

2. CONTRACT NO. DTMA-94-C-2011-0002
 3. AWARD/EFFECTIVE DATE
 4. ORDER NUMBER
 5. SOLICITATION NUMBER
 6. SOLICITATION ISSUE DATE

7. FOR SOLICITATION INFORMATION CALL: a. NAME: Patricia Etridge
 b. TELEPHONE NUMBER (No collect calls): (415) 744.2586
 8. OFFER DUE DATE/LOCAL TIME

9. ISSUED BY: U.S. DOT/ Maritime Administration
 Pacific Div. Acquisition Office
 MAR 380-4
 201 Mission Street Suite 1800
 San Francisco CA 94804
 CODE: 00094
 10. THIS ACQUISITION IS:
 UNRESTRICTED
 SET ASIDE % FOR
 SMALL BUSINESS
 HUBZONE SMALL BUSINESS 8(A)
 NAICS: 336611
 SIZE STANDARD: 1,000
 11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED
 SEE SCHEDULE
 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)
 13b. RATING
 14. METHOD OF SOLICITATION
 RFQ IFB RFP

15. DELIVER TO: U.S. DOT/Maritime Administration
 Pacific Division Operations
 201 MISSION STREET
 SUITE 1800
 SAN FRANCISCO CA 94804
 CODE: 00094
 16. ADMINISTERED BY: U. S. DOT Maritime Administration
 Pacific Div. Acquisition Office
 MAR 380.4
 201 Mission Street Suite 1800
 San Francisco CA 94804
 CODE: 00094

17a. CONTRACTOR/OFFEROR: BAE SYSTEMS SAN FRANCISCO SHIP REPAIR INC.
 Attn: Hugh Vanderspek
 Foot of 20th St Pier 70
 San Francisco CA 94107-7644
 CODE: 798258182
 FACILITY CODE:
 TELEPHONE NO. 415-861-7447 ext 200
 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER
 18a. PAYMENT WILL BE MADE BY: MARAD A/P INVOICES
 6500 SOUTH MACARTHUR BLVD
 OKLAHOMA CITY OK 73169
 CODE: AMZ-160 (FEDEX)

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a. UNLESS BLOCK BELOW IS CHECKED. SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0001	TRAINING SHIP THE GOLDEN BEAR FY11 SPRING VOYAGE REPAIR Delivery: 04/15/2011 Period of Performance: 01/10/2011 to 03/25/2011 THE PURPOSE OF THIS CONTRACT IS TO ACQUIRE SERVICES TO REPAIR THE GOLDEN BEAR IN PREPARATION FOR THE FY11 SPRING VOYAGE. Note that pricing will be in accordance with the attached Pricing Schedule. (Use Reverse and/or Attach Additional Sheets as Necessary)				1,195,228.00

25. ACCOUNTING AND APPROPRIATION DATA: 70X1750SMR.2011.120SMJ1070.0000160000.25431.61006600
 26. TOTAL AWARD AMOUNT (For Govt. Use Only): \$1,195,228.00

27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA A ARE ARE NOT ATTACHED.
 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4, FAR 52.212-5 IS ATTACHED. ADDENDA ARE ARE NOT ATTACHED.

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.
 29. AWARD OF CONTRACT REF. BAE Proposal OFFER DATED . YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS: See Pricing Schedule

30a. SIGNATURE OF OFFEROR/CONTRACTOR
 30b. NAME AND TITLE OF SIGNER (Type or Print): Patricia Etridge
 30c. DATE SIGNED
 31. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)
 31b. NAME OF CONTRACTING OFFICER (Type or print): Patricia Etridge
 31c. DATE SIGNED: 01/07/2011

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS <i>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30</i>				1. REQUISITION NUMBER MA-PR617-20110013		PAGE OF 1 12F	
2. CONTRACT NO. DTMA-94-C-2011-0002		3. AWARD/ EFFECTIVE DATE	4. ORDER NUMBER		5. SOLICITATION NUMBER		6. SOLICITATION ISSUE DATE
7. FOR SOLICITATION INFORMATION CALL:		a. NAME Patricia Etridge			b. TELEPHONE NUMBER (No collect calls) (415) 744.2586		8. OFFER DUE DATE/LOCAL TIME
9. ISSUED BY U.S. DOT/ Maritime Administration Pacific Div. Acquisition Office MAR 380-4 201 Mission Street Suite 1800 San Francisco CA 94804			CODE 00094	10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED <input type="checkbox"/> SET ASIDE % FOR <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> HUBZONE SMALL BUSINESS <input type="checkbox"/> 8(A) NAICS: 336611 SIZE STANDARD: 1,000		11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE	12. DISCOUNT TERMS
15. DELIVER TO U.S. DOT/Maritime Administration Pacific Division Operations 201 MISSION STREET SUITE 1800 SAN FRANCISCO CA 94804			CODE 00094	16. ADMINISTERED BY U. S. DOT Maritime Administration Pacific Div. Acquisition Office MAR 380.4 201 Mission Street Suite 1800 San Francisco CA 94804			
17a. CONTRACTOR/ OFFEROR		CODE 798258182	FACILITY CODE	18a. PAYMENT WILL BE MADE BY MARAD A/P INVOICES 6500 SOUTH MACARTHUR BLVD OKLAHOMA CITY OK 73169		CODE AMZ-160 (FEDEX)	
17a. CONTRACTOR/ OFFEROR BAE SYSTEMS SAN FRANCISCO SHIP REPAIR INC. Attn: Hugh Vanderspek Foot of 20th St Pier 70 San Francisco CA 94107-7644 TELEPHONE NO. 415-861-7447 ext 200							
<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER				<input type="checkbox"/> 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a. UNLESS BLOCK BELOW IS CHECKED. <input type="checkbox"/> SEE ADDENDUM			
19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0001	TRAINING SHIP THE GOLDEN BEAR FY11 SPRING VOYAGE REPAIR Delivery: 04/15/2011 Period of Performance: 01/10/2011 to 03/25/2011 THE PURPOSE OF THIS CONTRACT IS TO ACQUIRE SERVICES TO REPAIR THE GOLDEN BEAR IN PREPARATION FOR THE FY11 SPRING VOYAGE. Note that pricing will be in accordance with the attached Pricing Schedule. <i>(Use Reverse and/or Attach Additional Sheets as Necessary)</i>						1,195,228.00
25. ACCOUNTING AND APPROPRIATION DATA 70X1750SMR.2011.120SMJ1070.0000160000.25431.61006600						26. TOTAL AWARD AMOUNT (For Govt. Use Only) \$1,195,228.00	
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA A				<input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.			
<input type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4, FAR 52.212-5 IS ATTACHED. ADDENDA				<input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.			
<input type="checkbox"/> 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.				<input checked="" type="checkbox"/> 29. AWARD OF CONTRACT REF. <u>BAE Proposal</u> OFFER DATED _____ . YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS: <u>See Pricing Schedule</u>			
30a. SIGNATURE OF OFFEROR/CONTRACTOR				31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)			
30b. NAME AND TITLE OF SIGNER (Type or Print)		30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (Type or print) Patricia Etridge		31c. DATE SIGNED 01/07/2011	

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	<p>Obligated Amount: \$1,195,228.00</p> <p>THE CONTRACT PRICE IS IN ACCORDANCE WITH THE ATTACHED PRICING SCHEDULE</p> <p>The total amount of award: \$1,195,228.00. The obligation for this award is shown in box 26.</p>				

32a. QUANTITY IN COLUMN 21 HAS BEEN RECEIVED INSPECTED NOTED: _____ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		
32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE			32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE		
			32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE		
33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT	37. CHECK NUMBER	
<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL			<input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		
38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY			
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT			42a. RECEIVED BY (Print)		
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		41c. DATE	42b. RECEIVED AT (Location)		
			42c. DATE REC'D (YY/MM/DD)	42d. TOTAL CONTAINERS	

PRICING SCHEDULE

Item	Description	Quantity	Unit	Amount
1	AUTOMATION SERVICE	1	JOB	52,825.00
2	ANNUAL LIFERAFT SERVICE	1	JOB	19,259.00
3	SSDG CONTROL SERVICE	1	JOB	12,006.00
4	FIRE EXTINGUISHER SERVICE	1	JOB	36,223.00
5	ANNUAL RADAR, RADIO & BRIDGE EQUIPMENT	1	JOB	20,947.00
6	LIFEBOAT DAVIT BRAKE INSPECTIONS	1	JOB	46,250.00
7	ENTERPRISE R5 16V OVERHAUL/SURVEY	1	JOB	58,226.00
8	ENTERPRISE R5 16V CYLINDER HEAD OVERHAUL	1	JOB	31,839.00
9	REVERSE OSMOSIS ISTALLATION MODS	1	JOB	75,992.00
10	WEATHERTIGHT DOORS	1	JOB	Option
11	WATER-TIGHT DOORS	1	JOB	Option
12	WEATHER DECK STEEL REPAIR	1	JOB	50,372.00
13	WEATHER DECK FITTINGS REPAIR	1	JOB	18,137.00
14	DISTILLER VALVES AND SERVICE	1	JOB	6,805.00
15	GALLEY EQUIPMENT REPLACEMENT	1	JOB	38,553.00
16	VARIOUS PIPING AND STEEL WORK	1	JOB	25,905.00
17	EOS DUCTING	1	JOB	Option
18	SSDG FO CAM	1	JOB	Option
19	SIMPLEX OWS PARTS AND OCM EXCHANGE	1	JOB	10,685.00
20	A/C & REFRIGERATION SERVICE	1	JOB	54,671.00
21	BALLAST TANK 5-77-1&2 COATING REPAIR	1	JOB	Option
22	BALLAST TANK 5-104-1&2 COATING REPAIR	1	JOB	Option
23	TLI REPLACEMENT AND SERVICE	1	JOB	21,243.00
24	SLOP OIL REMOVAL	1	JOB	10,815.00
25	JOINERY, HEAD DECK & SHOWER REPAIRS	1	JOB	23,035.00
26	AFT MSD STEEL RENEWAL AND SERVICE	1	JOB	Option
27	01 DECK PASSAGE AND STATEROOM UPGRADE	1	JOB	314,655.00
28	UPPER-CLASS MESS AND MAIN DECK PASSAGE	1	JOB	Option
29	BALLAST VALVE ACTUATOR INSTALL	1	JOB	Option
30	STEERING STAND INSTALLATION	1	JOB	22,149.00
31	PUMP FOR CMS	1	JOB	120,967.00
32	EXHAUST INSULATION AND REPAIR	1	JOB	Option
33	PORTLIGHT	1	JOB	1,025.00
34	OWS UPGRADE	1	JOB	33,844.00
35A	SUPPLEMENTAL - MATERIALS	1	JOB	60,000.00
35B	SUPPLEMENTAL - LABOR @ \$48/HOUR	600	HOUR	28,800.00
	TOTAL			1,195,228.00

TABLE OF CONTENTS

COMMERCIAL CLAUSES

1	INSTRUCTIONS TO OFFERORS
2	DEPT OF LABOR WAGE DETERMINATION - SOLANO COUNTY CA
3	RESERVED
4	RESERVED
5	RESERVED
6	RESERVED
7	RESERVED
8	FAR 52.212-04 Contract Terms and Conditions--Commercial Items
9	ALTERATIONS TO FAR 52.212-04
10	DPO INVOICE SUBMISSION GUIDANCE
11	1252.232-80 PROGRESS PAYMENTS UNDER COMMERCIAL SHIP REPAIR CONTRACTS
12	252.217-85 INSPECTION AND MANNER OF DOING WORK
13	52.212-05 Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items
14	BAN ON TEXT MESSAGING

SECTION A – Solicitation

SECTION C -- DESCRIPTION AND STATEMENT OF WORK

SECTION E -- Inspection and Acceptance

E.1 DELEGATION OF INSPECTION AND ACCEPTANCE

SECTION F -- Deliveries or Performance

F.1 Time of Delivery

SECTION G -- Contract Administration Data

G.1 SCHEDULES AND SCHEDULE UPDATES FOR SHIP REPAIR CONTRACTS

SECTION H -- Special Contract Requirements

H.1 SUPPLEMENTAL GROWTH REQUIREMENTS

H.2 DISPOSITION OF REMOVED EQUIPMENT AND SCRAP

H.3 MARITIME LIENS, NO AUTHORITY TO INCUR

H.4 SUPERVISION

H.5 SUPPLEMENTAL WORK REQUESTS

H.6 INDEMNITY AND INSURANCE

H.7 INDEMNITY AND INSURANCE (ADDITIONAL)

H.8 STANDARDS OF EMPLOYEE CONDUCT

SECTION I -- Contract Clauses

I.1 Guarantee

I.2 Performance

I.3 Subcontracts

I.4 Title

I.5 Small Business and Small Disadvantaged Business Subcontracting Reporting

I.6 Removal or Disposal of Hazardous Substances-Applicable Licenses and Permits

I.7 Accident and Fire Reporting

I.8 Contracting Officer's Technical Representative

I.9 Post-Award Small Business Program Rerepresentation

I.10 Availability of Funds

COMMERCIAL CLAUSES

1 INSTRUCTIONS TO OFFERORS

1. This solicitation is issued in accordance with FAR Part 12, Commercial Items for Vessel Repairs on the Training Ship the Golden Bear. This requirement includes the main propulsion maintenance and regulatory inspections, annual regulatory service of bridge electronics, navigation, safety and lifesaving equipments, tank coating renewals; and repairs and service to various piping, pumping and ship's service systems. The proposed contract will be performed while the vessel is located at Vallejo, California, at the foot of 200 Maritime Academy Drive in the beginning of January 2011.
2. The following information is required from Offerors and must be submitted with your quote:
 - A. PRICE - Individual prices for all items listed in the schedule, summed to establish a Total Price.
 - B. PAST PERFORMANCE
 - a. Offerors shall provide a list of all contracts (Not to exceed three), commercial and/or government performed within the last 3 years for work similar to the instant procurement, including a brief summary, original contract dollar value, completed period of performance, and customer point of contract (address, telephone number and e-mail).
 - C. TECHNICAL PROPOSAL -
 - a. A narrative explaining the technical approach to completing the work (not to exceed three typewritten pages), specifically explaining the work sequencing logic and how the approach will optimize the performance and reliability of the vessel's automation system upgrades.
 - b. The resumes of proposed experts/technical representatives.
3. The period of performance is expected to be 90 days.
4. A Pre-Solicitation ship check will be held on November 15th at 9 AM on board the vessel. Interested parties please contact Sujit Mukherjee, Contracting Officer Technical Rep via email at sujit.mukherjee@dot.gov.
5. This solicitation allows bids to be transmitted by email. All email bids shall be addressed to Patricia Etridge, Contracting Officer at patricia.etrIDGE@dot.gov. In accordance with FAR 52-216-1, bids must be received by the Contracting Officer, including any amendments and revisions and all evaluation factors required above by the time specified in the solicitation.
6. The FAR requires that offerors provide Reqs & Certs at least annually via ORCA. Reference FAR 52.212-03 for further instructions. The link to ORCA is <http://orca.bpn.gov>.

2 DEPT OF LABOR WAGE DETERMINATION - SOLANO COUNTY CA

WD 05-2069 (Rev.-10) was first posted on www.wdol.gov on 07/27/2010

REGISTER OF WAGE DETERMINATIONS UNDER | U.S. DEPARTMENT OF LABOR
 THE SERVICE CONTRACT ACT | EMPLOYMENT STANDARDS ADMINISTRATION
 By direction of the Secretary of Labor | WAGE AND HOUR DIVISION
 | WASHINGTON D.C. 20210

|
|
|

| Wage Determination No.: 2005-2069

Shirley F. Ebbesen | Division of | Revision No.: 10
 Director | Wage Determinations | Date Of Revision: 07/16/2010

State: California

Area: California Counties of Napa, Solano, Sonoma

THE COMPLETE WAGE DETERMINATION REFERENCED ABOVE CAN BE ACCESSED AT <http://www.wdol.gov/>

Each service employee employed in the performance of this contract by the Contractor or any subcontractor shall be paid not less than the minimum monetary wages and shall be furnished fringe benefits in accordance with the wages and fringe benefits

determined by the Secretary of Labor, or authorized representative, as specified in the Wage Determination referenced above and is attached to the proposed contract.

In pricing a proposal for work requirement in this solicitation, the Contractor is responsible for locating the applicable Department of Labor Wage Determination. This may be done online by first going to the URL <http://www.wdol.gov/> and following these steps:

1. Click on Selecting SCA WDs
2. Use drop down arrows to select the locality applicable to the location of your dry dock; click on Continue
3. Answer No to the question, "Were these services previously performed at this locality under an SCA-Covered contract?"
4. Answer No to the question, "Are the contract services to be performed listed below as Non-Standard Services?"
5. Click on Printer Friendly Version and print out the applicable wage determination.

Many of the occupations listed may not be applicable, but some will be applicable particularly in the 23000 Mechanics and Maintenance and Repair Occupations.

8 52.212-04 CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS JUNE 2010

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. If repair/replacement or reperformance will not correct the defects or is not possible, the Government may seek an equitable price reduction or adequate consideration for acceptance of nonconforming supplies or services. The Government must exercise its post-acceptance rights—

- (1) within a reasonable time after the defect was discovered or should have been discovered; and
- (2) before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Assignment. The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (e.g., use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-01, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) Definitions. The clause at FAR 52.202-01, Definitions, is incorporated herein by reference.

(f) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement or any excusable delay, setting for the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) Invoice. (1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include-

- (i) Name and address of the Contractor;
- (ii) Invoice date and number;
- (iii) Contract number, contract line item number and, if applicable, the order number;
- (iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;

- (v) Shipping number and date of shipment, including the bill of lading number and weight of shipment if shipped on Government bill of lading;
- (vi) Terms of any discount for prompt payment offered;
- (vii) Name and address of official to whom payment is to be sent;
- (viii) Name, title, and phone number of person to notify in event of defective invoice; and
- (ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.
- (x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer-Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer-Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(2) Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR part 1315.

(h) Patent indemnity. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) Payment.-(1) Items accepted. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract.

(2) Prompt payment. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and prompt payment regulations at 5 CFR part 1315.

(3) Electronic Funds Transfer (EFT). If the Government makes payment by EFT, see 52.212-5(b) for the appropriate EFT clause.

(4) Discount. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(5) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall—

(i) Remit the overpayment amount to the payment office cited in the contract along with a description of the overpayment including the—

(A) Circumstances of the overpayment (e.g., duplicate payment, erroneous payment, liquidation errors, date(s) of overpayment);

(B) Affected contract number and delivery order number, if applicable;

(C) Affected contract line item or subline item, if applicable; and

(D) Contractor point of contact.

(ii) Provide a copy of the remittance and supporting documentation to the Contracting Officer.

(6) Interest. (i) All amounts that become payable by the Contractor to the Government under this contract shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 611 of the Contract Disputes Act of 1978 (Public Law 95-563), which is

applicable to the period in which the amount becomes due, as provided in (i)(6)(v) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid.

(ii) The Government may issue a demand for payment to the Contractor upon finding a debt is due under the contract.

(iii) Final decisions. The Contracting Officer will issue a final decision as required by 33.211 if—

(A) The Contracting Officer and the Contractor are unable to reach agreement on the existence or amount of a debt within 30 days;

(B) The Contractor fails to liquidate a debt previously demanded by the Contracting Officer within the timeline specified in the demand for payment unless the amounts were not repaid because the Contractor has requested an installment payment agreement; or

(C) The Contractor requests a deferment of collection on a debt previously demanded by the Contracting Officer (see 32.607-2).

(iv) If a demand for payment was previously issued for the debt, the demand for payment included in the final decision shall identify the same due date as the original demand for payment.

(v) Amounts shall be due at the earliest of the following dates:

(A) The date fixed under this contract.

(B) The date of the first written demand for payment, including any demand for payment resulting from a default termination.

(vi) The interest charge shall be computed for the actual number of calendar days involved beginning on the due date and ending on—

(A) The date on which the designated office receives payment from the Contractor;

(B) The date of issuance of a Government check to the Contractor from which an amount otherwise payable has been withheld as a credit against the contract debt; or

(C) The date on which an amount withheld and applied to the contract debt would otherwise have become payable to the Contractor.

(vii) The interest charge made under this clause may be reduced under the procedures prescribed in 32.608-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(j) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) Limitation of liability. Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 3701, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; Section 1553 of the American Recovery and Reinvestment Act of 2009 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order:

- (1) The schedule of supplies/services.
- (2) The Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause.
- (3) The clause at 52.212-05.
- (4) Addenda to this solicitation or contract, including any license agreements for computer software.
- (5) Solicitation provisions if this is a solicitation.
- (6) Other paragraphs of this clause.
- (7) The Standard Form 1449.
- (8) Other documents, exhibits, and attachments.
- (9) The specification.

(t) Central Contractor Registration (CCR). (1) Unless exempted by an addendum to this contract, the Contractor is responsible during performance and through final payment of any contract for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(2)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in FAR Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (t)(2)(i) of this clause, or fails to perform the agreement at paragraph (t)(2)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect

information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(3) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(4) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423 or 269-961-5757.

9 ALTERATIONS TO FAR 52.212-04

CONTRACT TERMS & CONDITIONS - COMMERCIAL ITEMS
(ADD)

1252.223-71 ACCIDENT AND FIRE REPORTING

1252.242-73 CONTRACTING OFFICER'S TECHNICAL REPRESENTATION

10 DPO INVOICE SUBMISSION GUIDANCE

INVOICE SUBMISSION - MARAD DPO

The Contractor may submit invoices in either electronic or paper format. Electronic submission is preferred.

(1) Electronic invoices shall be addressed to MARADInvoices@faa.gov, with copy to MARADWRInvoices@dot.gov

Electronic invoices shall conform to the following criteria, or be subject to rejection:

- a. Invoice and supporting documentation shall be in Adobe Acrobat (pdf) format.
- b. The e-mail subject shall include the contract/purchase order number and invoice number.
- c. The transmitting e-mail shall include the following information: Name of the Contractor; Invoice date and number; Invoice amount; Contract number and, if applicable, the order or modification number; Terms of any discount for prompt payment offered; Payment instructions (i.e., financial institution, ABA routing #, account #)

(2) Paper invoices shall be submitted to one of the following addresses. Multiple copies are not required.

MARAD A/P WR Invoices Branch
AMZ-150
PO Box 25710
Oklahoma City, OK 73125

If a street address is required for delivery (i.e., Federal Express), the following address may be used in lieu of the post office box:

MARAD A/P WR Invoices Branch
AMZ-150
6500 S MacArthur Blvd.
Oklahoma City, OK 73169

11 1252.232-80 PROGRESS PAYMENTS UNDER COMMERCIAL SHIP REPAIR OCTOBER 2000
CONTRACTS

(a) In order for a Contractor to be considered for payment of progress payments, the Contractor must request, in writing, within five (5) federal working days after contract award, the inclusion of progress payments in the contract awarded as a result of the individual solicitation. Written requests must be accompanied by an itemized breakdown of the contract price for performing each item of work,

as identified by each principle category of work in the specification. The breakdown will include the prorated portion of contract price for (i) direct labor, (ii) material, (iii) overhead, and (iv) any amount included for contingencies and profit. If the Contractor does not provide an itemized

breakdown, progress payments will not be authorized. The Contracting Officer has sole discretion for approving the itemized breakdown and subsequent authorization of progress payments. If authorized, the specific contract will be modified to incorporate progress payments. Progress payments may be unilaterally suspended if unsatisfactory contract performance occurs. In the event that progress payments are suspended, contract payments will be made under the provisions of FAR 52.232-1 Payments (APR 1984). Pursuant to FAR 52.232-1, partial payments will only be permitted on a Contract Line Item (CLIN) basis. To be considered for partial payment, the CLIN must be 100% complete and inspected and accepted by the Government.

(b) The Government shall pay the Contractor the contract price as provided in this contract.

(c) For contracts 30 days or less in duration, the Government will not make progress payments. For contracts more than 30 days in duration, the Government shall make progress payments monthly as the work proceeds, or at other intervals as determined by the Contracting Officer, on

estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer and up to a limit of 80 percent of the total contract price. The Contractor shall furnish a breakdown of the progress schedule and total contract price showing the amount included therein for each principal category of the work, which shall substantiate the payment amount requested in order to provide a basis for determining progress payments, in such detail as requested by the Contracting Officer. In the preparation of estimates the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site may also be taken into consideration if -

(1) Consideration is specifically authorized by this contract; and

(2) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(d) Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made:

I hereby certify, to the best of my knowledge and belief, that -

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of chapter 39 of Title 31, United States Code; and

(3) This request for progress payments does not include any amounts which the prime Contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract.

(4) This certification and any resultant payment is not to be construed as final acceptance by the Government of work performed by any subcontractor or contractor under this contract.

(Name)

(Title)

(Date)

(e) If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for

performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the unearned amount), the Contractor shall -

- (1) Notify the Contracting Officer of such performance deficiency; and
- (2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in 31 U.S.C. 3903(c)(1)) equal to interest on the unearned amount from the date of receipt of the unearned amount until -
 - (i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or
 - (ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.
- (3) Pay back to the Government the aggregate of the unearned amount immediately upon receipt of a written demand by the Contracting Officer.
- (f) If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full.

When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds.

Also, on completion and acceptance of each separate division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

- (g) All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as -
 - (1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or
 - (2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.
- (h) In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (f) above shall not apply to that portion of progress payments attributable to bond premiums.
- (i) The Government shall pay the amount due the Contractor under this contract after -
 - (1) Completion and acceptance of all work;
 - (2) Presentation of a properly executed voucher; and
 - (3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

- (a) The Contractor shall perform work in accordance with the contract, any drawings and specifications made a part of the job order, and any change or modification issued under the Changes clause.

(b)(1) Except as provided in paragraph (b)(2) of this clause, and unless otherwise specifically provided in the contract, all operational practices of the Contractor and all workmanship, material, equipment, and articles used in the performance of work under this contract shall be in accordance with the best commercial marine practices and the rules and requirements of all appropriate regulatory bodies including, but not limited to the American Bureau of Shipping, the U.S. Coast Guard, and the Institute of Electrical and Electronic Engineers, in effect at the time of Contractor's submission of offer, and shall be intended and approved for marine use.

(2) When Navy specifications are specified in the contract, the Contractor shall follow Navy standards of material and workmanship. The solicitation shall prescribe the Navy standard whenever applicable.

(c) The Government may inspect and test all material and workmanship at any time during the Contractor's performance of the work.

(1) If, prior to delivery, the Government finds any material or workmanship is defective or not in accordance with the contract, in addition to its rights under the Guarantee clause, the Government may reject the defective or nonconforming material or workmanship and require the Contractor to correct or replace it at the Contractor's expense.

(2) If the Contractor fails to proceed promptly with the replacement or correction of the material or workmanship, the Government may replace or correct the defective or nonconforming material or workmanship and charge the Contractor the excess costs incurred.

(3) As specified in the contract, the Contractor shall provide and maintain an inspection system acceptable to the Government.

(4) The Contractor shall maintain complete records of all inspection work and shall make them available to the Government during performance of the contract and for 90 days after the completion of all work required.

(d) The Contractor shall not permit any welder to work on a vessel unless the welder is, at the time of the work, qualified to the standards established by the U.S. Coast Guard, American Bureau of Shipping, or Department of the Navy for the type of welding being performed. Qualifications of a welder shall be as specified in the contract.

(e) The Contractor shall--

(1) Exercise reasonable care to protect the vessel from fire;

(2) Maintain a reasonable system of inspection over activities taking place in the vicinity of the vessel's magazines, fuel oil tanks, or storerooms containing flammable materials.

(3) Maintain a reasonable number of hose lines ready for immediate use on the vessel at all times while the vessel is berthed alongside the Contractor's pier or in dry dock or on a marine railway;

(4) Unless otherwise provided in the contract, provide sufficient security patrols to reasonably maintain a fire watch for protection of the vessel when it is in the Contractor's custody;

(5) To the extent necessary, clean, wash, and steam out or otherwise make safe, all tanks under alteration or repair.

(6) Furnish the Contracting Officer a "gas-free" or "safe-for-hotwork" certificate before any hot work is done on a tank;

(7) Treat the contents of any tank as Government property in accordance with the Government Property (Fixed-Price Contracts) clause; and

(8) Dispose of the contents of any tank only at the direction, or with the concurrence, of the Contracting Officer.

(9) Be responsible for the proper closing of all openings to the vessel's underwater structure upon which work has been performed. The contractor additionally must advise the Government of the status of all valve closures and openings for which the contractor's workers were responsible.

(f) Except as otherwise provided in the contract, when the vessel is in the custody of the Contractor or in dry dock or on a marine railway and the temperature is expected to go as low as 35 Fahrenheit, the Contractor shall take all necessary steps to--

- (1) Keep all hose pipe lines, fixtures, traps, tanks, and other receptacles on the vessel from freezing; and
- (2) Protect the stern tube and propeller hubs from frost damage.
- (g) The Contractor shall, whenever practicable--
 - (1) Perform the required work in a manner that will not interfere with the berthing and messing of Government personnel attached to the vessel; and
 - (2) Provide Government personnel attached to the vessel access to the vessel at all times.
- (h) Government personnel attached to the vessel shall not interfere with the Contractor's work or workers.
 - (i)(1) The Government does not guarantee the correctness of the dimensions, sizes, and shapes set forth in any contract, sketches, drawings, plans, or specifications prepared or furnished by the Government, unless the contract requires that the Contractor perform the work prior to any opportunity to inspect.
 - (2) Except as stated in paragraph (i)(1) of this clause, and other than those parts furnished by the Government, and the Contractor shall be responsible for the correctness of the dimensions, sizes, and shapes of parts furnished under this agreement.
- (j) The Contractor shall at all times keep the site of the work on the vessel free from accumulation of waste material or rubbish caused by its employees or the work. At the completion of the work, unless the contract specifies otherwise, the Contractor shall remove all rubbish from the site of the work and leave the immediate vicinity of the work area "broom clean."

13 52.212-05 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES JULY 2010
OR EXECUTIVE ORDERS--COMMERCIAL ITEMS

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

- (1) 52.222-50, Combating Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).
 ___Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104(g)).
- (2) 52.233-03, Protest After Award (AUG 1996) (31 U.S.C. 3553).
- (3) 52.233-04, Applicable Law for Breach of Contract Claim (OCT 2004) (Pub. L. 108-77, 108-78)

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

[Contracting Officer shall check as appropriate.]

___X___ (1) 52.203-06, Restrictions on Subcontractor Sales to the Government (Sept 2006), with Alternate I (Oct 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).

___X___ (2) 52.203-13, Contractor Code of Business Ethics and Conduct (DEC 2008) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

___(3) 52.203-15, Whistleblower Protections Under the American Recovery and Reinvestment Act of 2009 (MAR 2009) (Section 1553 of Pub. L. 111-5). (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009.)

___(4) 52.204-11, American Recovery and Reinvestment Act—Reporting Requirements (MAR 2009) (Pub. L. 111-5).

___ (5) 52.219-03, Notice of Total HUBZone Small Business Set-Aside (Jan 1999) (15 U.S.C 657a).

- (6) 52.219-04, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JULY 2005) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C 657a).
- (7) [Reserved]
- (8)(i) 52.219-06, Notice of Total Small Business Set-Aside (June 2003) (15 U.S.C. 644).
- (ii) Alternate I (Oct 1995) of 52.219-6.
- (iii) Alternate II (Mar 2004) of 52.219-6.
- (9)(i) 52.219-07 Notice of Partial Small Business Set-Aside (June 2003) (15 U.S.C. 644).
- (ii) Alternate I (Oct 1995) of 52.219-7.
- (iii) Alternate II (Mar 2004) of 52.219-7.
- (10) 52.219-08, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637 (d)(2) and (3)).
- (11)(i) 52.219-09, Small Business Subcontracting Plan (APR 2008) (15 U.S.C. 637(d)(4)).
- (ii) Alternate I (Oct 2001) of 52.219-9.
- (iii) Alternate II (Oct 2001) of 52.219-9.
- (12) 52.219-14, Limitations on Subcontracting (Dec 1996) (15 U.S.C. 637(a)(14)).
- (13) 52.219-16, Liquidated Damages—Subcontracting Plan (JAN 1999) (15 U.S.C. 637(d)(4)(F)(i)).
- (14)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (OCT 2008) (10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
- (ii) Alternate I (June 2003) of 52.219-23.
- (15) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (APR 2008) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (16) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (Oct 2000) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (17) 52.219-27, Notice of Total Service-Disabled Veteran-Owned Small Business Set-Aside (May 2004) (15 U.S.C. 657 f).
- (18) 52.219-28, Post Award Small Business Program Rerepresentation (APR 2009) (15 U.S.C. 632(a)(2)).
- (19) 52.222-03, Convict Labor (June 2003) (E.O. 11755).
- (20) 52.222-19, Child Labor-Cooperation with Authorities and Remedies (AUG 2009) (E.O. 13126).
- (21) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).
- (22) 52.222-26, Equal Opportunity (MAR 2007) (E.O. 11246).
- (23) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (SEPT 2006) (38 U.S.C. 4212).
- (24) 52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29 U.S.C. 793).

___ (25) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (SEPT 2006) (38 U.S.C. 4212).

___ (26) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201).

___ (27) 52.222-54, Employment Eligibility Verification (JAN 2009). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)

X (28)(i) 52.223-09, Estimate of Percentage of Recovered Material Content for EPA-Designated Items (MAY 2008) (42 U.S.C. 6962(c)(3)(A)(ii)).

___ (ii) Alternate I (MAY 2008) of 52.223-09 (42 U.S.C. 6962(i)(2)(C)).

___ (29) 52.223-15, Energy Efficiency in Energy-Consuming Products (DEC 2007) (42 U.S.C. 8259b).

___(30)(i) 52.223-16, IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (DEC 2007) (E.O. 13423).

___(ii) Alternate I (DEC 2007) of 52.223-16.

X (31) 52.225-01, Buy American Act—Supplies (June 2003) (41 U.S.C. 10a-10d).

___ (32)(i)52.225-03, Buy American Act—Free Trade Agreements—Israeli Trade Act (JUNE 2009) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, 19 U.S.C. 3805 note, Pub. L. 108-77, 108-78, 108-286, 108-302, 109-53, 109-169, 109-283, and 110-138.

___ (ii) Alternate I (Jan 2004) of 52.225-3.

___ (iii) Alternate II (Jan 2004) of 52.225-3.

___ (33) 52.225-05, Trade Agreements (AUG 2009) (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).

___ (34) 52.225-13, Restrictions on Certain Foreign Purchases (JUNE 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

___ (35) 52.226-04, Notice of Disaster or Emergency Area Set-Aside (NOV 2007) (42 U.S.C. 5150).

___ (36) 52.226-05, Restrictions on Subcontracting Outside Disaster or Emergency Area (NOV 2007) (42 U.S.C. 5150).

X (37) 52.232-29, Terms for Financing of Purchases of Commercial Items (Feb 2002) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

X (38) 52.232-30, Installment Payments for Commercial Items (Oct 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

X (39) 52.232-33, Payment by Electronic Funds Transfer-Central Contractor Registration (Oct 2003) (31 U.S.C. 3332).

___ (40) 52.232-34, Payment by Electronic Funds Transfer-Other than Central Contractor Registration (May 1999) (31 U.S.C. 3332).

___ (41) 52.232-36, Payment by Third Party (May 1999) (31 U.S.C. 3332).

X (42) 52.239-01, Privacy or Security Safeguards (Aug 1996) (5 U.S.C. 552a).

___ (43)(i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx 1241(b) and 10 U.S.C. 2631).

___ (ii) Alternate I (Apr 2003) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

[Contracting Officer check as appropriate.]

(1) 52.222-41, Service Contract Act of 1965 (NOV 2007) (41 U.S.C. 351, et seq.).

(2) 52.222-42, Statement of Equivalent Rates for Federal Hires (May 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

(3) 52.222-43, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Multiple Year and Option Contracts) (SEP 2009) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

(4) 52.222-44, Fair Labor Standards Act and Service Contract Act--Price Adjustment (SEP 2009) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

(5) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements (NOV 2007) (41 U.S.C. 351, et seq.).

(6) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services-- Requirements (FEB 2009) (41 U.S.C. 351, et seq.).

(7) 52.226-06, Promoting Excess Food Donation to Nonprofit Organizations (MAR 2009) (Pub. L. 110-247).

(8) 52.237-11, Accepting and Dispensing of \$1 Coin (SEPT 2008) (31 U.S.C. 5112(p)(1)).

(d) Comptroller General Examination of Record. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records--Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c) and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in paragraphs (e)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause--

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (DEC 2008) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(ii) 52.219-08, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$550,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iii) [Reserved]

(iv) 52.222-26, Equal Opportunity (MAR 2007) (E.O. 11246).

(v) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (SEPT 2006) (38 U.S.C. 4212).

(vi) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(vii) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201).

(viii) 52.222-41, Service Contract Act of 1965 (NOV 2007)(41 U.S.C. 351, et seq.).

(ix) 52.222-50, Combating Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).

___Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104(g)).

(x) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (NOV 2007) (41 U.S.C. 351, et seq.).

(xi) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services-Requirements (FEB 2009) (41 U.S.C. 351, et seq.).

(xii) 52.222-54, Employment Eligibility Verification (JAN 2009)

(xiii) 52.226-06, Promoting Excess Food Donation to Nonprofit Organizations (MAR 2009) (Pub. L. 110-247). Flow down required in accordance with paragraph (e) of FAR clause 52.226-06.

(xiv) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(End of Clause)

14 CONTRACTOR POLICY TO BAN TEXT MESSAGING WHILE DRIVING

Pursuant to E.O. 13513 and DOT Order 3902.10, the contracting officer shall insert the interim clause below. Contractor Policy to Ban Text Messaging While Driving in all solicitations and contracts, exceeding the micro-purchase threshold

a) Definitions. The following definitions are intended to be consistent with the definitions in DOT Order 3902.10 and the E.O. For clarification purposes, they may expand upon the definitions in the E.O. "Driving"-

(1) Means operating a motor vehicle on a roadway, including while temporarily stationary because of traffic, a traffic light, stop sign, or otherwise.

(2) It does not include being in your vehicle (with or without the motor running) in a location off the roadway where it is safe and legal to remain stationary.

"Text messaging" means reading from or entering data into any handheld or other electronic device, including for the purpose of short message service texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication. (See definition in DOT Order 3902.10) (b) In accordance with Executive Order 13513, Federal Leadership on Reducing Text Messaging While Driving, October 1,2009, and DOT Order 3902.10, Text Messaging While Driving, December 30,2009, contractors and subcontractors are encouraged to:

(1) Adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers including policies to ban text messaging while driving--

(i) Company-owned or -rented vehicles or Government-owned, leased or rented vehicles; or

(ii) Privately-owned vehicles when on official Government business or when performing any work for or on behalf of the Government.

(2) Conduct workplace safety initiatives in a manner commensurate with the size of the business, such as-

(i) Establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving; and

(ii) Education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

(c) Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (c), in all subcontracts that

exceed the micro-purchase threshold, other than subcontracts for the acquisition of commercially available off-the-shelf items.
(End of clause)

SECTION C – DESCRIPTION AND STATEMENT OF WORK

TRAINING SHIP GOLDEN BEAR
SPRING VR 11
ENTIRE SPEC DATED 10/15/10
INDEX

<u>CLIN</u>	<u>TITLE</u>
	GENERAL CRITERIA
1	AUTOMATION SERVICE
2	ANNUAL LIFERAFT SERVICE
3	SSDG CONTROL SERVICE
4	FIRE EXTINGUISHER SERVICE
5	ANNUAL RADAR, RADIO & BRIDGE EQUIPMENT
6	LIFEBOAT DAVIT BRAKE INSPECTIONS
7	ENTERPRISE R5 16V OVERHAUL/SURVEY
8	ENTERPRISE R5 16V CYLINDER HEAD OVERHAUL
9	REVERSE OSMOSIS INSTALLATION MODS
10	WEATHERTIGHT DOORS
11	WATER-TIGHT DOORS
12	WEATHER DECK STEEL REPAIR
13	WEATHER DECK FITTINGS REPAIR
14	DISTILLER VALVES AND SERVICE
15	GALLEY EQUIPMENT REPLACEMENT
16	VARIOUS PIPING AND STEEL WORK
17	EOS DUCTING
18	SSDG FO CAM
19	SIMPLEX OWS PARTS AND OCM EXCHANGE
20	A/C & REFRIGERATION SERVICE
21	BALLAST TANK 5-77-1&2 COATING REPAIR
22	BALLAST TANK 5-104-1&2 COATING REPAIR
23	TLI REPLACEMENT AND SERVICE
24	SLOP OIL REMOVAL
25	JOINERY, HEAD DECK & SHOWER REPAIRS
26	AFT MSD STEEL RENEWAL AND SERVICE
27	01 DECK PASSAGE AND STATEROOM UPGRADE
28	UPPER-CLASS MESS AND MAIN DECK PASSAGE
29	BALLAST VALVE ACTUATOR INSTALL
30	STEERING STAND INSTALLATION
31	PUMP FOR CMS
32	EXHAUST INSULATION AND REPAIR
33	PORTLIGHT
34	OWS UPGRADE
35 A & B	SUPPLEMENTAL - MATERIALS & LABOR

GENERAL CRITERIA

Intent:

This item defines the general criteria which the contractor shall apply to each and every Specification Item (CLIN) contained within this Contract, including all amendments, modifications, and approved delivery orders. The costs associated with implementation and accomplishment of these requirements during the planning and performance of each specification item and subsequent delivery orders shall be included in the pricing of each line item of the specification.

Work Description:

Definitions

The following terms shall be understood to have these meanings:

“As approved”, “for approval” - When used without further qualification, the decision of the Regulatory Body representative is intended. For items which are not covered by regulations, the decision of the COTR is intended.

“Contract” - The agreement entered into between the Owner or Owner’s representative and the Contractor for the accomplishment of the work specified in the Specifications.

“Contractor” - The shipyard or ship repair firm acting as the prime contractor responsible for accomplishing the provisions of the subject Contract.

“COTR” - Contracting officer’s technical representative overseeing the repair availability.

“Detach” - means that the Contractor shall unbolt, unpipe, and disconnect all attachments to the unit to enable the unit to be moved, and/or to unbolt, unpipe, and disconnect a fixed unit. All attachment points shall be tagged, identified, and protected to facilitate reinstallation. This definition also covers reinstallation of detached units.

“Equivalent” (“or equal”) equipment - Where equipment is specified by manufacturer’s name, make, and model number, the Contractor may propose equivalents to the COTR for approval. Approval will be based on the following criteria:

- a. Meet the specified performance requirements.
- b. Possess appropriate Regulatory Body approval where required.
- c. Possess similar dimensions; weight; power; capacity; material; service characteristics; maintenance features; time in service; population in commercial service; vendor-furnished training, service and support; consumption and performance data.
- d. Exceptions to these criteria will be considered if they are demonstrable to be superior to those specified and are to the advantage of the vessel’s mission and the Government.

“Government” - Means the United States Government, including the Maritime Administration (MARAD).

“Install”, “extend”, and “modify” mean that the Contractor shall provide the piece of equipment to be installed, and, in addition, shall provide the materials and labor to install, connect, test, remove and reinstall interferences, and effect a finished, fully operational installation. When “install” is used with reference to GFE, all conditions of the previous definition except the requirement to provide the piece of equipment are applicable.

“Owner” - The U.S. Department of Transportation, Maritime Administration (MARAD), and authorized representatives.

“Provide” - Means to furnish and install all services, materials, equipment and systems to accomplish stated requirements.

“Regulatory Body” - Means the American Bureau of Shipping (ABS) or a Federal Government or international regulatory agency or an organization which is authorized by the agency to perform delegated regulatory functions on its behalf.

“Regulatory Body requirements” - means the regulations, rules, requirements, and interpretations issued by Regulatory Bodies.

“Remove” - Means to take the existing off the ship without replacement.

“Repair” - Means to fix the existing thereby restoring it to its original capabilities.

“Renew” - Means to remove the existing then replace with new of similar or specified capability

“Specifications” - The document containing the Work Items that specifies the work requirements to be performed by the Contractor

Accomplish the Requirements of the Contract

The Contractor shall satisfactorily perform all work and details therewith, to the required standards and shall provide all the necessary resources in that performance. Details that are not mentioned in these specifications, but which are usual and necessary for shipwork shall be furnished by the contractor.

Noncompliance/nonconformance with the requirements of the Contract or Work Items, discovered by the Government will be reported to the contractor in writing.

Contractor shall respond in writing to the COTR, indicating the corrective action taken and, where applicable, the action to be taken to correct the cause of the deficiency.

Written responses shall be within two (2) working days from notification. Labor or material progress payments on deficient Work Items will be withheld until each deficiency has been corrected.

Provide Labor, Material, and Equipment

Provide all labor, material and equipment required for the completion of the specifications, unless specifically identified as Government Furnished Material (GFM) in the individual work items.

Report Production Delays and Difficulties

In the event difficulty is encountered or anticipated in complying with the contract requirements or schedule dates, notify the COTR immediately by verbal means, followed on the next work day, by written correspondence stating the pertinent details. Receipt of this notification by the COTR is not to be construed as a waiver of the contract requirements or delivery schedule by the government; nor is it a waiver of rights or remedies provided by law or under this contract relating to jeopardy of the contract schedule.

Verify Dimensions

Any and all dimensions, measurements, size, shape, quantities, etc., in the specifications including drawings, sketches, etc., contained therein, are not guaranteed to be correct. The contractor shall be responsible for the tasking, determination, and ascertaining of any and all dimensions, measurements. The contractor should take full advantage of any ship check/inspection periods offered for this purpose.

Report Additional Work or Material Procurement

When additional work or material procurement is identified that is necessary to produce a reliable product or complete repair, a report will be submitted to the COTR. The required report, with supporting data, will be submitted as soon as possible after discovery to allow the COTR to initiate early action. The goal is to have any required additional work completed within the original contract period. Contractor shall make every effort to deliver all condition reports during the first half of the performance period.

These condition or inspection reports shall contain the following information:

1. Vessel name, Contract Number, CLIN Number (work item number), and item paragraph number.
2. A description of the conditions found with supporting data. This data should include sketches, photographs, and calculations, with actual readings and dimensions, when necessary to make the conditions clearly understandable to the COTR. Said condition reports shall also state the Contractor's recommended course of corrective action for the noted discrepancy and a list of materials required.

3. Include a statement regarding the conditions effect on the subject work item and other work items; and a statement about the conditions and recommendations effect on the production schedule and/or critical path. Include a statement as to whether all work on the item is stopped pending a response.

Submit Requests for Work Deviations

A deviation is defined as any action which is not in conformance with the Work Item requirements, including references thereto.

Deviations will only be considered by the COTR upon receipt of a written request from the contractor.

The Government does not have an obligation to accept any deviation, and may do so only if benefit to the Government can be shown. Accomplish deviations only when authorized in writing by the COTR.

Accomplish Joint Vessel Inspection.

The Contractor and COTR shall complete a joint arrival inspection at NTP to document general conditions on the vessel. Topside areas, interior passageways, anticipated major work areas; the engine room and shaft alley shall be inspected.

A videotape with commentary shall be prepared by the Contractor concurrent with the inspection. The videotape and one copy shall be submitted to the COTR with a serialized Condition Report within five working days.

Provide Closures Against Weather

The contractor shall use existing closures and provide temporary closures as necessary to prevent intrusion of weather related elements (rain, snow, sleet, etc.), into the vessel. Temporary closures materials may include the use of plywood, canvas, herculite or other materials at the contractor's option and expense to cover temporary access openings or the opening of doors, scuttles and cargo hatches for periods in excess of 24 hours. Additional protection from sandblast grit intrusion shall be provided per a separate item.

Cargo hatches shall be closed at the completion of daily work unless work is scheduled in specific cargo holds around the clock.

Service lines, hoses and cables shall be run through a single door as mutually agreed upon by the contractor and COTR. The service line access shall be separate from the primary personnel access.

Workmanship

Workmanship shall be of the highest quality commercial marine standard and shall be subject to the approval of the COTR upon completion. Welding shall meet ABS and USCG requirements and conform to American Welding Society (AWS) standards. 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, and foreign matter

All welding shall be in accordance with ABS requirements and certified by the local ABS Representative. All Non-destructive testing of welds shall be in accordance with ABS requirements and certified by the local ABS representative

Welded connections of major items installed and modified by the Contractor shall be subjected to nondestructive testing as delineated for the particular items in this specification. All such testing shall be performed by qualified personnel and shall be in accordance with ABS "Rules for Non-Destructive Testing of Hull Welds

Contractor Use of Vessel Equipment and Materials

The Contractor shall not use, without explicit permission on a case by case basis, any vessel spare parts, equipage, equipment, special tools or materials.

Vessel's machinery and equipment is not to be operated by the contractor's personnel or subcontractors except as explicitly authorized on a case by case basis by the COTR, or as explicitly required elsewhere in the specifications. The Contractor shall sign for all drawing and tech manuals deemed necessary for examination off site.

Cleanliness, Tests and Job Completion

Upon item and job completion, all interior and exterior spaces, equipment, machinery, tanks, cargo holds and accommodations affected by repairs shall be left in a clean and orderly condition and ready to serve their intended purposes. A joint redelivery inspection will be held by the Owner and Contractor at least 2 days prior to scheduled delivery date and vessel acceptance by the Government. During this joint inspection, any further cleaning and outstanding deficiencies will be noted, which shall be completed prior to the delivery of the ship. No work may be deferred for accomplishment after the ship's redelivery, unless it is shown to be advantageous to the Owner.

All new, disturbed and/or soiled materials, surfaces, equipment, etc., affected by the accomplishment of these Specifications and any Delivery Orders shall be cleaned, prepared, coated, recoated, re-lagged, reinsulated as directed in other applicable items in this contract.

Work that requires testing shall be completed in time to allow correction of deficiencies prior to any dock trials, sea trials, and other applicable milestones established in the contract.

The contractor, or his foreman representative, shall meet with the CHENG and/or Chief Mate at the beginning of **each day** they will be onboard to discuss the day's work plan, number of workers aboard, hot work anticipated, ship's systems affected, and other ship coordination issues. This shall be a formal meeting and must take place before work begins, at the same time daily. The representative for the Contractor shall be the same individual for the duration of the voyage repair package.

Once a week, the ship superintendent shall walk through each onboard job with the COTR.

Contractor is responsible for all of their required loading operations and activities including opening/closing of hatch and operating ship's crane (when available) under the authority and permission of the Chief Officer. CMA may be able to assist contractor with forklift and crane services, but this is not guaranteed as this equipment is frequently used otherwise for CMA operations and training. If not available, lifting and material handling equipment shall be the responsibility of the contractor.

Contractor is responsible for temporarily detaching all interferences necessary to complete CLIN items and then reinstalling interferences to their original condition. Contractor is also responsible for replacement or repair of any damaged structures, parts or joinery removed for work completion.

Contractor will at all times (each day) coordinate with Chief Officer on pier and ship access and availability, including vehicle parking. In the absence of the Chief Officer, coordination shall be conducted with PIC of the boathouse.

Regular working hours are weekdays from 0700/0800 until 1700. Hot work will only be allowed during these hours on weekdays. All work, tests, and inspections shall be performed in this time frame. COTR may authorize work outside these hours on a case by case basis. The C/M or C/E shall be notified before any hotwork is commenced so that fire detection systems can be temporarily disabled.

No work will be allowed to take place during campus breaks, unless approved in advance by the COTR. Bidders should request an academy calendar from the COTR one week before bid submissions.

All condition reports shall be submitted to the COTR. They shall be serialized numerically, and provide a recommended course of action when a deficiency is noted.

The contractor shall maintain a log of all persons on board the ship, who are employees, agents, or subcontractors for work being performed. Daily, all personnel are to sign the logbook upon arrival onboard, and to sign out upon departure. The logbook is a deliverable, separate from the ship's log book, and shall be provided and maintained by the contractor. The contractor is responsible for its accuracy and content. Each Monday during the contract performance period, provide the COTR with a copy of the previous week's log or more frequently if requested. At the end of the contract, provide the COTR with a complete copy of the logbook (or the original). These deliverables are to be attached to a serialized condition report.

Marad may provide a third party paint representative to oversee and advise the COTR on all paint-related concerns. Schedule all paint related inspections with the paint representative as well as with the COTR.

Marad covers payments for the local ABS Surveyor under a separate purchase order. The successful bidder shall cover all costs for ABS services (such as plan review and approval) not performed by the local ABS office in Oakland.

The successful bidder is responsible for scheduling all ABS and USCG inspections, surveys and checkpoints cited in the CLIN's. The contractor shall pre-inspect and pretest prior to making these arrangements to assure successful completion of checkpoints.

The Contractor is responsible for disposal of all waste and debris generated as a result of any work performed. Use of shipboard or California Maritime Academy waste bins is prohibited. Coordinate with the Chief Mate for an acceptable place to place a contractor furnished disposal bin on the pier or the ship, if deemed necessary. All hazmat waste streams generated as a result of this contract are the responsibility of the contractor for lawful disposal, manifesting and transportation. No hazmat, including blasting debris, may be disposed of on ship or CMA premises.

Contractor is responsible for all employees and sub-contracting employees to purchase valid parking permits when on campus and to be briefed on waterfront and pier parking regulations. Pier access for work trucks is by permission of Chief Mate only. Only two parking places in the Waterfront parking lot may be utilized by contractor or their subcontractors for personal vehicles. All other contractor personal vehicles shall be parked in either Lots E or F and ferried down by others or parked outside the gates and similarly ferried. Any parking citations received are the contractor's responsibility. Any ferrying for employees is the contractor's responsibilities.

All work areas and operations that disturb original coatings shall be recoated to conform to ship's coating system. Preparation of exposed metals shall be prepared accordingly to MARAD paint and coating guidelines (attached). Transition between recoated areas and original painted surfaces shall be feathered smooth with 100-grit paper before restorative coatings are applied. The ship's coating system for metal surfaces is as follows:

- disturbed areas shall be prepared to SP3 (power tool clean level) minimum, unless specified differently in individual item.
- Apply chemical rust deoxidizer of "1 Step Rust Killer" brand as per manufacturer's directions.
- Apply a sealer coat of "Amerlock Sealer" as per manufacturer's directions.
- Two coats of Ameron brand primer. Each coat is 3-5 mils DFT. Product name is "Amercoat 240" as per manufacturer's directions.
- Two coats of top coat in matching color code of PSX-1001 or as per manufacturer's directions.
- Deck coatings vary throughout the vessel and will be specified as appropriate given location by the Chief Engineer and/or Chief Mate.

When a CLIN tasks the contractor to transfer articles to the Marad warehouse, the Contractor shall perform the following steps:

- Assist the ship storekeeper in entering a property transfer into NS-5.
Notify warehouse in advance of delivery. POC is Mike Streblov at (510) 337-5084.

- Transfer article with the form.

Provide COTR with a copy of the form with both signatures (warehouse and storekeeper).

The address for the warehouse is:

Marad SBS Warehouse
1651 Viking St.
Alameda, CA 94501

Substitutions for specific materials and equipment cited in CLIN's must be pre-approved by the COTR prior to NTP.

When cited in a CLIN, The contractor and applicable tech reps shall attend the ship's one-day sea trial, date to be determined. All onboard workers, including subcontractors, must wear a badge identifying themselves as contractor employees. Those persons without badges may be escorted off the ship.

The requirements within this General Criteria are not to be separately priced. Cost for this item shall be spread out and incorporated against the appropriate awarded work CLIN(s).

Performance Criteria/Deliverables:

Joint arrival inspection video tape and condition report.

Security

Security requirements as outlined in the following “Security Instruction” titled “Security Instruction number 1” shall be strictly adhered to.

Security Instruction number one

DATE: September 3, 2008
TO: All Contracting and Vendor Personnel
FROM: Captain Harry Bolton
Company Security Officer, California Maritime Academy

This is to inform all persons that may visit, conduct work, provide technical or sales services or have other official business aboard or in any way need access to be alongside or aboard the training ship **GOLDEN BEAR**, that new International and Coast Guard regulations requires stringent access control to all U.S. vessels by all persons in accordance with those regulations. This includes the training ship, whether she is in a foreign or in any domestic port. Additionally, the California Maritime Academy may invoke additional requirements to gain access to the campus if it is determined by the U.S. Coast Guard that the CMA is a "port facility" under the new regulations.

These security requirements will require that all visitors, contracting personnel, vendors, sales-persons and any technical consultants comply with the requirements outlined herein before being allowed to board or approach the training ship. Failure to comply in whole or in part of these regulations may lead to the expulsion of personnel from the vessel until full compliance is achieved. Any and all additional costs resulting from this eventuality, including delays in work, denial of access for subcontractors or any other interruption of contracted services, is to be completely borne by the contracting or vendor companies. Only pre-authorized persons will be allowed onboard. This includes visitors.

All contracting, vendor, or visiting personnel, must at all times, comply with any and all requirements and rules promulgated by the ship's Security Officer, which in the case of the **GOLDEN BEAR**, is the vessel's Chief Officer. These requirements are those made by the training ship and the California Maritime Academy. Any additional security procedures, rules or requirements promulgated by MARAD will be in addition to these requirements.

Any or all of the following rules and procedures must be complied with depending on the official national maritime threat level:

1. Campus access and parking may be controlled by the school's public safety department.
2. The primary contractor shall be responsible for issuing all of their direct employees and as well as their designated sub-contractor's employee's identity verification and authorized company photo ID cards. Non-photo company identification cards will not be accepted. These identification cards are required to be worn in a visible location. Subcontractors and employees without company ID shall be required to obtain from the CMA/GOLDEN BEAR a daily visitor pass in the form of a generic ID card that authorizes the holder to be onboard. The daily visitor cards will be required to be worn in a conspicuous manner so that each person is readily identifiable by ship's officers and security personnel. The cards will be used to log workers and vendors on and off of the vessel using the ship's logging system. These Golden Bear Visitor cards must be issued and surrendered at the beginning and end of each day for logging in and out. Failure to surrender the visitor card at the end of the day shall be treated as a security violation.
3. Outside company employees newer than six months and all temporary visitors not known to the Academy are subject to security background inquires by the CMA consistent with current laws before they will be permitted to board the vessel.
4. Materials or parts delivered directly to the campus/ship are subject to search and screening by the ship's Security Officer. Deliveries of equipment, parts and materials must be declared to the ship Security Officer at least 24-hours in advance of the delivery and must be scheduled for screening before being loaded aboard.
5. Materials and supplies shipped in advance or drop shipped to CMA's facility must pass through the campus warehouse for screening. This screening process shall be conducted by the ship's security officer (Chief Mate) and an authorized person designated by the contractor. This inspection and shipping documentation screening must be accomplished before any materials can be loaded onto the vessel.
6. Contractor vehicles will not be allowed onto the pier without first being screened by the vessel's security officer. This may be done daily. The same applies for contractor tool boxes or other equipment when first loaded aboard. Ship security personnel shall work closely with contractor's management personnel to achieve workable but effective security concerns.

7. Depending on the national security threat level, all persons needing access to the vessel may be subject to random personal and bag checks. If the vessel is at a heightened security level, ALL persons may be subject to these searches or screenings.
8. The contractor and shipboard management supervisors must attend a one-hour security orientation on or before the first day of a contract performance period. This orientation will be conducted onboard the vessel by the Ship's Security Officer. It must be emphasized that contracting personnel or their sub-contractors who have not been authorized to be onboard the vessel will be denied access to the vessel.
9. In conjunction with the orientation, a short security briefing will be conducted before the contract begins. This briefing shall be attended by:
 - MARAD COTR
 - Company Security Officer
 - Ship Security Officer
 - Director of Campus Public Safety
 - Warehouse Supervisor

It must be emphasized to contractors and visitors that these requirements are mandatory, and that any disruption or recalcitrance demonstrated by visiting or contracting persons onboard concerning these requirements will be denied access to the vessel until full cooperation is achieved. If necessary, persons who are being uncooperative or belligerent will be removed from the vessel permanently and reported to national authorities. It is the desire of the CMA and the training ship that all work is accomplished in the spirit of security awareness and cooperation and every accommodation that can be given while maintaining compliance with the regulations is encouraged.

Regards,

Captain Harry Bolton
CMA Security Officer

INTERFERENCES

Intent: The Contractor shall detach and reinstall all interference in way of accomplishing specified work.

An interference is any part of a ship, whether installed or portable, that must be moved or disturbed in the accomplishment of work specified in the Work Item. Contractor is responsible for identifying all interferences to all items during the shipcheck period.

Statement of Work:

Identify all the interferences at formal bidders' shipcheck of the vessel.

When work on the vessel is started:

- visually examine each interference before removal. Note any damage or deterioration to it that was already there, and protect it from damage before it is removed.
- when removing the interference, take caution not to damage it.

After interference removal, inspect it again. If it is damaged, make a note and notify the COTR in writing. Tag it for reinstallation, or disposal if approved by COTR.

Before reinstalling an interference:

- check it again. If it is acceptable, go ahead and reinstall it.

- do not reinstall anything that was damaged before, deteriorated, or damaged later. Notify COTR if this takes place.

Protect interferences from damage or loss, and prevent contamination of detached or removed components and remaining parts of the system.

Visually examine interferences prior to and during detachment for previous damage and deterioration. Report any damage or deterioration to the COTR. .

Material containing asbestos which requires removal as an interference shall not be reinstalled. The Golden Bear is an asbestos free ship.

Install stamped or engraved solid metal tags on interference's to indicate the ship's name, location and Work Item number prior to detachment or removal from system or shipboard location.

Reinstall interferences which were neither reported as previously damaged or deteriorated nor rendered unsuitable for reinstallation during removal.

Install new material in place of material rendered unsuitable for reinstallation during detachment, removal, or storage.

New material shall be equal in composition, strength, design, type, and size as existed prior to removal of the interferences.

Install new insulation and lagging in place of that removed as interference.

Install new reusable covers except when reinstallation of existing reusable covers is identified by the invoking Work Item.

Install new fasteners and gaskets when reinstalling interferences.

Restore compartment, equipment, and systems labeling.

Install new deck covering in place of that removed or damaged as interference.

New material shall be equal to existing in color and composition.

Align and accomplish appropriate strength, tightness, system cleanliness, and operational tests and ensure that the reinstalled interferences perform their normal functions within the system.

These requirements not to be separately priced. Cost for this item shall be spread out and incorporated against the appropriate awarded work CLIN(s).

SCHEDULING AND PROGRESS REPORTS

Intent: The contractor shall prepare and submit for review and acceptance by the COTR, accurate contract scheduling data, which is relevant to the scheduling and progress of the repair availability for the entire project, and for these critical path CLINS cited below or identified by Contractor:

CLIN 004 FIRE EQUIPMENT SERVICE
CLIN 005 ANNUAL BRIDGE SURVEY
CLIN 007 MAIN ENGINE PISTONS & CYLINDERS
CLIN 008 MAIN ENGINE CYLINDER HEADS
CLIN 025 AFT MSD STEEL REPAIR AND SERVICE
CLIN 030 STEERING STAND INSTALLATION

Both reports should be indicative of the planning and scheduling required to ensure an integrated and timely completion of all CLINS, and to ensure the contract delivery date is achieved. **Critical path items must reach completion before March 15, 2011.**

Scope of Work: Each Thursday, provide the COTR with a weekly report denoting the progress on each **critical path CLIN** cited above. Incorporate all task orders and contract modifications to this report.

At minimum, the weekly report shall depict:

- Critical path and controlling work items clearly indicated
- Scheduled start and completion date of the **production work** for each critical path CLIN
- Actual start date for each critical path CLIN
- Actual finish date for each critical path CLIN
- Provide the COTR with a separate weekly PERCENTAGE REPORT denoting
- Percent completion to date of each CLIN and each TASK ORDER in the work package
- Overall percentage completion of the work package

Both reports shall be delivered to the COTR within (3) three days of award of contract, and shall be updated and submitted weekly to reflect the addition, deletion, or modification of CLINS, and changes made by the Contractor or Contracting Officer.

Manage and schedule subcontractors' production work/progress, material procurement, and interface control to support the overall production schedule.

Provide a list of subcontractors by CLIN Number to the COTR within (3) three days of award of contract. A revised list is to be provided whenever changes occur to the list.

The subcontractor list shall include:

- CLIN number
- Specific work to be accomplished
- Subcontractor's business address and telephone number

On the first week of the availability, provide the COTR with a list of all the deliverables cited in the contract, and the intended delivery date for each of these deliverables.

These requirements not to be separately priced. Cost for this item shall be spread out and incorporated against the appropriate awarded work CLIN(s).

Upon completion of a CLIN, conduct a walk through of the work cited in the CLIN accompanied by the COTR, Chief Engineer, and Chief Mate. Develop and submit a sign-off sheet for each CLIN, to be signed by ship superintendent and COTR. Provide the COTR with a copy of all sign-off sheets as they occur.

DELIVERABLES:

- weekly report denoting the progress on each critical path CLIN
- weekly PERCENTAGE REPORT
- subcontractor list
- list of deliverables
- sign-off sheet for each CLIN

CLIN 001 **AUTOMATION SERVICE**

1.0 ABSTRACT

This item describes the servicing and maintenance of the Alarm & Monitoring, Ballast Control, and Propulsion Control automation systems.

2.0 REFERENCES

Technical Marine Service, Inc. technical manuals available onboard.

3.0 ITEM LOCATION / DESCRIPTION

- 3.1 Location: EOS, Bridge Console, Machinery space, and monitoring stations.
- 3.2 Item description: Perform repairs and service to vessel's automation system.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES:

- 4.1 One (1) Hatteland HT CO1 STD-A101 computer for DCS Server/Workstation

5.0 STATEMENT OF WORK

5.1 GENERAL CRITERIA

- 5.1.1 **Supply all labor, equipment and materials to perform the following repairs and modifications.**
- 5.1.2 Provide services of an experienced engine control vendor to perform the following repairs and maintenance. The original conversion and installation, and all recent upgrade, repairs and service have been successfully performed by Technical Marine Service, Inc. of Portland, OR.
- 5.1.3 Save any new or modified control data & programs affected by this performance specification to the Alarm & Monitoring and Propulsion Control Systems to Chief Engineers computer and disk and back up to other computers in system with log date of action. Provide Chief Engineer with a back-up disk of Propulsion Control, Alarm and Monitoring, and Ballast Control system programs.

5.2 DCS & BCS CONSOLE

- 5.2.1 Provide two (2) each touch screen monitors for use as operational spares. Groom and test hardware for full function. Provide fashion plates or template for allowing drop-in replacement of monitor. Turn over enabled monitor to Chief Engineer as spare.
- 5.2.2 Provide one (1) each new industrial DCS Server Workstation computer to replace GB1 or 2 and match the GFE Hatteland HT CO1 STD-A101 computer recently purchased.
- 5.2.3 Provide capability for remote service connections to technicians for all 4 DCS, BCS, and PCS computers while vessel is at CMA pier. Coordinate with campus IT via vessel's crew to arrange for a system of request for temporary VPN access.
- 5.2.4 Upgrade alarm printer functions to allow for current print to file feature to be adapted for selective printing to a standard tray printer. Investigate and provide proposal to develop "data log" and "bell log" print file function similar to alarm log set up. Provide two each standard HP printers compatible with inboard systems to take over selected print functions.
- 5.2.5 Provide discreet run indication and alarm points and interconnection for new RO unit to be located port side of 26 ft flat. A run light and title shall be adapted to Distiller panel on console.

- 5.2.6 A new OWS installation is being installed aboard. Contractor shall provide guidance to installer for connection of alarm in series with current OWS alarms.
- 5.2.7 Provide a new indication and annunciates panel on the bridge as per EOS console installation. Also provide a means of temporary disable of bridge audible alarms during in-port periods when bridge is unmanned. Occasional program conflicts with individual and group alarm set-points that initiate on bridge cause continuous alarms.
- 5.2.8 Check and confirm that both GB1 and GB2 computers have appropriate programs and set-points throughout, are set up properly for Alarm (GB2) and Bell Logger (GB1) screen and printer functions on system boot-up.
- 5.2.9 Test function and confirm that both GB1 & GB2, and Ballast Control are networked with short-cuts, Chief Engineer's and Chief Mate's offices. Investigate update of power lab interface to using recently developed internet viewer function vs. obsolete license viewer arrangement.

5.3 PROPULSION CONTROL

- 5.3.1 Inspect and review vessel repair and replacement to SME Speed Setting Tachometer and MPU. Upgrade wiring in console as per requirements for grounded terminals and make recommendations on further upgrades.
- 5.3.2 Provide a proposal for replacement of EOT and Throttle HMI system. Proposal shall include specific recommendation on hardware and software along with estimated pricing for materials and labor. Check, adjust, and calibrate the EOS and Bridge EOT and Throttle RVDTs and Synchronos.
- 5.3.3 Work with vessel's Chief Engineer to document and update instruction manual for shifting to "Maneuvering Mode". This instruction was not updated with PCS upgrades in 2007 and should be in both TMS' and TSGB files. Review instructions for any other appropriate updates.
- 5.3.4 Test operate all TMS systems with vessel crew and specifically observe and report on operation of all systems worked on and modified.

6.0 NOTES

7.0 DELIVERABLES

- 7.1 Provide COTR 2 copies of a typewritten report of repairs and modifications made to systems. Included in report shall be the network addresses of all computers in system.

CLIN 002 **ANNUAL LIFERAFT SERVICE**

1.0 ABSTRACT

This item describes the annual liferaft service order for the ship's 8 davit launched liferafts.

2.0 REFERENCES

Last Year's service reports (copies available on board).

3.0 ITEM LOCATION / DESCRIPTION

Contractor picks-up and delivers to CMA pier after scheduling with Chief Mate.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

Forklift assistance for loading / unloading.

5.0 STATEMENT OF WORK

- 5.1 Contractor to pick up from CMA waterfront (8) eight twenty-five person Crewsaver davit-launched liferafts and their associated hydrostatic releases and transport to a USCG/SOLAS approved repair facility. Vessel will unload/load rafts from/to vessel and assist contractor with forklift services on/off of contractor's truck.
- 5.2 Rafts to be serviced to SOLAS pack-A ocean service. Rafts and releases are to be inspected, tested, necessary repairs accomplished and parts/equipment replaced as necessary to bring rafts and releases into compliance. All equipment shall comply with the latest USCG requirements and regulations of the International Convention for the Safety Of Life At Sea.
- 5.3 Contractor to convey rafts and releases to and from CMA's waterfront by scheduled appointment time only. Otherwise, contractor shall be responsible for providing forklift services to load/unload.
- 5.4 Contractor is to provide all required bottle hydro-tests and renewal of expired or defective equipment and supplies due as specified in last year's reports. Items listed in these reports as due will not constitute "discoverable" or be the subject of an additional work item.
- 5.5 The contractor shall replace all parts or material expiring prior to **April 18, 2012**.

6.0 NOTES: None

7.0 DELIVERABLES

Contractor to provide COTR with original and three (3) copies of inspection certificates for rafts and releases. Each raft and release is to be marked with a sticker noting the latest inspection date. Hydro static releases are to be hand delivered to Chief Mate.

CLIN 003 **SSDG CONTROLS**

1.0 ABSTRACT

This item describes maintenance and repair to the ship's service diesel generator controls.

2.0 REFERENCES

SSDG and Alternator technical manuals. Available onboard.

3.0 ITEM LOCATION / DESCRIPTION

- 3.1 Item Location: Machinery spaces and EOS (control room).
- 3.2 Item description: Service control and alarm circuits for SSDG control, and perform inspection and maintenance to voltage regulator circuits.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

None

5.0 STATEMENT OF WORK

5.1 GENERAL CRITERIA

- 5.1.1 Supply all labor, equipment and materials to perform the following repairs and modifications. Service to be performed by a Service Engineer with a minimum of 5 years experience with C. Wilh. Stein-Sohn, Seimen's, and MAK controls pre-approved by COTR.
- 5.1.2 Previous vendor performing SSDG Control maintenance was: Vu Phung Lu, DG International, Inc. 1909 Merideth Rd, Virginia Beach, VA 23455. Phone (757) 463-7811 or (757) 463-7976 (cell).

5.2 SSDG CONTROLS

- 5.2.1 Service indicators in local panels. Provide 6 each white, green, red and amber LED's to facilitate replacement.
- 5.2.2 Test all local and remote temperature and pressure indications and alarms for all three SSDG's and **calibrate for accuracy**. *Note: Rtd's and thermocouples may be checked electronically but pressure transmitters must be checked with gauge tester.*
- 5.2.3 Pre-Test all safeties and shutdowns for all three SSDG's. Vessel's crew will run SSDG's as required to facilitate tests. Safeties include L.O. pressure, J.W. temperature, overspeed, and jacking gear engaged. Timing of repairs and test should precede & coincide with USCG & ABS inspection scheduled for March 22 & 23, 2010. Coordinate with Chief Engineer & COTR.
- 5.2.4 Troubleshoot and repair the DCS SSDG engine ready light being activated when rack is disengaged. If required, modify system to accommodate and red-line control diagrams in manuals with copies of print in local annunciator panels.
- 5.2.5 Provide two (2) stop and reset switch and install one in place of failed #3 SSDG switch.
- 5.2.6 Test overload and "dead bus" relays for "standby" operation. Adjust as necessary.
- 5.2.7 Open, inspect and report findings of generator control panel 24 vdc power supply and emergency backup.
- 5.2.8 Open & inspect, adjust, set, and test for stability the voltage regulators for all three SSDG's. Vessel's crew will operate SSDG's to facilitate tests and adjustments.

6.0 NOTES

7.0 DELIVERABLES

- 7.1** Provide a report to the COTR documenting repairs to complete above tasks. Include any additional recommended repairs or modifications in report.

CLIN 004 **FIRE EXTINGUISHERS SERVICE**

1.0 ABSTRACT

This item describes the work tasks to complete the annual regulatory fire portable and fixed fire extinguishing equipment checks to be performed in accordance with the vessel's COI and her approved fire and safety arrangement drawing. This item also includes SCBA testing, repair and replacement of worn out units.

2.0 REFERENCES (Available on Board)

- 2.1 Ship's Fire Safety & Arrangement Drawing – Rev. G.
- 2.2 Applicable ship's drawings.
- 2.3 USCG NVIC 9-00 CO2 Fire Extinguishing System Safety.'
- 2.4 Last Year's Service Report (Global Fire and Safety).

3.0 ITEM LOCATION / DESCRIPTION

Throughout vessel.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES None

5.0 STATEMENT OF WORK

- 5.0.1 Supply all labor, equipment, parts, materials and transportation/lifting services to accomplish work described in abstract. Contractor is responsible for removing and returning any material or parts requiring off-site repair or servicing.
- 5.0.2 Contractor is to temporarily remove any interference's necessary to accomplish work and then return ship to original condition—including any professional cleaning and any necessary labeling or painting. Contractor is required to confirm through ship-check: quantity of portable extinguishers (as per approved plan), quantity of dry chemical extinguishers to undergo the 6 yr. (from DOM) service maintenance and 12 yr. (from DOM) hydro-test and quantity of CO2 extinguishers to undergo the 5 yr. hydro-test (from date of last hydro-test), quantity of SCBA units for flow test and SCBA air bottles to undergo 5 yr. hydro-test, and any dimensions required to complete the work.

5.1 FIXED SYSTEMS:

- 5.1.1 Contractor is to survey, inspect, service and repair as required all fixed Halon, dry chemical, CO₂ and carboloy fire suppression systems including: engine and auxiliary engine rooms, hazmat locker, bulk paint storeroom, upper paint locker, boiler room, emergency generator room and galley. Each system servicing shall include (where required): local and remote activation controls, HVAC shutdown and damper controls and any activation alarms/indicators. Contractor is to perform all required regulatory hydro-tests on pressure bottles, fittings or hoses. Contractor is to demonstrate proper systems' operation in the presence of local regulatory inspectors (see section 6.0) to bring vessel into compliance and to satisfy the requirements of COI.
- 5.1.2 The Contractor shall ensure a safe work environment for personnel during CO₂ and Halon fixed fire fighting system repairs and modifications by accomplishing the following:
- 5.1.3 The Contractor shall provide a Qualified Person to take responsibility for personnel safety during the inspection, testing, repairing and modification of all problematic areas in the existing Halon & CO₂ fixed fire fighting system. All work to SCBA equipment shall be performed by an authorized manufacturer's representative.
- 5.1.4 The Contractor shall provide copies of the Qualified Person's Credentials such as certifications and licenses to work on CO₂ and Halon fixed fire fighting systems or SCBA equipment to the COTR for approval.

- 5.1.5 Main fixed CO₂ and Halon firefighting systems: provide inert gas or small charge of CO₂ in sufficient quantity to test gas powered sirens and system timers to meet USCG requirements. Carry out test of gas powered sirens in the protected spaces cited above to satisfaction of USCG and Chief Mate.
- 5.1.6 Carry out test of CO₂ local and remote controls by operating control levers at each location and recording the following data:
- 5.1.7 Operation of pressure switches and shutdown of interlocked fans and dampers upon activation of master valve.
- 5.1.8 Activation of gas powered sirens and any other CO₂ alarm devices in protected spaces upon activation of master valve and selector valve controls.
- 5.1.9 Pre-discharge time before selector valve opens once selector valve control has been actuated.
- 5.1.10 Discharge time.
- 5.1.11 Compare data with records of previous testing of same system. Deliver all data to COTR and USCG Inspector.
- 5.1.12 Contractor to take foam concentrate sample from tank reservoir and have independently tested to confirm foam concentrate is viable. Top off tank reservoir with new AFFF concentrate.

5.2 PORTABLE EXTINGUISHERS:

- 5.2.1 Contractor to provide annual service on 159 portable extinguishers and 1 semi portable extinguisher. Contractor is to perform hydro-tests on CO₂ bottles and Dry Chemical bottles as required (see last year service report). Contractor is to perform 6 yr. valve service on Dry Chemical extinguishers as required (see last year service report). Contractor to ensure safety pins are fitted and that each extinguisher is properly tagged with dated service tag. Number of portable extinguishers including spares:

- (97) 10 lb. Dry chemical.
- (62) 15 lb. CO₂
- (2) 50 lb. CO₂ (semi-portable)

If extinguishers are to be temporarily removed to contractors facilities: contractor is to remove only ½ of ship's extinguishers at any given time and approximately every other one so that vessel is not left with areas of ship not equipped with at least limited coverage of portable firefighting capability. Extinguishers taken off of vessel for service must be returned to their original locations before the next batch may be removed. The C/M may instruct the contractor to place ship's spare extinguishers in certain locations while the regular extinguishers are absent.

5.3 SCBA CASCADE SYSTEM:

- 5.3.1 Contractor to check and service both upper and lower ship's SCBA Compressors & refill systems and perform the following:
- 5.3.2 Check correct operation of both upper and lower Bauer air compressors to manufacturer's specifications. Change oil and all filters, including air filters. Inspect condition of belts. Provide COTR with report of compressor.
- 5.3.3 Check all lines and connections for corrosion or leaks. Renew all bad connections or fittings found.
- 5.3.4 Completely evacuate current air charge in each cascade bottle. Drain each bottle of residual condensate. Change air filter on intake hose. Refill entire system full capacity. Take air sample of system and have independently tested for harmful contaminants including: particulate, mists, gases or vapors. Provide COTR with test report.
- 5.3.5 Check relief valve pressure lifting point (in PSI) with a separate high-pressure air source. Provide COTR with test and final setting results.

5.4 SCBA EQUIPMENT:

- 5.4.1** Check all portable SCBA bottles located in (43) DC locker 1, (35) DC locker 2, (6) EOS and (15) EG locker for current hydro-test dates. Perform hydro test on all bottles last hydro tested before Feb. 2007.
- 5.4.2** Using an authorized manufacturer's rep. sanitize all associated air masks and conduct air-flow tests on all MSA SCBA units located in (8) DC locker I, (9) DC locker II, (3) EOS. Bag and seal all SCBA air masks. Provide COTR with discrepancy report for any regulator and air mask failures and/or needed parts and repairs to bring into good working order.
- 5.4.3** If SCBA units are to be temporarily removed to contractor's facilities, contractor is to remove only ½ of ship's units at any given time so that vessel is not left without fire response capability. SCBA taken off of vessel for service must be returned to their original locations before the next batch may be removed.
- 5.4.4** Provide vessel with one (1) new Self-contained Breathing Apparatus (SCBA) with communication system.

MSA Firehawk M7 SCBA with PASS alarm w/o thermal activation with Ultra Elite Face Mask (Medium), 30 minute 100% Aluminum Air Bottle and Clear Command Amplifier Part #A-M7LD0xC0C14CA0.

5.5 SCHEDULING & REGULATORY DEMONSTRATION

- 5.5.1** Contractor is responsible for demonstration of required system operation to local USCG & ABS inspectors. Contractor is to conduct preliminary tests on fixed fire systems prior to inspection by regulatory agencies. Contractor shall consult with COTR before regulatory test is scheduled.
- 5.5.2** Contractor is to coordinate, schedule in advance and then check in on every ship visit with either Chief Mate or Chief Engineer. Contractor shall designate a single lead-man to liaise with C/E and /or Chief Mate. On each ship visit, the lead-man shall brief the C/M or C/E on what work is planned, material/parts to be removed from vessel and schedules for return of items BEFORE WORK COMMENCES and project completion of pier side availability. Contractor ship visits or work parties needing pier access shall be scheduled in advance and in coordination with the Chief Mate.
- 5.5.3** Contractor is to advise COTR when work items described in this CLIN are operational and ready for inspection. COTR will arrange scheduling of regulatory bodies during the vessel's COI inspection which is tentatively scheduled for March 22/23. Contractor shall communicate findings and or problems encountered during contract to COTR BEFORE making any reports to regulatory agents and before the scheduling of regulatory test witnessing.

6.0 ADDITIONAL UNDISCOVERED WORK OR PARTS

- 6.1** Any work or parts required beyond that specified herein or as needed to complete fixed fire system tests and inspections or repairs to SCBA shall be the subject of a separate negotiated work item between COTR and the contractor. No additional work or parts shall be incurred by vessel that has not been approved in advance by COTR.

7.0 DELIVERABLES

- 7.1** The Contractor shall provide an "as found" condition report to the COTR before any corrective action is taken.
- 7.2** Contractor to provide COTR with one original and two copies of all required final certificates and test reports.
- 7.3** Provide COTR with reports on SCBA fill system and all portable units.
- 7.4** Upon approval from COTR, contractor to provide USCG with certificate copies of service reports.
- 7.5** Contractor is to provide all portable and fixed fire systems with appropriate tags indicating date of successful servicing or inspection.

CLIN 005

ANNUAL RADAR, RADIO & BRIDGE EQUIPMENT SERVICE

1.0 ABSTRACT

This item describes the annual maintenance service order for the ship's bridge electronic, radio and navigation equipment. This item also describes the annual GMDSS radio station survey, repair and maintenance contract. Inspection, maintenance and repair procedures shall be conducted as specified in manufacturer's maintenance and operations manuals.

2.0 REFERENCES (Available on Board)

- 2.1 Bridge Master E Service tech manual.
- 2.2 Sperry NAVIECDIS Voyage Management System manual
- 2.3 Applicable ship's drawings & Misc. manuals.
- 2.4 Sperry SRD-500 Dual Axis Doppler Speed Log manual
- 2.5 Sperry Mk 37 Compass Manual.
- 2.6 Raytheon and Furuno GMDSS equipment manuals.
- 2.7 Furuno SVDR & AIS technical manuals.
- 2.8 Various GPS, Anemometer, Radio, and Nav. Equipment manuals
- 2.9 Navigation & Communications Electronic Condition Report by NavCom dated September 2008.

3.0 ITEM LOCATION / DESCRIPTION

- 3.1 **Location:** 04 deck Bridge; 03 deck Communications Lab; 03 Deck Navigation office; 05 deck Flying Bridge

4.0 GOVERNMENT FURNISHED EQUIPMENT:

None

5.0 STATEMENT OF WORK

5.1 GENERAL

- 5.1.1 Contractor shall provide all equipment, labor, parts, materials, cables, licenses, lifting/moving/testing equipment necessary to complete work items.
- 5.1.2 All services, installations and workmanship shall meet IMO specifications and USCG requirements for GMDSS and Navigation.
- 5.1.3 All dimensions and conditions are estimated and contractor shall ship check prior to bid submission and notice to proceed.

5.2 REGULATORY CHECK

- 5.3.1 Perform operational, installation, and function tests of all required bridge Navigation and Communications equipments to meet the ABS requirements for annual bridge equipment survey. Meet with vessel's ABS surveyor to provide report for survey. This regulatory check and survey shall be timed to follow the completion of other work this item, and to be completed prior to ABS annual surveys occurring the last 2 weeks of March.

5.3 SPERRY COMPASS & STEERING SYSTEMS

- 5.4.1** Perform operational check and annual maintenance to both master gyro compass' and repeater system as recommended by manufacturer. Coordinate with Master and/or Chief Mate to run a functional test of the newly installed Steering system and Gyro interface.

5.4 GMDSS SUITE (FURUNO)

- 5.5.1** Contractor to conduct an annual survey and operational tests on the primary bridge GMDSS station and equipment suite to ensure regulatory compliance in all respects. Provide COTR, Master, and Chief Engineer with test and survey report on conditions found.
- 5.5.2** Check batteries on two SARTs for expiration. Renew EPIRB battery, test and re-certify.
- 5.5.3** Contractor is to schedule an inspection by ABS who will issue the vessel with valid *Statement Of Voluntary Compliance for Cargo Radio Certificate*. Contractor and ship's Communications Officer shall be present and liaison with ABS inspection.
- 5.5.4** Contractor to provide ship a one-year FCC approved shore-based maintenance contract to cover all GMDSS related equipment.
- 5.5.5** Ship check all required GMDSS publications onboard and provide all required updated versions. This requirement is not the subject of any additional costing and should be included in the original bid.

5.5 GMDSS SUITE COMMUNICATIONS LAB (RAYTHEON STR 2000)

Conduct an operational survey and test of training suite and provide COTR, Master and Chief Mate with a preliminary report on condition and any recommendations for additional service.

5.6 SPERRY BRIDGEMASTER RADARS AND NAVECDIS

- 5.7.1** Inspect, perform annual service and test Bridgemaster Radars and Navecdis system for full function and proper installations and connection. Provide Master and Chief Mate with a preliminary report on condition and any recommendations for additional service.
- 5.7.2** Provide a renewal of the vessel's annual C-map contract for electronic charts for world-wide service. Renewal contract shall specify vessel's COTS (Master) as POC.

5.7 SVDR and AIS

- 5.7.1** As part regulatory survey and function tests, survey SVDR and AIS systems and provide report to COTR, Vessel Captain, Cheng, C/M and ABS surveyor.

5.8 DOPPLER SPEED LOG

- 5.8.1** As part regulatory survey and function tests, survey Doppler Speed Log systems and provide report to COTR, Vessel Captain, Cheng, C/M and ABS surveyor.

5.9 BRIDGE VHF RADIOS

- 5.9.1** Perform operational and function tests on all VHF radios. Currently a condition exists that when transmitting on any of the 3 VHF radios the GPS signal is interfered with and GPS becomes temporarily disabled.

5.10 FURUNO FELCOM SAT B SYSTEM

- 5.10.1** As part regulatory survey and function tests, survey FELCOM SAT B system and provide report to COTR, Captain, C/E, C/M and ABS surveyor.

6.0 NOTES

- 6.1** All work is to be accomplished according to IMO, USCG & NEMA standards and shall follow manufacturer's repair & service procedures/recommendations.
- 6.3** All installations shall be left after survey and service in a condition to satisfy IMO specifications for grounding, routing, cable type, etc. It should be noted that several discrepancies have been discovered in regards to grounding and cabling after bridge electronics deliveries in the past.
- 6.3** The vessel will obtain the services of an independent, certified GMDSS Technician to QA the technician survey prior to ABS/USCG approval. COTR approval of contractor services shall be evaluated in conjunction with this QA survey.

7.0 DELIVERABLES

- 7.1** A final report after service on all tests, corrections & repairs to above equipment.
- 7.2** Service shall include delivery of a One Year Shore-Based Maintenance Contract for A3 GMDSS equipment.
- 7.3** Operation and maintenance manuals for new equipment and all required updated Pubs.
- 7.4** A GMDSS regulatory report for ABS survey of station and technician attendance & availability for scheduled ABS survey.

CLIN 006 Life Boat Davit Brake Jurisdictional Inspection

1.0 ABSTRACT

This item describes the internal inspection of the six Training Ship Lifeboat Gravity Davit Brake assemblies.

2.0 REFERENCES

Technical manuals and drawings available on vessel.

3.0 ITEM LOCATION / DESCRIPTION

3.1 Location: Port and Starboard 01 Weather Deck and 03 Aft House Weather Deck.

3.2 Description: Open and internally inspect each of the six Training Ship Lifeboat Gravity Davit Brake assemblies in the presence of the Gravity Davit Manufactures Technical Representative.

3.2.1 Davits #1 through #4 are Model BE 5.52,

3.2.1.1 Supported by Schat-Harding

3.2.2 Davits #5 and #6 are Type SPG (L) 27/15 with Type_BE 11.5 Winch,

3.2.2.1 Supported by Schat-Harding

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

None.

5.0 STATEMENT OF WORK

5.1 Provide all labor, materials and services to perform the following. All dimensions are estimated. Contractor is responsible for ship-checking and verifying dimensions prior to bid submission and notice to proceed.

5.2 Prior to work commencement and under the direction of ships staff, all davits shall have preventers rigged to prevent inadvertent release of davits.

5.3 Contractor shall, under the guidance of Manuf. Tech. Rep., open and inspect Davit Brake and Freewheel Assemblies as per USCG/IMO guidance for SOLAS vessels.

5.4 Contractor shall completely disassemble, clean, provide a preliminary condition report and make assemblies available for inspection by COTR or representative.

5.5 As determined by internal inspection, all components requiring repair or renewal in order to meet OEM requirement for fully functional and acceptable condition of assemblies will be covered under a separate item. *Note: Gaskets and soft parts shall be renewed at no extra cost to the Government.*

5.6 Assemblies shall be reassembled with new CRES fasteners. All joint surfaces shall be sealed with new gaskets or sealing compound where appropriate.

5.7 Prior to returning davits to service, a final overall inspection will be carried out by COTR or representative.

5.8 Full function testing of dockside davits may be problematic for inboard boats. A meeting between Manufactures Technical Representative, COTR or vessel representative (Chief Engineer or assignee) and Contractor shall be held to plan and execute function test.

6.0 NOTES: None

7.0 DELIVERABLES:

7.1 Complete Manufactures Technical Representatives report.

CLIN 007 ENTERPRISE R5 16V OVERHAUL & SURVEY 2010

1.0 ABSTRACT

This item describes the overhaul and inspection of cylinders #4 & #6 right & left bank of the starboard main engine along with the open & inspection of the 4 adjacent main bearings #4, #5, #6, and #7.

2.0 REFERENCES

2.1 Technical manuals for Enterprise Engines.

3.0 ITEM LOCATION / DESCRIPTION

2.1 Item Location: Main Machinery Space.

2.2 Item description: Open, Inspect and service 4 Main Engine cylinders along with adjacent main bearings as per the statement of work below.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES:

None

4.0 STATEMENT OF WORK

5.1. GENERAL CRITERIA & INITIAL INSPECTION AND PLANNING

5.1.1 **All dimensions are estimated. Contractor is responsible for ship checking and verifying dimensions and Data prior to bid submission and notice to proceed.**

5.1.2. **Provide the services of an Enterprise engine field technician/lead man with at least 5 years experience in Enterprise R4 or R5 engine overhaul to oversee all contract work and testing cited in this CLIN. Award vendor may use his own labor force to complete the work cited in the CLIN provided that the lead man is on site during critical phases of disassembly and assembly. Critical phases include all checkpoints and measurements cited in contract, actual rigging out of and into engine of components, inspection of and guidance for surface preparations (such as honing), and during inspection & testing phases.**

5.1.3. **Furnish labor, material, and equipment to accomplish the following. *Note: All parts and materials to be contractor supplied unless called out otherwise in specification. All parts and materials shall be OEM or equivalent pre-approved by COTR. All tolerances and limits referred to in this overhaul specification shall be defined as those that the OEM delineates as “suitable for reuse or reassembly” or “acceptable” in the Enterprise Maintenance and Repair manual for these engines. These tolerances and limits shall not be those the OEM describes as “as new” or “as delivered” unless specifically referred to in this specification and in no case shall the contractor deliver reports calling out tolerances as “out of spec” when within the “suitable for reuse” tolerances.***

5.1.4. **All work shall meet USCG, ABS or other appropriate regulatory standards. At the earliest opportunity during the first week of the project the contractor and/or sub-contractor shall tour the sight and review the project with the Chief Engineer, COTR, and regulatory body representative(s) to discuss expectations and checkpoints. Vessel’s Chief Engineer and COTR shall be given at least 48 hours notice prior to expected regulatory check points. Contractor is not responsible for surveyor fees, but must make every effort to minimize required surveyor visits by scheduling multiple inspections whenever possible.**

5.2 CYLINDER OVERHAUL PRE-TEST

5.2.1. Detach crankcase doors and valve covers for Stbd Main Engine cylinder and bearing service & overhauls. Cylinders to be overhauled shall be #4 and #6 right and left bank or others designated by Chief Engineer prior to start of work this item. The work shall consist of the overhaul of two (2) main/link rod pairs or four (4) each cylinders.

- 5.2.2. Ship's force will hydro-test engine prior to draining of jacket water. While ship's force is conducting the hydro-test, inspect for leaks around lower liner seals. After hydro-test, contractor shall drain off and dispose of jacket water to sewage system connection in AMR.**

5.3 MAIN ENGINE CYLINDER HEAD DETACHMENT(4 ea.)

- 5.3.1.** Disconnect and detach interferences from cylinder heads (4 ea.) including: fuel-lines, fuel valves, air-start, jacket water, intake, exhaust, lube oil, etc. Fuel valves to be detached, cleaned, serviced and tested at contractor's facility prior to re-assembly in engine. All testing and inspection to be witnessed by Chief Engineer and/or COTR.
- 5.3.2.** Disconnect and detach 4 ea. subcover/rocker-arm assemblies. Rig out of engine room or to mutually agreed upon and suitable location in engine room for cleaning and inspection. Take and record clearances as per manufacturer's Inspection and Maintenance Records.
- 5.3.3.** Using vessel furnished hydraulic pre-stresser, loosen cylinder head nuts, take and record as-found torque, and detach and store nuts for reuse. Provide torque values to Chief Engineer.
- 5.3.4.** Attach cylinder head lifting bracket, lift head clear of studs, rig out of engine room to suitable location for cleaning and inspecting. Weight is 1228 lbs each.
- 5.3.5.** On the fuel valves and safety valves detached from engine: Clean, service and test onboard or at contractor's facility prior to re-assembly in engine. All testing and inspection to be witnessed by Chief Engineer and/or COTR and included in final report.
- 5.3.6.** On the 4 ea. subcover/rocker-arm assemblies detached from engine: Take and record all clearances as per manufacturer's Inspection and Maintenance Records and include in final report. Inspection may take place onboard.

5.4. PISTON AND ROD DETACHMENT AND SURVEY (4 EA)

- 5.4.1** Clean upper part of cylinder liners of all carbon build-up, tap threaded holes in piston crown and install lifting tool for piston and link rod assemblies.
- 5.4.2** Using vessel furnished hydraulic pre-stresser, untorque connecting rod bolts, and record torque values. Provide torque values to Chief Engineer.
- 5.4.3** Using special tools and lifting gear, while holding main rod and piston, detach connecting rod bolts, and pull piston and link rod out and clear of cylinder as per repair manual.
- 5.4.4** Hook lifting gear to main rod piston and pull piston and rod clear of cylinder as per repair manual.
- 5.4.5** Rig pistons and rods to contractor's facility for disassembly and inspection. Approximate weight of master rod and piston assembly is 2,064 lbs. Link rod and piston assembly is 1,696 lbs.
- 5.4.6** The following work may be done aboard vessel, but shall be coordinated with ship's crew so as not take up entire machine shop:
- 5.4.7** Disassemble, clean, and inspect all piston and rod assemblies. Take and record all measurements such as piston pin, piston boss, connecting rod bushing, conn-rod box mating surfaces, conn-rod bearing bore and ovality, etc. as per Inspection and Maintenance Record in repair manual. Chief Engineer to witness inspections and readings shall be included in final report. Check and record torque on piston crown to skirt. Re-torque to correct value. Provide Chief engineer with readings.
- 5.4.8** NDT link rods and provide for inspection by COTR, Chief Engineer, and ABS surveyor. Report "as found" condition. Note: There was a past history of cracks propagating from link-rod, bolt holes. There are reconditioned link rods at the Marad warehouse in Alameda that will be utilized if a damaged link rod is discovered.
- 5.4.9** Reassemble piston and rod assemblies and ready for reinstall.

5.5 CYLINDER LINERS and BEARINGS

- 5.5.1 Deglaze and/or hone cylinder liners as per engine manufacturer's specification (Contractor may use vessel's glaze-breaking hone assembly). Take and record measurements for liner wear, ovality, proudness, etc. Clean, inspect, NDT via dye penetrant and measure crankshaft journal, and bearing shells. Determine suitability for reuse. *Note: If con-rod bearing condition is not suitable for reuse, replacement will be provided from ship's spares or under a separate work order.* Record all measurements as per Inspection and Maintenance Records and provide copies to Chief Engineer

5.6 CYLINDER REASSEMBLY

- 5.6.1 Perform the following checks on new contractor supplied piston rings: Install rings in liner and check piston ring end gap. Install rings on respective pistons and check side clearance. Record all values on engine manufacturer's form as per Inspection and Maintenance Record and provide copy to Chief Engineer. *Note: If using vessels spare liner to check end gap, re-apply preservative (vessel supplied) to liner after done gapping rings.*
- 5.6.2 Install piston and master/link rod assemblies in reverse order of disassembly with new piston rings using engine manufacturers ring compressor and special tools.
- 5.6.3 Prepare engine block and liner surfaces and rig previously serviced cylinder head or cylinder head from vessel's reconditioned spares into place using new contractor supplied seals and gaskets. Clean and install cylinder head nuts and torque using vessel furnished hydraulic pre-stresser as per engine manufacturer's specification. Record torque value and provide copy to Chief Engineer. *Note: If using vessel's spare cylinder head(s) which were rebuilt under a previous contract, it is not necessary to disassemble these vessel's spares as condition was acceptable in previous report. It is understood that the contractor will not be held responsible for any defect or delay under this contract caused by any fault associated with prior repairs contract.*
- 5.6.4 Prepare mating surfaces and rig sub-cover/ rocker arm assembly into place and secure as per engine manufacturer's specification.
- 5.6.5 Reinstall all detached interferences on engine as original using new contractor furnished gaskets and seals. Interferences include: fuel injection valves, fuel-lines, air-start, jacket water, intake, exhaust, lube oil, relief valve, test cock, etc.
- 5.6.6 Set and lock valve lash as per engine manufacturer's specification.

5.7 MAIN BEARING INSPECTIONS (4 ADJACENT BEARINGS #4, 5, 6 & 7)

- 5.7.1 Position Engine properly and detach lube oil lines and temperature sensor from each main bearing to be inspected.
- 5.7.2 Using hydraulic pre-stresser and stud puller assembly, detach main bearing stud nuts as per engine manufacturer's repair manual. Install stud protectors and lower studs into lower pockets.
- 5.7.3 Lift bearing cap clear of crankshaft and detach from engine. Detach upper shell from bearing cap and roll lower shell out of journal.
- 5.7.4 Inspect upper and lower bearing shells in accordance with engine manufacturer's specification and record findings on standard form. Perform a non-destructive dye check on bearing shells. Advise vessels Chief Engineer and Marad surveyor of findings and recommendation for replacement or re-use. **Bearing renewals will be from vessel's spares with replacement materials the subject of a contract modification.**
- 5.7.5 Inspect bearing cap for fretting on bore or seating surfaces. Remove any high spots by stoning. Clean bearing cap and lower bore thoroughly with solvent and lint free rags.
- 5.7.6 Roll in new or re-used or renewed lower shell and install upper shell in cap. Reinstall cap in block.

5.7.7 Install bearing cap studs and nuts using hydraulic pre-stresser and stud puller assembly in reverse order of assembly as per engine manufacturer's specification. Record torque values.

5.8 JW INLET FLANGE GASKET REPLACEMENT & PME THERMOCOUPLE BOSS REPAIR

5.8.1 #16 SME JW inlet flange is leaking. Detach bolts and remove failed gasket. Clean both flange surfaces and provide for COTR or vessel representative inspection. Replace with appropriate gasket and sealing compound to address any anomalies in surface. *Note: Adjacent flanges may require loosening to allow repair.*

5.8.2 PME #9 cylinder Exhaust manifold Thermocouple boss has failed. Crop and replace boss under guidance of OEM representative with appropriate material and welding procedures. All precautions must be taken to avoid foreign materials entering exhaust passage. Inspect with vessel's representative after repair using vessel supplied boroscope.

5.8.3 Test run JW system SME to prove repair.

5.9 DELIVERY INSPECTIONS

5.9.1 When ready fill engine with vessel supplied fresh water and vessel supplied engine water treatment with ship's crew assistance. Inspect for leaks and hydro-test with jacket water pumps.

5.9.2 Perform a set of deflections on SME prior to running engine (after engine has reached operating temperature).

5.9.3 Install crankcase doors and have ship's crew run lube oil pumps to check for flow to bearings and valve and running gear. Bar engine over while running pump. When pumps are secured pull alternate crankcase doors to check for oil flow to bearings and pistons.

5.9.4 Test run both main engines and perform SME bearing checks with vessel crew.

6.0 NOTES

ENGINE DATA

MODEL	R5-V16
SERIAL NUMBERS	85008-3127, 85008-3128 – Hull 4667
FUEL	MARINE DIESEL
TYPE INSTALLATION	MARINE MAIN PROPULSION
CONFIGURATION	45 Degrees VEE
NUMBER OF CYLINDERS	16
BORE	17 INCHES
STROKE	21 INCHES
CYCLE	FOUR STROKE
BMEP	252 PSI
RATED HORSEPOWER	12,500
RATED SPEED	514 RPM
DISPLACEMENT PER CYLINDER	4,766 CUBIC INCHES
TOTAL DISPLACEMENT	76,266 CUBIC INCHES

7.0 DELIVERABLES

- 7.1 Provide 2 final typewritten copies to Chief Engineer of all measurements, clearances and readings taken during work this item in manufacturer's format as per Inspection and Maintenance Record of service manual within 30 days of contract completion. This report shall include serial numbers of all rods, pistons, cylinder heads, etc., and shall be associated with the cylinder where reinstalled.

CLIN 008 ENTERPRISE R5 16V CYLINDER HEAD OVERHAUL

1.0 ABSTRACT

This item describes the inspection and overhaul of Main Engine cylinder heads.

2.0 REFERENCES

2.1 Technical manuals for Enterprise Engines.

3.0 ITEM LOCATION / DESCRIPTION

3.1 Item Location: Main Machinery Space.

3.2 Item description: Cylinder head overhaul and NDT in conjunction with the Open, Inspect and service of 4 Main Engine cylinders.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES:

4.1 4 Main Engine cylinder heads removed during cylinder overhauls.

5.0 STATEMENT OF WORK

5.1 GENERAL CRITERIA & INITIAL INSPECTION AND PLANNING

5.1.1 **All dimensions are estimated. Contractor is responsible for ship checking and verifying dimensions and Data prior to bid submission and notice to proceed.**

5.1.2 **Provide the services of an Enterprise engine field technician/lead man with at least 5 years experience in Enterprise R4 or R5 engine overhaul to oversee all contract work and testing cited in this CLIN. Award vendor may use his own labor force to complete the work cited in the CLIN provided that the lead man is on site during critical phases of disassembly and assembly. Critical phases include all checkpoints and measurements cited in contract, and evaluation for regulatory survey.**

5.1.3 **Furnish labor, material, and equipment to accomplish the following. *Note: All parts and materials to be contractor supplied unless called out otherwise in specification. All parts and materials shall be OEM or equivalent pre-approved by COTR. All tolerances and limits referred to in this overhaul specification shall be defined as those that the OEM delineates as "suitable for reuse or reassembly" or "acceptable" in the Enterprise Maintenance and Repair manual for these engines. These tolerances and limits shall not be those the OEM describes as "as new" or "as delivered" unless specifically referred to in this specification and in no case shall the contractor deliver reports calling out tolerances as "out of spec" when within the "suitable for reuse" tolerances.***

5.1.4 **All work shall meet USCG, ABS or other appropriate regulatory standards. At the earliest opportunity during the first week of the project the contractor and/or sub-contractor shall tour the sight and review the project with the Chief Engineer, COTR, and regulatory body representative(s) to discuss expectations and check-points. Vessel's Chief Engineer and COTR shall be given at least 48 hours notice prior to expected regulatory check points. Contractor is not responsible for surveyor fees, but must make every effort to minimize required surveyor visits by scheduling multiple inspections whenever possible.**

5.2 CYLINDER HEADS

5.2.1 On all four (4) cylinder heads detached from engine, transport to contractor's facility to perform the following service and inspections:

5.2.2 Completely disassemble and clean each cover detaching valve gear, etc. Check fire-decks, and valve seats for cracks using either dye penetrant or magnetic particle method. Clean and inspect all parts including: exhaust and intake valve spindles, rotators, guides, air-start valves, safety valves, indicator cocks, etc.

- 5.2.3 Provide as found report to COTR and Chief Engineer with recommendations for cylinder heads to continue with service as per specification.
- 5.2.4 On those cylinder heads accepted to proceed:
- 5.2.5 Grind intake and exhaust valves and seats to bring back to within manufacturer's tolerances. Take and record clearances as per manufacturer's Inspection and Maintenance Records.
- 5.2.6 Re-assemble cylinder head. Install vessel furnished hydro-test ring and gauge test cover to 125 psi.
- 5.2.7 **ABS surveyor to witness above inspections as required. Provide all readings to Chief Engineer and include in final report.**
- 5.2.8 Deliver cylinder heads reconditioned and serviced to vessel and rig into machinery space for reinstallation on engine or (if vessel's spare heads reinstalled on engine) to parts rack location designated by Chief Engineer. All heads shall have a light coating of anti-corrosion oil and be wrapped with plastic sheeting.
- 5.2.9 Cylinder heads rejected for service shall have a light coating of anti-corrosion oil and be wrapped with plastic sheeting, tagged with date and cause for rejection, and be delivered to Marad Warehouse in Alameda, CA. Substitute cylinder heads, previously overhauled, shall be delivered to vessel as per guidance above.

5.3 DELIVERY INSPECTIONS

- 5.3.1 Provide 2 final typewritten copies to Chief Engineer of all measurements, clearances and readings taken during work this item in manufacturer's format as per Inspection and Maintenance Record of service manual and provide for review during ABS attendance. This report shall include serial numbers of all cylinder heads, etc., and shall be associated with the cylinder where reinstalled

6.0 NOTES

ENGINE DATA

MODEL	R5-V16
SERIAL NUMBERS	85008-3127, 85008-3128 – Hull 4667
FUEL	MARINE DIESEL
TYPE INSTALLATION	MARINE MAIN PROPULSION
CONFIGURATION	45 Degrees VEE
NUMBER OF CYLINDERS	16
BORE	17 INCHES
STROKE	21 INCHES
CYCLE	FOUR STROKE
BMEP	252 PSI
RATED HORSEPOWER	12,500
RATED SPEED	514 RPM
DISPLACEMENT PER CYLINDER	4,766 CUBIC INCHES
TOTAL DISPLACEMENT	76,266 CUBIC INCHES

7.0 DELIVERABLES

- 7.1** Provide 2 final typewritten copies to Chief Engineer of all measurements, clearances and readings taken during work this item in manufacturer's format as per Inspection and Maintenance Record of service manual within 14 days of contract completion. This report shall include serial numbers of all cylinder heads, etc., and shall be associated with the cylinder where reinstalled

CLIN 009 REVERSE OSMOSIS INSTALLATION AND REACTIVATION

1.0 ABSTRACT

This item describes the installation of a Reverse Osmosis Watermaker (RO Unit).

2.0 REFERENCES

Technical manuals and drawings available on vessel.

3.0 ITEM LOCATION / DESCRIPTION

3.1 Location: Engine Room, port side, 12 ft flat and 26 ft flat.

3.2 Description: Provide and install one complete 27 cubic meter/day RO Unit.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

It is possible that Government may opt to purchase and provide RO Unit.

5.0 STATEMENT OF WORK

- 5.1 Provide all labor, materials and services to perform the following. All dimensions are estimated. Contractor is responsible for ship-checking and verifying dimensions prior to bid submission and notice to proceed.**
- 5.2 Contractor shall acquire new Reverse Osmosis Watermaker, specifications equivalent to or exceeding those of:**
 - 5.2.1 Model NH72463S Neptune Series, 27 cubic meters per day. Manufactured by FCI Watermakers, Santa Ana , CA (714) 850-0123, Contact: Scott McGuire**
- 5.3 RO Unit shall be mounted in Engine Room at frame 134, port side, 26 ft. flat.**
- 5.4 Membrane Vessels shall be installed one deck bellow, on hull frames between frames 134 and 140.**
- 5.5 All communicating hoses between RO Control Unit and Membrane housings shall be of length sufficient to facilitate Membrane location.**
- 5.6 Contractor shall obtain and install one new Back Flushing Media Filter, P/N 01-0055, at Frame128, Port side ER at 15ft. level outboard of 4-125-2 Tank. Media Filter can be obtained from FCI Water Makers, Santa Ana, CA.**
- 5.7 Contractor shall mount Low Pressure Feed Pump supplied with RO Unit on foundation at Port ER, 10ft. level, frame 121 just outboard of 4ft. ladder.**
- 5.8 Copper Nickel Feed Pipes shall be run from existing isolation valves at Low Pressure Evaporator Ejector Pump Suction Header at 10 ft. level, frame 121, to suction of the Low Pressure Feed Pump, continuing on to the Back-Flush Media Filters and culminating at each of the RO Unit Feed Inlet. Suction piping to Feed Pump shall be 1 ½” and all piping after Feed Pump shall be 1”. Feed Pump shall have Ball Valves for isolation on suction and discharge.**
- 5.9 One inch Back-Flush lines from the Media Filter shall be tied into the adjacent Ships Refrigeration Sea Water Overboard. The back flush line shall have a check valve and Isolation ball valve. Back Flush line shall be tied into 3” Ships Refrigeration Sea Water Overboard, just before sea valve.**
- 5.10 A 1” copper Product Water line shall be run from the Product Water outlet of the RO Unit and will tie-in to the Low Pressure Evaporator Distillate Discharge Header at frame 127. A 1” ball bronze ball valve shall be installed at tie-in for isolation.**

- 5.11** A 1 “ copper nickel Brine Discharge line shall be installed from RO Unit Brine Discharge and shall tie-in, with check valve and isolation ball valve, to the Back Flush Media Filter Overboard Line between filter back flush check valve and Back Flush Overboard Isolation Valve.
- 5.12** Power for RO Unit shall be run from either motor control centers MCC 402 or MCC 406 which either is more convenient. Contractor shall provide and install MCC breaker sufficiently suited for the requirements of the selected RO Unit.
- 5.13** Upon completion of installation a technical representative of the RO Unit manufacturer shall be on site for the activation of unit and for the training of ships personnel. The duration of this visit shall be of a minimum of one full 8 hour day from 0800 to 1700, but may be extended at the discretion of COTR under a separate item.
- 5.14** Unless otherwise specified, all replaced water piping shall be 90-10, copper-nickel. The copper-nickel fittings shall be a Sil-Braze type, compatible to 90-10 copper-nickel pipe. Piping shall be 150 class MIL T 164200 90-10 copper-nickel. Sil-Braze Fittings shall be MIL F 1183, 90-10 copper nickel. Flanges connected to Cu-Ni (copper-nickel) shall be 200 class MIL F 1183
- 5.15** All braze materials and fluxes shall be compatible with materials being brazed.
- 5.16** All fluxes shall be compatible with filler and piping. **Note: All excess flux shall be washed off completely at completion of repair.**
- 5.17** All flange fasteners shall be of stainless steel material.
- 5.18** All piping shall be properly supported where good engineering practice warrants. after completion of work contractor shall reinstall any and all interferences. reassemble system, pressure and operationally test for COTR.

6.0 NOTES: None

7.0 DELIVERABLES

- 7.1** Four comprehensive RO Unit technical manuals with addendums specific to any third party manufactured equipment.

CLIN 010 **WEATHERTIGHT DOORS**

1.0 ABSTRACT

This item describes the replacing of Navy style quick acting water tight doors with marine weather-tight fire doors and frames.

2.0 REFERENCES

Technical manual and drawings, available on board

3.0 ITEM LOCATION / DESCRIPTION

3.1 Item Location: 01 deck weather door on port and starboard side of forward house; 04 deck weather door on portside, by Wheelhouse Chartroom entrance; 04 deck port weather door to boiler room aft side of stack house; 03 deck fwd house at passage by Navigation office.

3.2 Item description: Replace 4 ea. Navy-type, quick-acting water tight doors with weather tight fire doors.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES: None

5.0 STATEMENT OF WORK

5.1 Supply all labor, equipment and materials to perform the following repairs and modifications.

5.2 Detach the five (5) existing water tight doors and frames at Locations **3.1**. Remove interferences to allow for installation of replacement door and frame assemblies.

5.3 Dispose of all parts of door after assessment by Chief Mate and Chief Engineer.

5.4 Renew detached doors and flanges with Coast Guard approved weather tight fire doors and flush mounted flanged frames. Doors shall be of stainless sheet steel over insulated core and be equal or better, as approved by COTR, than McGeogh Marine Ltd., MMLUSA A60 doors meeting USCG standards 164 136 18 0, NVIC 9-97. 1385 Barker Rd. Hood River, OR. Assembly shall include to match existing automatic closer and to match existing single door lever and latch locksets, lockable from inside. All locksets shall be keyed alike to match existing locksets. Doors shall swing out, and hinge shall be on same side as existing. All doors shall be fitted with a square port of maximum dimension to maintain structural fire rating, made of safety glass. All doors shall be fitted with dogs and dog clips for use in heavy weather.

5.5 Prepare all surfaces effected by work this item to SSPC-SP3 and prime and paint door with 2 coats of primer and 2 top coats and paint frame area with 1 coat rust deoxidizer, 1 coat Amerlock Sealer, 2 coats of primer and 2 top coats to match vessel's existing paint scheme.

5.6 Leave ready for sea.

6.0 NOTES: None

7.0 DELIVERABLES

7.1 Provide Chief Engineer & COTR with copies of USCG approval and specifications for new doors.

CLIN 011 **01 DECK WATERTIGHT DOORS**

1.0 ABSTRACT

This item describes the renewal of a water tight door with self closure and frame arrangements at A-60 bulkheads and the refurbishment of the Emergency Diesel Generator Room door.

2.0 REFERENCES

Ship's Fire protection drawing and other structural drawings available onboard.

3.0 ITEM LOCATION / DESCRIPTION

3.1 01 deck, forward deck access from starboard stairwell frame 45 water tight door.

3.2 03 deck, forward house Emergency Diesel Generator Rm. Refurbish door.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES: None

5.0 STATEMENT OF WORK

5.1 Contractor is to temporarily remove joinery interferences to complete task. Retain all A-60 insulation arrangements and materials for re-installation.

5.2 Remove existing door and frame attached to the A-60 bulkhead at location **3.1**.

5.3 At 01 deck forward stairwell to starboard side foredeck, provide and install a new heavy-duty frame and water tight door arrangement that meets and is rated as per existing fire boundary. Provide manufacturer's test certificate to COTR. The door is a high-traffic passage. The door and frame must be able to withstand high usage and stress. The door shall be equipped with an auto-closer and standard door handle latch assembly as well as a quick-acting, watertight "dog" arrangement which can be left un-dogged when not in use. The door, latch assembly, and closer shall rugged in construction, suitable for high-traffic, and set to provide a "soft" but positive closure. Doors shall be of steel with factory applied epoxy coatings and be equal or better, as approved by COTR, than water tight doors by Walz & Krenzer, Inc. Note: All locksets shall be keyed alike to match existing locksets. Door shall swing out, and hinge shall be on same side as existing. A 24" sill height shall be maintained. Door dimension shall be 54" x 30.

5.4 Contractor is to arrange for inspection for fit-up, final welding, insulation integrity and final operation before joinery is re-installed.

5.5 Surrounding joinery shall be re-installed or modified as necessary to accommodate the new frame. Contractor is to clean and/or re-coat disturbed areas.

5.6 At Emergency Diesel Generator space, refurbish the existing quick-acting watertight door as follows. Crop and replace wasted steel at port light opening to original dimension. Renew/refurbish brass dog wedge with new or wedge obtained from door removed in item 5.3. Replace and renew handle spring latch top allow handle to latch up when opening. Prepare and paint all new and disturbed surfaces to match vessel's existing paint schedule. Obtain and install anew port-light assembly to meet doors original design rating and regulatory requirements.

6.0 NOTES

6.1 All installations must meet and maintain ABS and USCG requirements for sill height, fire rating, port light opening, etc.

7.0 DELIVERABLES

7.1 Provide Chief Engineer & COTR with copies of ABS and/or USCG approval and specifications for new doors.

CLIN 012 **WEATHER DECK STEEL REPAIRS**

1.0 ABSTRACT

This item describes various steel work repairs throughout the vessel's weather deck.

2.0 REFERENCES

Drawings as per Andy Toro.

3.0 ITEM LOCATION / DESCRIPTION

- 3.1 Item Location:** 04 Bridge deck.
- 3.2 Item Description:** Fabricate port and starboard Bridge Rain Shields.
- 3.3 Item Location:** 04 Deck Aft starboard side frame 124
- 3.4 Item Description:** Insert forward bulkhead with steel plating.
- 3.5 Item Location:** Forward 01 deck portside vent 5-35-2 and starboard side vent 5-35-1.
- 3.6 Item Description:** Renew vent brackets.
- 3.7 Item Location:** Starboard main deck, frames 145 and 152, Port 01 deck, frame 35.
- 3.8 Item Description:** Renew goose-neck vents.
- 3.9 Item Location:** Starboard amidships stores crane.
- 3.10 Item Description:** Renew hand railing.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

None.

5.0 STATEMENT OF WORK

- 5.1 GENERAL** Provide all labor, materials, and services to perform the following. All dimensions are estimated.
- 5.2** Contractor is responsible for ship checking and verifying dimensions prior to bid submission and notice to proceed.
- 5.3** Gas-free and maintain safe for hot-work for all work this item. Contractor shall provide the services of a marine chemist and competent persons as outlined in general requirements section.
- 5.4** All plate steel and piping repairs shall follow ABS & USCG requirements for materials and welding.
- 5.5 Bridge Rain Shields Port & Starboard by Bridge Wing Doors**
 - 5.5.1** Obtain services of a Naval Architect to create drawings and engineer the installation of port and starboard Bridge Rain Shields. Preliminary sketches shall be submitted to COTR, and Chief Engineer for review and approval.
 - 5.5.2** Submit drawings to local ABS or Houston for review. *Note: Cost of ABS service and review shall not be responsibility of contractor, but submittal effort shall be. ABS cost will be covered by vessel and Marad.*

- 5.5.3 The new bridge wing rain shields shall be similar to those built for Navigation laboratory mock bridge on aft house.
- 5.5.4 Crop off and remove unused antenna platforms port and starboard.
- 5.5.5 Crop off and lower existing rudder angle, rpm and EOT indicators so as not to interfere with new construction and also to facilitate access to indicators. Visibility is also to be considered in new placement. Location to be approved by Captain or Chief Mate and COTR.
- 5.5.6 Fabricate and install bridge wing rain and wind shield with radius corners and coaming to match existing 05 deck on overhead, and a single window similar to wind shield aft. Outboard edge of vertical wind shield shall be finished with a fashin plate or pipe to match existing installations.
- 5.5.7 All new and disturbed steel and welds shall be prepped, primed and painted to match existing paint scheme.

5.6 Bulkhead Insert Forward BHD Frame 124 by E/R Stores Hatch 04 Deck

- 5.6.1 Crop off and remove existing tacked on steel plate.
- 5.6.2 Fabricate new steel plate insert to be installed into existing framework. New insert shall be welded into place.
- 5.6.3 All new and disturbed steel and welds shall be prepped, primed and painted to match vessel's existing paint scheme.

5.7 VENT PIPING BRACKETS 5-35-1&2 01 Foredeck Port & Starboard

- 5.7.1 Crop off and remove existing brackets.
- 5.7.2 Fabricate new steel brackets to be installed by welding onto existing frame and bolt clamped below vent gooseneck.
- 5.7.3 All new and disturbed steel and welds shall be prepped, primed and painted to match existing paint scheme.

5.8 STARBOARD GOOSE-NECK VENT FRAME 145 on Main Deck

- 5.8.1 Renew entire flanged section of this goose-neck vent from deck connection to ball-check. Vent is 2 ½", schedule 80, steel piping. Renew all fasteners with appropriately sized SS fasteners. Prepare new and effected areas as follows: 1 coat rust deoxidizer, 1 coat Amerlock Sealer, 2 coats primer and 2 topcoats to match existing paint scheme.

5.9 STARBOARD GOOSE-NECK VENT FRAME 152 on Main Deck

- 5.9.1 Renew entire flanged section of cofferdam goose-neck vent from deck connection to ball-check. Vent is 2 ½", schedule 80, steel piping. Renew all fasteners with appropriately sized SS fasteners. Prepare new and effected areas as follows: 1 coat rust deoxidizer, 1 coat Amerlock Sealer, 2 coats primer and 2 topcoats to match existing paint scheme.

5.10 PORT GOOSE-NECK VENT FRAME 35 on 01 Foredeck

- 5.10.1 Renew entire flanged section of 6-35-2 goose-neck vent from deck connection to ball-check. Vent is 2 ½", schedule 80, steel piping. Renew all fasteners with appropriately sized SS fasteners. Prepare new and effected areas as follows: 1 coat rust deoxidizer, 1 coat Amerlock Sealer, 2 coats primer and 2 topcoats to match existing paint scheme.

4.0 STBD MIDSHIP STORES CRANE RAILING

- 5.1.1 Remove and renew all existing hand railing on the starboard stores crane. Railing is 2", schedule 80, steel piping. The existing controls console is currently welded to the forward sections of railing. After new railing is installed

weld console back into place. Prepare new and effected areas as follows: 1 coat rust deoxidizer, 1 coat Amerlock Sealer, 2 coats primer and 2 topcoats to match existing paint scheme.

6.0 NOTES: None

7.0 DELIVERABLES: None

CLIN 013 WEATHER DECK FITTINGS REPAIRS

1.0 ABSTRACT

This item describes the repairs to be performed on all weather decks.

2.0 REFERENCES

2.1 Tech manual 300, Anchor Windlass Model X-1924

3.0 ITEM LOCATION / DESCRIPTION

3.1 Item Location: 01 and main weather deck areas.

3.2 Item Description: Make the following repairs and replacements.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

None.

5.0 STATEMENT OF WORK

5.1 GENERAL

5.1.1 Provide all labor, materials, and services to perform the following. All dimensions
Are estimated.

5.1.2 Contractor is responsible for ship checking and verifying dimensions prior to bid submission and notice to
proceed.

6 Gas-free and maintain safe for hot-work any hot work this item.

5.4 ANCHOR WINDLASS BRAKE BANDS

5.4.1 Supply all labor, equipment and materials to replace the worn starboard brake band linings on the starboard
anchor windlass wildcat.

5.4.2 Secure and fasten the starboard anchor and chain to the satisfaction of the COTR and Chief Mate prior to
disassembly.

5.4.3 Disassemble and remove brake bands complete with pins, hand wheel, shafts and nuts. Lay items out for
inspection by COTR, Chief Engineer and Chief Mate for wear and alignment.

5.4.4 Remove brake bands to contractor's facility. Remove worn brake linings and discard. Blast and coat brake
bands with 1 coat rust deoxidizer, 1 coat Amercoat Sealer, 2 coats epoxy primer, and 2 topcoats to match
existing paint scheme.

5.4.5 Provide and install new brake lining as per manufacturer's specification using new rivets and materials as
required.

5.4.6 Clean and prepare all brake band items disassembled in **5.2.3** for reassembly with new stainless cotter pins.
Deliver items to vessel for inspection by COTR, Chief Engineer and Chief Mate prior to re-assembly.

- 5.4.7 Repair or replace bent brake adjusting rod. This item currently interferes with tightening band to full range of adjustment.
- 5.4.8 Re-assemble brake bands as per manufacturer's recommendations for proper adjustment of adjusting rod and brake screw.
- 5.4.9 Test operation of replaced brake with COTR, Chief Engineer and Chief Mate. Leave installation and work areas clean and ready for sea.
- 5.4.10 Provide and install 1 each, Brake Screw Retainer and Hex HD Cap Screw (items 95 and 96, DWG R-15251) to end of the portside Brake Screw.
- 5.4.11 Fabricate and install 2 each, Chain Pipe Covers for the port and starboard chain pipes.

5.5 AFT PORT AND STARBOARD WIRE ROLLER CHOCKS

- 5.5.1 Open, inspect and detach as required the port side and starboard side, forward wire chocks to facilitate freeing-up and making fully operational. Remove to contractor facility if required making sure to block bulwark in way of chock for safety purposes.
- 5.5.2 Renew all bearing and pin cap fasteners with all new stainless steel fasteners and drill out broken bolts.
- 5.5.3 Renew all bearings and bushings for wire-chocks and repack with grease.
- 4.0 Prepare and paint all disturbed areas of chock and foundation with 1 coat of rust deoxidizer, 1 coat of Amerlock Sealer, 2 coats epoxy primer and 2 top-coats to match vessel's existing paint scheme.

6.0 NOTES: None

7.0 DELIVERABLES: None

CLIN 014 Service and Repair #1 and #2 Evap Jacket Water Valves

1.0 ABSTRACT

This item describes the service and repair of the #1 and #2 Evaporator Jacket Water Inlet and Outlet Gate Valves.

2.0 REFERENCES

Technical manuals and drawings available on vessel.

3.0 ITEM LOCATION / DESCRIPTION

3.1 **Location:** Engine Room, port side, 26 ft flat.

3.2 **Description:** Service and Repair of the #1 and #2 Evaporator Jacket Water Inlet and Outlet, 5 inch, 150 lbs., Gate Valves

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

5.2.1 None.

5.0 STATEMENT OF WORK

Provide all labor, materials and services to perform the following. All dimensions are estimated. Contractor is responsible for ship-checking and verifying dimensions prior to bid submission and notice to proceed.

- 5.1 Contractor shall detach the #1 and #2 Evaporator Jacket Water Inlet and Outlet, 5 inch, 150 lbs., Gate Valves from Evaporator Piping systems.
- 5.2 Blank flanges shall be provided at locations designated by COTR or representative to minimize loss of Main Engine Jacket Water.
- 5.3 Contractor shall completely disassemble, clean and make valves available for inspection by COTR or representative.
- 5.4 As determined by internal inspection, all valve components will be repaired or replaced as required attaining "full stop and function" condition of valves.
- 5.5 Renew valve packing and soft parts with appropriately sized Teflon braided packing and compressed mineral fiber (or appropriate approved by COTR) gasket materials.
- 5.6 Prior to returning valves to system, a final overall inspection will be carried out by COTR or representative.
- 5.7 Valves will be re-installed with new CRES stud/nut fasteners sized and rated for this service. All disturbed flanged joints shall have new spiral wound gaskets installed.
- 5.8 All piping shall be properly supported during work where good engineering practice warrants. After completion of work contractor shall reinstall any and all interferences and insulating blankets.
- 5.9 Reassemble system, pressure and operationally test for COTR.

6.0 NOTES: None

7.0 DELIVERABLES: None

CLIN 015 GALLEY EQUIPMENT & PORTHOLE GLASS RENEWAL

1.0 ABSTRACT

This item describes the replacement of the main galley convection oven and the baker refrigerator freezer with two (2) refrigerators.

2.0 REFERENCES

Technical manuals and electrical drawings available onboard.

3.0 ITEM LOCATION / DESCRIPTION

3.1 Location: Galley space 1-104-1

3.2 Description: Replace the obsolete and worn-out main kitchen convection oven, and Baker's refrigerator/freezer with new equipment.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

4.1 Ship's electrician will modify 230V feeder for convection oven to a new 450V breaker to allow proper power feed for the new unit.

5.0 STATEMENT OF WORK

5.6 Provide materials, equipment and services to replace the following Galley appliances.

5.7 Replace the aft convection oven in main kitchen space (not forward baker's oven) a new Hobart Model ATC 502-480V double stack Convection oven or equal approved by COTR.

5.8 Disconnect, remove and discard the existing unit. Provide any appropriate bar-code or equipment information to COTR and vessel's Chief Engineer and Storekeeper to allow for removal from logistics and management system.

5.9 Modify and paint foundation to accept new convection oven and mount in place.

5.10 Coordinate with vessel's electrician who will modify power feed in equipment room for appropriate style, size and voltage, and electrically connect new oven.

5.11 Test with vessel's crew.

5.12 Disconnect and remove the existing Baker's refrigerator-freezer located on the forward bulkhead of the Galley. Recover charge and detach condenser and evaporator units from this refrigerator freezer and turn over to vessel as spares.

5.13 Replace this removed refrigerator-freezer with two (2) True – 2 S/S door Refrigerators 27' w X 29 ½" d X 78 ¾".

5.14 Modify and paint foundation as required to accept new refrigerators.

5.15 Coordinate with vessel's electrician to insure appropriate power, then install and connect electrically both new refrigerators.

5.16 Test with vessel's crew and leave ready for sea.

6.0 NOTES: None

7.0 DELIVERABLES

Contractor to provide COTR with original and three (3) copies of technical manuals for the new equipment.

CLIN 016 **VARIOUS PIPING AND STEEL WORK**

1.0 **ABSTRACT**

This item describes various piping and steel work repairs throughout the vessel.

2.0 **REFERENCES**

Ship's drawings located on board in Tech Library

3.0 **ITEM LOCATION / DESCRIPTION**

3.1 **Item Location:** Various piping and steel work throughout the vessel

3.2 **Item Description:** Various areas as per Statement of Work

4.0 **GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES:** None

5.0 **STATEMENT OF WORK**

Provide all labor, materials, and services to perform the following. All dimensions are estimated.

Contractor is responsible for ship checking and verifying dimensions prior to bid submission and notice to proceed.

5.1 **FWD Lift Station MSD bypass – AMR 5-144-1**

5.1.1 Contractor shall fabricate a crossover section of 2 ½ - inch piping that will run between the fwd lift overboard piping and MSD overboard discharge piping. Connections to existing piping runs shall be through welded "T"s. Contractor shall utilize existing flanged fitting or propose another option to be approved by COTR.

5.1.2 Contractor shall install a 2 ½ inch flanged stainless steel ball valve into this new cross over section

5.1.3 Approximate crossover length is 3 feet and will require two tees and up to six 4 bolt 150# flanges. New, full face, compressed fiber gaskets suitable for application shall be installed at these flanged connections.

5.1.4 Contractor shall reattach all existing pipe hangers and add new pipe hangers where good engineering practice warrants. After completion of work, contractor shall reinstall any and all interferences and shall install new and repair, renew or replace any removed, damaged or missing pipe insulation in way of installation.

5.1.5 Contractor shall pressure test for Chief Engineer's witness, at operational pipe pressure all piping installed prior to insulating sections. All piping shall be painted to match vessel's existing paint scheme.

5.2 **MSD System Holding Cross Over to 5-104-2 Tank – Machine shop to Halon Room**

5.2.1 Contractor shall detach / protect / all interferences including pipe hangers, lockers, tool bins and ductwork to install new section of pipe run.

5.2.2 Contractor shall re install any items removed or placed aside for new pipe.

5.2.3 All new and modified piping shall have pipe hangers and brackets installed as per existing piping and standard marine practice.

5.2.4 Piping shall be welded and flanged at points similar to existing pipe run.

5.2.5 Flanges shall be 150# rated. All gaskets shall be new full faced compressed organic material.

5.2.6 All fasteners utilized between flanges, and pipe hangers shall be new.

- 5.2.7 Piping shall be connected by welds utilizing outside coupling rings or “wedding bands.” There shall be no weld slag interferences inside pipe work.
- 5.2.8 Contractor shall detach existing check valve and flange located in existing pipe run near forward bulkhead of machine shop.
- 5.2.9 Modify piping to allow for relocation of check valve and installation of a new Tee to connect new cross over piping for discharge selection to 5-104-2 tank or 5-104-1 (current arrangement is 5-104-1 only).
- 5.2.10 Contractor shall modify new pipe run to travel across forward section of machine shop, reserve tool annex, and electrical storeroom to port side, then elbow aft through bulkhead into Halon rm.
- 5.2.11 Contractor shall make new pipe run and penetrations and isolation valves into tank 5-104-2 with similar detail to pipe run into tank 5-104-1.
- 5.2.12 New piping shall be painted same and with similar color as existing pipe.
- 5.2.13 All new piping shall be 3" schedule 80 seamless steel. New flanges shall be 6 bolt 150# type. Fasteners shall be 316 SS steel. New piping shall be installed in the overhead forward section of ships machine shop (2-114-1), ship's tool room annex (2-114-2), and electricians store room (2-114-4) into Halon storage space (2-104-2). Piping shall extend into tank 5-104-2.
- 5.2.14 At tank top (5-104-2) contractor shall install a new flanged 3" brass PIMS gate valve

5.3 Ship's Water Heater Steam Supply and Condensate piping – 26 Ft. Flat FWD ER

Cancelled

5.4 Stateroom 11 - Center of Stateroom overhead, outboard of vent duct

- 5.4.1 Crop out and replace approximately 12 inches of damaged copper piping extending 6 inches before, and 6 inches after leaking section of pipe elbow.
- 5.4.2 All repaired piping shall be brazed in.
- 5.4.3 Contractor shall renew all piping insulation.

5.5 Stateroom 223 - Center of Stateroom overhead at pipe holding bracket

- 5.5.1 Crop out and replace approximately 12 inches of damaged copper piping extending 6 inches before, and 6 inches after leaking section of pipe elbow.
- 5.5.2 All repaired piping shall be brazed in.
- 5.5.3 Contractor shall renew all piping insulation.

5.6 Weather deck overhang 1-137-2 - In ceiling space outboard of weather tight door

- 5.6.1 Crop out section of 1 ¼ copper pipe.
- 5.6.2 Braze in 4 bolt 150 psi flanges on each end. Cut to fit new section of copper pipe and fit ends with 4 bolt 150 psi flanges.
- 5.6.3 All fittings shall be brazed and flanges shall be installed using new gaskets. New gasket material shall be compatible with 100 pound steam service. Contractor shall use new 316 ss steel bolts to secure flanges.
- 5.6.4 Section shall be pressure and temperature tested prior to re insulating repaired section.

5.7 01 Deck Fan Room Forward House 01-67-0

- 5.7.1 Contractor shall remove all insulation and interferences necessary to identify extend of leak in heater.
- 5.7.2 Contractor shall crop out enough copper pipe to replace leaking fitting with new socket braze in type.
- 5.7.3 Contractor shall modify piping to replace bad fitting with new.
- 5.7.4 Contractor shall braze in new fitting
- 5.7.5 Contractor shall pressure and heat test 24 hours prior to re insulate and paint
- 5.7.6 Contractor shall insulate and pain with similar material and paint type and color.

5.8 01 Deck supply Fan Steam heater 01-76-3

- 5.8.1 Contractor shall remove all insulation and interferences necessary to identify extend of leak in heater
- 5.8.2 Contractor shall disconnect heater from fan unit to facilitate repair
- 5.8.3 Contractor shall identify leak in unit and propose measure to Cheng how contractor shall repair leaking segment.
- 5.8.4 Contractor shall proceed and repair and refit heating unit after Cheng approval.
- 5.8.5 Contractor shall pressure test 24 hours prior to re insulation and paint work.

6.0 NOTES: None

7.0 DELIVERABLES: None

CLIN 017 RENEW EXHAUST DUCT

1.0 ABSTRACT

This item describes the removal, repair and re-installation of the vent ducting located in the overhead of the EOS above the control console. This ducting is for exhaust fan E1-133-2 for the EOS which runs behind the Main Switchboard.

2.0 REFERENCES

Vessel's plans and drawings available onboard.

3.0 ITEM LOCATION/DESCRIPTION

3.1 Location: EOS

3.2 Description: Replace wasted section of exhaust duct.

4.0 GOVERNMENT FURNISHED EQUIPMENT/MATERIAL/SERVICES:

None

5.0 STATEMENT OF WORK

5.1 Provide all labor, materials, and services to perform the following:

5.2 All dimensions are estimated. Contractor is responsible for ship checking and verifying dimensions prior to bid submission and notice to proceed and shall be responsible for all protective measures and covering of the work area.

5.3 Contractor shall remove all interferences and bulkhead joinery and ceiling panels.

5.4 Disconnect damaged section of ducting at flange fitting of the "Y". This section is approximately 12 linear feet of rectangular duct. Flange fitting appears to be wasted. Renew this flange and cut the Y section vent past the wasted underside. Remove ducting and repair any holes with new material and recoat ducting with epoxy coatings. Reinstall ducting using new flanges and new gasket material to seal duct.

5.5 Contractor shall reinstall all interferences, bulkhead joinery, and ceiling panels and leave ready for sea.

6.0 NOTES

6.1 DELIVERABLES None

CLIN 018 SSDG FUEL OIL CAM

1.0 ABSTRACT

This item describes the replacement of a damaged FO cam and associated cam-follower on the #1 SSDG.

2.0 REFERENCES

MaK Operations and Maintenance manual available onboard.

3.0 ITEM LOCATION/DESCRIPTION

3.1 Location: Machinery space

3.2 Description: Replace damaged FO cam with split cam provided by vessel.

4.0 GOVERNMENT FURNISHED EQUIPMENT/MATERIAL/SERVICES:

Split Cam assembly and associated cam-follower parts as required.

5.0 STATEMENT OF WORK

5.6 Provide all labor, materials, and services to perform the following:

5.7 Provide the services of an OEM or equivalent approved by COTR service engineer to oversee and perform the following repair. All recent MaK work has been performed by Ernst Narath of NC Power of Tukwila, WA. Other options for service must be proposed and approved by COTR.

5.8 Isolate and seal off region of #1 SSDG to allow for grinding and removal of damaged FO cam.

5.9 Disassemble tappet and pump assembly for cylinder to extent required for replacement.

5.10 Grind off damaged cam and install split cam assembly as per manufacturer's recommended repair procedure.

5.11 Clean and flush area of all grinding debris and materials.

5.12 Reassemble all interferences and set clearances.

5.13 Close up engine and test operation with ship's crew.

6.0 NOTES

7.0 DELIVERABLES

Technical service report in PDF format of repairs performed.

CLIN 019 TURBULO OWS CONTENT METER & SPARES

1.0 ABSTRACT

This item describes the purchase for exchange and delivery to Ship of a new Model OMD-2005 Oil Content Meter. Also, provide new coalescer and Hycasep filtration elements.

2.0 REFERENCES

Technical manuals and drawings available on vessel.

3.0 ITEM LOCATION / DESCRIPTION

3.1 Location: Engine Room

3.2 Description: Renew/exchange Model OMD-2005 Oil Content Meter on Turbulo Type TMPB 5, 15 ppm bilge water separator.

3.3 Provide new Coalescer and Hycasep filtration elements for the Simplex-Turbolo separator:
Four (4) each Coalescer Elements
Ten (10) each Hycasep-element filters

3.4 US Contact:
Simplex Americas LLC
20 Bartles Corner Road
Flemington, New Jersey, 08822
(908) 237-9099

3.5 Bilge Water Separator Data:
Turbulo Mechanical Phase Breaker
Type: TMPB 5
Serial No: 60499
Serial No cell: 5004683
Hull: Golden Bear
Year: 2006
BV order no: 1080039
Number of CD: 1

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES None.

5.0 STATEMENT OF WORK

5.1.1 Provide all labor, materials and services to perform the following. All dimensions are estimated. Contractor is responsible for ship-checking and verifying dimensions prior to bid submission and notice to proceed.

5.1.2 Contractor shall purchase and deliver to COTR or Representative the above described 15 ppm Oil Content Meter for exchange along with the separator Coalescer and Hycasep-element filters.

6.0 NOTES: None

7.0 DELIVERABLES:

7.1 OCM Meter Certificate of calibration and custody.

CLIN 020 **AC CHILLER & REFRIGERATION SERVICE**

1.0 ABSTRACT

This item describes the repair and annual service of A/C chiller units, and the core exchange of Refrigeration compressor #2.

2.0 REFERENCES

2.1 York Chiller and Refrigeration manuals available aboard

3.0 ITEM LOCATION / DESCRIPTION

3.1 **Item Location:** 5-118-1 in 2nd deck and lower machinery space and EOS

3.2 **Item description:** Inspect, replace current limiting relay #1 A/C, Clean condensers, test, and adjust Chillers. Replace #2 refrigeration compressor with an exchange core and adapt oil cooler to new core. Replace EOS A/C compressor.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

None

5.0 STATEMENT OF WORK

5.1 GENERAL CRITERIA

5.1.1 Supply all labor, equipment and materials to perform the following repairs and modifications.

5.1.2 All direct refrigeration work shall be under the supervision of a licensed refrigeration technician with at least 5 years experience on low-pressure and marine refrigeration equipment.

5.2 Replace Current Limiting Relay #1 A/C

5.2.1 Replace CLR with new equivalent and set for proper operation.

5.2.2 Provide 2 each CLR for vessel's spares.

5.3 Clean Condensers on A/C chiller units

5.3.1 Open all 3 condensers for cleaning after securing with ship's crew. Clean tubes with a non-destructive water jet process. Provide report on tube condition and recommendations if further cleaning is required. Vessel's crew will replace zincs in cover.

5.3.2 Reinstall with new gaskets.

5.4 REPLACE EOS COMPRESSOR & MODIFY COOLING WATER

5.4.1 Replace EOS A/C compressor with vessel spare.

5.4.2 Install simple compressor controls to provide LP and HP cut-out for each unit separately. Currently each has only HP cut-outs in series.

5.4.3 Remove cooling water control from CFW line to allow for constant water flow.

5.4.4 Provide replacement isolation valves (4 each) and re run liquid line for each compressor with new filter-drier arrangements. All drier connections shall be flare.

5.4.5 Provide 4 each spares of new filter-drier.

5.4.6 Flush systems and triple evacuate with nitrogen and charge with R22.

5.4.7 Prove systems secure, leak-proof, and fully operational to Chief Engineer or designate.

5.5 INSPECT AND SERVICE CONTROLS FOR A/C SW CONTROL

5.5.1 Provide the services of an A/c control and Electronic SW control service vendor to inspect, service and groom operations of all 3 A/C units.

5.5.2 Recommended vendor is Rob Chernosky of Comfort Dynamics 510 352-8501.

5.5.3 Operate all 3 units and inspect pneumatic and electronic controls for operation. Provide new air driers.

5.5.4 Provide report including recommended additional service.

5.6 RUN A/C UNITS

5.6.1 Run all 3 A/C units, trim controls, test for leaks and prove operation. Recommend further service or repair/

5.7 REPLACE REFRIGERATION CORE & SERVICE

5.7.1 Provide an exchange core for #2 refrigeration compressor.

5.7.2 Exchange compressors making all necessary adaptations for oil cooler, etc.

5.7.3 Flush oil as per manufacturer's recommendation to ready for ester based lubricant.

5.7.4 Perform a thorough leak check on entire refrigeration systems and operate with vessel's crew.

5.7.5 Leave ready for sea.

6.0 NOTES

7.0 DELIVERABLES

CLIN 021 BLAST & COAT 5-77-1 & 2 BALLAST TANKS

1.0 ABSTRACT

The Contractor shall provide all labor, material and equipment to prepare and restore coatings to the 5-77-1 & 2 ballast tanks.

2.0 REFERENCES

Marad coatings guidelines

Steel Structures Painting Council – Painting Manual, Vol. 1 & 2 (latest edition)

Valve actuator technical manual. Available on board.

3.0 ITEM LOCATION / DESCRIPTION

Item Location: ballast tank 5-77-1 & 2.

Item description: Prepare and restore coatings to ballast tank.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES:

None.

5.0 STATEMENT OF WORK

- 5.1 All dimensions are estimated. Contractor is responsible for shipchecking and verifying dimensions prior to bid submission and notice to proceed.
- 5.2 Provide all labor, material and equipment to prepare and restore coatings to the 5-77-1 & 2 ballast tanks and service the ballast valves and Tank Level Indicators for these tanks.
- 5.3 Open and gas-free the ballast tanks “Safe for men, safe for hot work.” Remove both manhole covers from each tank and provide safety bar at openings for entire period tank is opened. Tanks shall be maintained gas free for duration of work this item. Tanks will be flushed & pumped down to low suction by ship’s crew prior to commencement of job. Contractor shall strip, muck and dry tanks using contractor furnished pumps and hoses. Maintain tanks gas free for duration of work this item.
- 5.4 While tanks are open for inspection and coating work, open, disassemble, service and inspect the 6-inch tank suction valve and associated reach-rod universal joints, linkages, and penetrations. These valves and reach-rods are located in SWB tank 5-101-1 & 2. The actuators are mounted at the tank top on the 4th deck. Provide COTR with report of findings.
- 5.5 Lap and blue valve disc and seat, free up and lubricate joints and linkages, renew taper and shear pins and clean, grease and re-pack penetrations. When valve parts are ready for re-assembly provide to COTR and Chief Engineer for examination and acceptance. Special attention shall be paid to renewing taper and shear pins at universals and to freeing any sticking assemblies or overstressed joints.
- 5.6 Re-assemble valve and drive assembly after COTR acceptance. Hook reach-rod or valve stem back up to valve actuator and set limits and indicators according to valve manufacturers procedures. Lock all setscrews with locktite. Test and prove operation to satisfaction of COTR and Chief Engineer.
- 5.1 The Tank Level Indicator (TLI) system in the tank shall be inspected, tested, and calibrated by a service technician with at least 5 years experience working on Gems level sensor systems. Recommended local technician is Ed Garrahy of Technical Marine Service (510) 717-4979. If different vendor is proposed, provide name and resume of proposed

technician to COTR for approval prior to commencing work this item. Provide Chief Engineer and COTR with a report of TLI condition, calibration and any additional recommendations.

- 5.7 When tank has been certified gas free, provide for preliminary inspection to COTR and Chief Mate or Chief Engineer.
- 5.8 Mask and protect all items in tanks which could be adversely affected by scale debris or water blasting. Items to be masked include (though not exclusively) electrical wiring, and TLI system components.
- 5.9 High pressure FW wash using a minimum of 2500 psi all surfaces of tank (including manhole covers) to remove salts, chlorides, loose and peeling coating and loose scale. Strip and dry tank in preparation for mechanical surface preparation.
- 5.10 Once all areas in any given tank have been water blasted, cleaned and areas of extreme corrosion identified, provide tank for examination by COTR and Chief Mate or Chief Engineer for verification of readiness.
- 5.11 Re-Mask and protect all items in tanks which could be adversely effected by abrasive grit blasting. Items to be masked include (though not exclusively) electrical wiring, and TLI system components.
- 5.12 Using abrasive grit blast, brush-off or "sweep" blast tanks internal surfaces including manhole covers to an SSPC-SP-(7) standard to remove all loose paint and surface contamination and to provide a profile for paint application. Tightly adhering coatings and scale and rust may remain. Contractor shall be responsible for erection and removal of all necessary scaffolding and removal completely from vessel and facility and proper disposal of any spent blasting grit and any other trash, debris or by-products generated.
- 5.13 After grit blasting, sounding tubes, piping and striker plates within the tanks shall be inspected and a written report shall be delivered to COTR and Chief Engineer noting condition. Particular notice shall be given to blind sides of piping behind brackets and adjacent to tank internals for the presence of pitting and wastage. Assume for pricing purposes replacement of 10 feet of 2-inch steel piping.
- 5.14 Inspect tank ladders for condition of rails, rungs, stanchions and fasteners. Report findings to COTR along with any repair recommendations.
- 5.15 Inspect tanks for any areas of extreme corrosion or wastage. If any pitting is noted in tanks mark uniquely. If pitting is found to be 1/8 inch or deeper make special notation and provide COTR a report of findings. Pits over 1/8 inch deep shall be clad welded under a separate item.
- 5.16 Note: Pits as described above may be suspected of being associated with microbial pitting and will be addressed as follows under a separate item. Pits shall be fully cleaned out via mechanical scaling. They shall be wiped clean with hypochlorite solution. After preparation and gas-freeing of adjacent spaces, they will be clad-welded and ground smooth. Coating of involved surfaces shall continue as per basic item.
- 5.17 Coat tanks in areas prepared above. Coating system shall be high solids epoxy of Ameron, International paints or other marad approved coatings equal to or better than as follows:
 - 1 full coat, Ameron Amercoat 240 series epoxy, red, MDFT 6.0 mils
 - 1 stripe coat, Ameron Amercoat 240 series epoxy, gray, MDFT 6.0 mils
 - 1 full coat, Ameron Amercoat240 series epoxy, gray, MDFT 6.0 mils
- 5.18 The coating system shall be in conformance with approved Marad coatings guidelines. Prior to the start of the work, the contractor shall obtain all pertinent manufacturer's coating application procedures and data sheets. A paint schedule showing the type of coating for each coating system in this specification shall be provided to the COTR. Dry film thickness (millage) may vary slightly between those specified herein. It is the intent that proper millage shall be applied in accordance with products technical direction.

- 5.19** In conjunction with the contractor's supervision, application of all coating will be accomplished under the direct supervision of the coating systems manufacturers representative and to the satisfaction of the owner's representative. No application of coatings is to be made until the prepared surfaces or previously coated surfaces are accepted as ready by the coating systems manufacturers representative and owner's representative. The contractor is to arrange an inspection by the coating systems manufacturers representative, COTR and Chief mate or Chief Engineer prior to the application of any of the specified coatings.
- 5.20** Contractor shall provide instruments during all phases of this item to insure dew point readings are monitored. Contractor shall maintain a logbook, which shall become the property of the Owner at redelivery of the vessel.
- 5.21** Temporarily blank, mask or plug any penetrations from work areas into ship (including but not limited to port-lights, windows, doors, manholes, scuttles, drains and vents), in order to prevent intrusion of any blasting abrasive, dirt, removed material or paint while abrasive grit blasting or spray painting is in progress and maintain such an envelope until completion of such work.
- 5.22** Prior to commencing work, contractor shall conduct a joint inspection with the Owners Representative and Contractor's representative to verify that proper protection of all areas of the vessel and proper masking of areas not to be coated, has been satisfactory accomplished.
- 5.23** Upon completion of all work to the satisfaction of the COTR and Chief Mate or Chief Engineer, remove all equipment and materials, close up tank accesses with new gaskets, renewing any missing or damaged fasteners, and utilizing anti-seize. Leave all affected areas of the vessel as original. Any damage caused by ingress of grit, paint, or other contaminants shall be repaired/restored to satisfaction of COTR.
- 5.24** Contractor shall dispose of all grit, scale, and waste generated in the course of blasting and cleaning operations in accordance with Federal, State, and local regulations as applicable.

6.0 NOTES

- 6.1** Drying times and re-coating times specified by the coating systems manufacturer shall be strictly adhered to.
- 6.2** Every precaution shall be taken to preclude dirt, mud or debris from entering interior areas of vessel. Any grit, mud or dirt that enters vessel shall be promptly and thoroughly removed and area cleaned.
- 6.3** Application instructions of the coating systems manufacturer and their representatives shall be explicitly adhered to. Coatings shall be completely mixed prior to and during application to ensure that all solids are in complete suspension. Particular care shall be given to ensure that high solids coatings are continuously agitated during application to ensure proper suspension of solids.
- 6.4** Minimum dry film thickness (MDFT) shall be as designated in the appropriate coating schedules. This shall be confirmed by Elcometer thickness measuring instruments following each coating application.

7.0 DELIVERABLES

- 7.1** Two copies in binders of all logs and reports cited above required to perform work this item and MSDS for all materials supplied.
- 7.2** Two copies of a final typewritten report summarizing all work done this item including any required variance from the original specification. Report shall include separate section for valve work and TLI calibration.

CLIN 022 BLAST & COAT 5-104-1 & 2 BALLAST TANKS

1.0 ABSTRACT

The Contractor shall provide all labor, material and equipment to prepare and restore coatings to the 5-104-1 & 2 ballast tanks.

2.0 REFERENCES

Marad coatings guidelines

Steel Structures Painting Council – Painting Manual, Vol. 1 & 2 (latest edition)

Valve actuator technical manual. Available on board.

3.0 ITEM LOCATION / DESCRIPTION

Item Location: ballast tank 5-104-1 & 2.

Item description: Prepare and restore coatings to ballast tank.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES:

None.

5.0 STATEMENT OF WORK

- 5.25** All dimensions are estimated. Contractor is responsible for shipchecking and verifying dimensions prior to bid submission and notice to proceed.
- 5.26** Provide all labor, material and equipment to prepare and restore coatings to the 5-104-1 & 2 ballast tanks and service the ballast valves and Tank Level Indicators for these tanks.
- 5.27** Open and gas-free the ballast tanks “Safe for men, safe for hot work.” Remove both manhole covers from each tank and provide safety bar at openings for entire period tank is opened. Tanks shall be maintained gas free for duration of work this item. Tanks will be flushed & pumped down to low suction by ship’s crew prior to commencement of job. Contractor shall strip, muck and dry tanks using contractor furnished pumps and hoses. Maintain tanks gas free for duration of work this item.
- 5.28** While tanks are open for inspection and coating work, open, disassemble, service and inspect the (2) 6-inch tank suction valves and associated reach-rod universal joints, linkages, and penetrations. These valves and reach-rods are located outside the tanks in the engine room on the 12’ flat. The actuators are mounted port and starboard on the main deck. Additionally, open, disassemble, service and inspect (1) 14” crossover valve and associated reach-rod universal joints, linkages, and penetrations which is located in tank 5-104-1. This is a hand actuated valve which is located at the tank top on the 2nd deck. Provide COTR with report of findings.
- 5.29** Lap and blue valve disc and seat, free up and lubricate joints and linkages, renew taper and shear pins and clean, grease and re-pack penetrations. When valve parts are ready for re-assembly provide to COTR and Chief Engineer for examination and acceptance. Special attention shall be paid to renewing taper and shear pins at universals and to freeing any sticking assemblies or overstressed joints.
- 5.30** Re-assemble valve and drive assembly after COTR acceptance. Hook reach-rod or valve stem back up to valve actuator and set limits and indicators according to valve manufacturers procedures. Lock all setscrews with locktite. Test and prove operation to satisfaction of COTR and Chief Engineer.

- 5.2** The Tank Level Indicator (TLI) system in the tank shall be inspected, tested, and calibrated by a service technician with at least 5 years experience working on Gems level sensor systems. Recommended local technician is Ed Garrahy of Technical Marine Service (510) 717-4979. If different vendor is proposed, provide name and resume of proposed technician to COTR for approval prior to commencing work this item. Provide Chief Engineer and COTR with a report of TLI condition, calibration and any additional recommendations. *Note: A separate CLIN covers the replacement of these TLI's. Should these TLI's be slated for replacement, there shall be no costs associated with this inspection.*
- 5.31** When tank has been certified gas free, provide for preliminary inspection to COTR and Chief Mate or Chief Engineer.
- 5.32** Mask and protect all items in tanks which could be adversely effected by scale debris or water blasting. Items to be masked include (though not exclusively) electrical wiring, and TLI system components.
- 5.33** High pressure FW wash using a minimum of 2500 psi all surfaces of tank (including manhole covers) to remove salts, chlorides, loose and peeling coating and loose scale. Strip and dry tank in preparation for mechanical surface preparation.
- 5.34** Once all areas in any given tank have been water blasted, cleaned and areas of extreme corrosion identified, provide tank for examination by COTR and Chief Mate or Chief Engineer for verification of readiness.
- 5.35** Re-Mask and protect all items in tanks which could be adversely effected by abrasive grit blasting. Items to be masked include (though not exclusively) electrical wiring, and TLI system components.
- 5.36** Using abrasive grit blast, brush-off or "sweep" blast tanks internal surfaces including manhole covers to an SSPC-SP-(7) standard to remove all loose paint and surface contamination and to provide a profile for paint application. Tightly adhering coatings and scale and rust may remain. Contractor shall be responsible for erection and removal of all necessary scaffolding and removal completely from vessel and facility and proper disposal of any spent blasting grit and any other trash, debris or by-products generated.
- 5.37** After grit blasting, sounding tubes, piping and striker plates within the tanks shall be inspected and a written report shall be delivered to COTR and Chief Engineer noting condition. Particular notice shall be given to blind sides of piping behind brackets and adjacent to tank internals for the presence of pitting and wastage. Assume for pricing purposes replacement of 30 feet of 2-inch steel piping.
- 5.38** Inspect tank ladders for condition of rails, rungs, stanchions and fasteners. Report findings to COTR along with any repair recommendations.
- 5.39** Inspect tanks for any areas of extreme corrosion or wastage. If any pitting is noted in tanks mark uniquely. If pitting is found to be 1/8 inch or deeper make special notation and provide COTR a report of findings. Pits over 1/8 inch deep will be clad welded under a separate item.
- 5.40** Note: Pits as described above may be suspected of being associated with microbial pitting and will be addressed as follows under a separate item. Pits shall be fully cleaned out via mechanical scaling. They shall be wiped clean with hypochlorite solution. After preparation and gas-freeing of adjacent spaces, they will be clad-welded and ground smooth. Coating of involved surfaces shall continue as per basic item.
- 5.41** Coat tanks in areas prepared above. Coating system shall be high solids epoxy of Ameron, International paints or other marad approved coatings equal to or better than as follows:
- 1 full coat, Ameron Amercoat 240 series epoxy, red, MDFT 6.0 mils
 - 1 stripe coat, Ameron Amercoat 240 series epoxy, gray, MDFT 6.0 mils
 - 1 full coat, Ameron Amercoat240 series epoxy, gray, MDFT 6.0 mils
- 5.42** The coating system shall be in conformance with approved Marad coatings guidelines. Prior to the start of the work, the contractor shall obtain all pertinent manufacturer's coating application procedures and data sheets. A paint

schedule showing the type of coating for each coating system in this specification shall be provided to the COTR. Dry film thickness (millage) may vary slightly between those specified herein. It is the intent that proper millage shall be applied in accordance with products technical direction.

- 5.43** In conjunction with the contractor's supervision, application of all coating will be accomplished under the direct supervision of the coating systems manufacturers representative and to the satisfaction of the owner's representative. No application of coatings is to be made until the prepared surfaces or previously coated surfaces are accepted as ready by the coating systems manufacturers representative and owner's representative. The contractor is to arrange an inspection by the coating systems manufacturers representative, COTR and Chief mate or Chief Engineer prior to the application of any of the specified coatings.
- 5.44** Contractor shall provide instruments during all phases of this item to insure dew point readings are monitored. Contractor shall maintain a logbook, which shall become the property of the Owner at redelivery of the vessel.
- 5.45** Temporarily blank, mask or plug any penetrations from work areas into ship (including but not limited to port-lights, windows, doors, manholes, scuttles, drains and vents), in order to prevent intrusion of any blasting abrasive, dirt, removed material or paint while abrasive grit blasting or spray painting is in progress and maintain such an envelope until completion of such work.
- 5.46** Prior to commencing work, contractor shall conduct a joint inspection with the Owners Representative and Contractor's representative to verify that proper protection of all areas of the vessel and proper masking of areas not to be coated, has been satisfactory accomplished.
- 5.47** Upon completion of all work to the satisfaction of the COTR and Chief Mate or Chief Engineer, remove all equipment and materials, close up tank accesses with new gaskets, renewing any missing or damaged fasteners, and utilizing anti-seize. Leave all affected areas of the vessel as original. Any damage caused by ingress of grit, paint, or other contaminants shall be repaired/restored to satisfaction of COTR.
- 5.48** Contractor shall dispose of all grit, scale, and waste generated in the course of blasting and cleaning operations in accordance with Federal, State, and local regulations as applicable.

8.0 NOTES

- 9.0 Drying times and re-coating times specified by the coating systems manufacturer shall be strictly adhered to.
- 6.2** Every precaution shall be taken to preclude dirt, mud or debris from entering interior areas of vessel. Any grit, mud or dirt that enters vessel shall be promptly and thoroughly removed and area cleaned.
- 6.3** Application instructions of the coating systems manufacturer and their representatives shall be explicitly adhered to. Coatings shall be completely mixed prior to and during application to ensure that all solids are in complete suspension. Particular care shall be given to ensure that high solids coatings are continuously agitated during application to ensure proper suspension of solids.
- 6.4** Minimum dry film thickness (MDFT) shall be as designated in the appropriate coating schedules. This shall be confirmed by Elcometer thickness measuring instruments following each coating application.

7.0 DELIVERABLES

- 7.1** Two copies in binders of all logs and reports cited above required to perform work this item and MSDS for all materials supplied.
- 7.2** Two copies of a final typewritten report summarizing all work done this item including any required variance from the original specification. Report shall include separate section for valve work and TLI calibration.

CLIN 023 TANK LEVEL INDICATOR RENEWAL

1.0 ABSTRACT

This item describes repairs and maintenance to the Tank Level Indicating system on the Golden Bear.

2.0 REFERENCES

- 2.1 Tank capacity tables and blueprints. Available on vessel.
- 2.2 Gem sensor manual, Marad #151. Available on vessel.

3.0 ITEM LOCATION / DESCRIPTION

- 3.1 **Location:** Ballast tanks 5-104 1 & 2, SSDG DFM day tank 2-144-3 and Fwd Gray water lift tank .
- 3.2 **Description:** Replace failed Gems sensor system with pressure transducer type TLI and computer.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES None.

5.0 STATEMENT OF WORK

- 5.1 **Provide all labor, materials and services to perform the following. All dimensions are estimated. Contractor is responsible for ship-checking and verifying dimensions prior to bid submission and notice to proceed.**
- 5.2 Provide service of lead technician(s) with at least 5 years experience in troubleshooting and repair of Tank Level indicating systems to perform technical work this item. Recommended vendor is: Technical Marine Service, Inc. Ed Garrahy at (510) 717-4979. If different vendor is proposed, provide name and resume of proposed technician to COTR for approval prior to commencing work this item.
- 5.3 Gas free, and provide the services of a certified marine chemist to certify the following Diesel oil tank, Gray Water tank and Ballast tanks "Safe for entry." Maintain tanks' gas free certification for duration of work this item. *Note: Ballast tanks may be blasted and coated during this repair period. Work shall be coordinated with this item.*
- 5.4 Prior to cleaning, vessel's crew will pump tanks down to low suction (less than 6 inches remaining above tank bottom). Note: Contractor shall be pump Diesel Oil left below suctions to adjacent tanks via manholes or sounding tubes following the Chief Engineer's guidance.
- 5.5 Renew the tank level indicators systems and components in the tanks cleaned above.
- 5.6 Remove or secure all unnecessary components of the Gems level sensor system in each tank and up to and including the Signal conditioner connection box for all tanks referred to above. Components shall include transmitters, cables, connections, and floats.
- 5.7 Replace the Gems transmitters and float assemblies in tanks with a pressure transducer system such as that provided by TMS: Levelcom 101 computer with in tank transducer.
- 5.8 After installation program dynamic graphical performance curves to provide close tracking of volume to level curve for each tank. Provide COTR with report of findings including charts of float to voltage performance.
- 5.9 Connect output of new level computer to vessel's DCS and BCS automation systems.
- 5.10 Demonstrate proper operation to Chief Engineer and COTR.

6.0 NOTES: None

7.0 DELIVERABLES:

Provide documentation and report on new TLI system and provide update pages for vessel's TLI and automation manuals to vessel Administrative Support for inclusion in manuals.

CLIN 024 **SLOP OIL REMOVAL**

1.0 ABSTRACT

This item describes the removal of slop oil from the vessel.

2.0 REFERENCES

Technical manual and drawings.

3.0 ITEM LOCATION / DESCRIPTION

Item Location: Waste oil tank and slop oil shore connection.

Item description: Provide services to receive slop oil from vessel and clean out waste oil tank.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

Ship's crew will operate and oversee vessel's waste oil pump transfer.

5.0 STATEMENT OF WORK

- 5.1 Supply all labor, equipment and materials to perform the following repairs and modifications.
- 5.2 Provide the services and equipment necessary for the over water transfer and disposal of 7,000 gallons of waste oil from the vessel.
- 5.3 Recent sample of the slops revealed 22 % water, 78 % oil. Bidders shall assume the fluids to be pumped are within 5 % of the above sampling.
- 5.4 Transfer and disposal shall meet the requirements of all regulatory bodies with jurisdiction at CMA pier.
- 5.5 Ship's crew will provide labor to operate ship's pumps and oversight to transfer as per vessel's oil transfer manual.
- 5.6 Provide all appropriate transfer receipts and manifests to Chief Engineer for retaining onboard for vessel's records. The manifest yellow copy should be retained by the transporter. This yellow copy shall later be forwarded to the MARAD DPO office with the signature of the disposal facility operator for tracking final disposal action and dispersing fees.

- 5.7 Leave ready for sea.

6.0 NOTES

7.0 DELIVERABLES

All transfer receipts and manifests for Chief Engineer.

CLIN 025 JOINERY, HEAD DECK & SHOWER REPAIRS

1.0 ABSTRACT

This item describes the repair of cabin shower pans that have begun to detach from shower wall joinery and to facilitate increased drainage and upgrade of entire head deck and bulkheads. The decking system installed shall be the "phoenix" system made by *American Hi-Tech Flooring Co* or equal approved by COTR.

2.0 REFERENCES

Vessels blueprints, drawings, and materials specifications as required. All available on vessel

3.0 ITEM LOCATION/DESCRIPTION

3.1 **Locations:** 6 each 01, 02, & 03 deck stateroom heads in rooms Stateroom 29A, 29B, 22, 201, 312 and 313 or as designated by Chief Engineer and COTR shall have shower pan and deck renewed and head bulkhead paint renewed.

3.2 **Description:** Renew coating, decking and coving in way of shower and head spaces.

4.0 GOVERNMENT FURNISHED EQUIPMENT/MATERIAL/SERVICES None

5.0 STATEMENT OF WORK

5.1 **Supply all labor, equipment and materials to perform the following repairs and modifications:**

5.2 On the six (6) showers and heads designated by COTR perform the following:

5.3 In shower area of head, mechanically clean out and remove portions of shower pans where terrazzo has cracked and separated from shower stall. Remove as much material & rust as possible in areas where corrosion build-up is "prying" pan and stall apart. Provide both stalls and pans for inspection by COTR or Chief Engineer after cleaning.

5.4 Cut away all wasted steel and terrazzo material not bonded. Apply 30-year silicone or seka-flex caulk (or other suitable material proposed by contractor and approved by COTR) into cracks and gaps.

5.5 Entire surface of head deck shall be prepared to accept new coating system. Any rust or corrosion shall be mechanically scaled to SSPC-SP3 and surface coated with Corroseal.

5.6 Epoxy underlayment shall be used to build up bottom of shower such that an even, shallow slope from edge of pan to a 6-inch radius dished area in way of drain.

5.7 Entire deck of head and shower pan shall be renewed with a seamless deck system of American Hi-tech flooring, Phoenix One-step or equal approved by COTR over existing decking. Shower area shall be covered up 12 inches and rest of head deck shall be covered up 6 inches. Color shall be as selected by COTR to match existing installations.

5.8 Remove existing toilets, flushometers and associated plumbing from 13 suite heads. Provide a condition report on wall mounted porcelain toilets, flushometers and plumbing with recommendations for renewal and/or refurbishment,

5.9 Prior to re-installing toilets and fittings prep all surface areas of all 13 heads' bulkheads to a SSPC-SP3. Fill any pitted area with epoxy filler compound or other suitable filling compound to make ready for painting. Coat bulkheads with a compatible epoxy fleck coating to be applied per manufacturer's specifications. Color to be similar to existing bulkhead paint scheme as approved by COTR.

5.10 Re-install toilets and fittings using new gaskets and anti-seize compound after cleaning threads and flanges of rust and scale and coating with a rust-preventative coating.

5.11 Clean areas, re-install all detached items and remove deck protection and masking. Leave work area for Chief Engineer/Chief Mate inspection to ascertain condition and cleanliness.

5.12 Test drain in shower and head to satisfaction of COTR or Chief Engineer's assigned representative.

5.13 Upon satisfactory drain testing, leave ready for sea.

6.0 NOTES

7.0 DELIVERABLES

MSDS on flooring materials and Manufacturer's warranty information.

CLIN 026 MSD TANK REPAIRS AND PUMPING MODIFICATION

1.0 ABSTRACT

This item describes the steel repairs, coatings renewal and service of the Aft FAST D-7S Marine Sanitation Device.

2.0 REFERENCES

2.1 Technical manual and drawings for vessel's FAST D-7S Marine Sanitation Device (MSD). Available onboard

3.0 ITEM LOCATION / DESCRIPTION

3.1 Item Location: Auxiliary Machinery Space (AMR) 5-144-0.

3.2 Item description: Renew wasted steel and blast and recoat the aft MSD media chamber. Sweep and recoat the Chlorine Contact chamber.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

None.

5.0 STATEMENT OF WORK

5.1 Supply all labor, equipment and materials to perform the following repairs and modifications. Note: It is essential that all work associated with this sewage treatment plant be done in a controlled and sanitary fashion. The area of operations shall be draped and masked off. A washdown and changing station shall be maintained adjacent to workplace in AMR, and disposable coveralls and gloves shall be worn by workers in that location. In no case shall workers leave the location wearing the coveralls, boot coverings or gloves being worn in the environment. Once full cleaning and sanitation is achieved these rules may be relaxed upon mutual agreement of COTR and contractor.

5.2 Crop and replace steel to return Media chamber on aft MSD to design steel dimensions. Existing tank was adapted from former Red Fox unit converted in 1998. The media chamber has developed deteriorated coatings and has had several small leak repairs. Note that the Chlorine Contact Chamber was renewed in 2008, and a temporary aft protective flange and blank was placed on the media chamber at that time.

5.3 Vessel's crew will switch onboard sewage and gray water line-up to fully by-pass Scienco-FAST MSD unit. Witness valve line-up and tag-out and provide and install contractor tags for duration of repairs and modifications.

5.4 Vessel's crew will provide a caustic compound to clean and flush unit as per OEM specification. Contract or crew with vessel assist will empty and flush unit twice with fresh water leaving both stages pumped to low suction. Contractor shall fill unit and apply caustic to tank and allow vessel's crew to run in air scour for 24 hours. After a second fill and flush, contractor and Chief Engineer shall inspect to determine if a second caustic treatment is required and repeat process if needed.

5.5 Contractor's shall provide chlorine and labor to flush and sanitize unit on both media and chlorine chambers to provide a safe work environment. Vessel's crew will again assist in pump down to low suction. Contractor shall provide pumps and hoses for final stripping of tanks.

5.6 Provide services of a FAST OEM Technical Service engineer to give guidance on disassembly, repairs and reassembly. This FAST, Smith & Loveless technical representative shall be familiar with the operation of a FAST D7S sanitation device. Recommended technical source is:

Alan Fleischer
FAST Systems, Smith & Loveless Inc.

12977 Maurer Industrial Dr.
Sunset Hills, MO 63127-1515
email: afleischer@sciencofast.com
Tel: (314)645-6540
Fax: (314)645-6131
URL: www.marinefast.com

- 5.7** Open and detach all 3 access doors in media chamber, and both access doors in chlorine contact chamber to facilitate repairs and modifications. Internally inspect media chamber for fitting, installation, and coating condition. Provide a report to COTR.
- 5.8** Provide adequate OEM guidance to completely disassemble internal media, containment and fittings in the media chamber and stow in plastic bags, tagged for content, in a mutually agreed upon location. Note: One possibility may be to stow in AMR on port side of shaft or in bilges below shaft and unit. This may be preferable to moving materials to and from location.
- 5.9** On both media and contact chambers perform the following. Using abrasive grit blast, brush-off or “sweep” blast tank internal surfaces including manhole covers to an SSPC-SP-(7) standard to remove all loose paint and surface contamination and to provide a profile for paint application. Lower 4-inches of vertical external surfaces shall be mechanically scaled to remove epoxy filler applied to pitted areas.
- 5.10** Inspect tanks for areas of pitting and wastage and provide report to COTR with recommendations for steel replacement and clad welding repairs.
- 5.11** Expected Steel Replacement and repairs: Renewal planning should include A) The cropping and replacement of the lower 6 inch band of vertical steel all around the media chamber which has shown excessive pitting from outside. B) The cropping and replacement of the entire aft vertical bulkhead of the media chamber previously forming the boundary with the contact chamber and now with a provided with a doubler & flange. New section shall match hydrodynamic strength of the other vertical bulkheads. C) Three (3), 6-inch round inserts where leaks have occurred or pitting is excessive. D) 30 linear feet of 1/8” clad welding.
- 5.12** Entire internal surface of media tank should be prepared and re-blasted if necessary (as per recommendation of coating manufacturer, then coated with two coats of cycloaliphatic amine epoxy resin, Tnemec 104 or equal approved by COTR, specifically intended for full immersion in salt water a sewage service. Coatings shall be 6 to 8 mils DFT. Outside of tank shall be prepared and over-coat painted to match vessel’s existing paint scheme. Chlorine contact chamber shall have one full coat applied to areas of bare steel exposed by sweep blast (this is expected to include upper 20% of tank surface), and one full coat on entire tank surface.
- 5.13** After appropriate cure time, reassemble or renew Media tank internals under with OEM technical representative oversight. Provide for COTR, OEM, and Chief Engineer inspection.
- 5.14** Re-fill system with assistance of vessel’s crew and inspect and activate unit with vessel’s crew under OEM oversight to approve operations.
- 5.15** Clean and re-sanitize all areas disturbed by work this item. Paint all disturbed areas to match vessel’s existing paint scheme.
- 5.16** Leave ready-for-sea.

6.0 NOTES

- 6.1** It is essential that all work associated with this sewage treatment plant be done in a controlled and sanitary fashion. The area of operations shall be draped and masked off allowing limited passage through AMR with a “draped” barrier to worksite. A wash-down and changing station shall be maintained adjacent to workplace in AMR, and disposable coveralls and gloves shall be worn by workers in that location. In no case shall workers leave the location wearing the coveralls, boot coverings or gloves being worn in the environment. Once full cleaning and sanitation is achieved these rules may be relaxed upon mutual agreement of COTR and contractor.

- 6.2** As per SOW, the contractor shall provide the services of a FAST OEM Technical Service engineer to give guidance on disassembly, repairs and reassembly. This FAST, Smith & Loveless technical representative shall be familiar with the operation of a FAST D7S sanitation device.
- 6.3** While it is not necessary to have the presence of the OEM representative for the entire span of the project it is expected that the OEM participation will include the following: A) Electronic, photographic, and tele-conference communications with the Contractor, COTR and Chief Engineer to review "as-found" condition of internal components and recommendations for any replacement and assembly guidelines within 3 days of disassembly. B) One on-site visit spanning the period just prior to completion of re-assembly through filling and activation of the unit. It is expected that with appropriate planning this visit could be as little as two days.

7.0 DELIVERABLES

- 7.1** Provide two (2) hard copies and electronic copies of a new structural, installation and schematic plan for all new steel installations in Auto-Cad format.
- 7.2** Provide Two (2) copies of OEM technical report and condition survey along with a contractor report on repairs and coatings in PDF format.

CLIN 027 **01 DECK PASSAGEWAYS AND STATEROOM UPGRADE**

1.0 ABSTRACT

This item describes the upgrade and improvement to student stateroom suites and installation of new decking system to staterooms and passageway decks. The new decking system shall be the “phoenix” system made by *American Hi-Tech Flooring Co. or equal approved by COTR.*

2.0 REFERENCES:

None

3.0 ITEM LOCATION / DESCRIPTION

3.1.0 Location: Two student stateroom suites on the 01 deck of the aft house. A suite includes 2 staterooms and the adjoining head.

3.1.1 Description: Upgrade and recondition two stateroom suites including: Renew decks in staterooms and head, restore window sills, renew window blinds, paint out space, replace desks and dressers, vanities, sinks, faucets and toilets.

3.2.0 Location: Seven student stateroom suites on the 01 deck of the aft house. A suite includes 2 staterooms and the adjoining head.

3.2.1 Description: Upgrade and recondition seven stateroom suites on the 01 deck of aft house. Renew decks in staterooms only (adjoining head decks and showers not required), restore window sills, renew window blinds, paint out space, replace desks, dressers, vanities, sinks, and faucets.

3.3.0 Location: 01 deck passageways, port and starboard and athwartships, aft house, from frame 97 to 165, approx. 1400 ft².

3.3.1 Description: Renew decking system with “phoenix” system made by *American Hi-Tech Flooring Co. or equal approved by COTR.*

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICE: None

5.0 STATEMENT OF WORK

5.1 GENERAL CRITERIA

5.1.1 Supply all labor, equipment and materials to perform the following repairs and modifications.

5.1.2 Contractor shall provide furniture for renewal from vendor recommended below or equivalent approved by COTR. All furnishings shall be powder coated steel with heavy duty marine rated fittings:

Custom Ship Interiors
PO Box 882
14538 Solomons Island Rd.
South Solomons, MD 20688
(410) 326-9122

5.1.3 Contractor is to temporarily remove all interferences in way of work item and return to original condition after completion of work.

5.2 FURNISHING AND SINK RENEWAL

5.2.1 Ships force will remove existing desks and dressers from staterooms.

- 5.2.2 Contractor to provide and install new desks and dressers. Desks and dressers shall be those provided by Custom Ship Interiors Inc. (or equal approved by COTR). Desks shall be of steel construction with 3 right hand drawers and one lap drawer all with thumb latch of same dimensions as existing. Dressers shall be 36 inch wide as per existing, with 6 drawers and stainless steel paddle latches. Color of new furniture shall be as per recent installations and approved by COTR.
- 5.2.3 Contractor to remove existing sinks and vanities. Provide and install new sinks, fixtures (and associated plumbing) and vanities. Vanities, sinks and fixtures shall be those as per specified by Custom Ship Interiors Inc. in standard catalog cuts or shall match recent installations in new suites on vessel. Vanities shall be of steel construction and powder coated in color of new furniture as per recent installations and approved by COTR.

5.3 PAINT OUT SPACE, LOCKERS, BUNKS AND WINDOW FRAMES & SILLS.

- 5.3.1 Bunks and Lockers shall be prepared to SSPC-SP3 and spray painted to match new desk and dresser, and vanity. Color scheme shall be similar to recently refurbished suites as approved by Chief Mate.
- 5.3.2 Overheads, bulkheads shall be masked and prepared to SSPC-SP3 where required and spray painted. Color shall be a beige tone similar to existing refurbished suites.
- 5.3.3 Vinyl coverings on joiner bulkheads shall be stripped where peeling, gaps shall be filled with patching compound, and surface shall be smooth and prepared to accept coatings.
- 5.3.4 Four recently renovated suites identified as 104/106, 113/115, 116/118 and 121/123 have various amounts of paint damage. Contractor shall repair paint damage to these identified suites and furnishings to match existing paint scheme as approved by Chief Mate.
- 5.3.5 Remove existing and install new room darkening roller window shades to 26 staterooms.
- 5.3.6 26 window frames and sills shall be prepared to SSPC-SP3, rusted area shall be coated with 1 coat approved rust deoxidizer, 1 Amerlock Sealer, 2 coat primer and 2 top coats and to match new existing paint scheme.

5.4 STATEROOM AND HEAD DECKS

- 5.4.1 The stateroom decks are currently covered with linoleum tiles over underlayment. The intent is to remove and dispose of existing linoleum tiles and to install the "phoenix" decking system over remaining underlayment except in areas where water has damaged integrity of existing underlayment. Contractor shall assume that 100 ft² of existing underlayment shall require removal. Contractor is to prepare existing deck coverings as per manufacturer's instructions. The steel decks thus exposed shall be prepared to a SSPC-SP3 surface preparation and coated with 1 coat rust deoxidizer, 1 coat PPG Amerlock Sealer, 2 coats of epoxy primer as per the MARAD coating guidelines.
- 5.4.2 Provide pricing for additional tile and decking removal, and steel preparation. Pricing and costs shall assume that additional work will be awarded in 10 ft² increments
- 5.4.3 System shall be of sufficient thickness to level all steel deck irregularities to a minimum thickness over the highest portion of 1/8", or as specified by manufacturer.
- 5.4.4 All sides of deck system shall be covered up the sides of the surrounding bulkheads to a height of ½ -1", or sufficient to seal water incursion underneath bottom of connecting joinery in way of deck channel. Coved decking shall be squared off at top of channel such that baseboard may seat against it.
- 5.4.5 After flooring system is installed, replace rubberized baseboard coving similar to other parts of vessel along entire perimeter of compartment. Baseboard material shall be black and approved by COTR. Baseboard material shall be installed with adhesive and black-headed screws into joinery placed at edges of every panel near the top of baseboard. Reasonable effort shall be made to make screw locations symmetrical or evenly spaced apart and should not be tightened to the point where the baseboard material is indented.

- 5.4.6 Finally, a bead of clear silicon caulking shall be applied continuously at the junction of the flooring system and the newly installed cove basing.
- 5.4.7 In shower area of head, pan shall be ground away where separated from bulkhead and entire surface of head deck shall be prepared to accept Phoenix coating system. Any rust or corrosion shall be mechanically scaled to SSPC-SP3 and surface coated with 1 coat rust deoxidizer, 1 coat Amerlock Sealer and 2 coats epoxy primer. Epoxy underlayment shall be used to build up bottom of shower such that an even, shallow slope from edge of pan to a 6-inch radius dished area in way of drain.
- 5.4.8 Entire deck of head and shower pan shall be renewed with a seamless deck system of American Hi-tech flooring, Phoenix One-step or equal approved by COTR over existing decking. Shower area shall be covered up 12 inches and rest of head deck shall be covered up 6 inches.

5.5 DECKING SYSTEM

- 5.5.1 Contractor is to temporarily remove all interferences in way of work item and return to original condition after completion of work.
- 5.5.2 Contractor is to prepare existing deck coverings as per manufacturer's instructions. The aft house 01 deck passageways are currently covered with linoleum tiles over underlayment. The intent is to remove and dispose of existing linoleum tiles and to install the "phoenix" decking system over remaining underlayment except in areas where water has damaged integrity of existing underlayment. Contractor shall assume that 200 ft² of underlayment shall require removal. The steel decks thus exposed shall be prepared to a SSPC-SP3 surface preparation and coated with 1 coat rust deoxidizer, 1 coat PPG Amerlock Sealer, 2 coats of epoxy primer as per the MARAD coating guidelines.
- 5.5.3 Provide pricing for additional tile and decking removal, and steel preparation. Pricing and cost shall assume that additional work will be awarded in 10 ft² increments.
- 5.5.4 System shall be of sufficient thickness to level all steel deck/underlayment irregularities to a minimum thickness over the highest portion of 1/8" or as specified by manufacturer.
- 5.5.5 All sides of deck system shall be covered up the sides of the surrounding bulkheads to a height of 1/2" to 1" and squared off a track sufficient to seal water incursion underneath bottom of connecting joinery lower track.
- 5.5.6 After decking system is installed, renew rubberized baseboard coving similar to other parts of vessel along entire perimeter of compartment and passageways. Baseboard material shall be black and approved by COTR. Baseboard material shall be installed with adhesive and stainless steel screw into joinery butt joint seam, butt joint end and at every corner both sides.
- 5.5.7 A bead of clear silicon caulking shall be applied continuously at the junction of the decking system and the newly installed cove basing.

5.6 PAINT HEADS & RENEW TOILETS

- 5.6.1 Remove existing toilets, flushometers and associated plumbing from 13 suite heads. Provide a condition report on wall mounted porcelain toilets, flushometers and plumbing with recommendations for renewal and/or refurbishment.
- 5.6.2 Prior to re-installing toilets and fittings prep all surface areas of all 13 heads' bulkheads to a SSPC-SP3. Fill any pitted area with epoxy filler compound or other suitable filling compound to make ready for painting. Coat bulkheads with a compatible epoxy fleck coating to be applied per manufacturer's specifications. Color to be similar to existing bulkhead paint scheme as approved by COTR.
- 5.6.3 Re-install toilets and fittings using new gaskets and anti-seize compound after cleaning threads and flanges of rust and scale and coating with a rust-preventative coating.

5.7 BULKHEAD PANEL AND CHANNEL RENEWAL

- 5.7.1** It is assumed that during the 01 deck renovation that various bulkhead panel and supporting channels will need repair. The contractor shall assume that 12 panels in their lower 12 inches along with existing channel may need repair and/or replacement. These panels shall have rusted and wasted metal removed and be built up with metallic flashing and support to stabilize.
- 5.7.2** In way of damaged panels and channel track, contractor shall tack down new metallic z-flashing to form a new track and stabilize bulkhead.
- 5.7.3** New primer and coatings shall be applied to deck, track and panels in way of repairs prior to reapplication of underlayment and decking. Coving shall be installed to cover repaired areas or blend into existing installation.
- 5.7.4** In way of plumbing access panels, the upper and lower edges of all removable panels shall have a square channel riveted in to form a tapered feed into bottom channel. Bottom channels shall also be renewed in all access panels to form a clean stop.

6.0 NOTES None

7.0 DELIVERABLES

- 7.1** MSDS on flooring materials and Manufacturer's warranty information.
- 7.2** Technical data sheets on new desks and dressers.
- 7.3** Parts list for new desks and dressers.
- 7.4** Technical data and MSDS on new coatings.

CLIN 028 **UPPERCLASS MESS AND MAIN DK. PASSG. DECKING**

1.0 ABSTRACT

This item describes the preparation and installation of a new interior decking system in the specified locations. The new decking system shall be the “phoenix” system made by *American Hi-Tech Flooring Co. or equal approved by COTR*.

2.0 REFERENCES:

None

3.0 ITEM LOCATION / DESCRIPTION

- 3.1** **Location:** The upperclass mess complete on main deck from frame 47 to 69, approx. 1200 ft². Color designation is PT-608.
- 3.2** **Location:** The portside main deck and associated athwartship passageways from frame 96 to 166, approx. 1200 ft². Color designation is PT-608.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICE: None

5.0 STATEMENT OF WORK

5.1 GENERAL CRITERIA

- 5.1.1** Contractor is to temporarily remove all interferences in way of work item and return to original condition after completion or work.
- 5.1.2** Contractor is to prepare existing deck coverings as per manufacturer’s instructions. The upperclass mess deck and portside main deck passageways are currently covered with linoleum tiles over underlayment. The intent is to remove and dispose of existing linoleum tiles and to install the “phoenix” decking system over remaining underlayment except in areas where water has damaged integrity of existing underlayment. Contractor shall assume that 110 ft² of existing underlayment shall require removal. The steel decks thus exposed shall be prepared to a SSPC-SP3 surface preparation and coated with 1 coat rust deoxidizer, 1 coat PPG Amerlock Sealer, 2 coats of epoxy primer as per the MARAD coating guidelines.
- 5.1.3** Provide pricing for additional tile and decking removal, and steel preparation. Pricing and coast shall assume that additional work will be awarded in 10 ft² increments.
- 5.1.4** System shall be of sufficient thickness to level all steel deck/underlayment irregularities to a minimum thickness over the highest portion of 1/8” or as specified by manufacturer.
- 5.1.5** All sides of deck system shall be coved up the sides of the surrounding bulkheads to a height of ½” to 1” and squared off a track sufficient to seal water incursion underneath bottom of connecting joinery lower track.
- 5.1.6** After decking system is installed, renew rubberized baseboard coving similar to other parts of vessel along entire perimeter of compartment and passageways. Baseboard material shall be black and approved by COTR. Baseboard material shall be installed with adhesive and stainless steel screw into joinery butt joint seam, butt joint end and at every corner both sides.
- 5.1.7** A bead of clear silicon caulking shall be applied continuously at the junction of the decking system and the newly installed cove basing.

6.0 NOTES None

7.0 DELIVERABLES

7.1 MSDS on flooring materials and Manufacturer's warranty information.

CLIN 029 BALLAST VALVE ACTUATOR RENEWAL

1.0 ABSTRACT

This item describes the renewal of failed ballast valve actuator assemblies.

2.0 REFERENCES

Eaton Valve Actuator manual available on vessel.

3.0 ITEM LOCATION / DESCRIPTION

3.1 Location: Main Deck passage aft and below near frame 114 and Steering Gear Flat frame 188.

3.2 Description: Renew and replace failed valve actuators and calibrate to meet original installation design for open & close limits and span. Provide vessel spares for later installation.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES:

None.

5.0 STATEMENT OF WORK

5.1 Provide all labor, materials and services to perform the following. All dimensions are estimated. Contractor is responsible for ship-checking and verifying dimensions prior to bid submission and notice to proceed.

5.2 Contractor shall provide five (5) each Limitorque MXA-10 valve actuators with thrust base, or equal approved by COTR, for replacing obsolete and failed vessel Eaton valve actuators. Units shall meet technical specifications of existing for electrical requirements, torque, speed, flange and stem mount interface, and feedback. Reference previous USTS Golden Bear installations: Limitorque MX-10.1; Tag No. 224(XXX); Order No. 39296-001; S/N L641755. All actuators shall have blank stem nuts.

5.3 Utilizing 3 each of the "MX-10" actuators, renew the actuators for the 5-104-1 and 5-104-2 valves in the main deck passage, and valve 3-188-0 in the steering gear space. Modify and machine adaptor flanges and blank stem nuts to match existing reach rods and support.

5.4 Electrical junction box shall be provided with new water tight, metallic stuffing tubes, and all electrical connections shall be made to meet IEEE-45 and USCG requirements. Coordinate with vessel's electrician to connect, set and calibrate actuators.

5.5 Care shall be taken that reach rods and teleflex cables have adequate freedom in each direction so as not to inhibit valve operation. *Note: Contractor shall prove and demonstrate this full range with ship's crew prior to disconnecting original actuator.*

5.6 Adapt joinery and flash in way of 5-104-2 installation to provide a clean installation.

5.7 Operate, test and calibrate new valve actuators and prove operation with vessel's Chief Engineer and Chief Mate.

5.8 Leave ready for sea.

6.0 NOTES: None

7.0 DELIVERABLES

7.1 Provide PDF copies of technical operation and maintenance manuals for new valve actuators.

- 7.2** Provide PDF and 2 hard copies of a typewritten report of all mechanical requirements and instructions for valve actuator renewal and calibration associated with work this item.

CLIN 030 STEERING STAND & CONTROL SYSTEM REPLACEMENT

1.0 ABSTRACT

This item describes the replacement of the vessel's obsolete steering stand and installation of a new Steering Controls system along with associated equipments.

2.0 REFERENCES (Available on Board)

- 2.10** Bridge Master E Service tech manual.
- 2.11** Sperry NAVIECDIS Voyage Management System manual
- 2.12** Applicable ship's drawings & technical manuals associated with Sperry steering control.
- 2.13** Sperry Mk 37 Mod D/E Compass Manuals.
- 2.14** Furuno SVDR & AIS technical manuals.

3.0 ITEM LOCATION / DESCRIPTION

- 3.1** **Location:** 04 deck Bridge; 2nd deck steering flat; various locations throughout vessel for cable runs and repeaters.
- 3.2** **Description:** Replace the vessel's obsolete steering stand, and RAI system as per Statement of Work below with GFE Raytheon Steering and RAI equipment.

4.0 GOVERNMENT FURNISHED EQUIPMENT:

4.1 RAYTHEON COMPILOT 20 STEERING STAND AND RAI

- 4.1.1** Raytheon Compilot 20 Steering Stand complete with accessories as outlined in L-3 Klein Associates Quotation # 100528-DM-1-Rev#0. Available on request from vessel.
- 4.1.2** Raytheon RAI System complete with accessories as outlined in L-3 Klein Associates Quotation # 100528-DM-2-Rev#0. Available on request from vessel.

5.0 STATEMENT OF WORK

5.1 GENERAL

- 5.1.4** Contractor shall provide all equipment, labor, parts, materials, cables, licenses, lifting/moving/testing equipment necessary to complete work items.
- 5.1.5** All services, installations and workmanship shall meet IMO specifications and USCG requirements for GMDSS and Navigation.
- 5.1.6** Note: Lead based paint has been discovered throughout vessel. Contractor shall be prepared to perform all appropriate testing, abatement, and disposal procedures in way of mechanical and hot work this item.
- 5.1.7** All dimensions and conditions are estimated and contractor shall ship check prior to bid submission and notice to proceed.

5.2 STEERING CONSOLE

Removals and provision:

- 5.2.1 Remove existing steering stand located on the Bridge. New Steering Stand will be provided complete with all required cabling, adaptors and mounting hardware as per OEM installation manual. Existing cabling and runs are expected to be reused. Make note and bring to immediate attention of COTR where contractor suspects existing installations do not meet the minimum OEM requirements.
- 5.2.2 Remove terrazzo decking in way of existing foundations. Detach existing chaffing ring under steering stand. Detach resilient decking material for reinstallation after installation of new stand.
- 5.2.3 Detach false overheads and insulation one deck below in the Captains and Chief Engineer's office as required for welding/burning. Note: Lead based paint has been discovered throughout vessel. Contractor shall be prepared to perform all appropriate testing, abatement, and disposal procedures in way of mechanical and hot work this item.

Installations:

- 5.2.4 Mount adapter plate to existing foundation of old steering stand.
- 5.2.5 Mount Raytheon Compilot 20 Steering Stand to mounting plate.
- 5.2.6 Reinstall chaffing ring under Steering Stand.
- 5.2.7 Install junction box one (deck below in overhead) for Steering Stand interconnect cables.
- 5.2.8 Integrate existing equipment into Steering Stand Console (Radar, ECDIS, GPS, GYRO and Rate of Turn Indicator).
- 5.2.9 Reinstall insulation and overheads in Captains and Chief Engineer's office.

5.3 RUDDER ANGLE INDICATOR SYSTEM

Removals and Installation:

- 5.3.1 Take possession of and install the new GFE Rudder Angle Indicator (RAI) System for integration with Raytheon Compilot 20 and meeting all appropriate Regulatory requirements.
- 5.3.2 Remove the following: (1) RAI inside of the Pilot House, (1) RAI on Port Side Bridge Wing, (1) RAI on Starboard Side Bridge Wing, (1) RAI Transmitter in Steering Gear Flat.
- 5.3.3 Renew existing stuffing tubes on both Bridge Wings and detach false overheads and open MCT (main cable trunk) throughout the vessel and inspect existing cables to insure they meet minimum OEM specifications. Note: It is expected that existing cabling will be reused for RAI throughout the vessel as provision requirement specified inclusion of any and all required new cabling. Immediately notify COTR if any cabling is suspected of not meeting OEM specification.

Installations:

- 5.3.4 Mount Feedback unit for Rudder Angle Indicator (RAI) System in Steering Gear Flat.
- 5.3.5 Mount Three Face RAI on ceiling inside Bridge.
- 5.3.6 Mount (1) one each Panama Approved RAI on each Bridge Wing.
- 5.3.7 Mount RAI with bracket in Steering Gear Flat.
- 5.3.8 Run any new required commercial marine cables for the RAI system on the vessel and make all interconnects and securing arrangements as per Regulatory requirements and normal shipboard practice Existing cabling and runs are expected to be reused. Make note and bring to immediate attention of COTR where contractor suspects existing installations do not meet the minimum OEM requirements.

5.4 GYRO COMPASS SYSTEM INTEGRATION

- 5.4.1 Integrate Gyro inputs into new Steering Equipment on the vessel.

6.0 NOTES

- .1 All work is to be accomplished according to IMO, USCG & NEMA standards and shall follow manufacturer's repair & service procedures/recommendations.

- .2 All installations shall be left after survey and service in a condition to satisfy IMO specifications for grounding, routing, cable type, etc.

7.0 DELIVERABLES

- 7.5 3 hard copies along with electronic in autocad format of a 1-line diagram of all new installations.
- 7.6 A final report after installation on all tests, corrections & repairs to above equipment.

CLIN 031 MAIN AND AUX. SEAWATER PUMP & MOTOR REPAIR

1.0 ABSTRACT

Open for Jurisdictional Inspection and provide service and repair for #1, #2 and #3 Main Seawater Pumps and #1 and #2 Auxiliary Seawater Pumps. Excluding #1 Main Seawater Pump, clean, dip, bake and renew bearings in motors. Renew all pump suction and discharge sensing lines and Sensing line bosses.

2.0 REFERENCES

Framo Centrifugal pump technical manual, available on board.

3.0 ITEM LOCATION / DESCRIPTION

3.1 Location: Main Machinery Room, 12-foot flat, port and starboard side, frame 118.

Description: Open, inspect and service ASW and MSW pumps and (excluding #1 MSW) renew motor bearings. Renew all pump suction and discharge sensing lines and Sensing line bosses.

3.2 ASW Motor and Pump technical data as follows:

Motor:
440VAC/60HZ/3PH
75 Hp
1785 RPM
Reliance
Frame 405 TDZ

Pump:
Frank Mohn (FRAMO)
1600 GPM
Type VH200 / 150Z

3.3 MSW Motors and Pumps technical data as follows:

Motor:
440VAC/60HZ/3PH
50 Hp
1785 RPM
Reliance
Frame 365 TDZ

Pump:
Frank Mohn (FRAMO)
2000 GPM
Type VH300 / 250Z
Impellor "B2": 117-23-113

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES:

None

5.0 STATEMENT OF WORK

5.1 GENERAL CRITERIA

5.1.1 All dimensions are estimated. Contractor is responsible for ship checking and verifying dimensions and Data prior to bid submission and notice to proceed.

5.1.2 Provide all labor, equipment and materials to perform the following repairs:

5.1.3 Detach all interferences as required to complete work this item. Tag items as required facilitating reassembly and stowing in location designated by Chief Engineer and COTR.

5.2 MAIN AND AUXILIARY SEAWATER PUMP OPEN & INSPECT

5.2.1 Disassemble all Main and Auxiliary Seawater Pumps from motor. Lay out all items for inspection including intermediate bearing housing. Take initial measurements and clearances including coupling and shaft tolerances and provide preliminary report and materials for inspection by COTR and Chief Engineer.

5.2.2 Using new shaft and coupling as standard, inspect, stone, and blue the disassembled shaft and report on condition to Chief Engineer & COTR with recommendations for reuse, reconditioning or replacement.

5.2.3 Provide a new "Simsite" pump impellers and wear rings for #2 and #3 Main Seawater Pumps.

5.2.4 Detach impellor and mechanical seal from each pump stub shaft. Provide a condition report on impellor and wear ring with recommendation for, reuse, reconditioning or replacement. Replace mechanical seals with new seals provided from Ships Spares. Replace impellor with new "Simsite" impellor or turn-over to Chief Engineer as per direction of COTR.

5.2.5 Send out detached mechanical seals for OEM level reconditioning and turn over to Chief Engineer when complete. Mechanical seal repairs on these pumps have been successfully completed in the recent past by:

Mechanical Seal Repair (MSR)
Signal hills, CA
(562) 472-2221

5.2.6 Confer with vessel's Chief Engineer and COTR whether to install new "Simsite" wearing rings in pump casings or turn over to Chief Engineer as per COTR. Prior to installing new "Simsite" or bronze wear rings, prepare casings via water wash and grit blast in preparation to apply a coat of Belzona Super-Metalglide. Strictly adhere to Belzona manufacturer's recommendations for application.

5.3 MOTOR SERVICE

5.3.1 Verify that motor shaft run out, radial play and end thrust are within manufacturer's tolerances. Report findings to COTR and Chief Engineer. Include findings in final report.

5.3.2 Rig motors out of vessel and to contractor facility and/or electric motor service shop for repairs.

5.3.3 Disassemble motors to clean, dip, and bake windings. Renew connector pigtailed making sure to renew lead tags.

5.3.4 Replace bearings with new sealed bearings and reassemble motor with plugs in grease connections.

5.4 PUMP AND MOTOR REASSEMBLY

5.4.1 Reassemble pump, motor and intermediate housings with new bearings as per guidance in manufacturer's technical manual. Provide 1 set of spare intermediate shaft bearings.

5.4.2 All rabbet-fit joints shall be checked for trueness and corrected if not found true. Particular attention shall be paid to mounting plate for trueness of motor seating surface and bearing housing seating surface. Include findings in report cited above.

5.4.3 Repack bearing housings with vessel supplied grease, and reassemble pump motor mounting plates

5.4.4 Install impeller, wear ring, mechanical seal and impeller key. New impeller and wear rings shall be of Simsite material. Simsite impellers and wear rings have been provided in the past by: Sims Pump and Valve Co. phone (201) 792-0600.

5.4.5 Reassemble and reinstall pumps in systems with new gaskets and galvanically compatible fasteners. Use onboard tech manual for guidance during installation.

5.5 SENSING LINE RENEWAL

5.5.1 Crop out and renew all existing MSW and ASW Pump suction and discharge gauge sensing and vent line bosses.

5.5.1.1 For MSW, a total of six 1/2" NPT Cu-Ni weldlet discharge bosses and three 1/4" NPT Cu-Ni weldlet discharge bosses.

5.5.1.2 For ASW, a total of four 1/2" NPT Cu-Ni weldlet suction and discharge bosses

5.5.1.3 All existing pressure sensing tubing for pumps, all pump gauges and all pump pressure switches and transducers shall be replaced with tubing of stainless steel construction. All tubing shall have supports and stand-offs provided consistent with good engineering practice. All Sensing lines shall have stainless steel isolation valves. MSW discharge sensing tubing and all ASW sensing tubing shall be 3/8". MSW suction sensing tubing shall be 1/4".

6.0 NOTES

6.1 At each stage of reassembly, alignment shall be verified and provided for inspection by COTR and Chief Engineer. These alignment measurements shall be included in final report. COTR and Chief Engineer shall be provided with the following measurements: Shaft tolerance, run outs; Shaft end thrusts; and Shaft radial play.

7.0 DELIVERABLES

7.1 Provide 2 copies of final reports of all work this item.

CLIN 032 Engine Exhaust Stack Insulation Repair

1.0 ABSTRACT

This item describes the repair of Main Engine and SSDG Exhaust insulation.

2.0 REFERENCES

Technical manuals and drawings available on vessel.

3.0 ITEM LOCATION / DESCRIPTION

3.1 Location: Engine Room Uptakes

3.2 Description: Repair of approximately 12 square feet of failed castable insulation and block insulation and approximately 50 square feet of failed insulation cloth covering located at various locations on Engine exhaust stacks to be identified by COTR or representative.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES None.

5.0 STATEMENT OF WORK

5.1 Provide all labor, materials and services to perform the following. All dimensions are estimated. Contractor is responsible for ship-checking and verifying dimensions prior to bid submission and notice to proceed.

5.2 Castable insulation and block insulation repairs

5.3 #3 SSDG Stack, Main Deck approximately 6 sq. ft

5.4 #2 SSDG, 01 Deck approximately 6 sq. ft

5.5 Contractor shall open insulation at identified locations removing any/all loose castable or block insulation.

5.6 After removal of failed insulation, COTR or representative shall inspect area to verify that remaining insulation is structurally sound and intact.

5.7 Contractor will replace all failed insulation with like material.

5.8 Insulation cloth repairs.

5.9 Starboard Main Engine, Main Deck, approx. 20 square feet
#2 SSDG, 03 deck, Approx. 3 square feet
Port Main Engine, 03 deck, Approx. 15 square feet

#1 SSDG , 04 deck, Approx. 6 square feet

5.10 All areas shall be painted to blend consistent with surrounding area.

6.0 NOTES: None

7.0 DELIVERABLES: None

CLIN 0033

UPPERCLASS MESS AND GALLEY PORTHOLE GLASS

1.0 ABSTRACT

This item describes the preparation and installation of new port lights to replace broken port hole glass.

2.0 REFERENCES:

None

3.0 ITEM LOCATION / DESCRIPTION

3.3 Location: The upperclass mess middle port light.

3.4 Location: The galley forward port light.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICE: None

5.0 STATEMENT OF WORK

5.1 GENERAL CRITERIA

5.1.1 Contractor is to temporarily remove all interferences in way of work item and return to original condition after completion or work.

5.1.2 Contractor is to remove the (2) broken porthole glass at stated locations and replace with new 18 ½" x ¾" porthole glass.

5.1.3 Contractor is to verify dimensions of porthole glass before ordering and installing porthole glass.

6.0 NOTES None

7.0 DELIVERABLES

7.1 None

CLIN 034 BILGE WATER CENTRIFUGAL SEPARATION SYSTEM

1.0 ABSTRACT

This item describes the installation of a Bilge Water Centrifugal Separation System (BWCSS).

2.0 REFERENCES

Technical manuals and drawings available on vessel and from BWCSS manufacturer.

Vessel's Oily Waste system drawing 2706-400-1. Available onboard or from A Toro.

3.0 ITEM LOCATION / DESCRIPTION

3.1 Location: Engine Room, Starboard side, 12 ft flat, frame 139

3.2 Description: Provide and install one complete 2 cubic meter/hour BWCSS.

4.0 GOVERNMENT FURNISHED EQUIPMENT / MATERIAL / SERVICES

4.1 It is possible that Government may opt to purchase and provide BWCSS Unit.
Government can supply up to:

- 200' (Two Hundred Feet) of 2" 90/10 Cu-Ni pipe
- 25 (Twenty Five) 2" Silver Braze 90/10 Cu-Ni elbows
- 6 (Six) 2" flanged 150 ball valves
- 12 (Twelve) 2" Silver Braze Cu-Ni 150# commercial flanges
- 12 (Twelve) 2" x 1.5" Brass Silver Braze to NPT adaptors
- 12 (Twelve) 2" Threaded Brass commercial flanges
- 24 (Twenty Four) 2" Threaded Brass Pipe nipples
- 12 (Twelve) 2" Silver Braze 90/10 Cu-Ni tees

5.0 STATEMENT OF WORK

Provide all labor, materials and services to perform the following. All dimensions are estimated. Contractor is responsible for ship-checking and verifying dimensions prior to bid submission and notice to proceed.

5.1 Contractor shall acquire one new Bilge Water Centrifugal Separation System, specifications equivalent to or exceeding those of:

5.1.1 Alfa Laval Ecostream Separation System Model Number 585420-01. System must be capable of processing up to 2 cubic meters/hour and meeting IMO MEPC 107.49 requirements

5.2 BWCSS shall be installed in Engine Room on ex-DFM Purifier Sludge Tank, Starboard 10 ft flat at frame 139.

5.2.1 Existing Work Bench and cleaning tank will need removal from sludge tank

5.2.2 Sludge Tank will require gas freeing and cleaning.

5.2.3 A Double Diaphragm Sludge Pump shall be installed on sludge tank consistent to Sludge Pumps on existing purifier modules. Pump discharge shall be tied into abandoned sludge discharge line.

5.3 BWCSS Feed Pump skid will be installed in ER, port side 10 ft. flat, frame 127, just aft of Lube Oil Transfer Pumps.

5.3.1 Deck structure modification may be required to support Feed Pump Foundation.

- 5.4** The Feed Pump Suction line will be 2" Cu-Ni and will tie into the existing Turbolo OWS Suction Line at tank, frame 127 with a new ball valve for system isolation.
- 5.5** A two inch CU-NI discharge line with a new ball-valve for isolation shall be installed between Feed Pump discharge and BWCSS Feed inlet. Line shall be run bellow deck plates.
- 5.6** Two inch Cu-Ni Recirculation lines shall be installed from the recirculation outlets of both the Feed Inlet and Clean Water Outlet Three-Way Changeover Valves. These two recirculation lines should tied into existing Turbolo OWS Recirculation line at tank top with a new isolation valve, port ER, frame 130. Check valves shall be installed in both the new and existing Turbolo OWS recirculation lines at this location. Upon consultation with COTR or representative, these two new individual lines maybe tied together prior to reaching Turbolo connection. As much as practical, this line shall be run below deck plates.
- 5.7** A one inch Cu-Ni line shall be installed between the outlet of the Clean Water Three-Way Valve and both existing OWS Clean Water Discharge lines port side engine room at frame 124. This line shall be run in overhead of lower flat. New ball-valves (2 each) for system isolation shall be installed at this "overboard" connection tie-in and adjacent to the three-way valve.
- 5.8** Power for new BWCSS shall be supplied from open bucket in MCC 403/404. Contractor shall provide and install new breaker suitable for this service.
- 5.9** Operating Water and Control Air for new BWCSS shall be obtained from abandoned lines for previous separator installation at proposed site.
- 5.10** Oil Content and Purifier Operating Alarms and status shall be integrated into Ships Alarm and Monitoring System in coordination with CLIN 001.
- 5.11** Upon completion of BWCSS installation a manufacturer's technical representative shall be on site for the activation of unit and for the training of ships personnel. The duration of this visit shall be of a minimum of one full day, but may be extended at the discretion of COTR.
- 5.12** Unless otherwise specified, all replaced water piping shall be 90-10, copper-nickel. The copper-nickel fittings shall be a Sil-Braze type, compatible to 90-10 copper-nickel pipe. Piping shall be 150 class MIL T 164200 90-10 copper-nickel. Sil-Braze Fittings shall be MIL F 1183, 90-10 copper nickel. Flanges connected to Cu-Ni (copper-nickel) shall be 200 class MIL F 1183
- 5.13** All braze materials and fluxes shall be compatible with materials being brazed.
- 5.14** All fluxes shall be compatible with filler and piping. **Note: All excess flux shall be washed off completely at completion of repair.**
- 5.15** All flange fasteners shall be of stainless steel material.
- 5.16** All piping shall be properly supported where good engineering practice warrants. After completion of work contractor shall reinstall any and all interferences.

6.0 NOTES: None

7.0 DELIVERABLES

- 7.1** Four comprehensive BWCSS technical manuals with addendums specific to any third party manufactured equipment.

CLIN 035A SUPPLEMENTAL WORK MANHOURS LABOR

Abstract: Provide labor hours and material for supplemental work.

Reference: Solicitation Sections

Statement of Work:

Provide up to 1,000 supplemental man-hours.

CLIN 035B SUPPLEMENTAL WORK - MATERIAL

Abstract: Provide labor hours and material for supplemental work.

Reference: Solicitation Sections

Statement of Work:

Provide up to \$100,000 for material supplemental.

SECTION E -- INSPECTION AND ACCEPTANCE

E.1 MCL.E-1 DELEGATION OF INSPECTION AND ACCEPTANCE

AUGUST
2005

Mr. Sujit Mukherjee is delegated as the Contracting Officers's Technical Representative for the ultimate contract that is awarded. He is delegated the responsibility and the authority to conduct inspection and acceptance duties for the contract when awarded.

SECTION F -- DELIVERIES OR PERFORMANCE

F.1 52.211-08 TIME OF DELIVERY

JUNE 1997

(a) The Government requires delivery to be made according to the following schedule:

REQUIRED DELIVERY SCHEDULE

THE ESTIMATE PERFORMANCE PERIOD IS 90 DAYS FROM NOTICE TO PROCEED.

The Government will evaluate equally, as regards time of delivery, offers that propose delivery of each quantity within the applicable delivery period specified above. Offers that propose delivery that will not clearly fall within the applicable required delivery period specified above, will be considered nonresponsive and rejected. The Government reserves the right to award under either the required delivery schedule or the proposed delivery schedule, when an offeror offers an earlier delivery schedule than required above. If the offeror proposes no other delivery schedule, the required delivery schedule above will apply.

[OFFEROR'S PROPOSED DELIVERY SCHEDULE]

(b) Attention is directed to the Contract Award provision of the solicitation that provides that a written award or acceptance of offer mailed, or otherwise furnished to the successful offeror, results in a binding contract. The Government will mail or otherwise furnish to the offeror an award or notice of award not later than the day award is dated. Therefore, the offeror should compute the time available for performance beginning with the actual date of award, rather than the date the written notice of award is received from the Contracting Officer through the ordinary mails. However, the Government will evaluate an offer that proposes delivery based on the Contractor's date of receipt of the contract or notice of award by adding (1) five calendar days for delivery of the award through the ordinary mails, or (2) one working day if the solicitation states that the contract or notice of award will be transmitted electronically. (The term "working day" excludes weekends and U.S. Federal holidays.) If, as so computed, the offered delivery date is later than the required delivery date, the offer will be considered nonresponsive and rejected.

SECTION G -- CONTRACT ADMINISTRATION DATA

G.1 MCL.G-1 SCHEDULES AND SCHEDULE UPDATES FOR SHIP REPAIR AUGUST 2005
CONTRACTS

(a) The Contractor shall, within a period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer, with a copy to the COTR, for approval, an electronic copy or other format as directed by the Contracting Officer, a practicable, detailed schedule using appropriate project management software and technology, showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials and equipment). Format of the schedule and supporting information shall be in the electronic form and format directed by the Contracting Officer. The schedule shall include a summary in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a complete schedule package within the time prescribed, the Contracting Officer may withhold notice to proceed until the Contractor submits the required schedule.

(b) Periodically, with each invoice submitted, or at other intervals as directed by the Contracting Officer, the Contractor shall update the schedule showing the actual progress and estimated times and resources at completion compared with initial project elements. Failure to submit updated schedules with the invoice shall be grounds for the Contracting Officer's rejection of the entire invoice. The revised progress schedule information shall be delivered to the Contracting Officer in the format and at the times directed by the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the initial approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of facilities, and to submit for approval any supplementary schedule or schedules as the Contracting Officer deems necessary to demonstrate how the required rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

(d) The Contractor shall plan and schedule all Open, Inspect, and Report Items as required by the Specifications such that they are accomplished within the first 25% of the availability, unless otherwise agreed by the Contracting Officer.

SECTION H -- SPECIAL CONTRACT REQUIREMENTS

H.1 MCL.H-10 SUPPLEMENTAL GROWTH REQUIREMENTS

AUGUST 2005

The labor rate offered in Section B under the Supplemental Repair Work CLIN shall be a yardwide composite labor rate and shall include all management, supervision, overhead, G&A, handling charges, freight and profit. The yardwide composite rate offered by the Contractor shall be binding during the entire period of this Contract for all supplemental work which cannot be accurately described at this time and is not included in other CLIN specifications. The Government may order up to 50 percent more hours than are currently estimated in the CLIN at the same labor rate provided therein.

H.2 MCL.H-11 DISPOSITION OF REMOVED EQUIPMENT AND SCRAP

AUGUST 2005

Any ship's equipment, fuel, lube oil, supplies, stores, furniture, fixtures, salvage, scrap and other movable property, removed from the vessel shall be and become the property of the Government and any ship's equipment, fuel, supplies, lube oil, stores, furniture, fixtures, salvage, scrap and other movable property so removed shall be disposed of in such manner as the Contracting Officer may direct, provided such direction is given to the Contractor within sixty (60) days from the date of the completion of the work. During said sixty (60) calendar days period such ship's equipment, fuel, lube oil, supplies, stores, furniture, fixtures, salvage, scrap and other moveable property shall be stored and protected by the Contractor without charge to the Government. If within sixty (60) calendar days such direction is not given to the Contractor, it shall, after said sixty (60) calendar days, store and protect the same in the Contractor's facility or outside of the Contractor's facility, at the Contractor's election, for the additional period directed by the Government. Such direction shall be covered by a change order, and the increased contract price for such additional storage shall be determined as provided in the changes provisions of this contract.

H.3 MCL.H-12 MARITIME LIENS, NO AUTHORITY TO INCUR

AUGUST 2005

(a) The Contractor is an independent contractor and does not act as an agent for the Government, its agents, its vessels, servants, or employees.

(b) The Contractor, its agents, servants, and employees, and all persons acting by, at the direction of, or on behalf of the Contractor (including, without limitation any subcontractors) have no right, power, or authority whatsoever to create, incur, or permit to be placed or imposed (i) any lien or (ii) any right in remedy of any kind, upon or against any vessel upon which work is being performed under this Agreement or against the United States of America or its agents, vessels, servants, or employees. This contractual provision governs notwithstanding any other provision of this contract.

(c) The Contractor, on behalf of itself, its agents, servants, and employees, and all persons acting by, at the direction of, or on behalf of the Contractor (including, without limitation any subcontractors) hereby waives its right to any maritime lien as well as any right in remedy of any kind based upon a maritime lien theory, upon or against any vessel upon which work has been, is being, or will be performed under this contract or against the United States of America or its agents, servants, or employees, whether known or unknown. The foregoing clause shall not prevent the Contractor's rights to proceed on this contract under the Contract Disputes Act.

(d) The Contractor shall pay when due all costs and expenses incident to the work performed by it or for its account. Neither the Contractor, nor its agents, servants, and employees, nor persons acting by, at the direction of, or on behalf of the Contractor (including, without limitation, any subcontractors) shall have the power to incur any lien of any kind maritime or otherwise. Such entities shall not (i) create, incur, suffer, or permit to be placed or imposed upon any vessel (or portion thereof), any maritime lien or other lien or encumbrance or charge in any way arising from any act or omission or (ii) incur or allow their subcontractors to incur any debts, obligations, or charges upon the credit of the vessel or against the United States of America or its agents, servants, or employees.

(e) Although it is not intended that the Contractor shall have the power to incur such liens, the Contractor shall immediately discharge or cause to be discharged any lien or right in remedy of any kind, whether incurred by the Contractor or its subcontractors, other than in favor of the Maritime Administration, which at any time exists or arises in connection with the work done or materials furnished under this contract.

(f) If any lien or right in remedy is not immediately discharged, MARAD may discharge or cause to be discharged such lien or right in remedy at the expense of the Contractor. MARAD shall have the right to recoup or setoff such funds from any monies owing to the Contractor from any other MARAD contract or any other Government contract. Should a question exist whether there is a valid lien or right in remedy, among other rights, MARAD shall have the right to retain such funds as security without interest.

(g) From the start of work under this contract the Contractor shall cause a notice, reading as follows (or containing such other information as may be approved by MARAD), in plain type and of such size that the reading matter shall cover a space of at least 2 feet wide by 2 feet high in weather resistant paint to be placed and maintained by the gangway and shall read as follows:

"NOTICE TO SUBCONTRACTORS, MATERIALMEN, AND LABORERS

This vessel is owned by the United States of America, acting by and through the Maritime Administration.

The Contractor, and all persons acting by, (prime contractor), at the direction of, or on behalf of the Contractor (including, without limitation, any subcontractors) have no right, power, or authority whatsoever to create, incur, or permit to be placed or imposed any lien or right in remedy of any kind upon any vessel upon which work is being performed under this Agreement. The Contractor, its agents, servants, and employees, have no authority, either express or implied, to pledge the credit of said vessel."

(h) At the option of MARAD, the Contracting Officer may require that as a condition either for entry upon a vessel of the MARAD by any subcontractor or in order for any subcontractor to provide necessities to a vessel of the MARAD, that such subcontractor shall on behalf of itself, its agents, subcontractors, servants, and employees, and all persons acting by, at the direction of, or on behalf of such subcontractor waive its right to any maritime lien as well as any right in remedy of any kind based upon a maritime lien theory, upon or against any vessel upon which work has been, is being, or will be performed under this contract or against the United States of America or its agents, servants, and employees, known or unknown. The foregoing clause shall not prevent such subcontractor's right, if any, to proceed under the Contract Disputes Act.

(i) The foregoing clause shall not deprive MARAD of any of the rights or remedies which it has under the common law.

H.4 MCL.H-13 SUPERVISION

AUGUST 2005

The Contractor shall provide at all times the quantity and quality of supervision necessary for the effective and efficient management of the operation. All supervisors shall have an intimate knowledge of the various tasks, equipment, and materials so as to be able to properly train and direct the workers in their individual tasks and to maintain and control an effective operation.

H.5 MCL.H-2 SUPPLEMENTAL WORK REQUESTS

AUGUST 2005

(a.) In the complex world of ship repairs, supplemental work often emerges as a result of test, inspection, or discovery of unknown or otherwise differing conditions. The extent and nature of such supplemental work can neither be identified in bid or proposal specifications, and both parties recognize the possibility that such work may arise. Notwithstanding the possibility of the identification of such work, MARAD does not guarantee the award of any supplemental work during contract performance.

(b.) Although MARAD shall be under no obligation to award supplemental work during contract performance, MARAD has provided an estimate for labor (in labor hours) and material (in dollars) for such work in the Schedule (Section B of the solicitation under applicable supplemental work contract line item numbers (CLIN or CLINs)). The offeror shall specify an hourly composite billing rate in its bid or proposal for supplemental work labor. The composite labor-billing rate shall be the rate applicable to labor for all supplemental work that MARAD orders under the applicable supplemental CLIN of the resulting contract. Any supplies or subcontracts required to complete supplemental work will be charged as a direct cost reimbursable under the applicable supplemental work CLIN; additional indirect charges for materials and subcontracts will not be allowed.

(c.) During the performance of the contract, when conditions indicate a need for supplemental work, the Contracting Officer's Technical Representative (COTR) is empowered to provide technical direction, negotiate the amount of labor and material, and authorize the contractor to perform supplemental work through the issuance of a written authorization. The COTR will issue authorizations for supplemental work in accordance with the following:

(1.) When conditions make supplemental work appropriate, the COTR shall submit to the contractor a supplemental work request that identifies the work to be accomplished.

(2.) The Contractor shall promptly review each supplemental work request upon receipt and shall, within seventy-two (72) hours of issuance, or sooner, as specified by the COTR, provide the COTR with a proposed price for the supplemental work. Price proposals for all supplemental work must be broken down by labor hours, materials, and subcontracts and allocated to the applicable supplemental work CLIN as appropriate. The contractor shall price the supplemental work to be performed in accordance with the composite labor rate bid or proposed under the supplemental work CLIN in the contract. If necessary, the Contractor shall submit prices for subcontractors, which will be negotiated and treated as direct materials. Once the COTR and contractor agree on the technical direction and price to accomplish the supplemental work, the contractor and COTR shall sign the authorization for supplemental work, which shall be final and binding on the contractor and MARAD. Subject to paragraphs (c.)(3.) through (c.)(6.), if urgent circumstances do not permit waiting for a written authorization, the parties may orally agree and follow up with written confirmation.

(3.) Notwithstanding the preceding, the COTR shall not authorize and the contractor shall not accept individual supplemental work authorizations from the COTR in excess of the price ceiling established by the Contracting Officer pursuant to paragraph (d.)(10.). In addition, the COTR shall not authorize and the contractor shall not accept a supplemental work authorization from the COTR that, when combined with all previously authorized supplemental work under the contract, exceeds the amount of labor hours and materials specified in the applicable supplemental work CLINs.

(4.) If the contractor requests an adjustment to the contract completion date in its proposal for the supplemental work, the COTR must refer the issue to the Contracting Officer for resolution, which could include modifying the performance period of the contract. All supplemental work must be accomplished within the contract performance period. The COTR shall not authorize and the contractor shall not accept supplemental work authorizations from the COTR that cannot be completed within the contract performance period.

(5.) If the COTR and contractor cannot agree upon the price, the time required, or any other term of a supplemental work request, the matter shall be referred to the Contracting Officer who may resolve the issue in accordance with the procedures contained in the Changes clause incorporated in the contract. Specifically, the Contracting Officer shall have the option of (i) directing that the Contractor perform the work at a price and within a time period determined by the Contracting Officer to be reasonable, or (ii) withdrawing said supplemental work request. The Contractor's refusal to perform the work as directed by the Contracting Officer shall constitute an event of default under the default clauses of the contract. Disputed issues resulting from supplemental work unilaterally directed by the Contracting Officer may be handled under the disputes clause of the contract.

(6.) If the Contracting Officer directs the Contractor to perform the work at a price and within a time period determined by the Contracting Officer to be reasonable, the Contractor shall maintain and submit to MARAD on a daily basis, report sheets itemizing materials used, the costs and man hours of all labor (direct, indirect, and impact), production schedule activities affected by and/or related thereto, and charges for equipment, whether furnished by the Contractor, subcontractors or others. Material charges shall be substantiated by valid copies of materials and/or suppliers invoices. Such invoices shall be submitted with the daily report sheets or, if not available, as soon as reasonably practicable thereafter. Said daily reports shall also include an indication as to which specific schedule activity(ies) are affected by the order which are the subject of the daily report sheets. To the extent the contractor fails or refuses to submit the aforementioned daily report sheets on a daily basis, such failure or refusal shall constitute a basis for the Contracting Officer to suspend payment for work completed under the supplemental work until appropriate documentation required by the contract is provided.

(d.) The following rules apply to supplemental work authorizations:

(1.) The COTR shall authorize supplemental-work only during the period of performance of the contract.

(2.) All authorizations for supplemental work are subject to the terms and conditions of the contract and must be within the scope of the contract.

(3.) If mailed, an authorization is considered "issued" when MARAD deposits the order in the mail. Authorizations may also be issued orally, or by written communications, that is hand-delivered or sent by facsimile or electronic transmission. Oral orders must be followed up by written confirmation as soon as practicable thereafter.

(4.) Unless otherwise explicitly noted in the authorization for supplemental work, all authorizations for supplemental work are firm fixed price. The agreed upon price shall cover all costs including, but not limited to, direct and indirect labor and material, overhead, delay, acceleration, and disruption caused by the supplemental work. Where the parties are unable to agree that an order establishes mutually agreeable terms, the parties shall note the specific differences that are not agreed upon in the text of the proposed work authorization and refer the matter to the Contracting Officer for resolution pursuant to paragraph (c.)(5.).

(5.) Unless the contractor otherwise explicitly notes in the supplemental work authorization, in consideration of the price of the order, the Contractor remises, releases, and forever discharges MARAD, its officers, agents, employees, and sureties from any and all civil claims and requests for equitable adjustment whatsoever, relating to, arising out of, or connected with said supplemental work authorization. Such release is full and final settlement of all claims and requests for equitable adjustment relating to, arising out of, or connected with the work authorization, as modified, including, but not limited to, all impact claims such as delay, acceleration, disruption, and cumulative effects of the instant and all previously issued supplemental work authorizations. The executed work authorization constitutes a complete and final adjustment of the price and the delivery schedule.

(6.) When MARAD requires supplies or services covered by the contract in an amount less than the total value of the contract, MARAD is not obligated to award supplemental work for the balance of the price bid or proposed for supplemental work. The Contractor is not obligated to honor additional supplemental work in excess of the estimated labor hours identified in the Schedule. This subparagraph does not affect or change the Contracting Officer's authority under the changes clause of the contract.

(7.) Except for limitations of labor hours estimated in the Schedule, there is no limit to the number of supplemental work authorizations that may be issued. MARAD may issue supplemental work authorizations requiring delivery or performance in multiple locations, if the contract contemplates multiple locations.

(8.) In the event a supplemental work authorization covers a series of related procedures, the Contracting Officer may request the Contractor to furnish separate prices for each item of the work.

(9.) If not otherwise provided, the Contracting Officer may request at any time during performance of supplemental work a list of subcontractors performing work covered by the supplemental work, the dollar value of the respective subcontracts, and a description of the subcontracted work, and the contractor shall promptly provide the requested information.

(10.) The COTR shall not issue and the contractor shall not accept supplemental work authorizations from the COTR that exceeds \$5,000.

H.6 MCL.H-3 INDEMNITY AND INSURANCE

AUGUST 2005

The Contractor shall indemnify and save and keep harmless the Government against any or all loss, cost, damage, claim, expense or liability whatsoever because of accident or injury to persons or property of others occurring in connection with the operations under this contract. The Contractor shall secure, pay the premiums for and keep in force until the expiration of this contract, and any renewal thereof, adequate insurance. Such insurance to specifically include liability assumed by the Contractor under this contract.

Each policy of insurance shall contain an endorsement that any cancellation or material change in the coverage adversely affecting the Government's interest shall not be effective unless the insurer or the Contractor gives written notice of cancellation or change as required to the Contracting Officer. When the coverage is provided by self-insurance, the Contractor shall not change or decrease the coverage without the Administrative Contracting Officer's prior approval.

A certificate of each policy of insurance shall be furnished to the Contracting Officer within ten (10) days after notice of award certifying, among other things, that the policy contains the aforesaid endorsement. The insurance companies providing the above insurance shall be satisfactory to the Government. Notices of policy changes shall be furnished to the Contracting Officer.

The contractor shall provide at the Contractor's expense, within five days of request from the MARAD contracting officer, a copy of all original insurance policies. These may be sent by mail or facsimile machine.

H.7 MCL.H-4 INDEMNITY AND INSURANCE (ADDITIONAL)

AUGUST 2005

(a) INDEMNITY

(1) The Contractor shall exercise reasonable care and use its best efforts to prevent accidents, injury or damage to all employees, persons and property in and about the work, and to the vessel or portion thereof upon which work is done.

(2) Except as provided elsewhere in this contract, including any guarantee clause, the MARAD assumes the risk of physical loss or damage to any part of the vessel, its machinery, equipment, stores, and other property including cargo if owned by the Government except to the extent that such loss or damage is caused by the negligence, fault, error, act or omission of the Contractor, its

subcontractors, agents, or employees. The burden of proving freedom from fault shall be borne by the Contractor. Unless the loss or damage was caused by the willful misconduct of the Contractor, its executive officers, or superintendents the Contractor's liability under this Contract shall not exceed total damage to the ship or ships including total loss up to \$5,000,000 per accident or occurrence per vessel, and shall not exceed in the aggregate per accident or occurrence the sum of total damage to the ship or ships including total loss up to \$5,000,000 multiplied by the number of MARAD's vessels in the care, custody or control of the Contractor at the location and at the time of the accident or occurrence giving to the loss or damage.

(3) As to third parties, including, but not limited to, agents, employees or servants of the Contractor, or any subcontractor, the Contractor will defend, indemnify and hold harmless the Government, the vessel, its owners and charterers, from all claims, actions, suits, costs, demands and expense of all descriptions arising out of disease, illness, personal injury, death or property damage to any third party in any way related to or arising out of the performance of work under this contract except to the extent caused by the fault, error, act or omission, or negligence of the Government, its agencies or employees. The burden of proving fault of the Government, its agencies or employees shall be borne by the Contractor.

(4) As to loss and damage which are the responsibility of the Government, the Government shall be subrogated to any claim, demand, or course of action against third parties which exists in favor of the Contractor, and the Contractor shall, if required, execute a formal assignment or transfer of such claim, demand, or course of action, and shall aid in securing information, evidence, obtaining of witnesses, and cooperate with MARAD in all matters MARAD may deem necessary in defense of any claim, or suit or appeal from any judgment or in effecting indemnity, provided, further, that nothing contained in this paragraph shall create or give rise to any right, privilege or power in any person except the Contractor, nor shall any person (except the Contractor) be or become entitled thereby to proceed directly against the Government, its agencies or instrumentalities, or to join the Government, its agencies or instrumentalities, as a codefendant in any action against the Contractor brought to determine the Contractor's liability or for any other purpose.

(b) TYPES OF INSURANCE AND MINIMUM COVERAGE. The Contractor shall at its own expense, provide and maintain the following insurances during the entire performance of this contract.

(1) Workmen's Compensation, including Longshoremen & Harbor Worker's Act coverage - Covering all agents, servants, borrowed servants, statutory employees of Contractor for all compensation and other benefits required by applicable state and federal law or by governmental authority on account of injury, death, sickness or disease - Statutory - no minimum.

(2) Employers Liability - to cover both injury and death resulting from accident, sickness or disease - \$5 million bodily injury by accident, each accident - \$5 million bodily injury by disease each accident - \$5 million bodily injury by disease in the aggregate.

(3) Maritime Employers Liability (Jones Act) to cover both injury and death resulting from accident, sickness or disease - \$5 million for each person per occurrence and \$5 million in the aggregate.

(4) Comprehensive General Liability to include coverage for (but not limited to) products and completed operations liability, property damage liability and contractual liability - \$5 million combined single per occurrence limit for bodily injury and property damage and \$5 million in the aggregate.

(5) Ship Repairers Legal Liability - coverage to be provided under the standard London or American Institute forms or their equivalent \$5 million per vessel, per occurrence or such other amount as may be requested.

(6) Pollution - sudden and accidental liability - \$5 Million per occurrence.

(c) All such insurance shall be subject to the approval of the Division of Marine Insurance and will contain thirty (30) calendar days advance notice of cancellation or of any non-renewal which is the option of the insurer, said notice to be provided to the U.S. Department of Transportation, Division of Marine Insurance, MAR-575, Room 8117, 400 Seventh Street, S.W., Washington, DC 20590.

(d) FORM OF CONFIRMATION

(1) The pollution insurance may be a separate policy or part of the Comprehensive General Liability policy, but the coverage must be specifically shown on the required confirmation of insurance. Excess liability and umbrella liability policies may be used in the excess of primary policies to meet the minimum limit requirements. The United States of America shall be an additional assured in the Ship Repairs Legal Liability policy, Comprehensive General Liability Policy and Pollution Policy. Such policies shall contain a clause statement that there is no recourse against the United States of America for payment of premium. All such insurance shall be

subject to the approval of the Division of Marine Insurance and must contain thirty (30) calendar days advance notice of cancellation (without disclaimer) or of any non-renewal which is the option of the insurer, said notice to be provided to the U.S. Department of Transportation, Division of Marine Insurance, MAR-575, Room 8117, 400 Seventh Street, S.W., Washington, DC 20590.

(2) The Contractor shall have its insurance broker provide a detailed certificate of insurance, cover note or policy confirming the above required coverage. The confirmation shall name the Contractor and United States of America as assureds and confirm the types of coverage, policy forms, policy periods, deductibles (if any) and underwriters with their percentage of participation. The N.Y. Suable Clause or Service of Suit USA Clause must be confirmed for any Foreign underwriter placements. The policy amounts, terms and conditions, deductibles and underwriters shall at all times be satisfactory to the Maritime Administration.

(e) The contractor shall insert the substance of this clause in subcontracts under this contract that require work on a Government installation.

H.8 MCL.H-6 STANDARDS OF EMPLOYEE CONDUCT

AUGUST 2005

The Contractor shall be responsible for maintaining satisfactory standards of employee competency, conduct, and integrity, and shall be responsible for taking such disciplinary action with respect to its employees as may be necessary.

SECTION I -- CONTRACT CLAUSES

I.1 1252.217-70 GUARANTEE

MAY 2005

(a) In the event any work performed or materials furnished by the contractor prove defective or deficient within 60 days from the date of redelivery of the vessel(s), the Contractor, as directed by the Contracting Officer and at its own expense, shall correct and repair the deficiency to the satisfaction of the Contracting Officer.

(b) If the Contractor or any subcontractor has a guarantee for work performed or materials furnished that exceeds the 60 day period, the Government shall be entitled to rely upon the longer guarantee until its expiration.

(c) With respect to any individual work item identified as incomplete at the time of redelivery of the vessel(s), the guarantee period shall run from the date the item is completed.

(d) If practicable, the Government shall give the Contractor an opportunity to correct the deficiency.

(1) If the Contracting Officer determines it is not practicable or is otherwise not advisable to return the vessel(s) to the Contractor, or the Contractor fails to proceed with the repairs promptly, the Contracting Officer may direct that the repairs be performed elsewhere, at the Contractor's expense.

(2) If correction and repairs are performed by other than the Contractor, the Contracting Officer may discharge the Contractor's liability by making an equitable deduction in the price of the contract.

(e) The Contractor's liability shall extend for an additional 90 day guarantee period on those defects or deficiencies that the Contractor corrected.

(f) At the option of the Contracting Officer, defects and deficiencies may be left uncorrected. In that event, the Contractor and Contracting Officer shall negotiate an equitable reduction in the contract price. Failure to agree upon an equitable reduction shall constitute a dispute under the Disputes clause of this contract.

(End of clause)

I.2 1252.217-72 PERFORMANCE

OCTOBER 1994

(a) Upon the award of the contract, the Contractor shall promptly start the work specified and shall diligently prosecute the work to completion. The Contractor shall not start work until the contract has been awarded except in the case of emergency work ordered by the Contracting Officer in writing.

(b) The Government shall deliver the vessel described in the contract at the time and location specified in the contract. Upon completion of the work, the Government shall accept delivery of the vessel at the time and location specified in the contract.

(c) The Contractor shall without charge,--

(1) Make available to personnel of the vessel while in dry dock or on a marine railway, sanitary lavatory and similar facilities at the plant acceptable to the Contracting Officer;

(2) Supply and maintain suitable brows and gangways from the pier, dry dock, or marine railway to the vessel;

(3) Treat salvage, scrap or other ship's material of the Government resulting from performance of the work as items of Government-furnished property, in accordance with the Government Property (Fixed Price Contracts) clause;

(4) Perform, or pay the cost of, any repair, reconditioning or replacement made necessary as the result of the use by the Contractor of any of the vessel's machinery, equipment or fittings, including, but not limited to, winches, pumps, rigging, or pipe lines; and

(5) Furnish suitable offices, office equipment and telephones at or near the site of the work for the Government's use.

(d) The contract will state whether dock and sea trials are required to determine whether or not the Contractor has satisfactorily performed the work.

(1) If dock and sea trials are required, the vessel shall be under the control of the vessel's commander and crew.

(2) The Contractor shall not conduct dock and sea trials not specified in the contract without advance approval of the Contracting Officer. Dock and sea trials not specified in the contract shall be at the Contractor's expense and risk.

(3) The Contractor shall provide and install all fittings and appliances necessary for dock and sea trials. The Contractor shall be responsible for care, installation, and removal of instruments and apparatus furnished by the Government for use in the trials.

I.3 1252.217-74 SUBCONTRACTS OCTOBER 1994

(a) Nothing contained in the contract shall be construed as creating any contractual relationship between any subcontractor and the Government. The divisions or sections of the specifications are not intended to control the Contractor in dividing the work among subcontractors or to limit the work performed by any trade.

(b) The Contractor shall be responsible to the Government for acts and omissions of its own employees, and of subcontractors and their employees. The Contractor shall also be responsible for the coordination of the work of the trades, subcontractors, and material men.

(c) The Contractor shall, without additional expense to the Government, employ specialty subcontractors where required by the specifications.

(d) The Government or its representatives will not undertake to settle any differences between the Contractor and its subcontractors, or between subcontractors.

I.4 1252.217-77 TITLE OCTOBER 1994

(a) Unless otherwise provided, title to all materials and equipment to be incorporated in a vessel in the performance of this contract shall vest in the Government upon delivery at the location specified for the performance of the work.

(b) Upon completion of the contract, or with the approval of the Contracting Officer during performance of the contract, all Contractor-furnished materials and equipment not incorporated in, or placed on, any vessel, shall become the property of the Contractor, unless the Government has reimbursed the Contractor for the cost of the materials and equipments.

I.8 1252.242-73 CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE

OCTOBER 1994

(a) The Contracting Officer may designate Government personnel to act as the Contracting Officer's Technical Representative (COTR) to perform functions under the contract such as review and/or inspection and acceptance of supplies, services, including construction, and other functions of a technical nature. The Contracting Officer will provide a written notice of such designation to the Contractor within five working days after contract award or for construction, not less than five working days prior to giving the contractor the notice to proceed. The designation letter will set forth the authorities and limitations of the COTR under the contract.

(b) The Contracting Officer cannot authorize the COTR or any other representative to sign documents (i.e., contracts, contract modifications, etc.) that require the signature of the Contracting Officer.

I.9 52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REREPRESENTATION

APRIL 2009

(a) Definitions. As used in this clause-

Long-term contract means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at 52.217-08, Option to Extend Services, or other appropriate authority.

Small business concern means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause. Such a concern is "not dominant in its field of operation" when it does not exercise a controlling or major influence on a national basis in a kind of business activity in which a number of business concerns are primarily engaged. In determining whether dominance exists, consideration shall be given to all appropriate factors, including volume of business, number of employees, financial resources, competitive status or position, ownership or control of materials, processes, patents, license agreements, facilities, sales territory, and nature of business activity.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall rerepresent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

(1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.

(2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.

(3) For long-term contracts-

(i) Within 60 to 120 days prior to the end of the fifth year of the contract; and

(ii) Within 60 to 120 days prior to the date specified in the contract for exercising any option thereafter.

(c) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at

<http://www.sba.gov/services/contractingopportunities/sizestandardstopics/>.

(d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the rerepresentation required by paragraph (b) of this clause by validating or updating all its representations in the Online Representations and Certifications Application and its data in the Central Contractor Registration, as necessary, to ensure they reflect the Contractor's current status. The Contractor shall notify the contracting office in writing, within the timeframes specified in paragraph (b) of this clause that the data have been validated or updated, and provide the date of the validation or update.

(f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.

(g) If the Contractor does not have representations and certifications in ORCA, or does not have a representation in ORCA for the NAICS code applicable to this contract, the Contractor is required to complete the following rerepresentation and submit it to the contracting office, along with the contract number and the date on which the rerepresentation was completed:

The Contractor represents that it _ is, _ is not a small business concern under NAICS Code _____ assigned to contract number _____.

[Contractor to sign and date and insert authorized signer's name and title].

(End of clause)

I.10 52.232-18 AVAILABILITY OF FUNDS

APRIL 1984

Funds are not presently available for this contract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.