
Sup Sys #14/16, Fr-86 STBD	34" x 64"	12 dogs
Exh Sys #15, Fr-87 Port	34"x 64"	12 dogs
Exh Sys #47, Fr-89, STBD	24" diameter	3 dogs
Exh Sys #46, Fr-89 Port	24" diameter	3 dogs
Exh Sys #48, Fr-88 STBD	16" diameter	3 dogs
Exh Sys #18, Fr-96 Port of CL	37" x 43"	10 dogs
Sup Sys #20, Fr-96 STBD	22" x 19"	7 dogs

K. Midship House, Main Deck

VERTICAL VENTS

Exh Sys #21, Fr-115 STBD	28" x 43"	10 dogs
Exh Sys #21, F4-115 STBD	13" x 37"	7 dogs

GOOSENECK

Natural Sup, Fr-151 Aft of Hse	22" x 45"	10 dogs
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L. Winch house Aft of #5 Hatch, Fr.-169 --177, Main Deck

VERTICAL VENTS

Exh Sys #50, Fr-175, Port	16" diameter	3 dogs
Exh Sys #49, Fr-175, STBD	16" diameter	3 dogs
Exh Sys #51, Fr-176, STBD	16" diameter	3 dogs
Sup Sys #24, Fr-169, STBD	17" x 31"	6 dogs
Sup Sys #25, Fr-169, STBD	17" x 31"	6 dogs
Exh Sys #26, Fr-170, STBD	18" x 11"	6 dogs
Exh Sys #26, Fr 170, STBD	18" x 11"	6 dogs
Sup Sys #22, Fr-172, Port	37" x 34"	12 dogs
Sup Sys #27, Fr-177, STBD	26" x 48"	10 dogs
Sup Sys #27, Fr-177, STBD	28" x 31"	8 dogs
Exh Sys #23/28, Fr-177 Port	16" x 48"	8 dogs
Exh Sys #23/28, Fr-177 Port	30" x 48"	10 dogs

M. Winch house Aft of #6 Hatch, Fr.-199 to Fr.-203, Main Deck

VERTICAL VENTS

Sup Sys #40, Fr-203, STBD	25" x 36"	9 dogs
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Sup Sys #29, Fr-199, STBD	25" x 36	9 dogs
Natural Sup, Fr-200, STBD	19" x 25"	6 dogs
Deck Locker, Fr-202, STBD	6" dia.	2 dogs
Elect Nat Sup, Fr-199, Port	6" dia.	2 dogs
Elect Nat Exh, Fr-203, Port	6" dia.	2 dogs
Exh Sys #52, Fr-203, CL	6" diameter	3 dogs

GOOSENECK

Natural Sup, Fr-204, CL	26" x 26"	8 dogs
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N. Aft Deck House Fr-206 to Fr-212, Main Deck

VERTICAL VENTS

Sup Sys #7, Fr-212 STBD	19" x 19"	4 dogs
Sup Sys #7, Fr-212 STBD	19" x 19"	4 dogs
Deck Lkr Nat Sup, Fr-206 STBD	24" x 6"	6 dogs
Deck Lkr Nat Exh, Fr-212 STBD	24" x 6"	6 dogs
Bosun Lkr Nat Sup, Fr-206 STBD	6" x 7"	2 dogs
Bosun Lkr Nat Exh, Fr-212 STBD	6" x 7"	2 dogs
Stvd Rm Nat Exh, Fr-212 Port	9" x 13"	4 dogs

GOOSENECK

Natural Sup, Fr-210, 25' Stbd	12" dia.	3 dogs
Natural Exh, Fr-210, 25" Port	12" dia.	3 dogs
Exh Sys #8, Fr-213, 9' Port	12" dia.	3 dogs
Exh Sys #9, Fr-213, STBD	12" dia.	3 dogs

O. Midship House, Above Main Deck

BRIDGE DECK

Gyro Room, Fr-133, STBD	18" x 10"	4 dogs
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UPPER DECK

Bat Lkr, AFT bhd, 3' STBD	11" dia.	3 dogs
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P. Forecastle Deck

Bosun Stores Hatch, Fr-3, STBD	38" x 38"
Anchor Windlass Room Access, Fr-19, CL	28" x 55"

Q. Winch house Aft of #1 Hatch, Forecastle Deck

#1 Hold Access, Fr-33, FWD CL	25" x 55"
#2 Hold Access, Fr-37, Aft 9' Port of CL	25" x 55"
MG Access, FR-3, Aft 2' STBD of CL	28" x 64"

R. Winch house Aft #2 Hatch, Forecastle Deck

MG Access Fr-62, Aft 2' Port of CL	25" x 64"
Lay-Up Gear, Fr-621, Aft 9' Port of CL	28" x 64"

S. Main Deck, Forecastle Aft Bhd, Fr-65

Deck Locker, 25' STBD of CL	37" x 64"
Paint Locker, 18' STBD of CL	86" x 74"
Deck Locker, 25' Port of CL	28" x 64"

	Eng. Stores, 18' Port of CL	28" x 64"
	#3 Hold Access, CL	25" x 64"
T.	<u>Winch house Aft of #3 Hatch, Main Deck</u>	
	MG Access, Fr-96, Aft 9' STBD of CL	28" x 64"
	#4 Hold Access, Fr-96, CL Aft	25" x 64"
	#4 Hold Access, Fr-96, CL Aft	25" x 64"
U.	<u>Midship House, Main Deck</u>	
	Interior Access STBD, Fr-121	32" x 64"
	Interior Access Port, Fr-121	32" x 64"
	Interior Access STBD, Fr-149	32" x 64"
	Interior Access Port, Fr-149	32" x 64"
V.	<u>Winch house Aft of #5 Hatch, Main Deck</u>	
	#5/6 Hold Access, Fr-169 Fwd 3' Port CL	25" x 64"
	MG Access, Fr-177, Aft 3', Port of CL	28" x 64"
W.	<u>Winch house Aft of #6 Hatch, Main Deck</u>	
	MG Access, Fr-199, Fwd 4' Port of CL	28" x 64"
	Elect Ship, Fr-199, Fwd 9' Port of CL	28" x 64"
	Deck Lkr, Fr-203, Aft 9' STBD of CL	28" x 64"
	Shaft Alley Hatch, Fr-204, Port of CL	50" x 74"
X.	<u>Aft Deck House, Main Deck</u>	
	Strng Gr Access, Fr-206, 9' STBD of CL	28" x 55"
	Deck Lkr, Fr-206, Fwd 18' STBD of CL	74" x 86"
	Int Access, Fr-212, Aft CL	28" x 64"
	Bosun Hatch, Fr-213, 6' STBD of CL	38" x 38"
Y.	<u>Midship House, Above Main Deck</u>	
	Top of Stack, manhole	14" x 18"
Z.	<u>Bridge Deck</u>	
	Port Fan Room Fr-139	28" x 74"
	STBD Fan Room, Fr-139	28" x 74"
	Deck Locker, Fr-138, STBD	28" x 74"
AA.	<u>Boat Deck</u>	
	Emergency Gear Port, Fr-144, Aft Bhd	28" x 72"
	Lifeboat Gear STBD, Fr-14, Aft Bhd	28" x 72"
AB.	<u>Upper Deck</u>	
	Deck Locker, Fr-144, Aft Bhd STBD	28" x 74"
	Galley Intake Plenum, Fr-144, Port	21" x 38"
	Galley Fan Room, Fr-143, 8' Port of CL	33" x 74"
AC.	<u>Bridge Deck</u>	

Port Cross Passageway Access, Fr-132

AD. Cabin Deck

Port Cross Passageway Access, Fr-123
STBD Cross Passageway Access, Fr-123

AE. Boat Deck

Port Cross Passageway Access, Fr-123
STBD Cross Passageway Access, Fr-123
Port Passageway Access, Fr-144
STBD Passageway Access, Fr-144

AF. Main Deck

Fore Peak Tank Vent (1) 6" diameter
Aft Peak Tank Vent (1) 6" diameter

6.0 DELIVERABLES

6.1 None

103. PUMPS - MOTORS DISCONNECT, DRAINING & SOFT PACKING

1.0 ABSTRACT

1.1 This item describes the pumps' motors disconnect , draining and soft packing.

2.0 REFERENCES

2.1 Ships' tech manuals.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Engine room/shaft alley/over 65 pumps on board for disconnect and 7 pumps for soft pack as listed in 5.5 below.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 Remove plugs and drain the liquid ends of all pumps, with the exception of the following:

- F.O. Transfer pumps & Service pumps
- Lube oil pumps

5.2 All saltwater service pumps shall be thoroughly flushed with fresh water prior to blowing down.

5.3 Do not re-install drain plugs that were removed to accomplish drainage and to facilitate D/H distribution. Remove coupling guards and if possible, rotate 180 degrees and install fasteners to one side of hold guard. Install left over fasteners in place, hand tight, all to facilitate MARAD SBRF to be able to operate motor during Phase IV. Remove packing, clean out stuffing boxes/glands. Pre-cut new

packing for each pump and place it in sealed plastic bags, tagged and put in the gang box provided . These removal areas are to be well marked with florescent tats so as to be easily recognizable.

5.4 Disconnect couplings on all pumps, Except Fuel oil and Lube oil Pumps. All grids, nuts, bolts, etc. from the couplings shall be placed in individual plastic bags, wired closed with tags attached to each bag, clearly indicating the pump that the coupling parts belong to. All loose gear to be marked and stored in the contractor provided gang boxes at each level. Each pump motor shall be marked with florescent tags to facilitate MARAD SBRF during Phase IV. Submit a report with three copies detailing the location of such drain plug removals /openings to the Owner's Representative in writing two days after completion of work on this item.

5.5 After the job is complete the contractor to clean as required, making sure that all loose paint chippings, dirt, and debris is removed and disposed of.

5.5 The following list of the pumps to be disabled and drained

- A. Contaminated Evaporator Feed Pump (2)
- B. Fire Pumps (2)
- C. AFT Foam System Pump (1)
- D. Potable Fresh Water Pumps (2)
- E. Forced Draft Blowers (2)
- F. Distiller Plant Pumps (8)
- G. Bilge and Ballast Pumps (2)
- I. Cargo Oil Hot Water Circulating Pump (1)
- J. D.O. Transfer Pumps (2)
- K. Main Circulator Pump (1)
- L. Auxiliary Circulating Pumps (2)
- M. Main Condensate Pumps (2)
- O. Salt Water Service Pumps (2)
- P. Auxiliary Condensate Pumps (2)
- Q. Ship's Service Reefer Compressors (2)
- R. Cargo Reefer Compressors (3)
- S. Air Conditioning Compressors (2)
- T. Chill Water Pumps (2)
- U. LO Steam Stand By pump (1)
- V. Cargo Bilge Pump , Steam (1)
- W. Oily Waste Water Electric Transfer pump (1)
- X. Standby Bilge/Ballast, Steam (1)
- Y. Contaminated Drain Transfer Pump (1)

Z. Injection Feed Pump (1)

AA. FO Transfer pump (1).

5.6 After the job is over the contractor to clean as required, making sure that all loose paint chippings, dirt, and debris is removed and disposed of.

5.7 Cleaning shall be done to the satisfaction of the port engineer.

6.0 DELIVERABLES

6.1 None

104. MAIN PROPULSION TURBINES

1.0 ABSTRACT

1.1 This item describes the assistance of tech rep to do the service described in statement of work on Main Propulsion Turbine.

2.0 REFERENCES

2.1 Ships tech manuals and drawings

2.2 LOC #1: MASPULSFWD – HP Main Propulsion Turbine- Impulse

2.3 LOC #2: MASPULPFWD – LP Main Propulsion Turbine- Impulse Reaction

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Upper Engine Room/Main Propulsion Turbine, 8750 HP, 5602/3404 RPM/ Qty: (1)
One.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 Remove LP and HP exhaust casing manhole covers, inspect low pressure and astern turbine blading, general condition of interior, and condenser tubes as can be viewed. Provide protective screening to cover openings in casing with a hard edging to pass around bolting to insure that the screening will remain in contact with turbine casing to prevent the entry of foreign objects. Screening to be of small mesh, such as 12 x 12. Fit four extension studs in way of cap screws on each manhole. Studs to be of sufficient length to allow the use of two nuts per stud to mount the manhole cover a distance of one inch above the opening to serve as protection for the screening. Upon fitting screening place covers over screen allowing approximately one inch of space between screening to allow for ventilation of turbine interiors.

5.2 Disassemble all turbine and chest drains and prove to the port engineer that they are clear and will drain properly. Reassemble drain, leaving drain valves open.

5.3 Drain gland seal and leak-off systems as well as regulator bellows assemblies. To insure that all trapped moisture is removed.

- 5.4 Ahead and astern throttle valves, nozzle valves as well as guardian valve are to remain in an open position.
- 5.5 Coat/lubricate the various operating mechanisms.
- 6.0 DELIVERABLES
- 6.1 None

105 MAIN ENGINE LUBE OIL SYSTEM

1.0 ABSTRACT

- 1.1 This item describes the services needed from contractor to empty and clean the main Engine lubricating oil system on board.

2.0 REFERENCES

- 2.1 Ships tech manuals and Engine Operating Manual Vol. 1

3.0 LOCATION/DESCRIPTION/QUANTITY

- 3.1 Engine Main LO system for main propulsion system.

4.0 DEFINITIONS

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 Drop oil from gravity tank to main sump taking care that the sump will contain the system oil including the gravity tank oil without overflowing.
- 5.2 Transfer the oil to lube oil settling tank through the centrifuge.
- 5.3 Open main engine sump for inspection and clean if necessary.
- 5.4 Return oil to the main sump.
- 5.5 Clean all lube oil strainers.
- 5.6 Restore main lube system to normal line up and circulate oil, using main lube oil pump, to verify proper leak free operation.

6.0 DELIVERABLES

- 6.1 None

106 EMERGENCY DIESEL GENERATOR – TEMPORARY LAYUP

1.0 ABSTRACT

1.1 This item describes the assistance of tech rep to temporarily disable the Diesel Generator. Emergency

2.0 REFERENCES

2.1 Ships tech manuals.

2.2 Engine: LOC #1: EGRM, S/N: 6B-19940/General Motors Corp/220 HP/6-110 Series.

2.3 Generator : LOC #1: EGRM, S/N: 8271805/General Electric Co/ Dwg# 149A1971, Type: AT1, 150 KW, 187.5 KVA, 1800 RPM, 450 V, 3 Phase,

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Emergency Diesel Generator room in 01 deck/ Qty: 1

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 PROVIDE A QUALIFIED ELECTRICIAN FOR THE FOLLOWING SERVICE:

5.2 The cooling system of the emergency diesel generator engine shall be drained and flushed with clean fresh water. The system shall be refilled with clean demineralized water, treated with a corrosion inhibitor equal to NALCOOL 2000 and treated with sufficient ethylene glycol antifreeze to provide protection to -20 deg F. The engine shall be operated to ensure proper mixing and the protection certified in the presence of the port engineer. A dated tag shall be attached to the expansion tank indicating the compounds used and the level of protection provided.

5.3 The engine oil and fuel filters shall be changed using manufacturers approved elements. The engine lube oil shall be topped up to proper level. Operation of engine shall be demonstrated after filters are changed.

5.4 The exhaust and intake louvers will be sealed temporarily so as to enable reactivation or starting of the EDG while in the fleet.

6.0 DELIVERABLES

6.1 None

107 TURBOGENERATORS

1.0 ABSTRACT

1.1 This item describes the assistance of tech rep to do the service described in statement of work on both turbo generators and target DH.

2.0 REFERENCES

2.1 Ships tech manuals and drawings. Dwg. 101L458BR/501E130BY.

2.2 Service Report from last major repairs and service of both TG # 1 & 2.

2.3 TG # 1 : MASPULSFWD , S/N: 126995

2.4 TG # 2: MASPULSFWD , S/N : 126996

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Upper Engine room/ Ship Service Turbogenerators/750 Watts, Pressure 585 psig, Temp. 855 deg F/ Two (2) Turbo generators

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 PROVIDE A TECH REP FOR THE FOLLOWING SERVICE:

5.1.1 TURBOGENERATOR – TURBINES:

5.1.2 Disconnect all throttle valve, chest, turbine, and bowl drains. Insure that the lines and drains are clear to the satisfaction of the port engineer. Reconnect piping and leave drain valves in the open position.

5.1.3 Remove exhaust casing sentinel relief valve, fit screening over opening with a frame in such a manner that it cannot be dislodged.

5.1.4 Clean both elements of the duplex lube oil strainers. Open gear unit inspection cover, examine gears for condition.

5.1.5 Fabricate a fine mesh screen with coarse mesh guard screen and frame and place securely over gear unit inspection opening. Use cover on standoffs to protect screen and yet allow ventilation.

5.1.6 Open, clean and inspect the following: Provide a Condition Report.

- Governor , Throttle trip and Safety devices

5.1.7 Reassemble in good order with new gaskets.

5.2 TURBOGENERATOR – ELECTRICAL:

5.2.1 Open alternator casings for ventilation. Verify operation of alternator space heaters.

5.2.2 Qualified electrician to perform the lifting of brushes from generator and exciter. Brushes shall be left in place but with their spring tension released and brushes lifted from the surface of the commutators.

6.0 DELIVERABLES

6.1 None

108 FUEL & DIESEL OIL REMAINING ABOARD VESSEL

1.0 ABSTRACT

1.1 This item describes the assistance of barge and or truck to remove the fuel oil and diesel oil on board.

2.0 REFERENCES

2.1 Ships blue prints and drawings.

2.2 Drew Chemical AMERISTAT 25

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Engine room, main deck and house

3.2 Diesel Oil about 500 Gallons in EDG day tank.

3.3 Fuel Oil about: 2000 barrels in various tanks

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 PROVIDE LABOR, EQUIPMENT, TRUCK/BARGE SERVICE FOR THE FOLLOWING SERVICE:

5.2 Diesel fuel remaining aboard the vessel is to be treated with an approved biocide to prevent the formation of fungus or bacteriological contamination of the fuel during long term lay-up of the vessel. This includes fuel in the emergency diesel generator fuel tank. Estimate the treatment of 500 gallons of diesel fuel. Emergency generator fuel tanks to be filled to 95% capacity. The rest to be transferred to an adjacent ship or truck as decided by the quantity remaining on board then.

5.3 Fuel oil remaining aboard the vessel is to be treated with an approved biocide to prevent the formation of fungus or bacteriological contamination of the fuel during long term lay-up of the vessel. Estimate treatment of 2000 gallons in all. Drew rep will be in attendance to help with the treatment.

6.0 DELIVERABLES

6.1 None

109 RUDDER, SHAFT LOCKING & STERN GLAND PACKING

1.0 ABSTRACT

- 1.1 This item describes the locking of the rudder and shaft and pack the stern gland to make it water tight.
- 2.0 REFERENCES
- 2.1 Ships tech manuals and drawings.
- 2.2 Dry Dock reports of 2008
- 2.3 Appendix B of Marad MA-496 : for Rudder & Shaft Locking Arrangements.
- 2.4 Drawing # 630-1270: Details of Line & Propellor Shaft.
- 2.5 Drawing # 630-1276: Details of Shafting, Stern Tube Bearing & Stuffing Box
- 2.6 Drawing # 630-1274: Details of Rudder & Rudder Stock
- 3.0 LOCATION/DESCRIPTION/QUANTITY
- 3.1 Shaft Alley, Underside of Water aft of ship for Rudder/Steering Room.
- 4.0 DEFINITIONS
- 4.1 None
- 5.0 STATEMENT OF WORK
- 5.1 PROVIDE A TECH REP FOR THE FOLLOWING SERVICE:
- 5.1.1 The contractor shall install the ship provided shaft locking device on the shaft in accordance with specifications set forth in Reference 2.3
- 5.1.2 The contractor shall paint with 1 coat of bright yellow paint.
- 5.1.3 The contractor shall secure physically by rudder lock in the mid ships position to the satisfaction of the Marad representative.
- 5.1.4 The contractor shall secure steering motors and close all hydraulic valves.
- 5.1.5 The contractor shall use the example of a commonly used rudder lock. It shall be designed and fabricated so as to facilitate ready securing for towing without the need for additional welding. Appendix attached as referred in 2.3 above describes the lock used.
- 5.1.6 The contractor shall coat the Rudder locks shall be painted with 1 coat of bright yellow paint.
- 5.1.7 The contractor shall make the stern gland water tight by putting the ship provided conventional packing glands shall have sufficient packing for future take-up.
- 6.0 DELIVERABLES
- 6.1 None

110 CARGO GEAR SECURE & STOW

1.0 ABSTRACT

1.1 This item describes the unreaving of rigging or running wires and stow on winches. Service the turnbuckles and shrouds.

2.0 REFERENCES

2.1 Ships' drawings.

2.2 Deck Operating and Tech. manuals of cargo gear and winches.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Main deck and Focsle deck, Top of MG houses # 1,2,3 & 4 and top of MCDS houses.

3.2 Main Deck forward and aft of the house/ Eighteen (18) booms and associated machinery.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 All running rigging are to be brought to the winch drums. All winches, drums and motors to be prepped for shrink wrapping. The eighteen (18) cargo booms are to be stowed in their cradles resting on two, non-absorbent, contractor furnished, nylon rods of sufficient length to extend fore and aft of cradles. The rods are to be fitted with wire straps to retain them in place on the cradles. Contractor shall install pad eyes on the inboard and outboard sides of each of the eighteen (18) boom cradle support posts. Each boom rest shall be fitted with two (2) each stainless steel shackles, one (1) each 3/8" stainless steel Sling with eye at each end. and one (1) each 12" long stainless steel turnbuckle. Installation shall be up such that the turnbuckle is approximately 1/3 engaged with the boom sitting in the cradle with the nylon rods in place. Contractor is to apply anti-seize compound to the threads of all shackles and turnbuckles. Contractor shall coat all new and disturbed steel work in accordance with Appendix D. Tension cargo runners to secure each boom in place.

5.2 Turnbuckles on mast shrouds shall be slacked off about a dozen (12) turns, the exposed threads heavily greased and tightened to former position, and the turnbuckle and shroud assemble shall then be coated with a water resistant grease.

6.0 DELIVERABLES

6.1 None

111 SHRINK WRAP- DECK & BRIDGE EQUIPMENTS

1.0 ABSTRACT

1.1 This item describes the shrink wrapping of all deck machinery, Bridge equipments and life boats' associated machinery on board.

2.0 REFERENCES

2.1 Ships tech manuals and drawings.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Main Deck forward and aft of the house/Eighteen, (18) booms and associated machinery consisting of – winches, motors, brakes and controls for a total of 50 items.

3.2 Hatch Covers and associated machinery consisting of pumps, power units, motors and controls for a total of 16 and 6 hatch covers and coamings.

3.2 VPL Cranes' associated controls and motors for a total of 18.

3.3 Other deck gear includes –Schooner winches, Topping and Vang Lift winches and associated machinery consisting of – winches, motors, brakes and controls for a total 108.

3.4 Life Boat davits, davit winches, winch motors and controls totaling 8.

3.5 Steering and Navigation equipments on bridge, gyro room and radio room total 12.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 The contractor to shrink wrap the deck machinery, Life Boats' winches, motors and controls, steering and navigation equipment as listed above in 3.1 to 3.5.

5.2 The contractor to make patterns for the equipments to wrapped. These patterns will be then fitted onto the equipment, taped and heat shrunk with propane torches.

5.3 The perimeters will be created with strapping for the hatches, and Shrink film laid in place. The shrink film will be heat shrunk along the perimeter and along the sides and tops.

5.4 After the covers are heat shrunk, the covers will be sprayed with shrink wrap coating System, tinted to haze gray color. This will seal the tapes, and protect from UV light, Toughen the film from abrasion, birds and wind.

5.5 The shrink wrap used for this job should consist of : anticorrosive and UV protecting quality of Mil 7. And should protect the film coated from abrasion, birds, winds and weather exposure. Should protect all metals and elastomerics from atmospheric corrosive gases (chlorides, sulfides, ozone, nitrous oxides etc. Should protect wood released acetic and formic acids. Should protect any humidity typical storage temperatures. No static charge generated in any humidity. Should protect all metals and elastomeric materials for up to 10 years per mil for indoors and less when exposed to UV outdoors , at least 5 to 7 years and more with coating.

5.6 The contractor will have the help of ships crew and local contractor in lifting their equipments, supplies and materials on board ship.

5.7 The area of wrapping is estimated to be 10000 square feet for bidding purposes.

6.0 **DELIVERABLES**

6.1 None

112 HATCH COVERS

1.0 **ABSTRACT**

1.1 This item describes the services needed from contractor to secure the hatch after chalk test on covers.

2.0 **REFERENCES**

2.1 Ships blue prints and tech manuals for Hatch Covers and associated components.

3.0 **LOCATION/DESCRIPTION/QUANTITY**

3.1 Main Deck and Forecastle Deck/6 hatch covers

4.0 **DEFINITIONS**

4.1 None

5.0 **STATEMENT OF WORK**

5.1 Chalk test all covers for tightness.

5.2 All hatch covers are to be checked for proper dogging and tightness.

5.3 When directed by owner rep, remove from storage and install ships hatch cover tarps on all main deck hatches and have ready for shrink wrap and coamings.

5.4 All tween deck hatch covers shall be closed.

6.0 **DELIVERABLES**

6.1 None

113 FIRE DAMPERS

1.0 **ABSTRACT**

1.1 This item describes the services needed from contractor to service all fire dampers for proper operation.

2.0 **REFERENCES**

2.1 None

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Engine lower and upper rooms, shaft alley, fidley, steering flat accommodation spaces.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 Contractor to survey all fire dampers on the vessel and manually test each for proper operation.

5.2 Note any missing or damaged label plates. Any defective units will be noted and a report of all defects issued to the Port Engineer.

5.3 Any and all repairs will be covered under a separate change order. Upon completion of all repairs prove for proper operation to the Port Engineer.

6.0 DELIVERABLES

6.1 List of all defective dampers with location and condition report.

114 DECK DRAINS AND SCUPPERS

1.0 ABSTRACT

1.1 This item describes the deck drains and scuppers to be cleaned, made operable and secured on board.

2.0 REFERENCES

2.1 Ships tech manuals and drawings.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Main Deck, 01,02,03, 04,05 and Fly Bridge

3.2 MCDS houses fwd and aft, MG Houses 1,2,3 & 4.

3.3 Quantity: 36 for quote purposes.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 All deck drains and scuppers on vessel weather decks shall be cleared and proven clear to the satisfaction of the port engineer. The deck drain overboard check valves are to be opened up, valve discs are to be removed from the valves and wired to the valve bodies. Valve bodies to be closed up.

6.0 DELIVERABLES

6.1 None

115 WATER LINE MARKINGS

1.0 ABSTRACT

1.1 This item describes the painting of water line markings per Marad specifications.

2.0 REFERENCES

2.1 Ships tech manuals and drawings.

2.2 Marad Paint Guidelines.

2.3 Marad MA-496, Item # 6-14

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Above Water line, Port and Stbd. of the ship.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 Contractor to paint the Waterline markings on the hull : Four (4) inch. wide stripes along the waterline extending horizontally forty-eight (48) inches toward midships from the bow and stern on both sides of the vessel.

5.2 Markings shall be of two coats of highly visible, reflective white or international orange, paint and applied to perform well over a long period of time.

5.3 A second marking stripe shall be applied approximately four feet above the waterline.

5.4 Contractor to apply the markings on the trailing edge of the rudder.

6.0 DELIVERABLES

6.1 None

116 VALVES – SECURE AND LOCK

1.0 ABSTRACT

- 1.1 This item describes the services needed from contractor to secure all the valves, lock and handover the keys to Marad.

2.0 REFERENCES

- 2.1 Marad MA-496 Deactivation Specs. Item # 6-14
- 2.2 Ships drawings and Engine Operating Manual

3.0 LOCATION/DESCRIPTION/QUANTITY

- 3.1 Engine lower and upper rooms, shaft alley.

4.0 DEFINITIONS

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 Provide labor and material to secure all sea valves.
- 5.2 All sea valves shall be secured with valve wheels chained and locked to the valve body.
- 5.3 Keys shall be turned over to MARAD via Matson Port Engineer.
- 5.4 All electric, hydraulic, and pneumatic operated valves shall be disabled at the controller.
- 5.5 Settling tank valves and all valves effecting seaworthiness shall be closed, chained and locked to prevent opening, with keys provided to MARAD.
- 5.6 All valves shall be surveyed for leaks.
- 5.7 Any leaking valves shall be repaired, replaced, or blanked at the flange. The sponsor shall take up on packing glands or repack valves as required, leaving valves and reach rods in good working order.

6.0 DELIVERABLES

- 6.1 Keys with document showing the location and name.

201 UNDERWATER BLANKS

1.0 ABSTRACT

1.1 This item describes the installing of the under water steel sea chest blanks.

2.0 REFERENCES

2.1 Capacity plan drawing # : 10-4376/Hull 551. USMA Drawing. 94-S29-1-6

2.2 MARAD Coatings Guidelines

2.3 External Hull Blank List Stbd. /Drawing # : 565V-002-081-01, Rev. C

2.4 External Hull Blank List Port / Drawing #: 565V-002-081-01, Rev. C

3.0 GOVERNMENT FURNISHED MATERIAL/EQUIPMENT/SUPPLIES

3.1 Blanks , Thirty Three (33)

4.0 LOCATION AND QUANTITY

4.1 Various outer hull locations from flat bottom to side shell to turn of bilge.

4.2 The following is a list of Sea chest and Overboard Blanks:

VL V	SERVICE	LOCATIO N	SIZE	WEIGHT
	PORT SIDE:			
01	SCUPPER	FR 101	13" DIA.	27LBS
02	MAIN SCOOP	FR 116	9-1/5" X 3'11- 1/2"	760LBS
03	MAIN CIRC. HIGH SUCTION	FR 120	5'7" X 5'0"	550LBS
04	OVERBOARD PLUMBING	FR 122	13" DIA	27LBS
05	SEA WATER DISCHARGE	FR 123	13" DIA	27LBS
06	PLUMBING OVERBOARD	FR 125	13" DIA	27LBS
07	CONT. EVAP. OVB'D.	FR 126	19" DIA	40LBS
08	DISTILLED & FEED PUMP	FR 127	2'4" X 18-1/2"	82LBS
09	PLUMBING OVERBOARD	FR 129	13" DIA	27LBS
10	LUBE OIL COOLER OVB'D.	FR 131	13" DIA	27LBS
11	BILGE & BALLAST OVB'D.	FR 131	19" DIA	40LBS
12	BILGE & BALLAST SUCT.	FR 132	2'4" X 2'0"	92LBS
13	FIRE & SANITARY LOW SUCTION	FR 133	3'0" X 2'0"	120LBS
14	FIRE & SANITARY HIGH SUCTION	FR 135	2'0" X 2'0"	80LBS
15	REEFER DRAIN OVB'D.	FR 144	13" DIA	27LBS
16	REEFER DRAIN OVB'D.	FR 145	13" DIA	27LBS
17	REEFER DRAIN OVB'D.	FR 169	13" DIA	27LBS
18	RUDDER EDUCTOR OVB'D.	FR 204	13" DIA	27LBS

VL V	SERVICE	LOCATIO N	SIZE	WEIGHT
	STARBOARD SIDE:			
19	REEFER OVB'D.	FR 101	13" DIA	27LBS
20	AUX. CIRC. DISCHARGE	FR 120-1/2	19" DIA	40LBS
21	AUX. CIRC. & SEA WATER SERVICE LOW SUCT	FR 120	3'4" X 2'10"	195LBS
22	AUX. CIRC. & SEA WATER SERVICE HIGH SUCT	FR 121	3'4" X 2'10"	195LBS
23	PLUMBING OVERBOARD	FR 122	13" DIA	27LBS
24	MAIN CONDENSER OVB'D.	FR 124	6'6" X 4-1/3"	40LBS
25	EMERGENCY BILGE OVB'D.	FR 125	13" DIA	27LBS
26	MAIN COND. HIGH OVB'D.	FR 126	19" DIA	40LBS
27	AUX. SEA WATER SVC OVB'D.	FR 130	19" DIA	40LBS
28	BOILER BLOW	FR 131	13" DIA	27LBS
29	PLUMBING OVERBOARD	FR 133	13" DIA	27LBS
30	REEFER DRAIN OVB'D.	FR 142	13" DIA	27LBS
31	REEFER DRAIN OVB'D.	FR 143	13" DIA	27LBS
32	REEFER DRAIN OVB'D.	FR 169	13" DIA	27LBS
33	AFT FIRE PUMP	FR 194	2'4" X 18-1/2"	195LBS

5.0 STATEMENT OF WORK

5.1 REMOVALS:

5.1.2 Pick up from vessel thirty three (33) blanks listed as GFM in 3.1 and 4.2 above and transport to contractor's facility for cleaning and preparing. Vessel's crew will off load the blanks into contractors' trucks.

5.2 INSTALLATION:

5.2.1 Renew all of the blank gaskets with live sheet rubber gasket material with a minimum of 3/16 thickness. Thoroughly clean gasket seating surfaces of any remaining cement previously used to secure gaskets in place. Notify Port Engineer when blank preparation is complete and conduct a joint inspection of the prepared blanks.

5.2.2 Conduct an underwater inspection of the openings to be blanked. Remove all of the cap screws installed to protect the threaded flange ring holes. Using a 3/4" bottom tap, clean and chase all of the threaded holes and scrape the gasket seating surface clean of any and all sealing cement, sea growth and obstructing material to insure a tight seal. Estimate that 5% of the threaded holes may need repairs or heli-coils installed to obtain a tight seal.

5.2.3 Provide all labor, material, staging, rigging and water craft, to install the GFM hull blanks using new contractor supplied 3/4" stainless steel (#504) Cap screws. Cap screws shall be installed with stainless steel washers over a Teflon or fiber washer against the blank, followed

by a mild steel washer. All washers to be a minimum of 1/16 thick. Cap screw threads to extend a minimum of 3/4" into the threaded hole with the gasket compressed.

5.2.4 Install expanding type plumber's plugs in overboard piping in hull above the waterline. For estimating purposes assume ten (10) plugs (3-4", 3-2", 4-1"). Testing not required.

5.3 TESTING

5.3.1 After completion of blank installation, contractor to set up a Wilden type pump and pump out the SW sides of main & aux condensers. This to include any water laying in the scoop injection & overboard piping. Note no water is to be allowed to drain into the bilges thereby becoming oily waste and require disposal.

5.3.2 Contractor is to air test the sea chests to 3 PSIG through the vent valve connection using an air manifold with calibrated pressure gages, air regulator and relief valve set at 4 PSIG to protect the ships structure from over pressurization... Notify Port Engineer to witness each test and verify no leakage. Compile a check-off list of all tests and record equipment, time, date and witness who verified completed test. Where air testing is not practical visual inspection with mirror or bore scope may substitute. Boroscope test lead should be atleast 25 feet long.

5.3.3 Overboard connections may have piping removed or valve bonnets open to prove blanking tight.

5.3.4 Upon completion of satisfactory testing of hull blanks and draining of salt water, all sea chests, scoops and overboard piping must be flushed with fresh water.

5.3.5 Upon completion of satisfactory flushing of all through hull fittings and sea chests and acceptance by Port Engineer or his representative, piping, condensers and other heat exchangers (Mn. LO cooler 2, SSTG LO coolers 2, Generator SW Coolers 2, Reefer condensers 2, General Service System, etc.) in the salt water circuit are to be opened (Head or Inspection Plates Removed) and thoroughly dried using compressed air followed by hot air blowers circulating through units until no traces of moisture remain. Conduct an inspection with the Port Engineer or his representative prior to closing all salt water piping, condensers and heat exchangers to insure adequate drying. All Salt Water Systems must be reassembled completely prior to lay-up at SBRF.

5.3.6 Tag lines are to be installed on all blanks and run up to the first open deck rail and terminated on to a staple eye or hand rail with an identification metal tag. Tag lines are to be vinyl coated 3/16" stainless steel wire connected with Stainless steel Crosby clamps or similar hardware. The guide staple eyes to be welded on side shell, tag lines are to be run through these guides to protect the tag lines from snagging on moorings. These guide staple eyes are spaced 8 feet apart.

5.4 QA REQUIREMENTS

5.4.1 Contractor is to maintain a log of all inspections with date and signature of the person doing inspection.

5.5 NOTES:

5.5.1 The SS Cape Jacob will be fendered off the adjacent vessel with Admiral Callaghan at Alameda Point Pier 3 with five (5) foot diameter Yokohoma Fenders limiting access to port or stbd. shell. Vessels' crew will assist hanging planks over the side with the ships gear as much as possible.

6.0 DELIVERABLES

6.1 None

202 DRYING OF MAIN STEAM SYSTEM

1.0 ABSTRACT

1.1 This item describes the blowing down of main steam line and preparation to a dry lay up.

2.0 REFERENCES

2.1 Ships drawings

2.2 Engine Operating Manual Vol. 1

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 LOCATION: Upper and lower engine room/

3.3 DESCRIPTION: The steam system and its piping

3.4 QUANTITY: Per statement of work below

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 The contractor to blow down the main steam lines with compressed air and dried with forced hot air.

5.2 The contractor will drain the Turbines and condensers and dry with forced hot air. A check list will be provided to assist in this evolution.

5.3 Blow down of Main Steam Lines

5.3.1 Remove the internals of traps on the main steam line drains, steam strainer drains and turbine throttle drains and replace bonnets. Manually open all valves between the super heater outlet and the turbines except the throttle valves at turbines, which are to be tightly closed. Close the super heater outlet stop check valves and open all other main steam stop valves. Pressurize the steam main with clean, dry oil free compressed air. Individually open each drain and confirm flow. Drain until all traces of moisture are gone. For solid piped drains, break the line downstream of all low points to confirm dryness. Repeat this sequence until all drains blow dry as soon as they are opened. Release pressure in the steam main by opening all drains.

5.3.2 Installation of Hot Air Blowers Open steam strainers upstream of throttle valves on main and auxiliary turbines and remove, clean, inspect and reinstall baskets. Install a temporary high capacity air heater/blower to discharge into each strainer. The blower capacity should be approximately 1000 scfm at 2" H₂O. Heater shall be capable of raising 1000 cfm from 70 to 140 deg. F. Blowers should be provided with inlet filters. Blowers may be mounted directly on larger strainers or ducted to smaller strainers. In either case, a sheet metal transition must

SS Cape Jacob Deactivation Spec

be provided between the strainer flange and the blower or duct flange. Install a full faced, gasketed, fine mesh screen between the strainer and transition flanges.

- 5.3.3 Drying Main Steam Piping: Remove the port and starboard super heater stop check valve bonnets and disks, open other steam stops and start all heater/blowers to circulate hot air through the steam lines, super heater and open steam drum manhole for twenty-four (24) hours. Check accessible locations for moisture. If moisture is found, continue drying. The disks should be put in a bag, tagged with location and name of valve and stowed in the contractor provided gang box .
- 5.3.4 Drying Turbine and Condenser Steam and Condensate sides: Open inspection plates on all condenser hot wells, jack open throttle valves, open all turbine and extraction drain lines, close boiler steam stops and replace stop check valve bonnets. Circulate hot air through turbines and condensers for at least forty-eight (48) hours. Check accessible locations for moisture. If moisture is found, continue drying.

6.0 DELIVERABLES

- 6.1 None

203 MACHINERY & PIPING SYSTEMS DRAINING

1.0 ABSTRACT

- 1.1 This item describes the draining and blow down of machinery and piping systems.

2.0 REFERENCES

- 2.1 The diagrams in the ship's Engineering Operating Manual are to be used as a guide to identify lines and equipment requiring drainage.
- 2.2 A check list must be provided to the Port Engineer to assist in this inspection.

3.0 LOCATION/QUANTITY/DESCRIPTION

- 3.1 LOCATION: Lower and Upper engine room on board SS Cape Jacob.
- 3.2 QUANTITY: 14 Systems approximately per list in below table.
- 3.3 Table of Systems: Contractor to provide all labor, materials, and equipment to drain all machinery and associated piping systems onboard vessel, containing water. This includes, but is not limited to:
 - 3.3.1 Fire Main Systems and strainers.
 - 3.3.2 LO Coolers
 - 3.3.3 Heat Exchangers – Fresh water, Sea water
 - 3.3.4 Hot Water Heaters
 - 3.3.5 Sea Water Service System
 - 3.3.6 Feed Water System
 - 3.3.7 Deck Drains

- 3.3.8 Compressed Air System
- 3.3.9 Oily Water Separators (3) and piping.
- 3.3.10 Priming Pump System
- 3.3.11 Gland Exhaust Condenser
- 3.3.12 Vacuum Pump System
- 3.3.13 Inspection Drain Tanks
- 3.3.14 Ballast System

4.0 DEFINITIONS

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 Prior to commencement of this item, the contractor shall submit a checklist of each system to the Port Engineer for approval. The Port Engineer will approve the submitted list as to accuracy and acceptability prior to the contractor's commencement of work of these systems. The purpose of this checklist is to ensure all parts of the independent systems have been properly drained/flushed prior to lay-up.
- 5.2 Flush all salt water pumps, strainers, condensers, coolers and piping with fresh water to insure traces of salt are removed and drain.
- 5.3 Machinery shall be drained thoroughly on both the steam and water sides by utilizing drain valves, drain plugs, opening valve bonnets, breaking pipe flanges, or any other approved method. Use a probe to clear clogged drainage openings. Ensure all machinery drains are clear and free of obstruction.
- 5.4 Piping systems are to be drained by utilizing existing drain valves or fittings, installing new drain nipples with caps or plugs at low points, where approved, (contractor to estimate the installation of five (5) drain nipples and plugs), breaking pipe flanges at the low points, breaking pump connections, or any other approved method. Use a probe to clear clogged drainage openings. Ensure control valves are placed in the open position to facilitate draining. Bilge and ballast manifolds are to have all their bonnets removed as necessary to facilitate inspection, drainage, and drying.
- 5.5 Open all manholes upon completion of the fresh water flush and wipe clean with lint free rags, the main condenser (salt and condensate water sides), auxiliary condensers (salt and condensate water sides), dc heater,. Port Engineer to inspect prior to reinstallation.
- 5.6 Manhole plates/covers are to be reinstalled adjacent to manholes with new gaskets and cotton grommets.

- 5.7 Install a contractor furnished expanded metal grating, backed with a fine-mesh screen over each manhole. Secure the permanent manhole plate, new gasket, and fasteners adjacent to opening.
- 5.8 Renew all zincs for the main condenser, auxiliary condensers and lube oil coolers per manufacturer's recommendations.
- 5.9 Remove heads, drain the waterside, blow out and brush tubes of the lube oil coolers, SSTG LO Coolers and SSTG air coolers. Upon completion reinstall heads with new gaskets as required.
- 5.10 Drain plugs/valves are to remain open. Store plugs in an airtight durable bag, tag with name and location and stowed in the contractor provided gang boxes.
- 5.11 Valves shall be operated, as necessary, to ensure all branches of piping have the treated air circulated through them.
- 5.12 Heat exchangers and all other machinery drained shall also be thoroughly dried.
- 5.13 When satisfactorily drained, thoroughly dry out the above drained machinery and piping systems.
- 5.14 Drying can be accomplished by blowing clean dry compressed air through piping systems - up to 2-1/2" diameter.
- 5.15 Piping systems larger than 2-1/2" diameter may be dried by either forced heated air or dehumidified air circulation.
- 5.16 Upon acceptance by the Port Engineer that the machinery and piping systems are drained and thoroughly dried, close up removed and disassembled equipment in good order, using new gaskets, packing material, and replacing any missing or damaged fasteners where required.
- 5.17 Removed fittings, plugs, etc., are to be bagged with air tight bags, tagged with name and location and stowed in the contractor provided gang box. Port Engineer to determine which items are to be left open.
- 5.18 All open items are to have a metal tag sprayed with fluorescent paint for easy identification at the next activation, with proper identification engraved on it.
- 5.19 Contractor to provide a written list of all removed fittings and plugs that are left open for deactivation. Turn list over to the Port Engineer at completion of deactivation.

6.0 DELIVERABLES

- 6.1 List per 5.19 above.

204 HVAC - STEAM/HOT WATER HEATING & CHILLED WATER SYSTEMS

1.0 ABSTRACT

1.1 This item describes the blowing out to dry and securing the HVAC systems and Chilled water systems on board SS Cape Jacob.

2.0 REFERENCES

2.1 Ships blue prints, drawings and tech manuals.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 LOCATION: On board SS Cape Jacob entire engine room, fan rooms and accommodation spaces.

3.2 DESCRIPTION/QUANTITY : Entire HVAC systems and associated machinery and piping including the chilled water piping and system.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 A check list will be provided by the contractor to ensure each piping line, radiator, heating coil, and chilled water coil is blown out with dry air and flushed with antifreeze. The checklist will be used to verify progress in completing this work item. Each check list item will be considered completed when initialed by the port engineer.

5.2 In coordination with the air blow down, ensure all water is purged out of piping, heaters, cooling coils and radiators to the satisfaction of the port engineer. Supply and return lines are to be disconnected at convenient points. Pump propylene glycol (Camco or equal) through the supply lines and return through the drain lines. Supply valves and return valves are to be operated at each radiator, air handler heater and coil to introduce the antifreeze throughout the entire system. Ensure automatic valves are in open position. At completion of system charging, drain antifreeze, and clean spillage. Blow down system using clean dry air. Drained antifreeze solution may be used in lay-up of bilge lines where described.

5.3 A detailed plan listing all broken connections shall be provided for use in reactivation. Any valves, traps, strainers or piping left open for drainage & drying will be marked by the attachment of a brightly colored, durable tag for readily visible identification. The contractor may mark up and adjust the work list provided at activation.

6.0 DELIVERABLES

6.1 None

205 POTABLE WATER SYSTEM PIPING/PRESSURE AND HEATING /FEED TANKS

1.0 ABSTRACT

1.1 This items describes the system draining of Potable water, cold and hot, opening and draining the entire system including the heating tanks and piping.

2.0 REFERENCES

2.1 Ships drawings, blue prints and tech manuals.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 LOCATION: Lower and Upper Engine room, Accommodation, Galley spaces.

3.2 DESCRIPTION/QUANTITY : Entire potable water system on ship.

4.0 DEFINITIONS

4.1 None.

5.0 STATEMENT OF WORK

5.1 In coordination with the potable water system draining, the cold water pressure and hot water heater vessels shall be opened, inspected and drained.

5.2 Clean the interiors of loose rust and particulate.

5.3 Blow down and prove dry.

5.4 Make new gaskets and renew any defective fasteners.

5.5 Leave open to DH air with covers and new gaskets secure to opening with necessary fasteners.

5.6 New fasteners to be bagged, tagged and left in gang box provided

5.7 After the potable water piping system has been drained, to the satisfaction of the port engineer, pump non-toxic propylene glycol antifreeze solution (Camco or equal) into the system from a connection in the engine room.

5.8 Every faucet and shower valve is to be operated in the presence of the port engineer to purge air and introduce the antifreeze solution to all parts of the piping system.

5.9 Develop a checklist to verify progress.

5.10 At completion of system charging, drain the antifreeze and clean spillage.

5.11 Blow down every piping line with clean dry air.

5.12 Drained antifreeze may be saved for use in other systems where described. NOTE: Antifreeze used and drained from other systems shall not be used in the potable water system.

6.0 DELIVERABLES

6.1 None

206 SANITARY FLUSHING & PIPING SYSTEM

1.0 ABSTRACT

1.1 This item describes the flushing of sanitary piping system, blowing to dry before lay up.

2.0 REFERENCES

2.1 Ships' drawings and blue prints.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 LOCATION : Onboard SS Cape Jacob entire accommodation and state rooms.

3.2 DESCRIPTION/QUANTITY : Assume 55 state rooms for this work.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 The contractor to drain and blow out the entire system and make it dry.

5.2 The contractor to inspect and drain each commode aboard the ship.

5.3 The contractor to fill the system with propylene glycol using portable pumping rig to rig to 50 to 70 psig.

5.4 Flush each commode and urinal until the propylene glycol solution appears from the flushometer and then flush two more times to permit the treated solution to drain to the sewage system.

5.5 Continue to maintain pressure on the system until all commodes and urinals have been flushed.

5.6 After all commodes have been flushed, reverse the connections on the portable pump and pump all excess solution back to the drums.

5.7 A high point vent will be required for the pump down operation. This can be accomplished by jacking open a flushometer or opening a line to the atmosphere. Recover as much of the propylene glycol solution as possible for use in the bilge system and ultimately disposal ashore.

5.8 When draining sanitary and sewage systems, ensure all sanitary traps, toilet bowls, sinks, and washbasins are dried out. Trap plugs, where fitted, are to be opened, cleaned, and reinstalled to ensure that traps are empty and dry.

5.09 When satisfactorily drained, thoroughly dry out the above drained machinery and piping systems.

5.10 Drying can be accomplished by blowing clean dry compressed air through piping systems - up to 2-1/2" diameter.

5.11 Piping systems larger than 2-1/2" diameter may be dried by either forced heated air or dehumidified air circulation.

5.12 Upon acceptance by the Port Engineer that the machinery and piping systems are drained and thoroughly dried, close up removed and disassembled equipment in good order, using new gaskets, packing material, and replacing any missing or damaged fasteners where required.

6.0 DELIVERABLES

6.1 None

207 BILGE, BILGE WELLS, BILGE DRAINS AND TANKS

1.0 ABSTRACT

1.1 This item describes the blowing out to dry ships bilges, bilge tanks and bilge drain clean up.

2.0 REFERENCES

2.1 Ships blue prints, drawings and tech manuals.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 LOCATION: On board SS Cape Jacob entire engine room, shaft alley, cargo hold spaces

3.2 DESCRIPTION/QUANTITY: 40 wells and drains, tanks for estimation purposes.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 Blow down system using clean dry air. Drained antifreeze solution may be used in lay-up of bilge lines where described.

5.2 A detailed plan listing all broken connections shall be provided for use in reactivation. Any valves, traps, strainers or piping left open for drainage & drying will be marked by the attachment of a brightly colored, durable tag for readily visible identification

6.0 DELIVERABLES

6.1 None

208 ENGINE ROOM CLEANING

1.0 ABSTRACT

1.1 This item describes the services needed from contractor to clean the engine room bilge and floor plates.

2.0 REFERENCES

2.1 None

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Engine lower and upper rooms, shaft alley, fidley, steering flat.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

- 5.1 Furnish necessary labor, material and equipment to clean entire engine room space upon completion of all work. This shall include the cleaning and soogeeing of all bulkheads, piping runs, vertical and horizontal stiffeners, I beams, light fixtures and machinery from upper fidley to lower engine room.
- 5.2 Vacuum and clean all traces of soot and dust from machinery, pipelines and crevices.
- 5.3 Sweep all floor plates, remove all trash and debris ashore and dispose of same.
- 5.4 Floor plates, gratings and supports shall be secured in place.
- 5.5 Missing plates and handrails shall be replaced.
- 5.6 Wash down and pump bilges clean as required, making sure that all loose paint chippings, dirt and debris is removed and disposed of.
- 5.7 Cleaning shall be done to the satisfaction of the port engineer.

6.0 DELIVERABLES

- 6.1 None

209 PRESSURE VESSEL CLEANING

1.0 ABSTRACT

- 1.1 This item describes the draining, opening and cleaning and blown dry of all the pressure vessels.

2.0 REFERENCES

- 2.1 None

3.0 LOCATION/DESCRIPTION/QUANTITY

- 3.1 Engine room/Boiler room/machinery spaces/as listed.

4.0 DEFINITIONS

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 The following tanks to be drained, open, clean, and blown dry. Leave open for D/H.
 - 1. Ship service air receiver.
 - 2. Sanitary water pressure tank.
 - 3. Control air receiver.

4. Contaminated evaporator.
5. Deck air receiver.

5.2 Upon inspection, leave inspection plates open and wired off to one side with new contractor furnished gaskets. Ship service air receiver is to be left closed, ready for service. Cover openings with fine mesh brass or Crescent screen.

6.0 DELIVERABLES

6.1 None

210 MSD UNIT – SEWAGE SYSTEM

1.0 ABSTRACT

1.1 This item describes the flush out and cleaning and drying of the MSD Unit and the sewage plant and disabling.

2.0 REFERENCES

2.1 Ships Drawings and Tech manual

2.2 Omnipure MAPX-12PP model;

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Upper Engine Room, port side/MAP12X / one (1)

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 Working in conjunction with the vessels crew, make sure the salt water sanitary system was charged fresh water. With the vessels crew go around see every toilet is flushed and taped before start of this job.

5.2 Open, pump out, flush with fresh water and disinfect the Marine Sanitation Device (MSD) and associated piping. Clean tank lids and leave tank lids and drain valves open. Fabricate and attach new rubber gaskets to unit. Loose fasteners, gaskets, etc. are to be sealed in a plastic bag and stow in the gang box in the vicinity for safe keep. After draining, cleaning and sanitizing the tank dry with forced air until completely dry.

5.2 The Contractor shall be responsible for the collection and disposal of all liquid wastes, sludge, etc. encountered during the cleaning, pumping or drainage operations. Properly dispose according to all applicable regulations.

- 5.3 Prior to start of work insure that tanks are isolated from the sanitary system and that the system have been secured and flushed with fresh water.
- 5.3 All removals shall be marked with a florescent tag. Submit a report with three copies, detailing the location of such removals/openings to the Port Engineer in writing two days after completion of work on this item.

6.0 DELIVERABLES

- 6.1 None

211 DISTILLERS - DRYING & LAYUP

1.0 ABSTRACT

- 1.1 This item describes the assistance of tech rep to do the service described in statement of work on all three distillers.

2.0 REFERENCES

- 2.1 None

3.0 LOCATION/DESCRIPTION/QUANTITY

- 3.1 Engine room upper deck/three (3).

4.0 DEFINITIONS

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 Provide labor, materials and equipment to open and clean the following

- 5.1.1 Two (2) Aqua-Chem :

- 5.1.2 Open water box on sea feed heater and distiller condenser. Clean any debris from tubes. Furnish new gaskets for all joints opened on evaporator and secure adjacent to place of use. Leave inspection plates loosely installed and held ajar with wooden wedges. Demisters are to be cleaned and reinstalled and cover plates made up with new gaskets. Clean gauge glasses and inspection windows. Clean strainers. Open, clean, inspect and gage the throat of the air ejectors. Renew all zinc anodes.

- 5.1.3 All steam and distillate , feed water ejector piping shall be drained, blown down and proven dry to the port engineer.

- 5.2 One (1) Alfa-Laval

- 5.2.1 Open cover of distiller, disassemble plates of both heat exchangers. Clean plates following manufacturer's recommendations. Reassemble plates and tighten to original dimensions.

Leave casing open. Drain, blow out and prove dry, all steam and water piping associated with unit. Casing bolts and hardware are to be left secured in a durable, tagged and stowed in the contractor provided gang box.

5.2.2 Open, inspect, service, and calibrate all distillate meters and salinity cells.

6.0 DELIVERABLES

6.1 None

301 LIFEBOATS

1.0 ABSTRACT

1.1 This item describes the disabling the life boats and associated machinery and installed equipment.

2.0 REFERENCES

2.1 Ships tech manuals and system drawings.

2.2 Service reports of tech. visits to ship.

2.3 Schat-Harding Water Craft Model : 9.4M Mk-IV, 74 persons capacity, Totally Encapsulated Fibre Glass, Motorized (diesel engine)

2.4 Loc # 1 : CABNDKPMID S/N: 94-1307 & Loc # 2 : CABNDKSMID S/N:94-1306

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Port & Stbd. sides of Boat deck/ Two (2) life boats, one on each side.

4.0 GOVT. FURNISHED MATERIALS

4.1 None

5.0 STATEMENT OF WORK

5.1 All loose equipages in lifeboats will be removed, tagged and stowed in a locked area as designated by port engineer or by the ship's crew.

5.2 Boat motors shall be completely drained of water, oil and fuel. Salt water cooling systems shall be flushed with fresh water. Remove spark plugs or injectors if diesel driven, from motor and inject one-half pint of an approved preservation oil in each cylinder. Replace spark plugs or injectors after cranking engine over two complete revolutions. Clean and gas-free fuel tanks.

5.3 Lifeboat gripes will remain in place, frapping lines, monkey ropes and any associated gear to be stowed in the midships house as directed by the port engineer.

- 5.4 Davits to be cleaned and all lubrication points greased, renewing any plugged, missing or deteriorated grease fittings. Lifeboat falls to be slushed with a high quality compound equal to Magnus "NEVA-MELT".
- 5.5 Lifeboat winches and controllers to be thoroughly inspected and lubricated at all grease points, renewing any plugged, missing or deteriorated grease fittings. Oil levels in gear boxes to be checked and topped up as required.
- 5.6 Life Boats will be stowed and secured in No. 2 Hold on contractor furnished cradles.
Furnish labor, material and equipment to assist crew in the removal of the port & Stbd. lifeboats from their respective davits and stow in the cargo holds. Crib boats so as they sit on their keels and using sand bags, sawdust bags, wood wedges or other suitable material. Verify with Port Engineer cribbing prior to installation.
- 5.7 The boats' winches and controllers will be left ready for shrink wrapping.

6.0 DELIVERABLES

- 6.1 None

302 LIFERAFTS

1.0 ABSTRACT

- 1.1 This item describes the removal, palletize and ship to warehouse at Division of Gulf Operation at New Orleans, LA.

2.0 REFERENCES

- 2.1 Ships tech manuals and service reports of recent 2010 annual service.

3.0 LOCATION/DESCRIPTION/QUANTITY

- 3.1 Passenger deck port and stbd./No. 2 Hold/ 12 Life Rafts.
- 3.2 Type: 25 DK /Capacity : 25 / Qty: 10
- 3.3 Type: 20 DK /Capacity : 20 / Qty: 1
- 3.4 Type: Crewsaver(16AA) / Capacity: 25 / Qty: 1

4.0 DEFINITIONS

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 Locate Qty. eight (8) life rafts from their exterior locations and four (4) from storage in No. 2 Hold, release units from cradles, palletize, and ship from vessel to DGO Warehouse, New Orleans, LA.

6.0 DELIVERABLES

6.1 None

303 HAZARDOUS WASTE SURVEY & CLEAN UP

1.0 ABSTRACT

1.1 This item is to provide the services of an Industrial Hygienist to conduct an Asbestos and PPE survey for SBRF and remove Hazardous material.

2.0 REFERENCES

2.1 U.S. Public Health Standards for Hazardous materials

2.2 MSDS Data sheet for the Hazardous materials to be removed.

3.0 LOCATION AND QUANTITY

3.1 Onboard SS Cape Jacob at Alameda alongside Adm. Callaghan

3.2 Various suspected places in the engine room, boiler room, fiddley and stack

4.0 GOVERNMENT FURNISHED MATERIAL/EQUIPMENT/SERVICE

4.1 None

5.0 STATEMENT OF WORK

5.1 Furnish the services of a qualified Industrial Hygienist and Laboratory to conduct an asbestos survey by collecting air and particle samples of the spaces as mentioned in 3.2 above to determine suitability of work environment.

5.2 Contractor should get a “Generator of Hazardous Material Number” on their company name and not on the ship owner or ship manager.

5.3 Contractor should plan and remove the Hazardous Material identified.

5.4 To submit to Port Engineer a copy of the report and readings. Before start of removal contractor to co-ordinate with Port Engineer for dates and times.

5.5 The report to be signed by an authorized Industrial Hygienist and Laboratory.

5.6 For quote purposes , the amount of removal estimated is 200 linear feet of Hazardous material for example Asbestos.

6.0 DELIVERABLES

6.1 Three copies of analysis report as a deliverable.

304 TANK SOUNDINGS, TABLES, LABELS & DECK PLUGS

1.0 ABSTRACT

1.1 This item describes the contractor assist in proving all sounding pipes in order, deck fittings and plugs are serviceable, tags and location drawing provided.

2.0 REFERENCES

2.1 Ships present soundings, Sounding Tables, Ships blue prints.

3.0 LOCATION/QUANTITY

3.1 Main deck, shaft alley, engine room, steering flat, fore peak space.

3.2 Assume 52 sounding pipes and ten quick closing valves.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 The contractor to arrange for labor, material and equipment to do the following listed items.

5.2 The contractor to arrange for cleaning the sounding pipes by observing maximum soundings per ships sounding chart.

5.3 The contractor to arrange for making the deck plugs and fittings serviceable.

5.4 The contractor to arrange for sounding pipes and plugs' correct identification and if found not in order to renew as needed.

5.5 The contractor to make sure all the quick closing valves 20 (twenty) are operable and if not to make it operable.

5.5 The contractor to grease the threads of the deck fittings and plugs.

5.6 The contractor to provide drawing of tank sounding pipe locations.

5.7 The contractor to provide 2 copies of current soundings of all tanks, including oil, fuel and water left on board shall be provided, along with documentation listing the specific contents, complete description and amount.

5.8 The contractor to identify the empty tanks.

6.0 DELIVERABLES

6.1 None

305 DUNNAGE REMOVAL

1.0 ABSTRACT

1.1 This item describes the collection and removal of ships dunnage during the layup period.

2.0 REFERENCES

2.1 Ship Check and Chief Mate/Bosun's list of dunnage with quantity and location.

2.2 Dept. of Agriculture Regulations for bugs in dunnage wood removed and disposal.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Cargo Holds 1 to 6, Garage and Storage spaces.

3.2 For quote purposes: 2400 cubic feet of dunnage to be removed

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 The contractor to walk through with the Boson and or Chief Mate for location and quantity Dunnage on board ship.

5.2 The contractor to arrange for safe and orderly removal.

5.3 The contractor to produce proper work for safe and orderly disposal with the Dept. of Agriculture, State of California regulations followed.

6.0 DELIVERABLES

6.1 None

306 SHIPS EQUIPMENT REMOVAL AND STOWING

1.0 ABSTRACT

1.1 This item describes the services needed from contractor to remove and stow ships equipment.

2.0 REFERENCES

2.1 Instructions to Form MARAD MA-496. Appendix A: Items to be stowed.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 As in 5.0 Statement of work/ 37 items in all.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 Contractor shall remove and stow the following items on vessel :

- Ships name boards (Qty. 2) stow as directed.
- Ships Bell (Qty. 1) stow as directed.
- Ships Bridge Wing Running Lights (Port and Stbd.) Stow as directed.
- Contractor shall collect all door dogging bars throughout vessel (approx. 30) and box and store in an area designated by the Port Engineer

5.2 All gear shall be stored in a shipshape manner allowing dry air to reach all items placed under D/H while maintaining easy and safe access to observe D/H effectiveness throughout the ship.

5.3 Sealed compartments shall be provided with screened openings to allow the diffusion of dry air.

6.0 DELIVERABLES

6.1 None

307 SECURING STORAGE SPACES - KEYING AND LOCKS

1.0 ABSTRACT

1.1 This item describes the services needed from contractor to secure the ships storage spaces, keying and put locks.

2.0 REFERENCES

2.1 Ships house drawing showing all the doors of the chosen storage places.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Main Deck, 01 deck, 02 deck, 03 deck and 04 or bridge deck.

3.2 Appendix B of MARAD MA-496 for drawing of securing arrangement

3.2 Bosun Lockers aft and forward of house.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 Supply labor and materials to secure, Key and put locks on Qty. 20 doors aboard the vessel.

5.2 Doors shall be secured as directed by Port Engineer by welding a bolt on the door and place a steel cross bar of 2 inches width and ½ inch thick and about 3 feet long. The bolt to pass through the bar and door secured with wing nut or hasps and locks,

6.0 DELIVERABLES

6.1 None

308 CARGO DH/AC & COMPUTER SYSTEM DISABLE AND SHIPPING TO DGO WAREHOUSE

1.0 ABSTRACT

1.1 This item describes the OEM contractor assist to remove the DH/AC and computer system of cargo spaces and ship as directed.

2.0 REFERENCES

2.1 Ships Tech Manuals and blue prints.

3.0 LOCATION AND QUANTITY

3.1 Onboard SS Cape Jacob at Alameda alongside Adm. Callaghan.

3.2 All DH areas in operation, Chief Mate's office on board Jacob.

4.0 GOVERNMENT FURNISHED MATERIAL/EQUIPMENT/SERVICE

4.1 OEM Tech rep from L & C Protec, NJ

5.0 STATEMENT OF WORK

5.1 The lab technician to remove the computer system and make ready for shipping.

5.2 To submit to Chief Mate/ Chief Engineer a copy of the report and readings.

5.3 If found fully satisfied, to recommend and submit the list of actions to be taken with spare parts and cost involved during reactivation.

6.0 DELIVERABLES

6.1 Report from the attending technician.

401 DEHUMIDIFICATION

1.0 ABSTRACT

1.1 This accommodations and machinery spaces shall be sealed and placed under dehumidification. It is the intent of this item to describe the zones that require this sealed and dehumidified state using the owner furnished equipment.

2.0 REFERENCES

2.1 Tech manuals of equipment, systems and ships drawings.

3.0 ITEM LOCATION/DESCRIPTION

3.1 The spaces that are to be under dehumidification are the Anchor Windlass Space, all Motor Generator mast houses, inside superstructure including accommodations engine room and shaft alley, MCDS units (2) including control modules and gear lockers and the steering gear space.

3.2 Two Main Propulsion Boilers and one Main Propulsion Turbine with two (2) Turbo generators ready for DH – Protec 300 Model. POC: Ray Gaffey, L&C Protec, NJ.

4.0 DEFINITIONS

4.1 GOVT. FURNISHED EQUIPMENT/MATERIALS/SERVICES

4.2 The equipment/material that is owner furnished is listed in the table below. Any Equipment/material not listed in the table below, or the specification statement of Work as government furnished needed to complete this work item, shall be supplied by the Contractor.

Anchor Windlass Space	1 ea HC 300R Munters
MG # 1 House	1 ea HC 150R Munters
MG # 2 House	1 ea HC 150R Munters
MG # 3 House	1 ea HC 150R Munters
MG # 4 House	1 ea HC 150R Munters
Bosun Lkr port under forecastle	1 ea HC 150R Munters
MCDS Fwd/Hauling Winch Enclosure/cab	1 ea HC 150R Munters
Accommodation/ER /shaft alley	1 ea HC 600R Munters
MCDS Aft/Hauling Winch Enclosure/cab	1 ea HC 150R Munters
Steering Gears	1 ea HC 300R Munters

WIRE #	DESCRIPTION	LOCATION
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1	RH SENSOR	ANCHOR WINDLASS
2	RH SENSOR	# 1 MG HOUSE
3	RH SENSOR	# 2 MG HOUSE

4	RH SENSOR	# 3 MG HOUSE
5	RH SENSOR	# 4 MG HOUSE
6	RH SENSOR	MCDS FORWARD
7	RH SENSOR	MCDS AFT
8	RH SENSOR	HOUSE, E/R, SHAFT ALLEY
9	RH SENSOR	BOILER FIRE SIDE P
10	RH SENSOR	BOILER FIRE SIDE S
11	RH SENSOR	STEERING FLAT
12	RH SENSOR	DH ZONE 1
13	RH SENSOR	DH ZONE 2
14	RH SENSOR	DH ZONE 3
15	RH SENSOR	DH ZONE 4
16	RH SENSOR	DH ZONE 5
17	RH SENSOR	DH ZONE 6
18	RH SENSOR	DH ZONE 7
19	RH SENSOR	DH ZONE 8
20	CONTROL DH UNIT	ZONE 1
21	CONTROL DH UNIT	ZONE 2
22	WARNING LIGHT	STERN HELO DECK
23	WARNING LIGHT	STERN HELO DECK

5.0 STATEMENT OF WORK

- 5.1 The Contractor shall furnish all labor and materials other than those listed above, to accomplish putting the vessel into deep lay-up. Flexible duct type 1 shall be used for process air, type 2 for reactivation air. Schedule 40 rigid PVC Pipe will be used on the exterior of the spaces protected. Contractor to make his own measurements at ship check. Those listed below are for guidance only.
- 5.2 The permanently installed D/H machines shall be opened up for inspection. Provide the services of a qualified contractor, experienced in the installation and services of desiccant type dehumidification (DH) machines, DH distribution systems and the sealing of ship and spaces of MARAD ships to accomplish the following:
- 5.3 The following is a list of zones and the work required to be accomplished:
- 5.3.1 ZONE ONE FORWARD UNIT HC 300R
- 5.3.1.1 Zone 1 DH unit is presently permanently mounted under the ladder going to the Anchor Windlass room. Provide labor and materials necessary to reinstall the process air ducting from the unit to the Bosun locker approximately 40 feet. Ducting type 1, 12 feet of 4", Type 2, 25 feet of 3" approximately. The unit is to be powered up to the temporary power system.
- 5.3.2 ZONE TWO MAST HOUSE NO 1 FR 60, HC 150R

5.3.2.1 This unit serves the # 1 & 2 Cargo Holds, mast machinery house. Contractor to provide new air ducting. This unit is permanently mounted. Ducting type 1, 12' of 4", Type 2, 20' of 3" approximate. Remove blanks to connect ducting to existing outlets to the weather. This unit is to be powered up to the temporary power system.

5.3.3 ZONE THREE FORWARD MODULE FR 85, HC 150R

5.3.3.1 This unit services the MCDS Equipment forward, bosun locker and the control module (cab). This unit is permanently mounted on the fwd. bhd. Contractor to provide new air ducting. This unit is to be powered up to the temporary power system. Ducting type 1, 6' of 4", Type 2, 12' of 3" approximate. Remove blanks to connect ducting to existing outlets to the weather and to the other spaces.

5.3.4 ZONE FOUR MAST HOUSE NO 3 FR 90, HC150R

5.3.4.1 This unit services Cargo Hold mast machinery houses (3) three and four (4) and is permanently installed on deck port side fwd section of house. Contractor to provide new air ducting. Ducting type 1, 12' of 4", Type 2, 20' of 3" approximate. Remove blanks to connect ducting to existing outlets to the weather.

5.3.5 ZONE FIVE 2ND DECK PASSAGEWAY FR 123, HC 600R

5.3.5.1 The mid ships DH unit serving the accommodations and engineering spaces, shaft alley, aft. pump room., after mast mach houses, and steering gear rm. area is permanently located in the Main deck Port side engine room fiddly and will require approx. 35' of exhaust hosing installed in the overhead from the DH unit to the Port outboard weather deck Bulkhead. Contractor shall fabricate and install a transition connection from the DH units exhaust connection to facilitate connecting the exhaust hose 90 degrees to the DH unit. Use 4" off stickers fitted with damper devices to HP Turbine, 2 ea. SSTGs, and Fire Main 6" aft cutout gate valve, main deck fidley aft of economizers, as it will be utilized for the distribution of the DH air to the quarters and bridge using the fire station outlets. Remove the bonnet of the valve for access to the fire main. The main accommodation stairwell will be utilized for the return air to the HC 600R. Contractor to supply all wye connections and dampers needed for this work item.

Contractor shall furnish labor and materials to remove overhead panels and cut openings in bulkheads to permanently install exhaust hose from DH unit. Reconnect all power and control wiring.

5.3.6 ZONE SIX AFTER MODULE FR 94 , HC 150R

5.3.6.1 This unit services the MCDS equipment in the Fwd. module and is permanently installed on the forward bhd. of the module. Reinstall the dehumidification system with the contractor provided new ducting as previously installed. The penetrations are currently blanked off and shall be opened and connected with proper ducting and under the supervision of a qualified DH tech rep. Ducting Type 1, 25' of 4" and Type 2, 25' of 3" approximate. Reconnect all power and control wiring.

5.3.7 ZONE SEVEN, MAST HOUSE FOR 5&6 CARGO HOLDS, FR.171, HC 150R

5.3.7.1 This unit will serve the MG machinery space for # 5&6 cargo hold. The unit is permanently mounted. Ducting Type 1, 6' of 4", Type 2, 12' of 3" approximate. Remove blanks to connect ducting to existing outlets to the weather. Reconnect all power and control wiring.

5.3.8 ZONE EIGHT MCDS MODULE, CAB AND GEAR LOCKER, HP 150R

5.3.8.1 This unit is in the MCDS module. The penetrations are currently blanked off and shall be opened and connected with ducting Type 1, 6' of 4", Type 2, 12' of 3" (approximate) and under the supervision of a DH tech rep. PVC piping exists between the Module and the cab/locker if not needed to be connected.

5.3.9 ZONE NINE AFT.HYD RM,FOAM PUMP RM. AND STEERING SPACE, HC 300R

5.3.9.1 This unit will serve the steering gear space, aft hyd. room and foam pump room. The unit is permanently mounted. Remove blanks to connect ducting to existing outlets to the weather. Ducting Type 1, 20' of 4', Type 2, 30' of 3" approx. Contractor shall also supply approximately 150' of 4" Type 1 process ducting to the run into shaft alley as per Tech Rep recommendations. All wyes and dampers to be supplied by the contractor.

5.3.10 ZONE TEN & ELEVEN ARE : PORT AND STBD BOILERS' FIRESIDES, HC150R

5.3.10.1 This unit will serve, one (1) each of HC 150R for each boiler, port & stbd.

5.3.10.2 This unit will be provided by the contractor. The units will be placed outside of engine room , by double door on 2nd deck , port side, and the ducting Type 1, 30' of 4" each approximately 4 lengths from and to the machine as per Tech recommendations.

5.4 Install the dehumidification system ducting using contractor supplied material and equipment with the exception of the owner furnished DH machines in the above table and scope of work.

5.5 If metal ductwork is used, the female end of each section shall face the direction from which the air flows. Duct work joints shall be secured with sheet metal screws and sealed with heavy duty sealer and duct tape to make airtight joints.

5.6 The entire DH envelope for each zone shall be sealed airtight so as to meet the requirements of an air test. Using an air mover or fan of atleast 500 CFM capacity or greater sealed into the DH zone, the air shall be steadily exhausted to the outside atmosphere, the pressure differential being measured by a calibrated manometer or vacuum gauge. Upon reaching a pressure differential equal to three inches of water, the air mover shall be secured and the opening blanked off at the weather side. The pressure differential shall not drop lower than a reading of one inch of water during a waiting period of then 10 minutes.

5.7 If the integrity of the sealing of the DH controlled areas is not verified by the above vacuum test, the problem is to be identified and any defects to the sealing system corrected. Any defects in the integrity of the ship's structure shall be reported to the Port Engineer with a report recommending the required corrective repairs.

5.8 The vacuum test of the DH controlled area is to be repeated as necessary until the proper tightness is verified.

5.9 The Completed system, upon satisfactory completion of air testing, shall be operated and tested to the satisfaction of the Port Engineer to ensure adequate distribution of dehumidified air and proper operation of all controls.

5.10 Four copies of the drawings of completed installation shall be furnished.

5.11 The removed blanks shall be secured in the space they were removed in. Each blank shall be tagged and added to the road map.

5.12 Any blanks that were removed for the installation and testing of the DH system that are required for water tight integrity shall be reinstalled prior to the tow to the Reserve fleet and properly reconnected at the fleet.

5.13 ELECTRICAL INSTALLATION

5.13.1 Contractor is to supply and install all electrical disconnects, circuit breakers, wiring, penetrations, kick pipes and humidistats needed to complete this item. Each DH machine will be on a separate circuit breaker, i.e. 150R-15 amps, HC-600 30 amps. Disconnects and breaker panels are mounted outside the house port side fwd. There are three (3) existing kick pipes which may be used. Contractor will connect to supply and to the boxes for 200A/460V/60 cycles main disconnect switch power distribution, switching gear, 460/120V, 10 KVA transformer and circuit breakers for each unit. Contractor shall make all necessary removals to run cable to HC-600 on the second deck. The HC-600 shall have a disconnect at the machine as well as on port side of the house. Each DH machine shall be powered from its respective circuit breaker on the port side of the house. This entails power leads to each space on deck properly securing same with standoffs. Wire to be run in such a way to minimize being stepped on. Penetrations shall be made in each space to bring cable to machine. Make penetrations DH tight. Seven machines are currently powered from ship's source. These wires are to be removed from the breaker panels in the space and discarded. If welding on the house is required, contractor shall be responsible for removals for hot work. The engine room, shaft alley, steering gear space, interior decks, MG Houses, MCDS spaces and Anchor Windlass space shall have humidistats.

5.14 D/H CONTROL SYSTEM

5.14.1 Contractor shall install a D/H control system to automatically control the relative humidity at a present level, within a dehumidified zone. A zone is that area of the vessel being preserved by dehumidification. The D/H Control System shall comprise of one (1) humidistat controller for every 10,000 cubic feet or less within each zone with maximum of four (4) humidistat controllers per dehumidifier. At the dehumidifier, there shall be a control panel to which the humidistats are connected in such a manner that it can be determined which humidistat station is calling for dry air.

5.15 QUALITY CONTROL

5.15.1 The entire dehumidification system shall be operated for four (4) hours and tested to the satisfaction of the Port Engineer/Marad representative to ensure proper installation and distribution of dry air.

6.0 DELIVERABLES

6.1 Item completion summary sheet

6.2 Completed installed drawings

402 Boilers Lay Up – Fireside Target DH

1.0 ABSTRACT

1.1 This describes the procedure for the port and stbd. boilers, fire side lay up target DH.

2.0 REFERENCES

2.1 Ships boiler tech manual and blue prints and drawings.

3.0 LOCATION/QUANTITY/DESCRIPTION

3.1 Port and stbd. boilers in the Engine Room on board SS Cape Jacob

3.2 One each Foster Wheeler Boiler, 600 PSI, D-type.

4.0 DEFINITIONS

4.1 Government Furnished Materials

4.2 None

5.0 STATEMENT OF WORK

5.1 OPEN FIRESIDES:

5.1.1 Remove all inner and outer air casing doors to provide access to the boiler firesides. Take measures to protect doors from damage, mark, all doors for boiler and location with tags placed in waterproof bags. Store the doors in a safe place. Cover all doors with protective cover. Place all nut, bolts, washers and dogs in a suitable container(s) and set aside with the doors.

5.1.2 Gas Free Firesides :

Ventilate firesides and certify safe for entry by a marine chemist and then daily by a competent person.

5.1.3 Fireside cleaning :

The contractor shall clean, by mechanical means, the fireside including all tubes, economizers, cavities and wind boxes free of all soot, loose carbon and slag. The contractor shall make all removals as required to allow for cleaning starting with the economizers, air heaters, generating tubes and super heater tubes. Open and clean the steam air heaters and clean the window boxes and air casings of oil and debris. Air lances, non-ferrous scrapers and high powered vacuum cleaners shall be used to remove all loose debris from all areas in the boiler. A high pressure air lance, using dry compressed air and non-ferrous scrapers shall be used to loosen all soot and debris and enhance the effectiveness of vacuum cleaning. Upon completion of cleaning and acceptance of same by the Port Engineer, the boiler shall be closed up in good order on new gaskets, packing and/or jointing, renewing any defective or missing fasteners or securements.

5.1.4 Secure all air casing accesses. Make up with new gaskets.

5.1.5 Upon completing fire side examination, reinstall all boiler gas side closures.

5.1.6 To DH fireside open the Forced draft fan inspection covers of both boilers, port and stbd. The metal covers to hang them loose in place. Then close the space using a plywood about 1/8" thick and bolt it down with a hole cut to fit the ducting leading to the inlet of the DH machine placed out of the engine room in the passage way leading to the galley on the port side of the deck.

5.1.10 To open the metal cover on the economizer door and hung in place. Then close the opening using a plywood about 1/8" thick and hole cut to fit the DH duct leading to the outlet of the DH machine.

5.1.11 The vendor will be provided two (2) DH compressors, Munter -150R model, for this job.

6.0 DELIVERABLES

6.1 None

403 BOILERS DEACTIVATION - WATER SIDE

1.0 ABSTRACT

1.1 This item describes the dry lay-up of water side of both Port and Stbd. Main propulsion boilers.

2.0 REFERENCES

2.1 Ships drawings and blue prints.

2.2 Boiler tech manual.

2.3 Drew Ashland Chemical Co guidelines for water side dry lay-up

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Boiler room at Upper Level of Engine room on board SS Cape Jacob.

3.2 Two Foster Wheeler Boilers, 650 psi, D-Type.

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 ABSTRACT

5.1.1 The drying of the boiler watersides shall be done using compressed air and circulation of dry hot air. Final inspections of tubes to determine satisfactory drying will be done through the use of a FIBER OPTIC BORESCOPE. The boiler steam and water drums and one hole in each header will be left open after ambient is obtained in the tubes for engine room DH.

5.2 BOILER INSPECTION AND MATERIAL CONDITION ASSESSMENT

5.2.1 As part of the deactivation and preparation for dry lay-up (non-retention), the boilers shall be thoroughly inspected by Port Engineer. The inspection of the boilers will concentrate on the following areas:

5.2.2 Boiler watersides: drum internals, internal surfaces and rolled joints of tubes and headers including handholds, desuperheaters, drain piping and valuing, blow down piping and steam separators.

5.3 CLEANING OF WATERSIDES, BOTH BOILERS

5.3.1 Treat each boiler's water with 10 lb. of sodium nitrite and fill the boiler completely using distilled water. Ensure complete mixing. Drain and dispose of the water in both boilers.

5.3.2 Open sufficient manholes and hand hole plates to allow for thorough inspection of all waterside surfaces. Hose out any loose sludge and mud accumulations.

5.3.3 Open lower water wall casing covers, remove sufficient number of water wall hand holes plates to gain access to floor tubes. Using 150 psi air pressure blow out all floor tubes repeatedly with 1/8 HP blower until they are free of water and dry with 1/8 HP hot blower. Clean interiors of headers of mud and debris.

5.3.4 After inspections close up hand holes that were removed with new gaskets, leaving one hand hole plate at each end of each header open. One water drum manhole and one steam drum manhole

cover shall remain open. New gaskets shall be secured with the hand hole and manhole plates left open.

5.3.5 Ten (10) spare hand hole, and two (2) spare manhole gaskets of each size plus five (5) spare economizer hand hole gaskets for each boiler to be put in a bag , identified and left in the gangbox provided for use in next activation.

5.4 DRY LAY-UP: FINAL CLOSURE OF THE BOILER

5.4.1 Secure all waterside points of access and exit points. Clean hand hole and manhole seating surfaces that are to be left open to be part of engine room DH, after ambient temperature is obtained in the tubes and holes. Close the waterside manholes and hand holes.

5.5 FINAL CLOSURE INSPECTION

5.5.1 The boiler lay-up shall be inspected and meet the satisfaction of the port engineer. Inspections by the attending port engineer shall be scheduled by the Contractor in sufficient time to allow for a thorough inspection. No area is to be closed up prior to inspection by the port engineer

6.0 DELIVERABLES

6.1 The Contractor shall furnish the port engineer with four copies listing any items such as valves, casing, hand or man holes, blanks or modified areas that require restoration.

404 CATHODIC PROTECTION

1.0 ABSTRACT

1.1 This item describes the tech rep. service of two (2) Forward and Aft. CAPAC units.

2.0 REFERENCES

2.1 Ships tech manuals and drawings

2.2 Wilson Walton International Systems, Input: 440VAC, Output: 19 DCV/ Input: 19 AC, Output: 300DC, Dwg.#: AS684, Cycle:60 cycles, 1 phase

2.3 Loc #1: MASPULPFWD, S/N: H0295331/ Loc # 2: WNMACHRM, S/N: H0395345

3.0 GOVERNMENT FURNISHED MATERIAL/EQUIPMENT/SERVICE

3.1 None

4.0 LOCATION AND QUANTITY

4.1 Engine room Port side generator flat and Forward MG house # 1/Cathodic Protection units

4.2 Ship afloat at Alameda Army Pier # 3 alongside Admiral Callaghan.

5.0 STATEMENT OF WORK

5.1 The contractor to provide services of a qualified CAPAC technician to test, adjust and calibrate the two installed CAPAC units on board per fleet requirements.

5.2 Submit a report of any and all deficiencies found, correction made and parts used if any.

SS Cape Jacob Deactivation Spec

6.0 DELIVERABLES

- 6.1 Item completion summary sheet and Tech Rep Report.

405. REFRIGERATION AND AIR CONDITIONING SYSTEMS

1.0 ABSTRACT

- 1.1 This item describes the assistance of tech rep to do the deactivation on all Reefer and HVAC systems on board.

2.0 REFERENCES

- 2.1 Ships tech manuals and drawings.
- 2.2 A/C compressors (2), Carrier Corp, Dwg # N8500 & 60 MC-D1998-26A, Model: 5H80-149 (Sht.1-21), HP:50, Capacity: 46.3 Tons/R134-A
- 2.3 Cargo Refrigeration Compressors (3), Carrier Corp.Dwg# N8500, 5H80-149, Capacity: 11.5 Tons/R134-A
- 2.4 Ships Service Refrigeration (2), Carrier Corp, Dwg # C10F-2,Capacity: 5.75Tons, Model: 5H40-679.
- 2.5 Ice Machines, Scotsman Ice Systems, Model : HTB350 (4)
- 2.6 Water Cooler : (3)
- 2.7 Split Air Conditioners: LG , Korea (4)
- 2.8 MCDS Air Conditioners : Carrier Corp, 5H80, Capacity: 5.75 Tons (2)

3.0 LOCATION/DESCRIPTION/QUANTITY

- 3.1 LOC:Lower room, cargo reefer spaces in No. 4 & No. 5 Hold, Containers on deck, Fan rooms in Bridge deck Port & Stbd, Reefer rooms in 1 Deck, Crew & Officers Mess, Captain's State Room, Radio Room, Crew and Officer's Scullery, Upper Engine room.
- 3.2 QUANTITY: 20 ITEMS

4.0 DEFINITIONS

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 PROVIDE A TECH REP FOR THE FOLLOWING SERVICE:

- 5.1.2 SHIP'S SERVICE REEFERS – Test for leaks and repair to the satisfaction of the port engr. Contractor to furnish the services of a refrigeration technician to deactivate the ship's service refrigeration plants. Refrigeration technician to pump down Freon from all units into receivers. Charge all units with a nitrogen blanket of no more than 2 psi. to prevent moisture from entering the system. Test again for leaks. Secure all valves on the system. The contractor shall furnish suitable refrigeration oil and shall fill the compressor oil sumps to a level above

the shaft seal. All compressor control and power circuit breakers shall be turned off and labeled as follows:

WARNING: DO NOT ENERGIZE - COMPRESSOR IS OVERFILLED WITH OIL AND A NITROGEN BLANKET IS IN SYSTEM. FREON STORED IN BOTTLES

5.1.3 The walk-in reefer boxes are to be emptied. All bulkheads, decks, shelves, trays, etc., are to be washed down and left clean. All drains are to be cleared, drain lines blown dry and the doors to each space wedged open. This work to be accomplished only when the provisions and stores are removed from the vessel.

5.1.1 **SHIP'S AIR CONDITIONING SYSTEM** - Contractor to furnish the services of a refrigeration technician deactivate the ship's air conditioning system. Refrigeration technician to pump down Freon from all units into receivers. Charge all units with a nitrogen blanket of no more than 2 psi to prevent moisture from entering the system. Test and fix all leaks. Secure all valves in system. The condensers shall be left drained and vented with the head drain plugs open. The contractor shall furnish suitable refrigeration oil and shall fill the compressor oil sumps to a level above the shaft seal. All compressor control and power circuit breakers shall be turned off and labeled as follows:

WARNING: DO NOT ENERGIZE - COMPRESSOR IS OVERFILLED WITH OIL AND A NITROGEN BLANKET IS IN SYSTEM. FREON STORED IN BOTTLES.

In spaces where nitrogen has been introduced, the contractor shall post permanent signs on all entrances and exits stating:

WARNING: NITROGEN BLANKET IN REFRIGERATION SYSTEMS. TAKE PROPER PRECAUTIONS BEFORE ENTERING.

5.3 **ICE CUBE MAKERS, WASHING MACHINES & WATER FOUNTAINS** - drain, clean, and wipe down after propylene glycol treatment.

6.0 DELIVERABLES

6.1 None

406 FIRE FIGHTING EQUIPMENT & CO2 SYSTEMS

1.0 ABSTRACT

1.1 This item describes the disablement of the fire fighting equipments and CO2 systems on board Ship by a qualified vendor.

2.0 REFERENCES

2.1 Ships blue prints, system drawings, tech manuals and service reports.

3.0 LOCATION/DESCRIPTION/QUANTITY

- 3.1 Throughout the ship's accommodation.
- 3.2 Fire Extinguishing systems – CO2 : Make: Fyr-Fyter, Dwg # X-100201-1 and X-100201-2, Capacity: 94 Cylinders @ 75 lb/ea & Location : 1 deck.
- 3.3 Fire Extinguishing System – CO2 : Make: Fyr-Fyter, Dwg # A- 62685, Capacity: 2 Cylinders @ 850 psi, A-62685.
- 3.4 Fire Extinguishing System – CO2; Gyro Room in Bridge deck; Capacity: 1 cylinder 75 lbs/ea.
- 3.5 Fire Extinguishing System - EDG Room in Upper Deck; Capacity: 2 Cylinder 75lbs/ea.
- 3.6 Fire Extinguishing System – Engine Room/Shaft Alley; Capacity: 2 Cylinders at 850 psi each.
- 3.7 Fire Extinguishing System – Halon 1301; CO2 Cylinder, Capacity: 1 at 75lbs/ea; Halon Cylinder (1)

4.0 DEFINITION

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 The fixed high-pressure CO2 systems are to be disarmed, deactivated and all hoses disconnected and covered with plastic sandwich type bags secured in place by elastics. All cylinder bottles shall have installed contractor-furnished caps.
- 5.2 Portable bottles are to be collected, inventoried and stowed in location directed by Port Engineer. Provide Owners Rep with three (3) typewritten copies of inventory showing; type of extinguisher, and size.
- 5.3 All fire station fire fighting equipment, such as fire hoses, nozzles, fog nozzles, fire axes, etc. are to be removed from Fire Stations about the vessel and neatly stowed in an area designated by the Port Engineer. Fire hoses are to be neatly coiled for storage.

6.0 DELIVERABLES

- 6.1 Three (3) copies of typewritten inventory showing type of extinguishers, system and equipment with name and size to PE.

407 TEMPORARY POWER SYSTEM

1.0 ABSTRACT

- 1.1 The item describes the externally mounted electrical distribution system to operate reservation systems design, supply and install by the contractor.

2.0 REFERENCES

- 2.1 MARAD MA – 496 Deactivation Document for Non-retention vessels at Sishun Bay, CA

3.0 LOCATION/QUANTITY

- 3.1 Location : Outside of house either Port or Stbd. (as desired by Fleet) forward of house entrance on the main deck bulk head Frames 119 to 127 at about 3 feet from the deck.
- 3.2 Quantity : One Electrical Distribution system per drawing and design.
- 3.3 200 Amps, 460V, 3 phase, 60 Hz switch – Main disconnect, Square D/HU364 AWK/2DD70 – Qty: 2
- 3.4 Power Distribution Block, P/N: 5A675 – Qty: 2
- 3.5 Circuit Breaker, 30 amps, 460V, 3 phase, 60 Hz for Protec System 600, Square D/ FA100AWK/FAL 34030 – Qty: 2
- 3.6 Circuit Breaker, 15 amps, 460V, 3 phase, 60 Hz for Protec System 150, Square D/ FA100AWK/FAL 24015 – Qty : 2
- 3.7 Transformer, 460Volts/120 Volts, 4;1, 10 KVA
- 3.8 Load Center, 120 V, Square D/Q0#2M00 – Qty : 1
- 3.9 Power Distribution Block, P/N: 00210/Q0C12US – Qty: 6
- 3.10 Cable , Size: 10/4 and Length : 1000 feet.

4.0 DEFINITIONS

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 The contractor will be provide a line diagram for this job.
- 5.2 The contractor to furnish necessary labor, material to provide electricity to the dehumidification, alarm panel, Anchor windlass , Cathodic Protection and the dehumidifier status systems.
- 5.3 All breakers, panels, transformers and associated components are to be permanently mounted on 4” standoffs to the ship’s bulkhead.
- 5.4 All unprotected steel is to be prepared, primed and coated with an approved exterior marine coating system.
- 5.5 The power distribution system’s panel is to be located adjacent to the gangway on the main deck out of the weather.
- 5.6 Power supply is 3-phase, 460 volt AC. Shore power connections shall be provided topside to permit one 3 pole disconnect switch (unfused) located topside and an individual 3 pole circuit breaker for each machine.
- 5.7 The power distribution system is to consist of one (1) main nonfusible disconnect.

- 5.8 The panel is to be sized so that the total connected load does not exceed the panel's rating. A lug bar is to be supplied so that each dehumidifier, alarm and D/H status circuit breakers will have its own termination.
- 5.9 Each dehumidifier is to have two (2) circuit breaker type switches capable of disconnecting it from the power source in the event of a malfunction.
- 5.10 One (1) is to be located at the power distribution system and one (1) at the D/H machine.
- 5.11 The alarm system and dehumidifier control system are to be protected by a single circuit breaker located at the power distribution panel capable of disconnecting the systems from the power sources in the event of a malfunction.
- 5.12 All circuit breaker panels are to be of a NEMA Type 12 or greater.
- 5.13 Switches to have a dual cover interlock to prevent unauthorized opening of the switch door when the handle is in the "ON" position and to prevent closing of the switch mechanism with the door open.
- 5.14 Switch should also have a provisions for padlocking the switch in the "OFF" position.
- 5.15 Transformers are to be of a heavy-duty NEMA Type 3R or greater.
- 5.16 All wiring is to be installed neatly triced overhead or connected to bulkheads with cable ties or marine type hangers.
- 5.17 Power shall be supplied from the ship's main shore power connection.
- 5.18 The power cable is to be of type SO (or greater) non-fusible disconnect at an amperage rating equal to or greater than the disconnect rating.
- 5.19 The wire for the dehumidifier(s) shall be of a Type SO sized so as not to load equal to the circuit breaker rating at a power distribution panel.
- 5.20 The alarm system and dehumidifier control wire shall be of a Type SH (or greater) cable (300 Volts), of any run exceed 5%.
- 5.21 All panel fitting and connectors are to be corrosion resistant.
- 5.22 The contractor will provide adequate cabling to reach the machinery and components and to the ships shore power panel in the aft of the house.
- 5.23 The contractor will install the system on board on a back plate 3/16 inch thickness.
- 5.24 The contractor will coordinate with the tech. reps attending the DH install job for location of humidifiers.

5.25 The contractor will coordinate with the Port Engineer for location of flooding, heat and motion sensors.

6.0 DELIVERABLES

6.1 4 Copies of circuit diagram, line diagram and component specifications.

408 FLOODING AND FIRE ALARM SYSTEM

1.0 ABSTRACT

1.1 This item describes the contractor help for installing the Flooding and Fire Alarm system.

2.0 REFERENCES

2.1 MARAD MA-496 and Sishun Bay, CA requirement.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 LOCATION:

Fire Alarms:

- Anchor windlass D/H
- M-G House # 1 D/H
- M-G House #2 D/H
- M-G House #3 D/H
- M-G House #4 D/H
- Fwd MCDS D/H
- Eng. Rm./Main House D/H
- Aft. MCDS D/H
- Steering Gear D/H

Flooding Alarms:

- Aft. Shaft Alley
- Port and Stbd. Eng Room
- Use Gem type LS-270 float switches

3.2 DESCRIPTION:

The contractor shall install, utilizing as much equipment from the existing installed system, a flooding and fire alarm system.

3.3 QUANTITY:

As defined in 3.1 above Thirteen (13) locations on board ship.

4.0 DEFINITIONS:

4.1 None

5.0 STATEMENT OF WORK:

5.1 Alarm System : Fire/Flood:

- 5.1.1 Contractor to furnish and install an alarm system that will provide flood and fire and intrusion protection against destruction and/or loss of the vessel and its contents.
- 5.1.2 The alarm panel is to be located adjacent to the gangway on the main deck out of the weather.
- 5.1.3 The system is to contain a 24V DC remote alarm station to be of a portable type located on the vessel's flying bridge with enough cable so that the station can be moved to either the port or starboard side and/or hang the panel over the side in the rear of the ship as directed by the fleet.
- 5.1.4 The alarm system will operate from a circuit breaker located at the power distribution system on 120VAC.
- 5.1.5 The alarm system will then transform the 120VAC to 24VDC which will be used to power the sensors and the indication lights.
- 5.1.6 The alarm panel shall have lights for each type of sensor mounted on the outside of the alarm panel which will indicate which sensor is being activated.
- 5.1.7 The alarm panel shall include a test button to test the system and to provide proof of operation of the remote alarm station .
- 5.1.8 The color of the indicating lights shall be red for fire and flood and white for Power on.
- 5.1.9 A keyed switch located on the alarm panel shall be used to turn the system off.
- 5.1.10 A horn shall be part of the alarm panel.
- 5.1.11 The power horn will be activated by the alarm system in the event of either a fire or flood.
- 5.1.12 The horn operates simultaneously with the red strobe.
- 5.1.13 The horn is to operate under adverse industrial conditions and be enclosed with a NEMA Type 4 enclosure and operate on 24 VDC, with a sound power rating of not less than 95db at four (4) feet.
- 5.1.14 The alarm system shall contain a backup 24VDC battery system which will operate in the event of a shore power failure.

5.1.15 The battery backup system shall have the capacity to operate for a period of not less than 12 hours.

5.2 Remote Alarm Station:

5.2.1 The remote alarm station located on the flying bridge and/or the rear of the ship hanging out shall consist of one (1) red strobe light, one (1) power light, and one (1) beacon to sound on failure of any on a stainless steel display rack.

1. Red Strobe/Fire and Flood : The red strobe light will be activated by the Alarm in the event of fire or flood .Strobe Light to be of a “Tomar” type or equal and to be contained in a watertight Stainless steel base with a clear lens dust cover and heavy-duty guard. The strobe shall operate on 24VDC.

2. Power Horn : The power horn will be activated by the alarm system in the event of Fire or flood. The horn operates simultaneously with the red strobe. The horn is to operate under adverse marine conditions and be enclosed in a NEMA Type 4 enclosure and operate on 24 VDC, with a sound power rating of not less than 110 db at four (4) feet.

3. White Light/Power: A white power light shall operate continuously indicating that Shore power is present. The power light is connected directly to the 120VAC side of alarm system, when the light is on shore power is present. When the light is off, the shore power connection has been broken. The light is to be an incandescent 100 watts light bulb enclosed in a housing suitable for industrial outdoor use.

SENSORS :The fire/flood sensor shall conform to the following specifications:

1. Flood Sensor: The flood sensor(s) are to be located in the following spaces: shaft alley, port and starboard side of the engine room. The flood sensor shall consist of equal micro switch embedded in cellular foam floats.
2. Fire Sensor: Fire wire is to be located over each dehumidifier and any other electric Device that is to be operating during lay-up period, and which has the potential of being a fire hazard. The sensor is to utilize a “fire-wire” (heat sensitive cable type) sensor calibrated to activate at one hundred and seventy-five degrees Fahrenheit (150 degree F – 170 degree F), capable of withstanding severe industrial exposure. There will be one provided for the Main Switch board in the upper engine room.

6.0 DELIVERABLES

6.1 Four (4) copies of drawings of the alarm system including sensor location to be supplied to the vessel representative on completion of the job.

409 BATTERIES AND CHARGERS

1.0 ABSTRACT

1.1 This item describes the assistance of qualified Electrician to disable all the batteries and chargers on board ship.

2.0 REFERENCES

2.1 Ships tech manuals and drawings.

3.0 LOCATION/DESCRIPTION/QUANTITY

3.1 Bridge, Engine Room, Radio Room and EDG Room.

3.2 Quantity as in Statement of work

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 PROVIDE A TECH REP FOR THE FOLLOWING SERVICE:

5.2 Batteries for emergency diesel generator starting and general alarm system, radio station, general alarm, emergency diesel, and aux VHF batteries are to be removed and transferred ashore for disposition by Port Engr. Dry charged batteries of equal capacity are to be installed in battery trays. Coat all cable ends with anti-corrosive compound.

5.3 All charging systems are to be serviced and placed in good order. All battery electrical connections are to be cleaned, neutralized and repaired. All battery boxes are to be placed in good order in accordance with USCG regulations.

5.4 Prior to removal, the specifications and description of each set of batteries is to be recorded and the information posted at the battery box location with a copy presented to the port engineer.

6.0 DELIVERABLES

6.1 None

410 GMDSS, BRIDGE ELECTRONICS & GYRO SYSTEM DISABLING.

1.0 ABSTRACT

1.1 This item describes the disabling and removal of the ships Gyro Compass System, Ships GMDSS, Radio and Navigation Electronics equipments.

2.0 REFERENCES

2.1 Ships tech manuals.

3.0 LOCATION/DESCRIPTION/QUANTITY

- 3.1 Bridge deck, stbd. side aft of Master's stateroom/Two Gyros mounted on deck
- 3.2 Fly bridge and main mast for Radar Scanners, Wind Bird etc.
- 3.3 Radio Room.
- 3.4 Items on board as listed below:
 - 3.4.1 Main Transmitter and Main Antenna
 - 3.4.2 Emergency Transmitter and Emergency Antenna
 - 3.4.3 Main Receiver and antenna
 - 3.4.4 Emergency Receiver and antenna
 - 3.4.5 Battery Charger and Emergency Radio Batteries
 - 3.4.6 Auto Keyer and Auto Alarm Receiver
 - 3.4.7 Navtex Receiver
 - 3.4.8 Radio Room - Wheelhouse Sound Powered Telephone (if fitted)
 - 3.4.9 VHF Radiotelephones and Antennas
 - 3.4.10 Radio Room Emergency Lighting and switches
 - 3.4.11 Life Boat Radio
 - 3.4.12 SSB Radiotelephone, transmitter, receiver and antenna
 - 3.4.13 X-Band Radar, transceiver and display
 - 3.4.14 S-Band Radar, transceiver and display
 - 3.4.15 Watch Receiver
 - 3.4.16 Alarm Generator
 - 3.4.17 EPIRB, Class S
 - 3.4.18 EPIRB, 406 Mhz
 - 3.4.19 Survival Craft hand-held VHF Radiotelephones
 - 3.4.20 Radio Station "sector" clock

- 3.4.21 SSAS Equipments
- 3.4.22 SVDR
- 3.4.23 Depth/Echo finder
- 3.4.24 All the GPS terminals

4.0 DEFINITIONS

- 4.1 None

5.0 STATEMENT OF WORK

- 5.1 Ship is fitted with two (2) Sperry MK37VT gyro compass's. System to be laid up by the manufacturer's representative, or equal, in accordance with manufacturer's recommendations. All repeaters to be removed and stowed as directed by Port Engineer. Any special instructions for activation to be placed in gyro room in a conspicuous location.
- 5.2 If chose not to remove to warehouse or to other ships, the contractor will shrink wrap the Gyro and associated equipment after isolating electrically.
- 5.3 If chose to remove at the time of removal any equipment needed by other ships and or warehouse will be shrink wrapped before stowed away and or shipped.

6.0 DELIVERABLES

- 6.1 None

411 LAYUP OF MOTOR GENERATOR SETS

1.0 ABSTRACT

- 1.1 This item describes the assistance of tech representative to do the service described in statement of work on Motor Generator Sets of Cargo Winches.

2.0 REFERENCES

- 2.1 Ships tech manuals and drawings.
- 2.2 Marad Deactivation document MARAD MA-496, item # 6.1.2 and 6.1.4
- 2.3 General Electric Co, 250 VDC, Amp: 160, Model: 5CD405G91.

3.0 LOCATION/DESCRIPTION/QUANTITY

- 3.1 Four (4) MG Houses on Main Deck/16 MG sets (Generators 16 and Motors 24)

4.0 DEFINITIONS

4.1 None

5.0 STATEMENT OF WORK

5.1 The contractor to open the inspection of all Motor Generator sets .

5.2 The contractor to clean them of all dirt, excessive oil and grease.

5.3 The contractor to lift the brushes and leave it place but with their spring tension released and off the surface of the commutators.

6.0 DELIVERABLES

6.1 None

412 EXTERMINATION

1.0 ABSTRACT

1.1 This item describes the Extermination inspection of entire ships' spaces.

2.0 REFERENCES

2.1 Tech manuals and ships drawings.

3.1 LOCATION/DESCRIPTION/QUANTITY

3.2 Various locations on ship as suspected and possible infestation identified.

4.0 DEFINITIONS

4.1 Govt. Furnished Materials

5.0 STATEMENT OF WORK

5.1 This specs is for hiring a qualified and certified contractor in the business and visit the ship for conducting Extermination Inspection of the entire ships' spaces.

5.2 The vendor to issue a Pest Free certificate to the satisfaction of the regulatory body and Marad SBRF at Sishun Bay, CA.

6.0 DELIVERABLES

6.1 The certificate after the survey and inspection.

MCDS DEACTIVATION

501 MCDS DEACTIVATION: GENERAL REQUIREMENTS

1. ABSTRACT

- 1.1. The Contractor shall provide all engineering, labor, materials, and equipment to deactivate and preserve the MCDS Modules installed in this Specification. The MCDS units will be deactivated and the equipment within preserved in order to maintain the same level of readiness as the host ship, the S.S. CAPE JUBY.
- 1.2. The 500 Series Items will address deactivation of each unique component of the installed MCDS Modules. Each MCDS Module, including the Control Module, the Hauling Winch and the Cargo Gear Locker will be protected from the environment using installed dehumidification (DH) equipment, and a dedicated recirculating system.

2. REFERENCES

- 2.1. NAVFAC P-434, Construction Equipment Department Management and Operations Manual dated Apr 1982.
- 2.2. IEEE 45-2002 Recommended Practice For Electric Installations on Shipboard
- 2.3. NAVSEA DWG. NO. 5210545 (REV. G) "Standard Painting Procedures For UNREP Equipment"

3. GOVERNMENT FURNISHED MATERIAL

- 3.1. None

4. CONTRACTOR FURNISHED MATERIALS

- 4.1. All material required to accomplish the work specified in Part 6 of this Item, and all other 500 Series Items shall be Contractor furnished.
- 4.2. New electrical cable shall be installed IAW Ref 2.2. In no case shall new cable contain any asbestos or lead.

5. LOCATION AND QUANTITY

5.1. Location

- 5.1.1. All work to be accomplished aboard the Ship shall be accomplished at the Contractor's facility.

5.2. Quantity

- 5.2.1. All quantities of equipment, fittings, miscellaneous hardware, and all other material as necessary to accomplish a complete deactivation of the two MCDS Modules and associated support systems.

6. WORK REQUIREMENTS

- 6.0 Workmanship shall be of the highest quality commercial marine standard and shall be subject to the approval of the Ship Manager/General Agent upon completion. Welding shall meet ABS and USCG requirements and conform to the American Welding Society (AWS) standard. All welds shall be cleaned prior to painting. All surfaces which have been cut, drilled, welded, or otherwise modified shall be cleaned free of grease, slag, or foreign matter.

- 6.1 The Contractor shall be responsible to preserve the equipment to the maximum extent possible in accordance with the work requirements of the 500 Series Items, and in accordance with the recommended preservation practices of Reference 2.1.
- 6.2 All P-type preservative call outs in the Specification Items refer to Table F-6 of Appendix F of Reference 2.1.
- 6.3 A low megger reading, as referred to in the 500 Series Specification Items, is defined as being less than normal. A normal megger reading is considered to be about 5 megohms.
- 6.4 All electrical motors defined in 500 Series Items having grease cups shall have them removed, and grease plugs installed. Grease cups shall be stored in plastic sealed bags adjacent to the motor.
- 6.5 The Contractor shall ensure that, upon completion of all work, all spaces and deck areas shall be cleaned and left free of debris.
- 6.6 The Contractor shall ensure that, any areas showing signs of rust shall have the area cleaned and preserved in accordance with Ref 2.3 NAVSEA DWG. NO. 5210545 (REV. G) "Standard Painting Procedures For UNREP Equipment"

502 MCDS DEACTIVATION: POWER MODULE DIESEL GENERATOR ROOM

1.ABSTRACT

1.0 The Contractor shall deactivate the equipment in the Diesel Generator (DG) Room of each MCDS Module.

2. REFERENCES

2.0 NAVSEA Drawing No. 6166302, Common Power Module: Diesel Room Installations and Arrangements.

2.1 NAVSEA Drawing No. 6166303, Common Power Module: Diesel Generator and Associated Piping System.

2.2 NAVSEA Technical Manual No. T9570-A1-MMC-010, Maintenance Manual for Modular Cargo Delivery Station (Units 1 thru 16) Commercial Equipment, Volume 2

GOVERNMENT FURNISHED MATERIAL

.1. None

CONTRACTOR FURNISHED MATERIALS

- .1. The Contractor shall furnish material as required to accomplish the work specified in Part 6 of this Item.
- .2. The Contractor shall obtain the services of a qualified subcontractor to provide all labor, materials, and equipment to install a strippable vinyl-plastic material and create an airtight environment within the MCDS Modules.

3. LOCATION AND QUANTITY

.3. Location

.3.1. DG Room in the forward MCDS Module located between frames 77 and 85, Main Deck.

.3.2. DG Room in the aft MCDS Module located between frames 187 and 196, Main Deck.

.4. Quantity

.4.1. Total of two (2) 500kW diesel generators

.4.2. Total of two (2) Radiators

.4.3. Total of two (2) Cooling fans

.4.4. Total of two (2) Fan Motors

.4.5. Total of two (2) load banks

.4.6. Total of two (2) fuel tanks

.4.7. Total of four intake louvers

.4.8. Total of two (2) radiator/load bank/exhaust louvers

.4.9. Total of two (2) starting batteries (consists of 20 cells each.)

.4.10 Total of two (2) Cooling system expansion tanks

5. WORK REQUIREMENTS

5.1 The contractor shall deactivate the equipment located in References 2.1 and 2.2 as described in this work item.

5.2 FORWARD MCDS DIESEL ENGINE

The contractor shall drain the cooling systems in the generator engines including expansion tanks and radiators, and shall flush the entire cooling systems with clean fresh water, inspect for leaks, damaged or deteriorated hoses and repair as necessary. The diesel engine cooling systems, expansion tanks, and radiators shall be refilled with clean demineralized water, treated with a corrosion inhibitor NALCOOL 2000, or equal, and treated with sufficient ethylene glycol antifreeze to provide protection to –34 degrees F. The Contractor shall operate the engines to ensure proper coolant mixing and proper operation of the thermostat. Check for proper level of coolant. The protection level provided by the antifreeze shall be measured and certified in the presence of the attending Ship Manager/ General Agent. Tag the radiators indicating the antifreeze mixture and level of protection.

5.3 The Contractor shall perform oil change and install new filters. Fill crankcase to operating level with P-10 preservative oil.

5.4 The Contractor shall deactivate the diesel engine Fuel System as follows.

5.4.1 A portable container with two compartments shall be positioned to provide gravity feed to the engine. One compartment shall be filled with diesel fuel specified for engine operation, the other compartment with P-20, Grade 1 preservative.

5.4.2 The engine fuel supply line shall be disconnected at the most convenient point nearest the fuel tank. A flexible line from the portable container shall be connected to the fuel supply line leading to the fuel pump. Using P-20 preservative, purge all air from the fuel supply line back to the fuel tank.

5.4.3 Use a three-way fuel selector valve on the portable container.

- 5.4.4 Disconnect the engine fuel return line and connect a line to permit draining the return fuel into the recovery container.
- 5.4.5 Start the engine and let warm up for 5 minutes.
- 5.4.6 With engine running, switch the fuel supply selector valve to preservative oil position.
- 5.4.7 Run the engine until undiluted preservation oil is flowing into the recovery container.
- 5.4.8 Shutdown engine, disconnect flexible lines and remove containers. Plug or cap all fuel lines. Disassemble and change RACOR and secondary filter elements.
- 5.4.9 Clean external surface of the engine to the satisfaction of the attending Ship Manager/General Agent.
- 5.4.10 Recovery mixtures of fuel and oil shall not be used to preserve other fuel systems. Recovery of uncontaminated preservation oil may be reused.
- 5.5 The Contractor shall clean the generator insulation using clean dry compressed air. The air pressure shall be 30 psi or less.
- 5.6 The Contractor shall megger test the generator. All readings shall be recorded and four copies provided to the attending Ship Manager/General Agent.
- 5.7 The Contractor shall replace the engine air filter elements with new elements of a type approved by the engine manufacturer. The Contractor shall clean all combustion air intake conduit located upstream of the filters. Seal all engine combustion air openings using tape conforming to MIL-T-22085, TY II.
- 5.8 The Contractor shall install exhaust covers, and use vinyl-plastic strippable sealing material to seal all engine exhaust openings to weather.
- 5.9 The Contractor shall completely drain and clean the fuel tanks of all sludge and contaminants. The fuel tank vent shall be blanked-off using the soft seal method. Coat the interior of the tanks with P-9 preservative.
- 5.10 The Contractor shall clean all dirt and debris from the radiator fins, load bank, and cooling fan blades. The Contractor shall seal the radiator louver discharge opening to weather using a vinyl-plastic strippable sealing material.
- 5.11 The Contractor shall clean all dirt from the cooling air intake louver assemblies and seal the intake louver openings to weather using a vinyl-plastic strippable sealing material.
- 5.12 The Contractor shall remove the starting batteries from their location in the DG Room and shall store them IAW Reference 2.3, Section 3, Part 2, Paragraph 2.2 in a steel, lead lined box fabricated to house the batteries. The box shall be adequately vented, located, and permanently secured in a suitable open area approved by the attending Ship Manager/General Agent.
- 5.13 The DG Room emergency lantern shall have the battery removed and discarded.

503 MCDS DEACTIVATION: POWER MODULE ELECTRICAL EQUIPMENT AREA

1. ABSTRACT

- 1.1. The Contractor shall deactivate the equipment in the Electrical Equipment Area of each MCDS Module.

2. REFERENCES

2.1. NAVSEA Drawing No. 6166305, Common Power Module: Electrical Equipment Area Installations and Arrangements.

2.2. NAVSEA Drawing No. 6166364, Common Power Module: Electrical Equipment Area Installation and Arrangement.

3. GOVERNMENT FURNISHED MATERIAL

3.1. None

4. CONTRACTOR FURNISHED MATERIALS

4.1. The Contractor shall furnish material as required to accomplish the work specified in Part 6 of this Item.

5. LOCATION AND QUANTITY

5.1. Location

5.1.1. Electrical Equipment Area in the forward MCDS Module located between frames 77 and 85, Main Deck.

5.1.2. Electrical Equipment Area in the aft MCDS Module located between frames 187 and 196, Main Deck.

5.2. Quantity

5.2.1. Total of two hauling winch motor controllers and reduced voltage starters

5.2.2. Total of two highline winch motor controllers and reduced voltage starters

5.2.3. Total of two hauling winch anti-slack device motor controllers

5.2.4. Total of two highline winch anti-slack device motor controllers

5.2.5. Total of two gypsy winch controllers

5.2.6. Total of two manual bus transfers

5.2.7. Total of two automatic bus transfers

5.2.8. Total of two each Power panels 1, 2, and 3

5.2.9. Total of two louver control panels

5.2.10 Total of two ventilation fan controllers

5.2.11 Total of two highline winch replenishment pump motor controllers

5.2.12 Total of two hauling winch replenishment pump motor controllers

5.2.13 Total of two ground detection units

5.2.14 Total of four sliding block drive motor controllers

5.2.15 Total of two halon louver control panels

6 WORK REQUIREMENTS

6.2 The Contractor shall megger test each motor controller as shown on references 2.1 and 2.2 with the exception of the slow start controllers. (WARNING: DO NOT MEGGER TEST THE SLOW START CONTROLLERS) All readings shall be recorded and four copies

provided to the attending Ship Manager/General Agent. Low megger readings shall be shown to the attending Ship Manager/General Agent.

- 6.3 All equipment shall be cleaned, tested, and put in operating condition. Any broken or worn parts shall be replaced.
- 6.4 The Electrical Equipment Area emergency lantern shall have the battery removed and discarded.
- 6.5 All breakers in Power panel “1” shall remain open.
- 6.6 The following breakers in Power panel “2” shall remain closed all others will be open.
 - 6.6.10 Circuit designated “PP2-4P-A” “Power Panel No. 3 via Transformers.”
- 6.7 The following breakers in Power panel “3” shall remain closed all others will be open.
 - 6.7.10 Circuit designated “PP3-1P-A” “LTG PWR MDL.”
 - 6.7.11 Circuit designated “PP3-1P-C” “LTG EQPT MDL.”
 - 6.7.12 Circuit designated “PP3-1P-D” “RCPT EQPT MDL.”
 - 6.7.13 Circuit designated “PP3-1P-E” “LTG/RCPT WN BOOTH.”
 - 6.7.14 Circuit designated “PP3-1P-J” “RCPT PWR MDL.”
 - 6.7.15 Circuit designated “PP3-1P-R” “RCPT GEN ROOM.”
 - 6.7.16 Circuit designated “PP3-1P-U” “RCPT WORKBENCH.”

504 DEACTIVATION: MCDS VENTILATION SYSTEMS

1. ABSTRACT

- 1.1. The Contractor shall deactivate each ventilation system located in the MCDS Modules.

2. REFERENCES

- 2.1. NAVSEA Drawing No. 6166301, Common Power Module: Ventilation System
- 2.2. NAVSEA Drawing No. 6166328, Common Equipment Module: Ventilation System

3. GOVERNMENT FURNISHED MATERIAL

- 3.1. None

4. CONTRACTOR FURNISHED MATERIALS

- 4.1. The Contractor shall furnish material as required to accomplish the work specified in Part 6 of this Item.
- 4.2. The Contractor shall obtain the services of a qualified subcontractor to provide all labor, materials, and equipment to install a strippable vinyl-plastic material and create an airtight environment within the MCDS Modules.

5. LOCATION AND QUANTITY

- 5.1. Location
 - 5.1.1. Electrical Equipment Area in the forward MCDS Module located between frames 77 and 85, Main Deck.

5.1.2. Electrical Equipment Area in the aft MCDS Module located between frames 187 and 196, Main Deck.

5.2. Quantity

5.2.1. Total of four intakes.

5.2.2. Total of four (4) Vane axial fans.

5.2.3. Total of four (4) Motor Controllers.

6. WORK REQUIREMENTS

6.1. The Contractor shall megger test each fan and its motor controller. All readings shall be recorded and four copies provided to the attending Ship Manager/General Agent. Low megger readings shall be shown to the attending Ship Manager/General Agent.

6.2. The Contractor shall clean the ventilation system and associated motors in place.

6.3. The Contractor shall replace the ventilation intake cover gaskets shown on References 2.1 and 2.2. The existing covers furnished with the MCDS unit shall be reinstalled and made airtight, using the soft seal method.

505 MCDS DEACTIVATION: FIRE EXTINGUISHING SYSTEMS

1. ABSTRACT

1.1. The Contractor shall deactivate each compressed air/HALON system and drain the foam extinguisher, located in the MCDS Modules.

2. REFERENCES

2.1. NAVSEA Drawing No. 6166331, Common Power Module: Compressed Air/Halon System

2.2. NAVSEA Drawing No. 6242917, MSNAP Modular Delivery Station: Fire Control Plan

3. GOVERNMENT FURNISHED MATERIAL

3.1. None

4. CONTRACTOR FURNISHED MATERIALS

4.1. The Contractor shall furnish material as required to accomplish the work specified in Part 6 of this Item.

5. LOCATION AND QUANTITY

5.1. Location

5.1.1. Electrical Equipment Area in the forward MCDS Module located between frames 77 and 85, Main Deck.

5.1.2. Electrical Equipment Area in the aft MCDS Module located between frames 187 and 196, Main Deck.

5.2. Quantity

- 5.2.1. Total of eight (8) Halon Portable Fire Extinguishers.
- 5.2.2. Total of two (2) Halon tank assemblies.
- 5.2.3. Total of two (2) 50 lbs. Carbon Dioxide cylinders
- 5.2.4. Total of two (2) foam fire extinguishers with hose reels
- 5.2.5. Total of two (2) nitrogen carttridges

6. WORK REQUIREMENTS

- 6.1. The Contractor shall deactivate the compressed air/Halon system and drain the AFFF tanks located on References 2.1 and 2.2
- 6.2. The Contractor shall drain and properly dispose of the foam solution from the foam fire extinguishers. The manufacture's instructions shall be used for guidance.
- 6.3. The Contractor shall disconnect the 50-pound carbon dioxide cylinder from the HALON 1301 system, and close the stop valves, and put caps in place.
- 6.4. The Contractor shall disconnect the nitrogen cartridge from the HALON 1301 system, and close the stop valves, and put caps in place.
- 6.5. The portable HALON extinguishers shall be retained in their mounting brackets to afford fire protection.
- 6.6. The Halon tanks shall be disconnected from the system piping and the louver control air supply valve, located in the Equipment Module overhead adjacent to the generator room door, shall be closed.
- 6.7. The Contractor shall store all cylinders removed from the MCDS modules in the aft MCDS gear locker.

506 MCDS DEACTIVATION: MCDS MODULE TOP EQUIPMENT

1. ABSTRACT

- 1.1. The Contractor shall deactivate and preserve each hauling winch assembly located on top of the MCDS module. This item shall be coordinated with work accomplished in item 812.
- 1.2. The Contractor shall obtain the services of a qualified subcontractor to provide all labor, materials, and equipment to install a strippable vinyl-plastic material to enclose each Hauling Winch and dehumidify the enclosure.

2. REFERENCES

- 2.1. NAVSEA Drawing No. 6197468, MCDS Station Assembly: UNREP Equipment.
- 2.2. Technical Manual S9571-AC-MMA-010: Transmission, Hydraulic, Variable Speed, Mk 6, Mods 1,3,4, Type NST-D
- 2.3. Technical Manual SG813-AD-MMA-010: Winch, Electric Hydraulic, Double Drum, Hauling, Inhaul-Outhaul MK4 Mods 1 and 2

3. GOVERNMENT FURNISHED MATERIAL

- 3.1. None

4. CONTRACTOR FURNISHED MATERIALS

- 4.1. The Contractor shall provide all material as required to accomplish the work specified in Part 6 of this Item.
- 4.2. The Contractor shall obtain the services of a qualified subcontractor to provide all labor, materials, and equipment to install a strippable enclosure to provide an airtight environment for each hauling winch.

5. LOCATION AND QUANTITY

5.1. Location

- 5.1.1. Forward MCDS Module top, located between frames 77 and 85, Main Deck.
- 5.1.2. Aft MCDS Module top, located between frames 187 and 196, Main Deck.

5.2. Quantity

- 5.2.1. Total of two hauling winches

5.2.2 Total of two hauling winch enclosures

6. WORK REQUIREMENTS

- 6.1. The Contractor shall megger test each hauling winch motor insuring the motor is electrically isolated from its associated slow start controller prior to testing. (WARNING: DO NOT MEGGER TEST THE SLOW START CONTROLLERS) The Contractor shall megger test the hauling winch fan motor. All readings shall be recorded and four copies provided to the attending Ship Manager/General Agent. Low megger readings shall be shown to the attending Ship Manager/General Agent.
- 6.2. The Contractor shall preserve the hauling winches shown on Reference 2.1. Grease all fittings with EP2 grease or Mobil grease 28, IAW Reference 2.3. Operate all components such as brake mechanism after greasing to ensure the component working parts are covered with grease. Fill winch and outhaul ASD gear reducers to operating level with lubricant. The inhaul and outhaul wire ropes shall be pulled back to the hauling winch. Open winch gear reducer inspection plates and coat gears with P-20 preservative. Coat all machined surfaces with P-2 preservative. Remove filter indicator caps, coat threads with anti-seize compound and reinstall cap. Coat all exposed bolt heads with a heavy coat of P-2 preservative. Coat Lebus spooling device shaft with type P-11 preservative.
- 6.3. The Contractor shall ensure that the hauling winch Navy Standard transmission is full of oil. Fill as required with new, clean filtered MIL-L-17672, Symbol 2135T-H in accordance with Reference 2.2 using the filter buggy stowed in the MCDS Unrep Gear Locker.
- 6.4. The Contractor shall fabricate and install a ridged airtight enclosure secured to the MCDS module upper deck for each hauling winch assembly.
- 6.5. Each enclosure shall be fit with an access to allow interior inspection. These accesses shall provide an airtight closure.
- 6.6. The highline wire rope shall be pulled back to the highline anti-slack device and attached to the securing pad eye located within the module. This will require the removal of the inboard upper highline sheave on the kingpost. Store the sheave in the associated MCDS

module. Highline scuttle opening approximately 12-inch x 3-inch shall be sealed with the strippable vinyl-plastic material to attain and airtight seal.

- 6.7. The ram cover and shield approximately 32-inch diameter shall be sealed with the strippable vinyl-plastic material to attain and airtight seal.

507 MCDS DEACTIVATION: EQUIPMENT MODULE UNREP EQUIPMENT AREA

1. ABSTRACT

- 1.1. The Contractor shall deactivate the equipment in the UNREP Equipment Area of each MCDS Module.

2. REFERENCES

- 2.1. NAVSEA Drawing No. 6166330, Common Equipment Module: UNREP Equipment Area Installations and Arrangements.
- 2.2. NAVSEA Drawing No. 6166324, Common Equipment Module: Structure.
- 2.3. NAVSEA Drawing No. 6166326, Common Equipment Module: Misc. Fabrication Details.
- 2.4. Technical Manual S9571-AR-MMO-020/16603: Ram Tensioner models THR-0750C-120, THR875C-120, THR-1000C-120.
- 2.5. Technical Manual S9571-AC-MMA-010: Transmission, Hydraulic, Variable Speed, Type NST-D.
- 2.6. Technical Manual SG813-AW-MMA-010: Winch, Electric Hydraulic, Single Drum MK2 Mods 1-4,6,7, and 9.

3. GOVERNMENT FURNISHED MATERIAL

- 3.1. None

4. CONTRACTOR FURNISHED MATERIALS

- 4.1. The Contractor shall provide all material as required to accomplish the work specified in Part 6 of this Item.
- 4.2. The Contractor shall obtain the services of a qualified subcontractor to provide all labor, materials, and equipment to install a strippable vinyl-plastic material and create an airtight environment.

5. LOCATION AND QUANTITY

5.1. Location

- 5.1.1. UNREP Equipment Area in the forward MCDS Module located between frames 77 and 85, Main Deck.
- 5.1.2. UNREP Equipment Area in the aft MCDS Module located between frames 187 and 196, Main Deck.

5.2. Quantity

- 5.2.1. Total of two highline winches
- 5.2.2. Total of two fixed fairlead sheaves

- 5.2.3. Total of two ram tensioners
- 5.2.4. Total of two ARC sending units
- 5.2.5. Total of two highline anti-slack devices
- 5.2.6. Total of two highline winches Navy standard transmissions

6. WORK REQUIREMENTS

- 6.1. The Contractor shall megger test each highline motor insuring the motor is electrically isolated from its associated slow start controller prior to testing. (WARNING: DO NOT MEGGER TEST THE SLOW START CONTROLLERS) All readings shall be recorded and four copies provided to the attending Ship Manager/General Agent. Low megger readings shall be shown to the attending Ship Manager/General Agent.
 - 6.2. The Contractor shall thoroughly grease, lubricate, and replace any damaged grease fittings on the highline winch and fairlead sheave in each MCDS unit shown on References 2.1 – 2.3. Top up the winch oil level as necessary.
 - 6.3. The Contractor shall preserve the highline winches shown on References 2.1 – 2.3. Grease all fittings with EP2 grease or Mobil grease 28, IAW Reference 2.6. Operate all components such as dog clutch, brake, and load holding pawl mechanisms after greasing to ensure the component working parts are covered with grease. Fill gear reducer to operating level with lubricant. Open winch gear reducer inspection plates and coat gears with P-20 preservative. Coat all machined surfaces with P-2 preservative. Remove filter indicator caps, coat threads with anti-seize compound and reinstall cap. Coat all exposed bolt heads with a heavy coat of P-2 preservative. Coat clutch jaws and Lebus spooling device shaft with type P-11 preservative.
 - 6.4. The Contractor shall plug all openings and clean the ram tensioners. Inspect the hydraulic oil tank for water, drain and clean if water is found.
 - 6.5. The Contractor shall fill the ram and accumulator with MIL-H-19457D oil in accordance with Reference 2.4. Secure the ram piston from extending, open the accumulator air dump, open charging connection, and fill the accumulator with fresh oil. Secure accumulator air connections. Open the ram air bleed valve and bleed until a steady stream of oil is observed in the sight glass. Secure the bleed valve and charging connection when system is full of oil. Fill oil reservoir.
 - 6.6. The Contractor shall preserve the ram tensioner as follows after all openings are plugged and all valves are closed. Wrap the sump breather with clean rags. Lubricate ram upper and lower sheave zerk fittings with EP2 grease.
 - 6.7. The Contractor shall ensure that the Highline winch Navy Standard transmission is full of oil. Fill as required with new, clean filtered MIL-L-17672, Symbol 2135T-H in accordance with Reference 2.5 using the filter buggy stowed in the MCDS Unrep Gear Locker.
 - 6.8. The Contractor shall shut off the air supply to the highline anti-slack devices. Preserve unpainted surfaces with EP2 grease.
 - 6.9. The Contractor shall ensure that all openings shown in References 2.2 and 2.3 are closed and made airtight, using the strippable vinyl-plastic sealing method.
- 5.14 The UNREP Equipment Area emergency lantern shall have the battery removed and discarded.

508 MCDS DEACTIVATION: EQUIPMENT MODULE COMPRESSOR AREA

1. ABSTRACT

1.1. The Contractor shall deactivate the equipment in the compressor area of each MCDS Module.

2. REFERENCES

2.1. NAVSEA Drawing No. 6166329, Common Equipment Module: Compressor Area Installations and Arrangements.

3. GOVERNMENT FURNISHED MATERIAL

3.1. None

4. CONTRACTOR FURNISHED MATERIALS

4.1. The Contractor shall provide all material as required to accomplish the work specified in Part 6 of this Item.

5. LOCATION AND QUANTITY

5.1. Location

5.1.1. Compressor area in the forward MCDS Module located between frames 77 and 85, Main Deck.

5.1.2. Compressor area in the aft MCDS Module located between frames 187 and 196, Main Deck.

5.2. Quantity

5.2.1. Total of two low pressure (LP) air receivers

5.2.2. Total of eight high pressure (HP) air flasks

5.2.3. Total of two high pressure and two low pressure air compressors

5.2.4. Total of two air dryers

5.2.5. Total of two pre-filters

5.2.6. Total of two after-filters

5.2.7. Total of two anti-slack device (ASD) air modules

5.2.8. Total of two anti- slack devices

6. WORK REQUIREMENTS

6.1. The Contractor shall ensure that all drain points on the low-pressure and high-pressure systems are drained free of moisture and oil. The compressor locations are on Reference 2.1.

6.2. The Contractor shall open up low-pressure air receiver and wipe free of all moisture, oil, and debris.

6.3. All filtering/drying elements shall be replaced, if of the disposable element type, or cleaned if of the reusable type.

6.4. The Contractor shall clean the air compressor motors using clean dry compressed air. The air pressure shall be 30 psi or less.

- 6.5. The Contractor Shall megger test each motor and associated motor controller. All readings shall be recorded and four copies provided to the attending Ship Manager/General Agent. Low megger readings shall be shown to the attending Ship Manager/General Agent and the cause for the readings investigated and repaired.
- 6.6. The Compressor Area emergency lantern shall have the battery removed and discarded.

509 MCDS DEACTIVATION: KINGPOST MODULE

1. GENERAL

- 1.1. The contractor shall deactivate the equipment associated with the Kingpost Module of each MCDS Module.

2. REFERENCES

- 2.1. NAVSEA DWG. NO. 6166379, Cargo Delivery – Kingpost Module: Equipment Installation

3. GOVERNMENT FURNISHED MATERIAL

- 3.1. None

4. CONTRACTOR FURNISHED MATERIALS

- 4.1. The Contractor shall provide all material as required to accomplish the work specified in Part 6 of this Item.

5. LOCATION AND QUANTITY

5.1. Location

- 5.1.1. Forward MCDS Module, located between frames 77 and 85, Main Deck.
- 5.1.2. Aft MCDS Module, located between frames 187 and 196, Main Deck.

5.2. Quantity

- 5.2.1. Total of two sliding block drives.
- 5.2.2. Total of two sliding block/transfer head assemblies.
- 5.2.3. Total of two highline fairleads.
- 5.2.4. Total of two inhaul fairleads.
- 5.2.5. Total of two outhaul sheaves.

6. WORK REQUIREMENTS

- 6.1. The Contractor shall deactivate the equipment shown on reference 2.1 and as described below.
- 6.2. The Contractor shall preserve the sliding block drive. Protect the brake drum with preservative MIL-PRF-16173E, Grade 2. Coat shafts with P-2 preservative. Wrap with greaseproof paper per MIL-B-121, Type I, Grade A, Class 2 and tape securely with tape per PPP-T-60. Grease all fittings thoroughly with P-11. Work in, where possible, by moving parts after greasing. Coat guide rails with P-2 preservative. Coat chain and chain sprockets with Mobil ARMA 798 grease. Fill gear reducer to operating level with normal lubricant.

- 6.3. The Contractor shall megger test the sliding block electric motors. All readings shall be recorded and four copies provided to the Ship Manager/General Agent. Low megger readings shall be shown to the Ship Manager/General Agent and the cause for the readings shall be investigated and repaired.
- 6.4. The Contractor shall coat the highline and inhaul fairleads and the outhaul sheaves with P-2 preservative. Lubricate all zerk fittings with EP2 grease to include upper sheaves and pillow bearings.
- 6.5. The Contractor shall secure the SB/transfer head on the lower hard stop and back off the electric brake adjustment to provide clearance between the brake shoes and the drum.
- 6.6. The Contractor shall drain the geared limit switch enclosures, coat the beveled gears with P-2 preservative and reseal the enclosures.

510 MCDS DEACTIVATION: GYPSY WINCH

1. ABSTRACT

- 1.1. The contractor shall preserve and seal each gypsy winch and master controller, using a strippable vinyl-plastic sealing method.

2. REFERENCES

- 2.1. NAVSEA DWG. NO. 6242909, Common Misc. Module: Gypsy Winch.
- 2.2. Technical Manual No. T9570-AL-MMA-010/6A795, MCDS Gypsy Winch Tech Manual.

3. GOVERNMENT FURNISHED MATERIAL

- 3.1. None

4. CONTRACTOR FURNISHED MATERIALS

- 4.1. The Contractor shall provide all material as required to accomplish the work specified in Part 6 of this Item.
- 4.2. The Contractor shall obtain the services of a qualified subcontractor to provide all labor, materials and equipment to install a strippable vinyl-plastic sealing system for each gypsy winch and master controller.

5. LOCATION AND QUANTITY

5.1. Location

- 5.1.1. Winch Machinery Deck House Top, aft of Hold No. 3, frame 87, Port Side.
- 5.1.2. VERTREP Platform, fwd deck, frame 200, Port Side.

5.2. Quantity

- 5.2.1. Total of two gypsy winches

6. WORK REQUIREMENTS

- 6.1. The Contractor shall deactivate the gypsy winch as shown on reference 2.1 and as described below.
- 6.2. The Contractor shall clean and preserve all exterior surfaces of the gypsy winches with Grade 2 solvent cutback corrosion preventative compound. Preservation of the gypsy winch motor controller is covered in Item 803.

- 6.3. The Contractor shall megger test the gypsy winch electric motors. All readings shall be recorded and four copies provided to the Ship Manager/General Agent. Low megger readings shall be shown to the Ship Manager/General Agent and the cause for the readings shall be investigated and repaired.
- 6.4. The Contractor shall seal the gypsy winches and the master controllers using the strippable vinyl-plastic sealing material and attain an airtight seal. The gypsy winches and master controllers will not require connection to the DH system.

511 MCDS DEACTIVATION: CONTROL MODULE

1. ABSTRACT

- 1.1. The Contractor shall deactivate, preserve, seal, and provide dehumidification to the Control Modules. This work shall be coordinated with Item 812.

2. REFERENCES

- 2.1. NAVSEA DWG. NO. 6166345, Common Winch Control Module - Arrangement

3. GOVERNMENT FURNISHED MATERIAL

- 3.1. None

4. CONTRACTOR FURNISHED MATERIALS

- 4.1. The Contractor shall provide all material as required to accomplish the work specified in Part 6 of this Item.
- 4.2. The Contractor shall obtain the services of a qualified subcontractor to provide all labor, materials and equipment to install a strippable vinyl-plastic sealing system to enclose the Control Modules.

5. LOCATION AND QUANTITY

5.1. Location

- 5.1.1. Control Station for the forward MCDS is located forward of Hold No.3, at frame 65, Port Side.
- 5.1.2. Control Station for the aft MCDS is located on top of the Gear Locker, forward of Hold No.6, frames 174-179, Port Side.

5.2. Quantity

- 5.2.1. Total of two Control Module installations.

6. WORK REQUIREMENTS

- 6.1. Remove the station marker box and store inside the Control Module.
- 6.2. The Contractor shall install a strippable vinyl-plastic material to seal the windows, and all miscellaneous penetrations on each Control Station, to provide an airtight environment. The door shall be sealed with tape or other methods understanding that monthly inspections of the units will occur.
- 6.3. The Contractor shall provide dehumidified air to the Control Modules Stations in accordance with Item 812 of this Specification.

512 MCDS DEACTIVATION: DEHUMIDIFICATION SYSTEM

1. ABSTRACT

- 1.1. The Contractor shall provide dedicated dehumidification units, ducting, humidistats and monitoring devices to provide a humidity-controlled environment for each MCDS Module. Each Hauling Winch enclosure shall be dehumidified by recirculating air to and from each via a separate system.
- 1.2. The Contractor shall make any modifications and installations to ensure an airtight seal within the installed MCDS Modules, the Winch Control Module, the aft Gear Locker and the Hauling Winch.

2. REFERENCES

- 2.1. None

3. GOVERNMENT FURNISHED MATERIAL

- 3.1. None

4. CONTRACTOR FURNISHED MATERIALS

- 4.1. Two, HC-150-R Cargocaire dehumidification units or equal.
- 4.2. Two, M120 Munters dehumidification units or equal.
- 4.3. Seven Humidistats, Cargocaire Model 90485-01, or equal.
- 4.4. Two 1/5 HP vane axial fans.
- 4.5. Four, Thermo hygrometers, Cole-Parmer Model J-3310-74 or equal.
- 4.6. The Contractor shall provide all material as required to accomplish the work specified in Part 6 of this Item.
- 4.7. The Contractor shall obtain the services of a qualified subcontractor to provide all labor, materials, and equipment to install a strippable vinyl-plastic sealing system and to seal all weather openings for each MCDS Module and each Control Module, the aft Gear Locker and to completely enclose each Hauling Winch.

5. LOCATION AND QUANTITY

5.1. Location

- 5.1.1. The forward MCDS Module located between frames 77 and 85, Main Deck.
- 5.1.2. Hauling Winch Enclosure on top of forward MCDS is located between frames 77 and 85.
- 5.1.3. Control Module for the forward MCDS is located forward of Hold No.3, frame 65, Port Side.
- 5.1.4. The aft MCDS Module located between frames 187 and 196, Main Deck.
- 5.1.5. Hauling Winch Enclosure on top of aft MCDS is located between frames 187 and 196.
- 5.1.6. Control Module for the aft MCDS is located on top of the Gear Locker forward of Hold No.6, frames 174-179, Port Side.
- 5.1.7. The aft Gear Locker is located between frames 175- 180, Port Side.

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5.2. Quantity

- 5.2.1. Total of two MCDS installations
- 5.2.2. Total of two Hauling Winch Enclosures.
- 5.2.3. Total of two MCDS Control Module installations.
- 5.2.4. Two, HC-150-R Cargocaire dehumidification units or equal.
- 5.2.5. Two, M120 Munters dehumidification units or equal.
- 5.2.6. Seven Humidistats, Cargocaire Model 90485-01, or equal.
- 5.2.7. Two, 115 HP vane axial fans.
- 5.2.8. Four, Thermo hygrometers, Cole-Parmer Model J-3310- 74 or equal.

6. WORK REQUIREMENTS

- 6.1. The Contractor shall provide all labor and materials to install a dehumidification unit within the forward MCDS Control Module, aft MCDS Gear Locker, and MCDS Modules and provide a separate recirculating system to the Hauling Winch Enclosures. Each MCDS Module dehumidification unit shall be located on the deck of the UNREP Equipment Area. The forward MCDS Control Module dehumidification unit shall be located on the deck of the module. The aft Gear Locker dehumidification unit shall be located on the deck of the Locker.
 - 6.1.1. The dehumidifier shall be of the desiccant type utilizing a fabricated extended surface contact media without the use of bulk or liquid desiccants similar to Cargocaire Model HC-150-R or equal for the MCDS Module and Munters Model M120 for the Control module and the aft Gear Locker. The dehumidifier shall be provided with controls, blowers, a rotary wheel with a silica gel absorbent surface, and seals. The casing shall be a unitized body of welded aluminum construction. The casing shall have removable access panels for inspection and servicing. Reactivation and process air fans shall be arranged for counter flow. The units shall be capable of sequencing on and off from input received from any of the remotely located humidistats. Inlet transitions for round duct for both the process and reactivation air shall be furnished with the unit. The Contractor shall modify the furnished dehumidification units by adding removable support brackets (legs) attached at each end of the dehumidifier to enable the unit to be firmly located above the deck. The support brackets acting, as legs for the unit shall be placed on 1/4-inch rubber mat(s) to reduce vibration.
 - 6.1.2. Any of the remote humidistats, one to be installed in each MCDS Module, one in each Hauling Winch Enclosure, one in each MCDS Control Module, and one in the aft Gear Locker shall actuate the appropriate dehumidification unit. Each humidistat shall be set to maintain 50% relative humidity. The humidistats shall be wired in parallel with one another and connected to each dedicated dehumidification unit control system.
 - 6.1.3. MCDS Module reactivation air shall be ducted to and from the unit to weather. Both penetrations shall be made for 3-1/2 diameter duct on the forward side of each MCDS Module between the high-pressure air flasks and the ASD air module. Penetrations shall be fabricated using schedule 40 steel pipe in accordance with

ASTM-A-53, and 150-pound flanges in accordance with ANSI-16.5. A blank flange shall be fabricated to mate with the penetrations and allow for future module activation. The blank flange and gasket shall be lock-wired to the bulkhead or adjacent area to prevent loss.

- 6.1.4. Forward Control Module reactivation air shall be ducted to and from the unit to weather. Both penetrations shall be made for 3-1/2 diameter duct on the aft side of forward Control Module. Penetrations shall be fabricated using schedule 40 steel pipe in accordance with ASTM-A-53, and 150-pound flanges in accordance with ANSI-16.5. A blank flange shall be fabricated to mate with the penetrations and allow for future module activation. The blank flange and gasket shall be lock-wired to the bulkhead or adjacent area to prevent loss.
- 6.1.5. Aft MCDS Gear Locker reactivation air shall be ducted to and from the unit to weather. Both penetrations shall be made for 3-1/2 diameter duct on the aft side of the Gear Locker. Penetrations shall be fabricated using schedule 40 steel pipe in accordance with ASTM-A-53, and 150-pound flanges in accordance with ANSI-16.5. A blank flange shall be fabricated to mate with the penetrations and allow for future module activation. The blank flange and gasket shall be lock-wired to the bulkhead or adjacent area to prevent loss.
- 6.1.6. Process air from the dehumidification unit shall be evenly distributed within the MCDS Module using flexible ducting.
- 6.1.7. A separate recirculating system consisting of a 1/5 hp vane axial fan rated for 250 cfm at 2.5 inches W.G. with spray tight housing, suitable for 115 volt, single phase AC electrical power, fitting, support brackets, etc shall be fabricated to circulate dry air from each MCDS Module to the adjacent Hauling Winch Enclosure.
 - 6.1.7.1. The fan shall be located in the overhead of each MCDS unit. The airflow from the fan shall be directed into the Hauling Winch Enclosure.
 - 6.1.7.2. The Hauling Winch Enclosure shall be penetrated in two locations as wide apart as possible to provide airflow through the enclosure.
 - 6.1.7.3. All penetrations shall be fabricated using schedule 40 steel pipe, in accordance with ASTM-A-53, and 150 pound flanges, in accordance with ANST 16.5. Blank flanges shall be fabricated to mate with the penetrations and allow for future module activation. The closure flange blanks and gaskets shall be lock-wired to the bulkhead or adjacent area to the penetration to prevent loss.
- 6.2. Weather openings in the MCDS Module shall be covered with a strippable vinyl-plastic sealing system and made airtight. The MCDS Module drains etc shall be plugged and made airtight. The access doors to both the MCDS Module shall be made as tight as possible using tape or other sealing methods, understanding that monthly inspections of the units will occur.
- 6.3. The Contractor shall modify the 120 volt single phase power panel, Power Panel No.3, by replacing the 15 amp circuit breaker for circuits PP3-1P-D (RCPT EQPT MDL) and PP3-1P-E (LTG/RCPT BOOTH) with 20 amp circuit breakers, in order to provide 120 volt, single phase, 60 hertz electrical power to each dehumidification unit and associated fans.

- 6.4. The Contractor shall provide each MCDS Module and each Control Module with a 6” diameter thermo hygrometer for measuring both temperature and relative humidity similar to Cole-Parmer Model J-3310-00. The meter serving the Control Module shall be mounted within the unit and be arranged for visual observation from outside. The meter for the MCDS Module shall be mounted within the unit but away from the DH unit. If visual observation of the meter can be arranged then the Contractor shall position it.
- 6.5. The entire dehumidification envelope consisting of each MCDS Module, Control Module, Gear Locker (aft only), and Hauling Winch Enclosure, shall be vacuum tested. Using a fan of at least 500 cfm or greater sealed into the D.H. envelope, the air shall be steadily exhausted to the outside atmosphere, the pressure being measured by a manometer or vacuum gauge. Upon reaching a pressure differential equal to 3 inches of water, the fan shall be secured and the opening blanked off on the weather side. The pressure differential shall not drop lower than 1 inch of water during a waiting period of 10 minutes
- 6.6. The sub-contractor furnishing the strippable vinyl-plastic sealing material shall furnish three patch kits to the Ship Manager/General Agent.