



CAPE LOBOS ACTIVATION SPECIFICATION

**Prepared by
Crowley Liner Services, Inc.
for
South Atlantic Region
U.S. Maritime Administration**

M/V CAPE LOBOS

ACTIVATION SPECIFICATIONS

Prepared By:

Crowley Liner Services
9487 Regency Square Blvd
Jacksonville, FL 32225

Ship Manager for the:

U.S. Department of Transportation
Maritime Administration - South Atlantic Region

March 2002

M/V CAPE LOBOS

ACTIVATION SPECIFICATIONS

DISTRIBUTION LIST

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M/V CAPE LOBS

ACTIVATION SPECIFICATIONS

RECORD OF REVISIONS:

Rev	Sections Replaced	Replaced By	Date
0	Original Issue		28 Mar. 2002
1			
2			
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4			
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14			

CROWLEY

LINER SERVICES

A Subsidiary of Crowley Maritime Corporation

Date:

TO: Participating Shipyards

Crowley Liner Services, Inc. (CLS) invites you to submit a proposal for work to be performed for the M/V Cape Lobos activation and Sea Trial Availability. Specifications are detailed in files discussed below.

Subject to the availability of funds, CLS intends to award a firm fixed price contract resulting from submission of these proposals, after negotiations, to the offeror whose proposal represents the best value overall after evaluation. CLS reserves the right to make an award on any item for a quantity less than the quantity proposed, at unit cost or prices offered, or to cancel an item in its entirety, unless the offeror specifies otherwise in the proposal.

Completion of the proposal:

(A) The following documents will be forwarded in the initial package:

Lobos.pdf	Solicitation Letter
"" ""	Cape Lobos Activation Specification
"" ""	CLS Terms and Conditions
PricesLob.xls	Pricing Submission for the Cape Lobos including Additional Pricing Information

(B) Each submission shall include in the proposal the following, as a minimum:

1. Electronic file labeled PricesLob.xls with section pricing, itemized pricing, unit pricing and additional pricing completed. This would include all blocks highlighted in yellow in the file.
2. An itemized Timeline Production schedule.
3. Whether your facility will be working under a firm labor contract during the time span of these repairs.
4. List of next lower tier subcontractors for all items.
5. List of any anticipated problems with material availability.
6. Statement of your firm's capability to provide the necessary personnel to accomplish this work.
7. Statement of your firm's capability to provide the necessary financial resources to accomplish this work.
8. Upon request, or after award, submit Certificate of Insurance - Ref. CLS Terms and Conditions

If Contractors wish to observe vessel conditions or perform a ship check, they may do so at their own expense, by contacting the vessel's Port Engineer. Contractors must advise the Port Engineer of their intent to visit the vessel not later than 4:00 p.m. EST on -----, **2002**. Ship check surveys are considered critical to the proposal process and may be considered in the evaluation of all proposals. Contact information and dates are:

Port Engineer:

Mr. Del Price

(904) 727-2408

cell phone (904) 607-0164

e-mail: del.price@crowley.com

Ship Location:

Norfolk

Availability

Availability Date: -----, 2002

In certain areas, assumptions such as square footage, length of welds, manhours, etc. have been made. These numbers are provided for information only. The Contractor will be responsible for determining the exact numbers on which the proposal should be based.

DISCUSSION PERIOD: Questions regarding this solicitation, the specifications, pricing, or other submission issues should be sent in writing, via email, to patricia.murphy@crowley.com with a cc: to cole.cosgrove@crowley.com. The discussion period for questions and answers will end at 5:00 p.m. EST on -----, **2002**.

Initial proposals must be received at the following email address:

patricia.murphy@crowley.com

before -----, 2002 at 5:00 p.m. EST.

Original hard copies should be sent via overnight delivery to arrive in Jacksonville by -----, 2002, to:

Crowley Liner Services, Inc., 9487 Regency Square Blvd., Jacksonville, FL, 32225

Attention: Patricia L. Murphy

Very truly yours,

Patricia L. Murphy

Contract Administrator

M/V CAPE LOBOS

**TOWING
ACTIVATION
and
SEA TRIAL**

SPECIFICATIONS

PREPARED BY:

**Crowley Liner Services, Inc.
9487 Regency Square Blvd.
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CAPE LOBOS

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Appendices:

1. Appendix A CLS Bid Cover Letter
2. Appendix B MARAD Coating Guidelines Revised as of April 2000
3. Appendix C CLS Operations Management Manual – Section RV-09
4. Appendix D Crowley Liner Services Inc., Terms and Conditions
5. Appendix E Bid Pricing Sheet
6. Appendix F Fire, Flood and Intrusion Alarms
7. Appendix G Dead Ship Tow Notification
8. Appendix H Contractor Safety Requirement Policies
9. Appendix I List of Removals
10. Appendix J List of Sea Valves
11. Appendix K Previous Megger Readings
12. Appendix L List of Hull Blanks

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VESSEL PARTICULARS

VESSEL:	M/V CAPE LAMBERT
CLASSIFICATION (AMERICAN BUREAU OF SHIPPING):	A1 - AMS
AMERICAN BUREAU OF SHIPPING ID NUMBER:	7330343
NATIONALITY:	UNITED STATES
PORT OF REGISTRY:	NORFOLK, VA
CALL SIGN:	KEBA
PREVIOUS NAME:	FEDERAL LAKES
TYPE:	ROLL-ON/ROLL-OFF
BUILT:	1973, PORT WELLER DRYDOCKS LTD., ST. CATHARINES, ONTARIO
LENGTH OVERALL:	682"-00"
LENGTH BETWEEN PERPENDICULARS:	621'-06"
BREADTH MOLDED:	75'-00"
BREADTH EXTREME:	75'-10"
DEPTH MOLDED:	58'-00"
DRAFT, SUMMER LOAD LINE EXTREME:	30'-06"
DWT ON SUMMER LINE:	19,802.9 LT
DRAFT, SCANTLING, MOLDED:	30'-0"
DISPLACEMENT, LIGHT SHIP, L TONS:	10,556.60
FUEL OIL, LTONS (3891 MAX):	3,078
FRESH WATER, L TONS:	227
DISPLACEMENT, FULL LOAD, L TONS:	30,359.50
SHAFT HORSEPOWER, NORMAL ABS:	11,000
SPEED, KNOTS:	18
TWO PROPELLER, 4 BLADES:	17'-04"
PROPELLING MACHINERY:	TWO CROSSLEY PIELSTICK 18-PC-2V DIRECT REVERSING ENGINES
GROSS TONNAGE (ITC 1969):	22,999
NET TONNAGE (ITC 1969):	7,000
AIR DRAFT (KEEL TO MAST):	138'
DRAFT FWD. (PRESENT):	17' 00"
DRAFT AFT. (PRESENT):	19' 06"

GENERAL REQUIREMENTS:

These general requirements in intent, scope and definitions shall be applied to this Specification Package for all Items 001 through 405 and all “Change Orders” for supplemental growth work.

A. STANDARDS AND EXHIBITS:

- A.1 American Bureau of Shipping (ABS) rules for surveying and maintaining class of vessels (latest version).
- A.2 US Coast Guard regulations, including all applicable CFRs and NAVICs, for inspection of vessels.
- A.3 International Load Line Convention, 1966.
- A.4 Institute of Electrical and Electronics Engineers, Inc. (IEEE) Standard No. 45, “Recommended Practice for Electrical Installation on Shipboard” as amended, except in cases of IEEE Standard No. 45 conflict with US Coast Guard regulations, of which the latter shall govern.
- A.5 Steel Structures Painting Council “Good Painting Practice Vol. I and II”
- A.6 EXHIBITS
 - A.6.1 Drawing and Plans as per References listed in the individual items.
 - A.6.2 MARAD Coating Guidelines, (Attached as Appendix B).

B. GENERAL:

- B.1 References and enclosures are identified to supplement the information provided in the specifications.
- B.2 For the purpose of this specification, the Crowley Liner Service (CLS) Representative is the Port Engineer. In cases where the Port Engineer is not present or is unable to attend or witness inspections/test etc, Port Engineer may so designate the Assist Port Engineer, Chief Engineer, Chief Mate as the Crowley Liner Service Representative (CLS). In matters relating to the contract, CLS Representative is defined as the port engineer.

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- B.3 If the Contractor intends to use a Technical Representative in lieu of the Manufacturer's Representative a written request shall be submitted to the Crowley Liner Services (CLS) Representative for review. The CLS Representative reserves the right to approve or not approve such substitution.
- B.4 Any particulars for the work outlined in the specifications and drawings are given for guidance purposes only. The Contractor shall take his own particulars and dimensions and shall be responsible for them.
- B.5 Names of manufacturers and trade designations of items are mentioned in the specifications as a means of specifying the general design character with respect to the quality and construction of the item(s). Where specific equipment or materials are identified in the specifications, equivalent product may be substituted in accordance with contract provisions after approval by regulatory bodies (if applicable), and the CLS Representative. All guaranties and warranties must remain the same.
- B.6 Where the specifications requires the opening of machinery, piping, fittings, etc., it is intended that the Contractor shall close such machinery, piping, fittings, etc., and shall prove functional and in good working order and ready for use after examination and approval by the CLS Representative. Prior to closing such items, all disturbed parts, such as jointing, packing, insulation, studs, bolts, nuts, gaskets and split rings, etc., shall be reinstalled in good order by the Contractor.
- B.7 Should the Contractor require the removal or shifting of any parts of the vessel's fittings, stores, fuel, water, outfit, equipment, or piping for carrying out the work specified or implied, the same shall be done by him, and all such removals shall be subsequently reinstalled in a satisfactory manner. The Contractor shall be held responsible for the protection of existing and newly installed equipment and materials. Any equipment that is damaged by the Contractor or loss resulting there from shall be renewed or restored/ repaired to original condition at the Contractor's expense.
- B.8 Items of equipment and/or material to be furnished by Owner (OFE/OFM) will be delivered Free on Board (F.O.B.) to the Contractor's facility unless stated otherwise. The Contractor shall receive (FOB), transport to the vessel, inspect, store, protect and place aboard the vessel all material and equipment furnished by owner for this Contract. CLS will submit all pertinent information on Owner Furnished Equipment that is required by the Contractor for engineering and installation of equipment in sufficient time to meet the production schedule. Generally, all material, equipment, etc., other than structural, shall be warehoused or otherwise protected from the weather.

C. HAZARDOUS WASTE:

- C.1 Handling and disposal of all hazardous material shall comply with local, state, and federal environmental regulations pertaining to the handling and disposal of hazardous waste as in attached Appendix C: RV-09.
- C.2 It is the responsibility of the Contractor to properly dispose of all “Hazardous Waste” created during this contract by the Contractor or any Subcontractor(s) at the Contractor’s expense.
- C.3 Prior to the completion of the contract, and prior to the vessel leaving the Contractor’s facility, all hazardous waste borne by this contract or is a result of work related to this contract shall be removed from the vessel.
- C.4 A properly executed, Contractor furnished, copy of all manifest(s) of disposal shall be submitted to the CLS Representative prior to completion of the contract.

D. MATERIAL/ WORKMANSHIP:

- D.1 Unless specifically identified as Owner Furnished Material, Equipment or Services (OFM/OFE/OFS), all materials, equipment, services, and labor shall be Contractor furnished.
- D.2 Except as otherwise specified, stainless steel (CRES or SUS) in this specification shall mean ANSI alloy 304 or 316 or equivalent for interior applications and ANSI alloy 316 or equivalent for weather locations, or installations exposed to liquids.
- D.3 New gaskets, seals, wicking and fasteners shall be installed when closing up manholes, bolted inspection plates and flanges.
 - D.3.1 All gaskets, seals, wicking and fasteners shall comply with the design service requirements (i.e., pressure, temperature, system fluid and material compatibility) of the systems or components for which they are installed.
 - D.3.2 Gaskets shall be pre-manufactured or made by contractor’s personnel with the use of designated gasket cutting devices; the use of ball pein hammers or striking devices shall not be permitted.
 - D.3.3 Any manhole or opening that would present a fall hazard and is left unguarded shall be fitted with suitable fall protection device.

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- D.4 All workmanship shall be performed to the complete satisfaction of the CLS Representative and the applicable Regulatory bodies. The acceptance of the CLS Representative shall be obtained in all cases where the Contractor intends to employ subcontractors.
- D.4.1 The workmanship and materials shall be of the best quality throughout, and the materials, shall conform in size to those originally in the vessel. The repairs shall, in every respect, be made under the supervision, and to the entire satisfaction, of the CLS Representative, US Coast Guard and Classification Surveyor (ABS).
- D.4.2 It shall be understood by the Contractor, that all materials requiring a test shall be tested in accordance with the Rules of the Classification Society. (ABS) and USCG all test shall be witnessed by regulatory bodies and/or CLS Rep. and must meet their requirements. All charges and costs for tests, inspections, etc., shall be borne by the Contractor.
- D.4.3 Contractor furnished materials shall be new and of commercial marine quality, conforming to the requirements of the various Regulatory bodies.
- D.4.4 New items of equipment or fittings furnished by the Contractor shall require the acceptance of the CLS Representative. Where required by ABS and regulation rules, certificates of compliance shall be provided. Manufacturers' plans shall be furnished to the CLS Representative.
- D.5 All welding required by these Specifications shall be in accordance with ABS rules. Special welding procedures required for the completion of any item in this specification will be developed and approved by ABS at the contractor's cost.
- D.6 All access for work, staging and cleaning, in way of repairs that are necessary for safe burning, welding, etc. shall be performed by the Contractor. The Contractor shall provide safe access to CLS Representative for inspections of all work.
- D.7 All interferences necessary to accomplish the specification work, such as paneling, piping, galley, stair tower, etc., shall be removed and restored to original condition.

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- D.8 Rigid control of welding and grounding shall be maintained for the protection of the hull, stern tube and other hull appendages. Care shall be taken that the welding polarity and ground connections of welding machines used on this vessel, or other vessels in the immediate vicinity and on the dock to which the vessel is moored, shall be so as not to damage any parts of the vessel. The Contractor shall adequately protect the underwater part of the hull prior to vessel delivery.
- D.9 In carrying out removals, modifications or reinstallation's the same requirements for good workmanship shall apply as that for new work.
- D.10 As a result of removals and /or new installations, all unused brackets, piping, ventilation ducts, and other fittings and hardware shall be removed and properly disposed of by the contractor. Unused electric cables shall be removed back to the nearest junction box.
- D.11 Connections of deleted piping and ventilation services shall be permanently blanked off at the branch from the main.
- D.12 Drawings illustrating the complete design of new or equipment modifications, arrangement of piping, and all details of construction and workmanship shall be submitted for the CLS Representative's acceptance prior to fabrication and installation. If specified for contractor to obtain Regulatory Body approval, drawings shall be submitted to the CLS Representative for review prior to submittal to Regulatory Bodies. No work shall be put in hand before approvals.

The contractor shall provide a minimum of four (4) copies of drawings/sketches approved by Regulatory Body Inspectors.

- D.13 Complete lists of spare parts for manufactured electrical and mechanical equipment as recommended by the manufacturers shall be submitted to the CLS Representative. Recommended spare parts shall include all pertinent ordering information.
- D.14 All new steel used for renewals or new installations shall be sandblasted to "near white" metal (SSPC SP-10) and coated with a MARAD approved coating system applicable to the area being repaired, modified or newly installed.
- D.14.1 Fit ups for steel work shall be rendered for inspection after fit up and prior to application of the "first pass". The Contractor shall schedule such inspections with the CLS Representative and all other concerned parties.

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D.14.2 Upon completion of steel renewals, disturbed areas of coating shall be prepped to SSPC-SP11/SP3, rendered for inspection and, when directed, coated with the same system as the new steel.

D.14.3 Existing coatings shall be properly feathered in way of repairs. Intermediate and final coats shall be applied to all new and disturbed surfaces.

D.14.4 Upon completion of repairs, modification and new installations, paint shall be applied in a timely manner following proper surface preparations.

E. PIPING:

E.1 Fit ups for Steel and Piping: All pipe and steel work requiring welding shall be rendered for inspection after fit up and prior to application of the “first pass”. The Contractor shall schedule such inspections with the CLS Representative and all other concerned parties.

E.2 All new and disturbed piping systems shall be provided with necessary gauges, thermometers, bulkhead fittings, hangers and supports, gaskets, expansion bends, relief valves, and operating gear.

E.3 New piping shall be led as directly as possible with a minimum number of bends, and with sufficient joints to facilitate ease of maintenance and renewal.

E.4 Any material or equipment that must be removed or altered so that new piping may be installed or so that repairs may be made shall be removed and altered as required and reinstalled. All disturbed systems shall be tested.

E.5 New piping installations shall be fitted with fittings, valves, and traps in order that pipes can be drained completely.

E.6 All new piping systems shall include a sufficient number of portable joints to facilitate removal for inspection and/or replacement. All such joints shall be located in accessible areas and shall be such as to minimize the extent of interference in removals.

E.7 Pipes conveying steam or liquids shall not be led overhead through the emergency generator room, battery locker, radio room, or in the vicinity of switchboards, nor in food preparation or storage spaces and similar spaces, where avoidable. Where this is not practical, the piping shall be at least Schedule 80 seamless pipe with all joints welded.

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- E.8 All new overboard shell discharge piping connections shall be fabricated from steel castings with heavy shell flanges or from double, extra heavy pipe steel plate of thickness equivalent to extra-heavy pipe, with bracketed spigot passing through the shell and reinforcing plate, and welded to the shell on both sides.
- E.9 Piping and piping appurtenances exposed to climatic and/or atmospheric elements shall be adequately protected through the individual or combined use of a moisture-resistant coating, insulation, and lagging. Piping appurtenances such as protective coatings, insulation, lagging, protective covers or guards, chafing and splash plates, drip pans, etc., shall be incorporated as required to fulfill the general intent of these Specifications and the requirements of the Regulatory bodies.
- E.10 Pipe threads shall be well coated with piping compound before attaching threaded flanges.
- E.11 Pipe Hangers: Where pipe hangers are required in specification items, the following standards shall be adhered to:
- E.11.1 U-Bolts: U-bolt type pipe hangers shall be manufactured from solid bar stock, hot dipped galvanized in tanks, on weather decks and cadmium plated elsewhere.
- E.11.2 When expansion is required (cargo, ballast, bunker, deck steam, deck fire main, etc.), U-bolts shall be installed using double sets of heavy series nuts and washers.
- E.11.4 Saddle: Saddle-type pipe hangers shall be manufactured from flat bar, blasted and prime coated prior to installation, with two (2) legs per hanger unless directed otherwise.
- E.11.5 Pipe hangers shall be spaced at six (6) foot (maximum) intervals, unless otherwise specified.

F. INSULATION:

- F.1 Insulation that is damaged, disturbed or removed as a result of modifications, new installation, or removal of piping and machinery shall be replaced. Replacement insulating materials shall be calcium silicate or equivalent for high temperature applications.
- F.2 Insulating material(s) with protective and/or confining lagging shall generally be applied to bare metal surfaces attaining temperatures of more

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than 125°F. Pipe surfaces of 55°F and less during any operational condition shall have an anti-sweat insulation applied. Where surface temperatures are normally between 125°F and 150°F and the omission of insulation shall not adversely affect operational efficiency, non-metallic lagging only shall be applied where necessary to protect personnel from contact with hot metal surfaces.

- F.3 Insulation thickness shall be selected so that insulated and fabric-lagged surface temperatures shall not exceed 150°F. Metal or metallic-type lagging surface temperatures should not exceed 125°F when in areas susceptible to personnel contact.

G. ELECTRICAL:

- G.1 All new, electrical equipment shall operate satisfactorily with a voltage variation of $\pm 5\%$, and AC equipment with a frequency variation of $\pm 3\%$. Temporary voltage dips during motor starting or speed changing shall not cause damage or interruption of service to equipment.
- G.2 The design of the electric plant including new motors and controllers shall be coordinated to ensure that the voltage dip, when starting the motor with the highest starting current shall not exceed 15% of rated voltage.
- G.3 Wiring fittings and fixtures installed in locations exposed to weather, condensation or excessive dampness shall be made of brass or bronze.
- G.4 All indicator lights added in the wheelhouse, which are normally on during vessel operation at sea shall be fitted with mechanical sector-type dimmers, unless otherwise specified.
- G.5 New fuses shall be of the non-renewable NEC standard cartridge-type. When more than one set of fuses is used in a circuit, they shall be of sizes progressively larger from the load to the supply to localize trouble in the circuit.
- G.6 As recommended in IEEE Standard 45, new electrical equipment shall be supplied with nameplates on or adjacent and symmetrical to the equipment.
- G.7 Any special precaution, maintenance or operational instructions shall be included on the nameplate or on a separate plate attached elsewhere on the equipment.
- G.8 All new electric cable shall be low smoke (LS) cable unless otherwise specified. Cable selection and installation shall be in accordance with

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IEEE Standard 45. Feeders for new circuits shall be sized to US Coast Guard demand loads as per 46 CFR 111.60-7. Insulation resistance tests (phase-to-phase to ground) shall be conducted on all new power cable installations and cable penetrations following completion of cable installation. All equipment modified, or installed, by this Work Package, shall be bonded/grounded.

G.9 In general, existing cableways shall be used for new cable installation to the maximum extent practicable. New cableways, if required, shall meet IEEE Standard 45. Cable splicing, as permitted by Regulatory Bodies, shall comply with 46 CFR 111.60.19.

G.10 All new cables shall be banded with 5/8" stainless steel band spaced 24" apart in accordance with US Coast Guard regulations. Hose clamps shall not be used for cable banding.

G.10.1 New cable installation shall be tagged with stainless steel Identification tags at each side of bulkhead penetrations, at termination's and at both ends. The tags shall identify to/from designations.

G.10.2 Individual conductors shall have shrink-wrap identifiers at terminal block connection, splices and attachments to devices.

G.10.3 All bulkhead and deck penetration fitting shall be tested and meet all regulator requirements.

G.11 Any items in this specification that requires work shall be logged in the vessels Ships Tag Out Log, maintained in the Engine control room prior to conducting work.

H. COATINGS AND FINISHES:

H.1 All new and disturbed areas for each work item shall be prepared and coated in accordance with the MARAD "Coating Guidelines" as amended, unless otherwise specified in these specifications.

H.2 Steel Renewals - All steel used for renewals or new installations shall be sandblasted to "near white" metal (SSPC SP-10) and coated with a MARAD approved coating system applicable to the area being repaired, as detailed in the MARAD "Coatings Guidelines", prior to installation.

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- H.3 Disturbed areas of coating shall be wire brushed or mechanically cleaned to “near white” metal, rendered for inspection and, when directed, coated with the same system as the new steel.
 - H.4 Existing coatings shall be properly feathered in way of repairs. Intermediate and final coats shall be applied to all new and disturbed surfaces.
 - H.5 All paint shall be applied in a timely manner after repairs and after the proper surface preparation as per paint manufacture recommendations.
 - H.6 All new galvanized steel shall not be blasted. Galvanized steel shall be cleaned (SSPC-SP-1, solvent cleaned), primed, and coated as per MARAD Coating Guidelines.

I. INSPECTIONS:

- I.1 The Contractor shall establish and maintain strict quality control procedures and staff (including inspection force) as may be required to ensure that the quality of workmanship and materials provided by the Contractor, subcontractors, and vendors conforms to the requirements of the Contract and the specifications. The Contractor shall be responsible for coordinating and arranging for all inspections as required by these specifications.
- I.2 All work being accomplished under the Contract shall be open to inspection by the CLS Representative at all sites of work, including, subcontractor’s shops, at all proper times. The CLS Representative shall be fully advised of the Contractor’s program of work, and corrective methods proposed by the Contractor to ensure that the interests of CLS may be adequately protected.

The CLS Representative shall be furnished with copies of all working plans, finished plans and instruction books as mentioned herein. The CLS Representative shall have the authority to reject any material or workmanship whenever found reasonably defective, unsuitable, not in conformity with good shipbuilding practice, or not in accordance with the specifications. The Contractor shall satisfactorily correct all rejected items at no additional cost to CLS.

- I.3 Upon completion of work specified herein, all new and affected compartments, equipment, fittings, systems, pipelines, electric cable systems, and other operable items, shall be tested to demonstrate proper installation and working order, and to demonstrate that all requirements of the specifications, and authorized changes thereto, have been fulfilled.

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Tests shall be performed to the approval of the CLS Representative and the satisfaction of the various Regulatory Bodies as their interests may apply.

- I.4 The scheduling of all specification inspection and work-related items that require Regulatory body involvement shall be accomplished to ensure minimizing the number of visits required by the parties concerned, i.e., the accomplishment of regulatory inspection items shall be grouped together to maximize Regulatory body attendance.
- I.5 Premium charges for inspections by Regulatory Bodies outside of normal working hours, at the request of the Contractor, re-inspection (extra visits) due to rejections of the Contractor's or his subcontractor's workmanship, rejection of materials, or due to the scheduling of ill-prepared inspection activities, shall be for the Contractor's account.
- I.6 The Contractor shall provide written notification to the CLS Representative, at least 24 hours prior to inspections.

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001 TOWING (ABS/USCG)

Provide tugs (number of tugs shall be as per USCG requirements), pilots, towing equipment and personnel to move and/or tie up and let go of vessel for all towing and moves.

A INSPECTION FOR TRIP IN TOW (ABS/USCG)

Prior to the tow to Contractor's Facility and return tow to MARAD JRRF, ensure that the shaft locking devices are properly installed in place and secured to prohibit shafts from turning. Contractor to ensure that the external rudder locking devices are properly installed to prohibit rudder from swinging. In addition, close system valves in the steering gear room to hydraulically lock the system.

Obtain the services of a Salvage Surveyor acceptable to the Underwriters and Ship Manager to make recommendations for ballast conditions for vessel's tow to return to JRRF. Contractor to obtain a ballast/de-ballast sequence plan and ballast the vessel, if required (Vessel's equipment is not to be used, Contractor must furnish pumps, hoses, etc.), prior to the tow.

Fuel oil bunker tanks *shall not* be used for ballasting.

Provide written report of stability calculations, soundings and results in terms of fitness for tow and excess stability, prior to tow, considering the then-current conditions of load, fuel and ballast. Such stability calculations and the certificate of stability to be reviewed and approved by a current registered Naval Architect.

Should vessel require ballast for either towing or proper trim, tanks extending above the double bottom are to be treated against ice damage if vessel's berthing site is in a freezing environment. **The vessel's ballast system is not usable.** Contractor will be responsible for opening manholes in ballast tanks as necessary to pump in ballast and remove any ballast with portable pumps, and ensure that the tanks used together with associated ballast suction piping are dry and clean upon return to the permanent lay-up site. Note: any desired stability book information will be made available to the Contractor.

Prior to the commencement of work, provide the Owner's Representative with two copies of VHS video showing the condition of the entire ship with detail of specific areas where work will be performed for these specifications.

The Owner's Representative will be present at the time the video is made. The video shall be narrated. The narration shall give the space or frame number, Spec. Item # and the direction of the view, as necessary to later identify the exact location. The videos will be submitted to the Owner's Representative prior to vessel leaving the James River Reserve Fleet.

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B. TOWING

1. Tow the vessel as a dead ship from its mooring at the U.S. Maritime Administration's James River Reserve Fleet (JRRF), Fort Eustis, Virginia. The vessel is considered an inactive vessel of the RRF Program. Launch service is available between the Reserve Fleet's pier and vessel. First launch departs pier at 0700 hours and last launch returns to pier on or about 1530 hours. Hours of Reserve Fleet Operations are between 0700 hours and 1700 hours Monday through Friday. Days of departure and arrival of vessels at the Fleet are normally Tuesday through Thursday. For any movement of vessels, Fleet should have a minimum notification of five working days with updates every 24 hours under normal circumstances. However, in no-notice activation, CLS will provide as much notice as possible. Point of contact at the Fleet will be Mr. Mike Bagley, Fleet Superintendent, or Mr. Robert Rohr, Fleet Operations & Maintenance Officer at telephone number (757) 441-3877/3878.

The Contractor shall contact the local Coast Guard Officer in Charge of Marine Inspection (Hampton Roads) in accordance with the Dead ship tows & tug escorts policy letter put into effect 5-21-01 see (Appendix G) regarding the requirements for 48-hour notification for "DEAD SHIP TOW NOTIFICATION".

Contractor's personnel will have to supply and carry their own personal needs such as food, drinking water, etc. All safety rules and regulations of the JRRF will be strictly adhered to and enforced by the JRRF. Contractor's personnel to supply their own hard hats, steel-toed shoes, flotation devices, etc. Minimum Contractor Safety will be in accordance with CLS RSS-05. Contractor Safety Requirements policy found in Appendix H.

2. While in restricted and/or piloted waters, furnish sufficient tugboats with personnel consisting of a qualified pilot and a line handling gang of at least ten persons and one supervisor to assist in the tow, securing the ship in docking and mooring and the removal of tow lines and bridle.

At present, the vessel shaft locking devices and rudder-locking device are installed. Prior to towing, a survey of the shaft locking devices and rudder locking devices for proper installation will be conducted as mentioned in the inspection section above.

Each person is required to have all safety equipment including steel-toed work shoes, hardhat and gloves for handling wire. Provide all towing equipment on the vessel being towed, any necessary certificates, towing permits, pilotage and auxiliary tug services, assume all expenses and fees in connection with the movement of this ship including salvage surveyor's fee and all necessary personnel required for towing and line handling pier side and aboard ship.

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3. Furnish total insurance coverage specifically for, but not limited to, all liabilities of hull and machinery protection and indemnities. Said insurance to be carried by recognized and reputable underwriters and/or insurers. All insurance shall name the United States Maritime Administration. See Appendix D, Crowley Liner Services Inc. Terms and Conditions, Section: Appendix 150-D.
 4. The use of tugs to move the ship, including shifting piers at the Contractor's facility, will be for the Contractor's account.
 5. While vessel is under tow in open, unrestricted waters, outside COLREGS Lines of demarcation provide towboats sufficient to tow vessel at average voyage speed of six knots, and to comply with USCG regulations.
 6. The following is provided as general minimal guidelines for all phases of towing vessel (both arrival and departure towing):
 - a. **Weather** - Always check, and heed, the weather forecast for the entire route of your tow.
 - b. **Anchors** - Ensure anchors on the vessel being towed are rigged and ready for letting go.
 - c. **Emergency Towing Hawser** - 33 CFR 165.501(d) (2) requires any vessel over 100 gross tons towed in the Hampton Roads Regulated Navigation Area to be equipped with a secondary towing rig of sufficient strength to tow the vessel, with a connecting device that can receive a shackle pin of at least 2" in diameter. The emergency towing hawser should be rigged with a tag line and buoy. NVIC 8-89 provides recommendations concerning emergency towing of tank ships. (See applicable ISSUE paper.)
 - d. **Communication** - Communication between the tug crew and their shore-based counterparts is vital. The Coast Guard cannot always communicate directly with the vessel and personnel on the vessel should be in contact with only one outside point of contact to prevent distraction of operating personnel.
 - e. **Towing Plan** - Towing companies shall file the approved towing plan with the Coast Guard offices in the ports of exit and entry and one (1) copy to Owner's Representative.
 - f. **Points of Contact** - Towing companies should also identify key representatives from their company, companies associated with the towed vessel, and the cargo or fuel on the towed vessel so that information may be provided to the Coast Guard when requested during an emergency.

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- g. Helicopter Assistance** Ensure adequate stand-by provisions/contracts are available should emergency helo assistance be required.
- h. Water Taxi/Launch** Ensure adequate stand-by provisions/contracts are available should a water taxi/launch service be required.
- i. Certificates** - Supply Owner's Representative with copies of Regulatory Body clearances for tow.
- j. Portable Sanitation** Provide portable sanitation facilities on the main deck of the vessel for use of any riding crew during tow. Sanitation device to be removed and cleaned within 24-hours of vessel's arrival.

COAST GUARD POSITION: Weather, anchors, communication capabilities, emergency towing arrangements, towing plans, and points of contact are all items that are to be considered in preparing a dead ship tow.

002 PRODUCTION, PLANNING AND SCHEDULING

A. ABSTRACT:

This item describes the minimum requirements for the planning, scheduling tracking the work described by this contract.

B. REFERENCES/ENCLOSURES:

B.1 None

C. ITEM LOCATION/DESCRIPTION:

C.1 None.

D. OWNER FURNISHED EQUIPMENT/MATERIAL/SERVICES:

D.1 OFE: None

D.2 OFM: None

D.3 OFS: None

E. STATEMENT OF WORK:

E.1 General:

E.1.1 The Contractor shall use a current version of Microsoft Project, Primavera Project Planner or other current project management software to plan, schedule and produce reports for the work described in the contract.

E.1.2 Failure by the Contractor to include any element of work required for performance of the contract shall not excuse the Contractor from completing all work within the agreed Contract Price and within the Contract Performance Period, and/or in accordance with any Contract-required Milestone Date(s).

E.1.3 Seasonal weather conditions shall be considered by the Contractor and included in the planning and scheduling of all work influenced by high or low ambient temperature, wind and/or precipitation,

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river stages, tides, or similar weather related occurrences to ensure completion of all work within the Contract Performance Period.

E.2 Planning:

E.2.1 The Contractor shall divide the required work into discrete project activities (tasks). These activities shall be reference to the specification and shall describe manageable units of work with definable start and end points. Each activity shall be assigned a proposed duration and manpower loading (labor hour estimate). The proposed duration assigned to each activity shall be the contractor's best estimate of the time required to complete the activity considering the scope of the activity, and available resource planned for the activity. Note: Subcontracted work shall be assigned as discrete activities. Estimated manning (labor hours) shall be assigned to each subcontract activity.

E.2.3 The Contractor shall include milestones for required ABS and regulatory body inspections as well as for inspection by the CLS Representative specifically called out in the contract.

E.2.4 The Contractor shall develop a time-scale logic diagram that depicts the order and interdependence of the activities and the sequence in which the work is to be accomplished as planned by the Contractor in coordination with its subcontractor/s. This diagram is to be submitted to the CLS Representative for approval no later than five working days after contract award. The contractor shall be responsible for ensuring that all work sequences are logical and the time-scale logic diagram shows a coordinated plan of work. The Contractor may submit a PERT diagram in lieu of a time-scale logic diagram.

E.2.5. The critical path shall be shown in red or equal distinguishing means. Each activity on the diagram shall be clearly identified with an activity ID or number, activity description and duration.

The interdependency of the activities shall be indicated by lines and the type of relationship (i.e. SS - start to start; FS - finish to start; FF - finish to start; SF - start to finish). Any lag or lead shall also be clearly indicated.

E.3 Scheduling:

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- E.3.1 Based on the project logic used for the time-scale logic diagram the contractor shall develop and provide a Gantt (bar) Production Chart, which is also to be submitted at least five working days after contract award. The Gantt Production Chart shall have appropriate columns to indicate Activity ID or number, Activity Description, Estimated (proposed) duration, Total Float, Free Float, Early Start and Early Finish. The 'x' axis time scale shall be subdivided by days.
- E.3.2 Using the project management software, the contractor shall determine the projects critical path. The critical path shall be defined as the activity or combination of activities that forms the longest duration and directly affects the completion of the project.
- E.3.3 All critical activity bars shall be indicated in red or equal distinguishing means. The chart shall have an appropriate title block, contract number, vessel name and date. The Gantt Production Chart shall be sorted by early start date.
- E.3.4 The Contractor shall submit a summary of the calendar used for scheduling that includes planned work days i.e., Monday, Tuesday, Wednesday, Thursday, Friday dates of all scheduled non-workdays (holidays), and the time periods for planned shift work by trade. In addition, the contractor shall provide a table of all activities with user imposed scheduling constraints and the type of constraint imposed.
- E.3.5 The Contractor shall produce and provide a Manning Scale Chart based on the information assigned to each activity. This chart shall indicate planned manning levels for each activity by craft and combined total for each activity. This table shall list each activity and shall be subdivided to show the number of personnel by craft. The table shall include a summary column or rows that show total man-hours of each line item and a separate column or row which shows the total daily man-hours for all activities.
- E.4 **Progress Tracking and Reporting:**
- E.4.1. The approved planning and scheduling information shall be saved in the project management software to serve as the baseline (target) for the purpose of progress tracking and variance analysis. The approved planning and scheduling information shall be used as the baseline through the project.

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- E.4.2 The contractor shall produce and submit, on a weekly basis, a Production Progress Gantt Chart. This chart shall comply with the requirements of E.3.1 and E.3.3. Additionally, this chart shall include columns for percentage complete, remaining duration and slip (if any). Slip and percentage complete shall also be shown graphically on the activity bar. All added work shall be incorporated into the chart under a separate activity. Changes (if any) to the critical path shall be clearly annotated and narrative for the change shall be provided. Slip is defined as the difference between the activity target early start date and the current early start date.
- E.4.3 The contractor shall produce and provide a Progress Manning Scale Chart weekly. This chart shall comply with the requirements for paragraph E.3.5. This chart shall show actual manning versus planned manning by activity, manning required for new or revised work and the latest revised scheduled manning.

F. PERFORMANCE CRITERIA/DELIVERABLES:

- F.1 Within five working days after contract award the Contractor shall submit four (4) copies of each of the project time-scale logic, Production Gantt Chart, Manning Scale Chart, calendar summary and table of activity constraints for approval. The CLS Representative reserves the right to review the Contractor's project schedule and manning projections. The Owner's Representative will require Contractor justification for work sequences, start and finish dates, manpower loading or other information that appears unrealistic. If the CLS Representative still finds portion of the information or data to be unrealistic, the contractor shall have two working days to provide justification or to modify the items in question and to resubmit for approval.
- F.2 Four (4) copies each of the Progress Gantt Chart, Progress Manning Scale Chart shall be provided to the CLS Representative weekly.

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003 GENERAL SERVICES

It is the Contractor's responsibility for supplying all services for the specification work in its entirety. The general services will be priced separately.

003(A)BERTHAGE/WHARFAGE

Provide a safe berth for the vessel with adequate depth of water under the keel is two (2) feet at all tidal conditions. Supply and install mooring lines of sufficient strength to secure the vessel to the wharf at all times during contract period. **Vessel is dead ship. Mooring winches cannot be used.** Supply and install fenders of sufficient size and type to protect the ship from pier damage. In the event of storm conditions, the Contractor will attach additional mooring lines and fenders to protect the ship and provide standby watch services to check lines and safety of the vessel at no additional cost to the owner. Provide line handlers to adjust lines due to change in tidal conditions, as needed.

Provide a pier with easy access for loading supplies and equipment and be unobstructed to allow for landing of the forward or after ramp. (The vessel's ramps are located on the Stbd. Side.) There shall be sufficient length (700 feet minimum) and water depth (25 feet minimum at all tidal conditions). Access to the Contractor's pier may be limited by the air draft. Contractor must check this prior to arrival at their facility if the ship has to pass under any bridges.

The vessel's mooring lines **shall not** be used for towing purposes or for mooring at the Contractor's repair facility.

The pier shall have sufficient mooring bitts to allow for an approved mooring arrangement.

003(B) FIRE PROTECTION

Provide qualified fire watch personnel and supply portable fire extinguishers, properly equipped, at all times in each area/compartments where burning and/or welding is being done. **Ship's extinguishers will not be used.**

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

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

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003(C) GANGWAY

Contractor to furnish, set up and maintain an approved, safe gangway. The gangway shall be complete with rails, lighting and a safety net from the repair facility's wharf to the vessel and installed upon vessel's arrival. Any and all damage caused to the vessel by Contractor's Gangway to be renewed as original by the Contractor.

The vessel's accommodation ladder *will not* be used in lieu of a shipyard gangway for the period of the repair contract.

003(D) GAS FREE CERTIFICATES (ABS/USCG)

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

003(E) DECK COVERING PROTECTION

Furnish and install heavy-duty, vinyl-coated fabric of 1G-13-9 Forest Green Taffeta (or equal in style, warranty and guarantee) throughout interior areas, where currently no covering is provided. The fabric comes in 30 and 60-inch widths and is to be installed bulkhead to bulkhead with continuous duct tape on both edges of fabric. Some areas currently have protective covering installed.

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

Maintain protective covering during vessel's entire period at Contractor's repair facility

One source of supply: B & B Hose and Rubber Company, 4604 Bainbridge Boulevard, Chesapeake, Virginia, 23320 at (757) 545-6166.

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Remove the covering and dispose of before departure from the shipyard for sea trial.

003(F) TEMPORARY LIGHTING

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

003(G) SHORE POWER

Provide a heavy-duty shore power cable in good condition, connect on arrival and disconnect at departure. **(Shore Power connection is located on the Stbd. Poop deck level at frame 18 approximately 50 feet above the water line.)** Supply shore power to the vessel **(600 amp, 440 VAC, 3 phase, 60 Hz)** while the vessel is in the Contractor's facility with exterior circuit breaker located on the pier between shore power source and shore power connection on vessel, with phase and surge protection. The Contractor shall check for proper phase rotation during each connection of the service. Provision for hull grounding shall be made for entire vessel during availability period. The A/C electrical power shall be maintained continuously at a maximum of 460 VAC, with minimum 440 VAC at ship's shore power connection. Voltage shall be continuously recorded at ship's shore power connection and the recording charts delivered to Owner's Representative weekly.

003(H) COMPRESSED AIR

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

003(I) CLEAN BALLAST WATER

Supply hoses, connections and clean fresh water for ballasting / towing purposes. Disconnect and remove hoses upon completion of work.

003(J) PUMPS

Provide pumps, hoses, and labor and waste retention facilities to pump dry all bilge areas, MSD and holding tanks of the ship. Properly dispose of all waste collected according to all applicable regulations.

The above will be maintained in a dry condition for the duration of the Contract period.

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003(K) PORTABLE TOILETS

Provide portable toilets for use, as vessel's systems are not to be used by contract workers (minimum two units). One unit on vessel another unit on the pier by the gangway. Units shall be serviced and cleaned daily.

003(L) DEBRIS COLLECTION

Furnish labor and facilities to remove debris and garbage daily from vessel, in areas affected by work during this contract. Food or eating on the vessel by the contractor's personnel is not allowed. The food waste and other garbage generated by ship's crew shall be removed and disposed as part of this item.

003(M) WATCHMAN

Furnish 24-hour per day service of bonded, uniformed security guard onboard the vessel in three shifts of eight hours each, seven days a week from vessel's arrival at Contractor's facility through completion of contract except during the sea trial period.

Guard to be instructed that Contractor's personnel are forbidden access to any part of vessel unnecessary to complete items, except under emergency conditions such as fire, storm, etc.

When shipyard is not performing industrial work, security guard shall maintain a logbook and record conditions found while checking the vessel at two-hour intervals (minimum), number of Contractor's personnel aboard vessel and all visitors.

During industrial activity, security guards shall maintain their watch at the gangway, or access point onboard the vessel with the log to record number of Contractor's personnel aboard vessel and all visitors. This log may be checked by Owner's Representative at any time and shall be delivered to Owner's Representative upon vessel's departure from Contractor's repair facility. Guard must be stationed on the vessel. Provisions are to be made to protect guard from inclement weather, and provide heat, sunshade, etc. It will not be acceptable to stand watch at Contractor's facilities entrance gates or office entryways to facilities.

Place one telephone aboard ship in a space designated by the Owner's Representative. Instructions, in the English language, for effecting emergency procedures are to be clearly posted in the immediate vicinity of the telephone. These instructions shall include day and night telephone numbers of the Owner's Representative, Contractor's Senior Officials, Shift Supervisors, Gatehouse, Security Office, Safety Office, Ambulance and Fire Fighting Departments. If the telephone is not specifically located at the watchman's station, a second copy of instructions is to be located at the watch station and the watch shall have access to the space 24 hours a day. Telephone is for use strictly by Watchman in the performance of his duties, ONLY. Yard personnel, sub-contractors, ship's crew,

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etc. are prohibited from using this phone except in case of a vessel emergency and a notice to that effect shall be placed adjacent to the phone. All charges related to the use of this phone shall be for the Contractor's account.

003(N) OFFICE FACILITIES AND ADMINISTRATIVE SERVICES

Provide a shore side office (with equipment) one week prior to vessels arrival and continuously during the shipyard period and one week after vessel departs for James River Reserve Fleet for the use of the MARAD Representatives and Owner's Representative's in attendance. Office space shall have both heating and cooling capability to maintain normal room temperature. This office shall be located within 200 feet of the vessel's berthing gangway and shall consist of the following:

- 1) Five large desks complete with swivel chairs. Desks are to have locks and keys.
- 2) One large conference table to seat at least eight people (min. 8 ft. x 4 ft.).
- 3) Six, 4-drawer filing cabinets complete with locks and keys.
- 4) Seven casual chairs (two in each office and one in reception area).
- 5) Coffee maker complete with hot water capabilities, filters, coffee, tea, cups and condiments (with support table) to be replenished throughout contract period.
- 6) Refrigerated drinking fountain, or bottled water cooler, including bottled spring water refills, with suppliers sealed caps & cups.
- 7) One refrigerator (minimum 19 cu. Ft capacity).
- 8) Microwave oven (minimum 1.0 cubic foot capacity).
- 9) One electric typewriter (IBM Selectric) for carbon copy forms.
- 10) One Ricoh Super G3, or equal plain paper fax machine with its own line, telephone number, paper and replacement toner cartridges.
- 11) One paper shredder, home office type.
- 12) One Canon or equal color copier capable of letter and legal size copying, sorting, reduction and enlargement. Paper and replacement toner to be provided.
- 13) Bathroom facilities with lockers: toilet, shower and changing facilities with condiments such as cloth towels, toilet paper, soap, etc.
- 14) Electric power, heat, air conditioning, and hot and cold running water.
- 15) All supplies such as pens, pencils, paper, ruler, floppy disks, copier supplies, ribbons, binders, packing boxes and any related services to be replenished.
- 16) One Sharp model EL 2192P or equal adding machine.
- 17) Two drafting tables complete with lighting.
- 18) One flat bed type Scanner Visioneer model 8100 or equal including software and connection cables.
- 19) Provide the four Computers & equipment, provided for the Cape Lambert availability, they are to be transferred for use during this availability.
- 20) Provide One (1) HP color LaserJet 4500dn printer on its own stand complete with extra toner, legal and letter paper trays, and extra paper to be stored within. Printer shall be connected for use by all computers. Five (5) boxes each of letter and legal paper with 8 reams in each box.
- 21) All copying, fax equipment to be installed and serviced by Contractor.

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The Contractor shall provide the services of a full-time secretary five (5) days per week, eight hours per day, during the entire performance period. The secretary shall not be an employee of the contractor and must be obtained from an outside reputable secretarial service pool or temporary services contact. The secretary shall work directly for the Port Engineer, however all time cards shall be billable to the contractor. The secretary shall be adept in using the office machines and software programs (Microsoft Office Suite including Access) and shall be able to perform all other commercial secretarial services. The Port Engineer retains the right to dismiss the secretary at any time for incompetence, or other valid reasons, and the contractor shall be responsible for providing a replacement within twenty-four hours of the dismissal.

The Contractor shall be responsible for the labor, costs, equipment and/or materials for procuring, installing, testing and maintaining the above.

Upon completion of contract, turn over all four computers, software equipment, etc, with printer, over to Owner's Representative with all warranties and manuals for government ownership and inventory.

The above office facilities shall have four segregated office rooms with private entry doors, with lock and one (1) set (quantity of 2) of keys for each door. Each office room shall consist of a minimum of 200 Sq. ft. of office space, a conference room of 400 sq. ft. with conference table and eight chairs. In addition, five (5) facility building entry keys are to be provided for the exclusive use of Owner's Representative and personnel.

Furnish six parking spaces for the exclusive use of the Owner's Representative and authorized personnel at the designated office spaces, including vehicle yard passes.

003(O) TELEPHONE SERVICES

A minimum of four telephones (five if the fax machine does not have an integral transceiver) with different telephone numbers will be required, with main distribution from the Administrative Assistant's desk and to include the capabilities of conference calls at each desk. The Contractor shall be responsible for the costs, labor, material, and equipment for installing, connecting, maintaining, and disconnecting all telephone lines and telephones. All telephone lines shall be for the unrestricted use of the Owners and MARAD authorized representatives and shall be direct lines with unlimited local and long distance capability. The lines and numbers are to be distributed as follows:

- One phone at each Port Engineer's desk.
- One phone at the MARAD Representative's desk.
- One phone at the Administrative Assistant's / receptionist's desk with call answering and transfer capability to other phones.

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Place one additional telephone aboard ship in a space designated by the Owner's or MARAD's Representative. Instructions in the English language, for effecting emergency procedures are to be clearly posted in the immediate vicinity of the telephone. These instructions shall include day and night telephone numbers of the Owner's Representative, Contractor's Senior Officials, Gatehouse, Security Office, Safety Office, Ambulance and Fire Fighting Departments. If the telephone is not specifically located at the watchman's station, a second copy of instructions is to be located at the watch station and the watch shall have access to the space 24 hours a day.

Install two additional telephone lines in the office spaces, with telephone numbers separate from voice telephones and each other, for the exclusive use of the fax machine and modem.

003(P) VENTILATION

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

003(Q) ELECTRICAL

Provide electrical source of power separate from vessel's bus for lighting, blowers, hoists, welding machines, etc. and for all compartments and spaces as necessary to accomplish work specified herein. There shall be an exterior circuit breaker located on the pier between shore power source and shore power connection on vessel with phase and surge protection.

Ensure that all compartments and areas being worked have Contractor-supplied lighting to accomplish all work specified herein.

Survey and prove safe, all power source cable before starting any work for the duration of this contract.

003(R) ELECTRICAL SERVICE

Furnish services of certified, competent marine electricians with all tools and equipment required to energize necessary electrical circuits to test, repair, and/or operate equipment as required by these Specifications/Contract.

003(S) CRANE SERVICE

Provide 80 hours of crane service to perform lifts as designated by the Owner's Representative for the Owners personal use. This service is to include crane, crane operator, hook on and off Rigger and safety person. The 80 hours is for lifts not

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associated with shipyard CLIN items. Provide a total price for this item broken down into an hourly rate. All lift requests for this item will be submitted in writing from the Owner's Representative to the Contractor. The Contractor in turn will supply a summary of the amount of time used and the amount outstanding to the Owner's Representative. Vessel's crane and/or cargo equipment *will not* be used for work under this specification unless expressly ordered by the Owner's Representative to expedite the activation schedule.

003(T) COMMUNICATIONS (YARD)

Provide radios (walkie talkies), one for Owner's Representative's office and one each for three Owner's Representatives for a **total of five**. Radios to have chargers and extra batteries and two channels, one to communicate with Contractor and one to communicate with office. Radios will be returned to Contractor upon completion of contract.

003(U) PROVIDE TECHNICAL DOCUMENTATION

I PROVISIONING TECHNICAL DOCUMENTATION

Provide provisioning technical documentation (PTD) for all new Contractor and Owner-furnished hull, mechanical and electrical/electronic equipment or components installed onboard.

Include in each material procurement document the requirement for equipment or component vendor, manufacturer or fabricator to provide the PTD.

Prepare an index of each procurement for equipment or components for which a PTD is required. The index shall include: work item number, drawing and piece number, description, quantity and respective purchase order number. Develop and provide RRF configuration change report MA-985 (3-92) for each piece of equipment or component installed or removed from vessel.

Provide **four copies** of technical manuals, parts manuals, drawings and as built drawings. (At least one copy will be in a data format compatible with "MS Office 97" or later.)

Provide complete list of parts by Manufacturers name and number, and index number.

Deliver four copies of the data and reports required by this item to the Owner's Representative two days prior to vessel's departure from Contractor's facility bound and labeled.

In the event the vendor or manufacturer fails to deliver the PTD, prepare the provisioning technical documentation on the basis of catalog, technical manual, handbook, drawings or nameplate data.

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Additionally, in the event that the Contractor acts as a "system integrator" and individual component manuals are incomplete, or deemed insufficient by the Owner's Representative, the Contractor will prepare a system manual detailing operation and maintenance of the system and include all component's vendor manuals.

II MEETINGS

- A. An arrival conference shall be held between Contractor's senior staff and Owner's Representatives.
- B. Weekly progress meetings shall be held between Contractor's Ship Manager, Ship Superintendent, Craft Foremen and Owner's Representatives.
- C. All meetings shall be held in the Owner's Representative's office or Contractor's conference room.

III INSPECTIONS

A. OWNER'S REPRESENTATIVE

- 1. All work items in the contract require that Owner's Representative and Regulatory Bodies accept and witness work in progress, completed work, testing or inspections. Provide written notification to the aforementioned at least 24-hours in advance of the work sequence to be witnessed/approved, except for weekends or holidays when 48-hours advance notice is mandatory.
- 2. Owner's Representative may designate work sequences, in addition to those identified by the specification item to be observed or inspected by Owner's representative or regulatory Bodies. Aforementioned notification requirements shall also apply to these designated work sequences.
- 3. Owner's Representative inspection is an independent function of the owner and does not relieve Contractor of responsibility to perform tests and inspections required by the specifications or those considered necessary to ensure product conformity.

B. REGULATORY BODY INSPECTIONS AND SURVEYS

All equipment addressed and applicable to ABS special survey shall be presented to the ABS surveyor for approval and all required documentation from the ABS hull and Machinery shall be addressed and presented to SM-PORT ENGINEER. Scheduling of all inspection shall be subject to approval of the SM-PORT ENGINEER

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C. REPORTS: Test, Condition and Final

TEST: Results of all reports required by these specifications are to be delivered in data format compatible with MS Office 97, within 48-hours of the event as follows:

CONDITION: Results of all condition reports required by these specifications are to be delivered within 24-hours of the event as follows:

1. Reports are to indicate prices broken down into labor and material.

FINAL: Contractor shall provide all Test, Condition Reports, Change Orders, Survey Reports and Service Reports required by these specifications to be delivered within one week from vessels departure to JRRF, In addition, hard copy reports will be supplied as follows:

1. Reports are to be in chronological order, indexed and in binders.
2. Three copies to Owner's Representative.
3. One copy to MARAD representative.

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200 INSPECTION FOR CERTIFICATION (COI) (USCG)

Contractor to provide labor, equipment and material to support accomplishment of the USCG "Inspection for Certification". This to include, but is not limited to; one electrician, one machinist, one pipe fitter and one laborer, for a term of at least sixty four (64) man/hours total, to operate in conjunction with ship's force to prove all systems to satisfaction of USCG. Coordinate with vessel's Chief Engineer and Master for actual times men are required. Provide Original/Temporary Certificate to Owner's Representative.

200(B) BOW LOOKOUT STORAGE CONTAINERS (QTY 2) (USCG)

Fabricate and install two (2) watertight containers to house life jacket and immersion suit at bow lookout station. Material to be 1/8 inch CRES (304) and all welding to be TIG. Containers to have lapped lids (not flush type) with gasket, 3/16 inch cloth inserted 60 durometer neoprene. Hinges to be stainless steel (316), TIG welded to top of lid and container. Closure latches to be quick acting, spring-tensioned (CRES 304) and TIG welded.

1. Life jacket container size to be 10" x 14" x 24" long.
2. Immersion suit container size to be 12" x 24" x 24" long.

Both containers to have mounting brackets and attached by TIG welding. All mounting fasteners to be CRES 304. Owner's Representative will designate mounting locations. Containers to be lettered in red 2 inch high block letters stating, "Life Jacket" and Immersion Suit".

201 KEYS AND LOCKS AND SECURITY DEVICES

Collect all vessel keys from Owner's Representative and/or his representative. Submit a condition report to the Owner's Representative of any locks or keys that were non-operational. Provide key list inventory and submit copy to the Owner's Representative. Provide the services of a qualified locksmith to verify and identify each door key with a permanent plastic tag labeled with the applicable door identification and attached to key with CRES key ring. Tag shall identify vessel, door number, space name, location, including deck name, etc, and placed in existing bulkhead mounted key board located in Captain's Office. Key Board shall be marked for each individual key, as each key is required by this specification. Verify that each stateroom, storeroom, water closet, etc. with a mortise lock set, throughout the accommodation area, has at least three keys each per lock. Each key to be on a ring with a label of its location. Where additional keys are

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required or less than the full compliment of keys are present, supply additional key/ring/tags as required.

202 UNDERWATER HULL BLANKS (ABS/USCG)

Provide necessary support service for divers removing hull blanks, i.e. crane service, rigging, etc. to remove hull blanks. Remove all underwater sealant applied to some hull blanks externally. Once removed, rig hull blanks aboard vessel and stow on main cargo deck at the direction of CLS Port Engineer, or in case of short term Activation, stow at the contractor's facility ashore as directed. Blanks stowed aboard shall be secured on pallets and securely lashed to deck. See Appendix L for list of hull blanks.

203 STACK COVER REMOVALS (ABS/USCG)

Remove two (2) aluminum main engine exhaust cover blanks (approx. 24 inch diameter x ¼ inch thick) bolted on top of each stack and remove three (3) aluminum generator exhaust cover blanks (approx. 18 inch diameter x ¼ inch thick). Open all remaining vent closures that are secured by toggle bolt (approx. 5 each). Extreme care is to be exercised to prevent any fasteners or foreign articles from entering the stacks. Completely remove all sealing materials found. Store all material at Contractors facility or in No. 1 cargo hold on pallet (s) as directed by the CLS Port Engineer. Securely lash material to deck until needed for Deactivation.

204 REMOVAL OF DEHUMIDIFICATION SEALING (ABS/USCG)

Remove and dispose of all vinyl protective coating and sealant installed to seal vessel for D/H purposes throughout the vessel. This includes all doors, hatches, vents, ducts, accesses, etc. All removed material to be disposed of as per applicable regulations.

Remove and sandblast to SSPC-SP-10 (near white), prime and paint, as per surrounding color scheme, two (2) each 32"x 44" ventilation closure cover interiors in their entirety. Provide and install new Contractor-furnished as per original thickness, 40 durometer, neoprene gasket material (approx. 25 feet total). Gasket material shall be adhered to the door. Re-install each closure cover and prove watertight to the satisfaction of the regulatory bodies, Owner's Representative and/or his representative.

205 SECUREMENT OF D/H SYSTEMS (ABS/USCG)

The Contractor shall deactivate the vessel's dehumidification systems, to include the following:

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- The 600-CFM D/H system servicing the house and machinery spaces shall be disconnected from the fire main and the fire main reassembled and aligned for normal underway use. All ducting and wiring that interferes with free access throughout the vessel is to be removed. These removals are to be secured nearby with adequate banding, for future use.
- The D/H and alarm electrical system (poop deck, starboard side, aft of house, outboard @ frame 25) shall be left in place but sealed with heavy plastic sheeting and duct tape to protect against weather damage during sea trials.
- All existing D/H power leads and alarm wire runs can be left in place if they do not interfere with door closings, water tightness, etc. The wiring through engine room access door, upper deck level, starboard, these shall be modified to have a male/female twist lock electrical plug permanently installed to facilitate removal for closing door (four individual wires).
- All wiring that prevents any door from being properly secured shall be tagged as to location and connection, disconnected from junction box at one end, neatly coiled and secured out of the way.
- The wiring through the ballast control room door access opening shall be disconnected at alarm panel, re-routed through a new contractor-provided and installed sealed bulkhead penetration near the door at a location designated by the Owner's Representative and/or his representative. Re-install all electrical wiring, hangers, etc, and test operate all alarms

Note: Surrounding panels may contain asbestos. Do not disturb.

206 FIRE PUMPS (3) (ABS/USCG)

Provide OEM service technician (Lister Petter) to inspect, service and test operate the Emergency Fire Pump diesel engine. Renew air, fuel, and lube oil filters. Renew Lube oil as per vessel lubrication chart. Renew fuel in day tank, with new, clean, MDO properly treated with algacide such as BioBor JF. After preparations, test/operate the Emergency Fire Pump diesel engine to satisfaction of Owner's Representative.

Operate each Fire Pump in turn to charge the fire main system and pressure test all relief valves (three total, at 125 PSI each). Reset the fire pump relief valves and, in conjunction with ship's force, prove satisfactory operation of the system to the ABS/USCG and Owner's Representative.

Machinery involved:

- Fire Pump: Hamworthy, located starboard side engine room, lower level.

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- Fire & Bilge Pump: Hamworthy, located port side engine room, lower level.
 - Emergency Fire Pump: Lister Petter, Inc. diesel engine-driven, s/n 3400096HL6A08, located in bow thruster compartment.

The fire main is presently being used as part of the D/H distribution system and must be reassembled prior to any testing can begin. (see item 205)

Provide original diesel engine service report and three copies to Owner's Representative.

207 FIRE HOSE CONNECTIONS AND FIRE HOSES (ABS/USCG)

Remove all vessel fire hoses (approx. 52) from storage in CO2 ROOM on deck, couple all together in continuous line on deck, and connect to fire main. In conjunction with ship's force, provide pressure tests for USCG / ABS. After tests, uncouple, drain, and stow at respective fire stations. Remove from storage deck storage locker and install all other required equipment, i.e. spanner wrenches, "Y's", nozzles, foggers, cap and chain, etc. at each station. Verify all fire stations contain the proper equipment as per Fire/Safety Plan.

The fire main is presently being used as part of the D/H distribution system and must be reassembled prior to any testing. (see item 200)

Verify each fire hose station (approx. 34) has plastic identification plates, with 2" BLOCK letters, white on red, ("FIRE STATION" & that station's location number). Provide Condition Report of any missing placard.

Each fire station shall have bronze cap with bronze chain installed. For bidding purposes, estimate 20-1½ inch caps, 20-2½ inch caps and 50 chains replacement

208 EMERGENCY EQUIPMENT (ABS/USCG)

- A. Remove from stowage the CO2 Room, frame 5, Poop deck Level in and place on station as required by vessel Fire/Safety Plan, all life preservers, survival suits and emergency equipment, including ring buoys, fire axes, applicators, etc. (see item 200 A)
- B. Provide and install new batteries and USCG approved light markers for life jackets and survival suits (approx. 53 Life Preservers and 45 Survival suits). Provide and install new batteries for ring buoy water lights (approx. 14), and battle lanterns (approx. 10). Prove satisfactory operation of all lights.

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- C. Provide and install new batteries and USCG approved light markers for life jackets and survival suits (approx. 53 Life Preservers and 45 Survival Suits). Provide and install new batteries for ring buoy water lights (approx. 14).

- D. Inventory all equipment and provide inspection support to USCG. (While inventorying lifejackets, survival suits and emergency equipment, make sure USCG required markings are stenciled in place. While inventorying Scott Air Packs, provide air bottle hydro dates.) Submit original and three copies of inventory list to Owner's Representative.

- E. Stow one life jacket and one survival suit in each crew stateroom. Stow two life jackets and two survival suits each on Bridge and in Engine Room, and one life jacket and survival suit at bow lookout station, as directed. Stow two lifejackets in each Life Boat.

- F. Fireman's Outfits: Are stowed in Emergency Gear Lockers.

- G. Emergency gear locker. Provide support to ship's force to remove from storage and stow all required gear in Emergency Gear Locker. Allow minimum of sixteen (16) man/hours, labor. (Coordinate with Master for times required.)

- H. Hazmat Chemical Suits: They are presently stowed in the after secured provisions locker. Remove from storage and stow as directed.

- I. Pyrotechnics. Contractor to provide Pyrotechnics, these were previously removed from the Cape Lambert and stored at the contractor's facility. These are to be stored about vessel as directed. Allow minimum of sixteen (16) man/hours, labor. (Coordinate with Master for times required.)

- J. SCBA air packs. Take delivery of or remove from storage SCBA air packs and stow aboard as directed. Inventory all air packs with hydro due dates. Provide three copies of inventory to Owner's Rep. Some are presently stowed in the after secured provisions locker and CO2 Room.

Note: all supplied battery items are to be removed at the beginning of the deactivation and stowed with the shipyard or other facility for installing on Cape Lambert if Cape Lobos is the first ship to go to the shipyard.

209 OIL WATER SEPARATOR

Provide services of OEM Technical Representative to inspect, service, start-up and prove operational the OWS. Demonstrate proper operation of the OWS and the OWS monitor and alarm unit to USCG/ABS and Owner's Representative. Contractor shall reinstall all

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removed drain fittings, access plates, pipe fittings and other accessories removed for lay-up and make the unit fully operational.

Machinery:

Hamworthy Engineering Ltd.
size HS5
Capacity 5 M3/hr.

210 POTABLE WATER STERILIZER (ABS/USCG)

Provide the services of a qualified OEM service technician (Ultra Dynamics Company) to service the potable water system ultraviolet water sterilizer and monitor.

Sterilizer is to be disassembled, inspected, cleaned and reassembled. During reassembly, the service technician shall provide and install new lamps.

Upon completion, sterilizer and monitor shall be tested to the satisfaction of Owner's Representative and/or his representative. Provide original service report and three copies to Owner's Representative.

Unit data: Model # 500-MF
Serial # 97736W
Lamp # 7001-803
Ballast # 7001-046

Monitor: Model # DW-50
Serial # 97737W

Manufacturer: Ultra Dynamics Company
1648 Tenth Street
Santa Monica, CA 90404
Tel: (310) 450-6461

211 POTABLE WATER TANKS (QTY 2) (ABS/USCG)

Contractor to remove existing bronze-mesh screens installed during deactivation for D/H circulation on each potable water tank manhole (2 total) and save for deactivation.

Upon completion of ABS and USCG internal inspection of each tank as part of the Hull Survey, sanitize each tank and install new manhole cover gasket, cover and nuts that are provided in a bag mounted at each manhole and close up in good order.

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Upon completion of above and upon approval of ABS, USCG and Owner's Representative, Contractor to provide and fill each potable water storage tank with approx. sixty (60) long tons of clean, fresh potable water (120 long tons total).

212 DISTILLERS (2) (ABS/USCG)

212(A) ATLAS

Furnish labor and materials to reinstall all drain plugs and flange connections on the ATLAS Distilling Plant that were opened to allow drainage during deactivation. Affected areas are painted with iridescent paint and plugs and associated connection hardware are attached to, or in the vicinity of, the equipment/openings in zip-lock bags.

Provide an OEM Technical Representative approved by Owner's Representative to test and calibrate salinity indicating systems, flow meters, dump valves and trips. Tech. Rep. is to then start distiller and prove proper operation for a period of at least four (4) continuous hours. Provide original service report and three copies to Owner's Representative.

Machinery data:

Distiller: Alfa-Laval ATLAS DESALT
TYPE AFGU -1S36

Salinity meter: Model MCNAB AP1 AQUA PUROMETER I

212(B) MECO

Furnish labor and materials to reinstall all piping, drain plugs and caps on the MECO Vapor Compression Distillation Unit. Clean all sheaves and pulleys of rust preventative coatings, install and adjust drive belts on compressor(s), pumps and motors. Affected areas are painted with iridescent paint and the drain plugs and drive belts are attached to, or in the vicinity of, the equipment/openings in zip-lock bags.

Provide an OEM Technical Representative approved by Owner's Representative to test and calibrate salinity indicating systems, flow meters, dump valves and trips. Tech. Rep. is to then start distiller and prove proper operation for a period of at least four (4) continuous hours. Provide original service report and three copies to Owner's Representative.

Machinery data: Distiller: MECO Model: PEE300M3C

213 MAIN PROPULSION PLANT (ABS/USCG)

Provide the services of a Pielstick diesel engine Technical Representative, specifically, Mr. Lennart Rosengren of Lindholmen Engineering Company (due to his familiarity with this machinery). Contact at: P.O. Box 23039, Jacksonville, Florida 32241, Tel: 904-739-3457, Fax: 904-739-5851. Furnish two (2) qualified assistants to assist Technical Representative to re-assemble and activate all main propulsion systems. (Engine Lube Oil filter has been installed in each engine for lay-up, and does not require renewal.) Start both main L.O. purifiers and operate from sump to sump for a minimum of eight (8) continuous hours before starting engines (see item 220). Operate main L.O. system for at least eight (8) continuous hours before starting. During this time, changeover and clean both engine Moatti automatic oil filters (LGM/LSM 280 Bn). Renew jacket water. Drain all system jacket water and dispose according to all applicable regulations. Refill system with clean de-mineralized fresh water treated to prevent freezing to zero degrees Fahrenheit. Treat with propylene glycol or other Owner approved anti-freeze. (System capacity is over 600 gals.) Verify water is protected to zero degrees, Fahrenheit. Circulate jacket water through both systems and verify systems are tight. Technical Representative is to attend the vessel for inspection, re-assembly, start-up, testing, Dock Trial, Sea Trial, deactivation and ABS periodic survey of the main propulsion plant. All safety devices, i.e. Low L.O. alarms and trips, over speed trips, etc., are to be tested and proven fully operational. (See item 200.)

Provide original service reports and three copies to Owner's Representative.

1. Accomplish the following closures, which were opened at deactivation to facilitate system draining and D/H circulation during lay-up (original fasteners are stored nearby):
 - Inspection plates, reduction gears
 - Crankshaft access plates, #1 & #18 cylinder, both main engines
 - Clean all gasket surfaces (8 total) and provide new gaskets for Exhaust gas outlet transitions, main engine turbochargers (4 total)
 - Main Engine turbocharger exhaust gas outlet transition insulation blankets (4 total)

Closure of gear inspection plates is to be done in presence of the Owner's Representative. Take extreme care to ensure that no foreign objects enter gear case.

Main engines are: Two-Crossley Pielstick Model 18-PC-2V direct reversing diesel engines

4 stroke, turbocharged, Cyl. Dia: 400mm, Stroke Length: 460mm,
Max. Continuous output at 520 RPM: 2 X 8500 BHP
Geislinger Coupling Type: B100C1102

Reduction Gears: Two- Philadelphia Gear Corporation, Model 54 MGH

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Output: 110 RPM @ 520 RPM input, 4.712 gear ratio Single reduction; single pinion, vertically offset in a completely closed housing.

214 SHIP'S SERVICE DIESEL GENERATORS (QTY 3 AT 845 kW) (ABS/USCG)

Furnish a Caterpillar Service Technician to reassemble, check all valve and injector lash settings, start up and test operate the SSDG Sets. Drain and properly dispose of jacket water. Furnish and install two new lawn tractor type 12-volt batteries per engine (total 6) for control wiring. Batteries are to be installed in existing boxes and wired in series for 24-volt system and to chargers (located in Control Room). Testing is to include all safety devices, high L.O. temperature alarm, low L.O. pressure and trip, over-speed trips, reverse current trip, under voltage relay trip and the operation of all remote starting and shutdown equipment.

Closings include (Original fasteners stored nearby):

- Crankshaft access covers
- Crankcase vent cover
- Exhaust gas outlet transition, turbocharger
- Exhaust gas outlet insulation blanket, turbocharger

Provide original service report and three copies to Owner's Representative.

Engines: Caterpillar, Model 3512, 12 cyl., 6.7" bore, 7.5" stroke, 1203 BHP @ 1216 RPM

Alternators: Type SR-4, 440 volt, 845 kW, 1330 amp, 60 cycle and 1061 kVA

215 EMERGENCY STEERING DIESEL ENGINE (ABS/USCG)

Furnish an OEM authorized service technician to re-assemble, start up and test operate the Emergency Steering Diesel Engine. (New air filter, oil filter and oil have been installed for layup).

Engine data: Sabb, Model 2GS, S/N 402

Provide original service report and three copies to Owner's Representative.

216 MACHINERY AND PIPING SYSTEMS (VARIOUS) (ABS/USCG)

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Furnish labor and materials to reinstall all piping, drain plugs, pet-cocks, filters, etc., on the fresh and salt water system lines, equipment and reinstall piping removed at deactivation. These items were opened and/or removed at deactivation to facilitate drainage and to allow circulation of dehumidified air during layup. Filters, lines, plugs, petcocks, etc. are attached to, or in the vicinity of, the equipment/openings in zip-lock bags. Test all joints after pressurizing water system.

Close up all removals made for drainage of water such as pumps and all auxiliary equipment:

Machinery and associated piping systems onboard vessel consist of:

- Main Engines
- Heat Exchangers
- Potable Water Head Tank
- Strainers
- Compressed Air Receivers
- Potable Water System
- Fire Main System
- Deck Drains
- SSDG's & EDG
- Sprinkler System
- Lube Oil Coolers
- Hot Water Heaters
- Distillers
- Pumps
- MSD
- Sanitary System
- Bilge and Ballast System
- Compressed Air Systems
- OWS/OWM
-

Removal areas are painted with iridescent paint and all removals are stored nearby in sealed plastic bags. Removals shall be recorded in the form provided in Appendix J. All pipe threads to be coated with teflon tape and machine threads are to be coated with approved anti-seize compound.

Provide a typewritten report listing the location and item of which drains were secured.

217 GAUGE CALIBRATION (VARIOUS) (ABS/USCG)

Provide the services of a qualified service technician to inspect, test, calibrate and certify the various electrical, pressure and temperature gauges in Engine Control Room, Engine room, Bridge and any other area(s) deemed necessary by regulatory bodies and/or the Owner's Representative.

For bidding purposes, estimate one hundred (100) various gauges total.

Upon completion, each gauge serviced shall have certification sticker applied. Provide original servicing report of all gauges serviced, and three copies to the Owner's Representative.

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218 PRESSURE VESSELS (ABS/USCG)

Remove protection screens from pressure vessels and store as directed.

Examine the six (6) air receivers and sweep clean or vacuum all dried dust and debris.

Close up and perform pressure tests in accordance with ABS and USCG Regulations. Perform pressure test of all relief valves and adjust relief valve setting, if required. ABS, USCG and Owner's Representative and/or his representative shall witness all tests and relief valve set point demonstrations.

Upon completion, drain and prepare for operation with exception of potable water pressure tank. Drain the potable water pressure tank to operating level and demonstrate that the pumps start and stop at prescribed pressure switch set points.

Machinery list:

- One Control Air; MAWP 150 PSI – Relief Valve setting @ 140 PSI
- One Control Air; MAWP 200 PSI - Relief Valve setting @ 140 PSI
- Two SSDG Starting Air; MAWP 350 PSI – Relief Valve setting @350 PSI
- Two MDE Stating Air; MAWP 425 PSI – Relief Valve setting @ 425 PSI
- One Potable Water System, Pressure Tank MAWP - Relief Valve setting 80
- Two Potable Water System, Hot Hater Heating Tank - Relief Valve Setting

219 BILGE WELL TESTING, CARGO HOLDS (ABS/USCG)

Remove strainer plates, inspect and clean all bilge wells throughout vessel, cargo hold and engine room. Bilge wells to be filled with fresh water and pumped dry through bilge systems in presence of ABS and USCG. Contractor is responsible to ensure that no oil is discharged overboard. Test pump by taking suction from all the cargo holds and any additional areas designated by the regulatory bodies and discharge to sludge tanks. When testing is complete, wipe all bilge wells dry and close up. All strainer plates are to be secured. Recover all slop water and pump ashore and properly dispose. For estimating purposes, assume 20 Long Tons slop water. Test and prove bilge sump sounding lines are free.

220 PURIFIERS (QTY 5) (ABS/USCG)

Provide Alfa-Laval Technical Representative to re-assemble, start-up and test operate the three (3) diesel oil purifiers and two (2) lube oil purifiers. Replace all fittings removed to facilitate the drainage of purifier water sealing system.

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Two - Alfa-Laval Purifiers, Type Mark MAPX 309BGT-14-60

One - Alfa-Laval Purifier, Type MAB 104B-24-60

Two – Alfa-Laval Purifier, Type MAB 207S-20

Provide original service report and three copies to Owner's Representative.

221 AIR COMPRESSORS (ABS/USCG)

Provide OEM authorized Service Technician to re-assemble, start-up and test run starting air, and control air compressors. Prove satisfactory operation on automatic and manual control.

Provide OEM authorized Service Technician to re-assemble service, start-up and test diesel-driven Emergency Starting air compressor.

Provide original service report and three copies to Owner's Representative.

- Starting Air: Two Hamworthy Engineering Ltd. compressors, type 2TF54
2 CFM, 425 PSI, 1175 RPM, water-cooled
- Control Air: One Quincy Compressor Co. compressor, model 5105-8
- Emergency Air: One Colt Industries, Quincy compressor, model 325
- Sprinkler System: One Air Compressor Products, model ACP-GS-13H1

222 DOMESTIC REFRIGERATION AND A/C SYSTEM (ABS/USCG)

Furnish the services of a certified Marine Refrigeration Contractor to activate and test vessel's Domestic refrigeration (DuPont Suva R-134A), and Air Conditioning (R-22) system. Currently, all systems, are under pressure with nitrogen blanket (2 PSI).

The following work shall be performed on all systems before starting.

- Verify proper operation of all thermostatic expansion valves.
- Verify proper operation of solenoid valves.
- Verify proper operation of all manual valves.
- Pressure test system at 45 psi. for tube leaks.
- Renew dehydrator elements.
- Add/Drain oil to normal operating level.
- Reclaim 2 PSI nitrogen blanket, pump down and re-charge with refrigerant (R-22 = approx. 312 lb. and R-134a = approx. 200 lbs.)

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- Test and prove fully operational all operational and safety devices, i.e. low temperature cutouts, low oil pressure cutouts, water pressure failure switches and compressor hi/low cut ins and cut outs.
- Test and verify proper operation of all fans related to these systems.
- Remove and clean A/C system air inlet filter media.

Test and start up systems and put in operation.

On Quarters A/C system; Close up fan room's air handlers after A/C fans are proved operational. Inspect all machinery spaces and quarters ventilation supply and exhaust systems for proper markings, operation, vibration, and integrity of ductwork, screens and condition of "V" Belts. Inspect, align all system dampers and start all vent fans. Test and prove operation of system. Test and prove operational, all accommodation space rooms fitted with reheaters. Operate system continuously for a period of no less than 24 continuous hours without any system failure.

On Galley Refrigeration system; Remove wood blocking from under reefer doors, inspect seals and adjust doors for proper operation. Inspect all alarms and door internal release mechanisms. Inspect all space and indicator lights for proper operation.

Remove floor grating, clean and disinfect refrigerated boxes, including decks, bulkheads., shelving, gratings, etc. Re-lay gratings and shelving in their respective locations.

Examine all box air circulating fans for proper operation and rotation. Blow-out condensate drain lines and verify clear.

Operate system continuously for a period of not less than 24 continuous hours without any failures. Operate system with felt filters in refrigerant line for minimum 8 hrs.

Test operate Galley Tempered Air System. Inspect galley range hood for proper operation. Clean all filters and install properly for operation.

In addition, inspect, service, clean and sanitize all freestanding icemakers (2), refrigerators and refrigerator-freezers in the galley, officer staterooms, and Officer's mess.

Provide original service report and three copies to Owner's Representative.

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223 HVAC SYSTEMS (ABS/USCG)

Inspect all machinery spaces and quarters ventilation supply and exhaust systems for proper markings, operation, vibration, integrity of ductwork, screens and condition of "V" Belts. Inspect, align all system dampers and start all vent fans.

Provide original service report and three copies to Owner's Representative.

223(A) STATEROOM AND OTHER ACCOMMODATION SPACE REPAIRS

Provide labor and material to accomplish repairs to items as given below. All materials and accessories shall be as per original specifications, or equal as agreed with the onsite CLS Port Engineer.

ROOM IDENTIFICATION	REPAIRS NEEDED
Bridge Dk. Pilot Room	Install approximately 51 feet of vinyl black 4" cove Base. Replace toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width). Replace missing shower spray nozzle.
Bridge Deck, Stbd. side, 2 Cadets Room	Two medicine cabinet light plastic lenses missing. Curtain rod missing approximate 33-1/2" width
Bridge Deck, Master's State Room, Head.	Shower mixing valve appears to require renewal.
Bridge Deck, Chief Eng. Head	Replace toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width). Medicine cabinet, light lens missing.
Bridge Deck, 2 Cadets Room Port side	Replace missing shower spray nozzle. Replace bad fluorescent bulb in medicine cabinet (F14T 12/CW) 14" long. Renew one Medicine Cabinet light fixture Assy. (Approximately 16" wide X 4" deep X 9-1/4" high).
Boat Deck Port Side aft., 2 Nd . Engineer	Replace missing curtain rod assy. Approximately 34" wide. Replace toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width). Renew approximately 8 feet of missing cove base black 4" vinyl molding. Renew Medicine Cabinet (Bad Mirror) Cab. Approximately 16-1/2" Wide X 5" Depth X 19-1/2" high, with overhead light assy. Mirror height is 22"
Boat Deck, 1 St . Engineer's State Room, located fwd. Port side.	Replace toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width).
Radio Officer State room	Room Sealed, Not inspected.

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Boat Deck, Chief Mate, State Room, Stbd. side fwd., and outboard side.	Replace toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width). Renew lampshade on table-mounted lamp (Shade approximately 10" Dia. X 12" High.). Medicine cabinet bulb out and light lens, missing, renew Medicine Cabinet light fixture assy. (Approximately 16" wide X 4" deep X 9-1/4" high).
Boat Deck, 2 Nd . Officer, Stbd. side aft.	Replace toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width). Medicine Cabinet light lens missing, Renew light fixture light Assy. (Approximately 16" wide X 4" deep X 9-1/4" high).
Poop Deck, Officer's Mess Pantry.	Appears Ok.
Poop Deck, 3 Rd . Mate, fwd. athwart ship passage way Stbd side	Replace approximately 3 Sq. feet of vinyl floor tile squares. Replace missing Head, flush mounted ceiling frosted light lens and mounting frame assy. Light fixture rough opening approximately 8-1/2" square. Light lens approximately 8" square. Replace toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width). Medicine Cabinet light lens missing, Renew light fixture light Assy. (Approximately 16" wide X 4" deep X 9-1/4" high).
Poop Deck Baggage Locker	Sealed, not inspected
Poop Deck, Hospital	Sealed, not inspected
Poop Deck, Steward's Storeroom.	Sealed, not inspected
Poop Deck Fwd. athwart ship passage way Stbd. Bosun State room 2 Nd . Room from Stbd.	Replace and install missing curtain rod assembly approximately 34" wide. Replace missing Medicine Cabinet frosted lens approximately 23-1/2' X 4-3/4"
Poop Deck, Deck Mechanic State Room Approximately center of passageway room phone # 218	Replace broken frosted glass overhead flush mounted light lens approximately 8" square. Re-secure adrift shower piping to the bulkhead with stainless sheet metal screws and nylon back-up support blocks and CRES securing straps.
Poop Deck, Third Engineer State room fwd Port side passageway Room Phone # 216	Replace and install approximately 30 feet of black vinyl 4" cove base molding. Replace missing toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width). Replace and install missing shower soap holder. Medicine Cabinet light lens missing, Renew light fixture Assy. (Approximately 16" wide X 4" deep X 9-1/4" high). Re-secure adrift shower piping to the bulkhead with stainless sheet metal screws and nylon back-up support blocks and CRES securing straps.
Poop Deck, Third Engineer State Room phone #215.	Replace and install approximately 10 feet of black vinyl 4" cove base molding. Replace missing toilet

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	paper roll holder (3/16 "pin type, 5-1/2" long, holder. Replace and install missing soap dish holder. Medicine Cabinet light lens missing, Renew light fixture Assy. (Approximately 16" wide X 4" deep X 9-1/4" high).
Poop Deck, Steward State Room	Medicine Cabinet light lens missing, Renew light fixture Assy. (Approximately 16" wide X 4" deep X 9-1/4" high). Renew missing toilet paper holder assy. and secure with CRES fasteners.
Poop Deck, Officer Laundry	Replace missing door lock cylinder.
Poop Deck, Cleaning Gear Locker	OK.
Poop Deck Petty Officer Mess	Room Sealed not inspected.
Poop Deck, Crew Mess	Overhead 4-foot flush mounted fluorescent light fixture missing cover and lens, Renew and install new light fixture.
Poop Deck, Scullery	Overhead 4-foot flush mounted fluorescent light fixture missing cover and lens, Renew and install new light fixture.
Poop Deck after athwart ship passageway fwd of galley Stbd. side.	Deck vinyl tile loose and cracked.underlayment. Renew approximately 3 square foot of deck tile floor covering and underlayment sub base.
Poop Deck Galley Head located passageway fwd of galley Stbd. side.	OK.
Galley Dish washing sink with garbage disposal.	Renew and replace spray head and 3 feet of hose with control valve assembly to make up to 3/8" NPT male pipe.
Poop Deck forward athwart ship passageway, Stbd. side.	Round flush mounted ceiling light lens and holder missing. Renew and install light fixture assy. rough opening size approximately 11-3/4". lens cover O.D. approximate size 12-3/4" Dia.
Upper Deck Port side Rec. Room	OK.
Upper Deck Port side GVA Room	Replace missing door lock cylinder. Replace missing curtains & curtain rod assy. approximately 31" wide. Curtain length approximately 36" long.
Upper Deck Port side 8-12 AB Room phone # 308.	Renew Medicine Cabinet (Bad Mirror) Cab. Approximately 16-1/2" Wide X 5" Depth X19-1/2" high, with overhead light assy. Mirror height is 22" Renew missing shower basket type soap dish with CRES fasteners. Shower mixing valve appears to be in poor condition, renew mixing valve. Renew missing curtain rod assy. approximately 34" wide

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Upper Deck Port side 8-12 AB Room(Next room moving Stbd.)	Replace and install approximately 12 feet of black vinyl 4” cove base molding. Renew missing shower, basket type soap dish with CRES fasteners. Renew Medicine Cabinet (Bad Mirror and light assy.) Cab. Approximately 16-1/2” Wide X 5” Depth X19-1/2” high, with overhead light assy. Mirror height is 22”. Replace missing curtains and curtain rod assy. approximately 34” wide. X 36” long. Medicine Cabinet light lens missing, Renew light fixture Assy. (Approximately 16” wide X 4” deep X 9-1/4” high).
Upper Deck Portside Cert. Water Closet.	Room is gutted. No toilet (including plumbing from deck up), Sink and plumbing missing from deck up. Wall mounted light over sink missing. Deck sub floor is in poor condition. Remove all flooring prepare steel deck and prime coat using approved MARAD coating materials. Install new sub floor leveling compound Install PRC deck compound color to be as directed. The deck shall be installed with formed radius corbels extending 8” up on perimeter walls. (deck approximate size 5’-5” Long X 4’-2” Wide.
Upper Deck, 4-8 AB room phone #305	Renew missing shower basket type soap dish with CRES fasteners.
Upper Deck, 1 Seaman, forward athwart ship passageway Portside.	Replace missing two sets of curtains and curtain rod assemblies, approximate sizes 34’ wide X 36” long. Replace missing toilet paper holder and secure with CRES fasteners. Replace missing medicine cabinet light fixture frosted light lens. Approximately 4”X 24”
Upper Deck, 4-8 AB Seaman, forward athwart ship passageway 2 Nd .room from, Port side.	Renew Medicine Cabinet (Bad Mirror) Cab. Approximately 16-1/2” Wide X 5” Depth X 19-1/2” high, with overhead light assy. Mirror height is 22” Replace missing curtains and curtain rod assembly, approximately 34”Wide X 36” long.
Upper Deck, 12-4 AB Seaman, forward athwart ship passageway 3 rd ..room from Port side	Replace missing curtains and curtain rod assembly, approximately 34”Wide X 36” long. Renew the 4-foot overhead ceiling flush-mounted 2 bulb fluorescent fixture with lens cover. Renew missing shower, basket type soap dish with CRES fasteners.
Upper Deck, 12-4 AB Seaman, forward athwart ship passageway 4 Th ..room from Port side	Replace missing toilet paper roll holder (3/16 “pin type, 5-1/2” long, holder. Replace and install missing soap dish basket type holder for sink install with CRES fasteners. Replace missing curtain rod assembly, approximately 34”Wide. Renew

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	Medicine Cabinet (Bad Mirror and light lens. Cab. Approximately 16-1/2" Wide X 5" Depth X 19-1/2" high, with overhead light assy. Mirror height is 22").
Upper Deck, Spare room forward athwart ship passageway 5 Th . room from Port side	Replace missing toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder. . Renew Medicine Cabinet (Bad Mirror and light lens. Cab. Approximately 16-1/2" Wide X 5" Depth X 19-1/2" high, with overhead light assy. Mirror height is 22"). Renew missing curtain rod assembly approximately 34" wide.
Upper deck ballast control Room	Install approximately 36 feet of vinyl black 4" cove Base.
Upper Deck Crew laundry	The 4-foot fluorescent ceiling light lens and cover are missing. Replace missing ceiling flush mounted 4-foot fluorescent light fixture, complete assembly.
Upper Deck Stbd. passageway fwd. 1 st . room	Renew missing curtain rod assy. approximately 34" wide. Re-glue approximately 12' of black 4" vinyl cove base.
Upper Deck Stbd. passageway fwd. 2 Nd . Room from fwd.	Renew missing curtain rod assy. approximately 34" wide. Renew Medicine Cabinet (Bad Mirror and light lens. Cab. Approximately 16-1/2" Wide X 5" Depth X 19-1/2" high, with overhead light assy. Mirror height is 22"). Renew missing sink basket type soap holder and secure with CRES fasteners Replace missing toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width).
Upper Deck Stbd. passageway fwd. 3 Rd . Room from fwd.	Renew missing curtain rod assy. approximately 34" wide. The 4-foot fluorescent ceiling light lens and cover are missing. Replace missing ceiling flush mounted 4-foot fluorescent light fixture, complete assembly. The fittings from the toilet flush valve to the new toilet are loose tighten all fittings.
Upper Deck Stbd. passageway fwd. 4 Th . Room from fwd.	Replace missing curtains and curtain rod assy. approximately 34" wide X 36" long. Replace missing toilet paper roll holder (3/16 "pin type, 5-1/2" long, holder width). Renew Medicine Cabinet (Bad Mirror and light lens. Cab. Approximately 16-1/2" Wide X 5" Depth X 19-1/2" high, with overhead light assy. Mirror height is 22"). The fittings from the toilet flush valve to the new toilet are loose, tighten all fittings, and replace flush valve.
Upper Deck, Stbd. passageway 5 Th . Room from fwd.	Replace missing curtains and curtain rod assy. approximately 34" wide X 36" long. Renew missing basket type soap holder for the shower and secure with CRES fasteners. The medicine cabinet has a

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	bad mirror, replace medicine cabinet and light assy. with Cab. Approximately 16-1/2" Wide X 5" Depth X 19-1/2" high, with overhead light assy. Mirror height is 22". The flush valve is not properly connected to the new American Standard type toilet, tighten all loose fittings and supply piping as necessary to connect to the flush valve.
Upper Deck, Stbd. passageway 6Th. Room from fwd.	Replace missing curtain rod assy., approximately 34" wide. Medicine Cabinet light lens missing and light fixture bad., Renew light fixture Assy. (Approximately 16" wide X 4" deep X 9-1/4" high).
Upper Deck, Stbd. passageway 7Th. Room from fwd. near rear WTD passage to weather deck.	New American Standard type toilet has been installed all plumbing to the flush valve needs to be properly made up. Modify supply plumbing to flush valve by installing two 45 degree 1" sweat type offset elbows and approximate 10" of 1" sweat type copper pipe to correct flush valve alignment with the toilet.
Upper Deck, After Stbd. passageway.	Replace the single bulb 4-foot surface mount type fluorescent fixture. The original cover is broken.
Engine Room, Lower level	Local gage board between main engines replace lube oil pressure gage, 0-200 PSI, bezel surface mounted, 4" Dia., Bottom connected 1/4" fitting for the Stbd. Main Engine.
Engine Room, Lower level	Replace the broken two position knob operated Allen Bradley type "Lag/ Lead" switch for the Stbd. Upper Reduction gear lube oil pump.
Engine Room, Lower level	Trident MSD unit. Remove the 6-1/2", 4-bolt flange mounted on the side of the collection tank. Remove old welded in 2"NPT galvanized pipe nipple X 4" (Threads deteriorated and broken) Weld in new nipple and install a new 2" 90 degree galvanized elbow and attach the existing 2" vent riser pipe. Reinstall the flange back on the collection tank with a new gasket.

224 SWITCHBOARDS, MAIN AND EMERGENCY (ABS/USCG)

Clean, vacuum and blow out; dust, carbon, film, etc., from all components on main and emergency switchboards and bus bars. Open switches, rheostats, breaker enclosures, etc., and clean all units.

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Tighten all bus bar connections, terminals, relays, trips, and contact points. Lubricate all operating mechanisms. When power is restored to boards and when plant is on line, inspect and test reverse power relays, ground fault detectors and low voltage trips for proper operation in presence of USCG/ABS, Owner's Representative and/or his representatives. Precautions shall be taken to prevent accidental feedback of power during all work. Work shall be accomplished at off peak hours to prevent disruption of work on vessel.

Test and prove main and emergency switchboards and all circuits ground free before applying power to board. Provide report of findings to Owner's Representative.

225 ELECTRICAL INSULATION RESISTANCE READINGS (ABS/USCG)

Electrical insulation megger readings shall be taken as soon as the vessel is moored at the Contractor's berthing on all generators, switchboards, motors, motor controllers and spare motors of one horsepower and greater (approximately 200), lighting panels, and heating elements (approximately 20). Motor readings shall be taken at controller (and at motor if required). (See Appendix K for list of previous readings.)

This item includes but is not limited to: elevator motors, winch motor generator sets, winch and capstan motors, pump motors, steering gear motors, ventilation motors, compressor motors, main and emergency generators, diesel oil and lubricating oil purifier motors, drive motors on auxiliary equipment including machine shop equipment, galley equipment, heating elements, etc.

Readings shall be submitted to Owner's Representative within 24 hours of vessel arriving at Contractor's facility and prior to applying power to any circuit. Readings are to be submitted in typewritten form and on floppy disc, in MS Word or Excel. Any motor with electrical insulation readings of 1 megaohm, or less, shall not be energized without the express permission of Owner's Representative.

Install new, approved, heavy construction (3/16"), non-conductive matting, such as Mil. Spec. M-15562F Grey/Diamond Plate matting, on Engine Control Room deck, including front and rear deck of all switchboards (approx. 1300 sq.-ft total). The fabric comes in 36-inch width.

One source of supply: B & B Hose and Rubber Company, 4604 Bainbridge Boulevard, Chesapeake, Virginia, 23320 at (757) 545-6166

226 ELECTRICAL CIRCUITS AND LIGHTING CIRCUITS (ABS/USCG)

Energize and test all lighting circuits.

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Renew with like equipment, all incandescent bulbs, fluorescent tubes, indicator lights, starting ballasts, etc. that are found to be “burnt out”. Likewise, renew on a daily basis, all equipment that fails during the availability to keep the entire ship “lamped” during Activation. This shall also include navigation lights.

Renew any missing or broken incandescent light fixture globes, protective shields and fluorescent fixture lenses. This item also includes renewal of all indicator lights and lenses throughout the vessel, including consoles, indicator panels, etc.

For estimating purposes, consider that twenty-five (25) each of globes, shields and lenses as well as 10 lighting ballasts will be required. All extras are to remain on board as vessel spares. Vessel lighting is maintained while at JRRF, therefore Contractor to provide all bulbs required during the Contract period. Vessel spares are not to be used.

Energize, test and fully commission galley and lounge electrical equipment including; ranges, ovens, toasters, mixers, heaters, coffee makers, TV’s, etc.

In Crew and Officer lounges, remove from storage, one television, one VCR, and one audio system each, and install as directed. Installation shall include securement against heavy weather.

Provide a list of all equipment exercised to the Owner’s Representative.

227 SAFETY SHUTDOWNS (ABS/USCG)

Inspect and test remote controls to power ventilation, mechanical closures, and remote safety shutdowns of engines, pumps, etc. This to Include; EDG dampers, Fuel Valves, Fire Dampers, and Electrical Shutdowns (such as outside Engine Room, on Boat Deck, on Bridge and the Sludge Pump shutdown from deck). (See also item 200)

Fabricate and install plastic placards with 2 inch BLOCK white letters on red background, each mounted with 2 CRES screws at all emergency shutdowns, pull cables, pull boxes, ventilation louvers, etc., reflecting service and equipment it directly serves (approx 50 each).

This specification requires that the CO2 systems be reconnected and tested. In conjunction with item 238, test all machinery and ventilation systems CO2 shutdowns.

ABS, USCG, Owner’s Representative and/or his representatives shall witness these tests.

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228 CATHODIC PROTECTION SYSTEM (ABS/USCG)

Provide services of Electrochemical Technical Representative to test, prove and activate the Cathodic Protection System (CAPAC). Clean all contacts, test systems internally and report any discrepancies with possible repair options. Provide Owner's Rep. with original and three copies of service report.

229 BATTERIES AND CHARGERS (ABS/USCG)

All charging systems are to be serviced and placed in working condition. All battery electrical connections are to be cleaned and renewed if defective. All battery boxes and lockers are to be cleaned, and fitted with a new rubber insulation mat.

Contractor to provide New Batteries to be placed onboard, installed in appropriate battery box and connected as described below. Provide electrolyte, fill and activate the batteries and provide a sealed container of spare electrolyte, which will be stored in the EDG battery locker.

- Emergency Fire Pump Diesel Engine, consists of two each Group 24, 12- volt
- Emergency Steering Diesel Engine, consists of two each D-8, 12-volt.
- Emergency Diesel Generator consists of one each D-8, 12-volt.
- General Alarm, consist of two each D-8, 12-volt.
- Emergency Radio, consists of four each Group 24, 12-volt.
- Fire Protection Emergency Back up, consists of four each 12-volt, 10AH and two each 12-volt, 31AH (six total).
- Ship's Service Diesel Generators (3), consists of two each (total 6) lawn tractor type batteries, wired in series for 24 V.
- Emergency Air Starting Compressor Diesel Engine, consists of one heavy-duty deep cycle marine battery, 12V.
- Sprinkler Fire Pump – consists of two each D-8, 12V batteries.

Upon completion of sea trial, remove, transfer and install all batteries and electrolyte to CAPE LAMBERT (If Cape Lobos is the first ship to be activated, otherwise the batteries may be transferred from Lambert to Lobos).

Note: the sprinkler pump system does not exist on the CAPE LAMBERT. When transferring the other batteries this battery is to be transferred to the owner's representative for disposal.

230 GYRO COMPASS AND REPEATERS (QTY 3) (ABS/USCG)

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Remove from Poop Deck level Bonded Stores Room, install and connect gyro compass repeaters. Existing installed canvas covers shall be removed and stored in Radio Equipment Room. Repeater stands are located at the following locations:

- Wheelhouse
- Port & Stbd. Bridge Wing

Provide the services of a Manufacturers Technical Representative to service the gyro compass system. Test, align and prove entire system including port and starboard autopilots and internal lighting.

Provide original service report and three copies to Owner's Representative.

231 COMPASS ADJUSTMENT (ABS/USCG)

Remove compasses from Poop deck level Bonded Stores Room and install on Bridge and Flying bridge as provided in item 230. Remove existing canvas covering and store in Radio Equipment Room. Contractor to ensure that all compass lighting is in proper operating condition. Furnish services of qualified Magnetic Compass Adjuster to adjust magnetic compass as required, including during Sea Trials. Prepare and submit three (3) deviation tables for the vessel's magnetic compass binnacle. Each individual table shall be dated, signed, and inserted in clear laminated plastic. Two shall be posted per the master's instructions on the navigational bridge and steering gear room, and One (1) shall be spare for Master.

Lifeboat portable compasses (Two plus one spare, total 3) shall also be examined and certified by Compass Adjuster.

232 ALARMS (ABS/USCG)

Service, calibrate and test operate, all alarms and related equipment for Engine Control Room and Bridge Consoles, including but not limited to, the general alarm, radio station alarm, engine order telegraph wrong direction alarm and steering failure alarm, etc. In conjunction with Ship's force, demonstrate proper operation of all alarm systems for USCG, ABS and Owner's Representative. (See item 200.)

233 NAVIGATION LIGHTS (ABS/USCG)

Remove from storage in Bonded Stores Locker, vessel running lights and install on Bridge as directed. Open, clean and close in good order all navigation light lenses, including range and mast head, port and stbd. running, stern, anchor, mast tree lights, etc. Clean and tighten wiring contacts in the navigation light panel. (Megger all navigation

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light circuits as per item 225.) After performing preventative maintenance, energize all navigation lighting circuits and ensure that all navigation lamps burn bright and clear. (Prove the Navigation Lt. Alarm panel functions properly for extinguished bulb filament as per item 232.)

Contractor shall demonstrate proper operation of navigation light system for ABS, USCG, Owner's Representative and/or his representatives.

234 NAME BOARDS (QTY 2) (ABS/USCG)

Remove from storage in Boat Deck level store room, port side, clean, repaint and mount port and starboard vessels name boards on flying bridge with new Contractor-provided 316-CRES mounting bolts, washers and nuts.

235 RPM AND RUDDER ANGLE INDICATORS (REPEATERS) (ABS/USCG)

Service, calibrate and test operate all engine/shaft RPM and Rudder Angle Indicators. These are located in Bridge, Bridge Wings and Engine Room. Demonstrate proper operation for ABS, USCG, Owner's Representative and/or his representatives (see item 200).

236 CARGO HATCH COVER (ABS/USCG)

Cargo hatch cover is located on stbd. side fwd. Weather deck. Currently, cargo hatch is secured in place. Open and inspect the condition of the hatch cover gasket(s) and provide a chalk test to show adequate contact of knife-edge. Submit Condition Report of results found. Provide all necessary equipment and manpower to perform a hose test of the hatch cover for USCG, ABS, Owner's Representative and/or his representatives.

237 SMOKE/FIRE DETECTING SYSTEM (ABS/USCG)

Furnish OEM technical representative (Pyrotechnics, Incorporated) to activate, service and test the entire smoke/fire detecting systems, including the cleaning of all zone modules and photocells. Technician shall prove proper operation to USCG and ABS (see item 200). Submit original service report with three copies to the Owner's Representative.

238 FIXED CO2 AND PORTABLE FIRE EXTINGUISHING (ABS/USCG)

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238 (A) FIXED CO₂ SYSTEMS

Furnish OEM technical representative (Ansul or their authorized service representatives) to remove caps, reconnect, service, activate, test and prove proper operation of all CO₂ fire extinguishing systems. Inspect, weigh, re-certify CO₂ bottles (approx. 348 total) and provide Condition Report of results found. The fixed CO₂ system serves: main cargo deck space, cargo holds, engine room, and paint locker. On Galley Gaylord Hood test all galley safety features and shut downs for fire protection, which includes deep-fat fryer. In addition, the Engine Room also contains one (1) B-V semi-portable system. After servicing, provide services to prove proper system operation, including alarms, sirens and time delays, etc. to ABS, USCG, Owner's representative (see item 200). Upon satisfactory testing, connect all flexible hoses, actuators and master CO₂ controls, etc. and render all systems operable.

Strict compliance to Safety and USCG regulations to be adhered to when testing systems, time delays, pull stations, sirens, etc.

Contractor shall provide original service report with three copies, including bottles and hydro due dates for each bottle to Owner's Representative.

All cylinder caps shall be retained for deactivation.

238 (B) PORTABLE FIRE EXTINGUISHERS

Remove all portable fire extinguishers (approx. 127) from storage in CO₂ Room. Furnish USCG approved technical representative to inspect, service and tag all portable extinguishers. Provide Condition Report of results found.

Fabricate and install approx. eighty-five (85) plastic plates with 2 inch white BLOCK numbers with red background, each mounted with 2 CRES screws at each correct numbered location, as specified on vessel's fire control plan. (Example: PORTABLE FIRE EXTINGUISHER NUMBER 22)

Install extinguishers in their correct numbered locations, as specified on vessel's Fire Control Plan. Ensure USCG required markings are in place. Using a permanent marker, mark corresponding extinguisher with station number. Provide Condition Report of results found.

Contractor shall provide original service report with three copies, containing servicing and hydro due dates for each bottle to Owner's Representative.

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239 SPRINKLER SYSTEM (ABS/USCG)

Contractor shall provide Caterpillar representative to service, activate and test sprinkler pump engine and associated systems. Upon completion of all work, Contractor shall perform operational tests of entire system for regulatory bodies. Note: Entire sprinkler piping system is currently open and dry. Contractor will be required to fill system with fresh water prior to any tests.

Provide Owner's Representative with original and three (3) copies of servicing report.

Sprinkler Pump Engine Data: Caterpillar, Model 3408 PC, s/n 67U1917

240 LIFEBOATS - EQUIPMENT AND STORES (QTY 2) (ABS/USCG)

Remove securing turnbuckles and wires from both lifeboats and wooden storage cradles on main cargo deck. Remove each lifeboat from the wooden cradle and rig to respective davits and secure. Remove from storage on main cargo deck, after stbd. Side, and rig and install Jacob ladders at their respective locations at port and stbd lifeboat davits. Connect falls, and secure boat for weight test. Cradles to remain in main deck cargo hold for reuse during deactivation. Lower each boat to the embarkation level and test winch brakes.

Contractor shall remove existing, procure and install new wire rope for port and starboard lifeboat davits. Each wire is approximately 150' long ½" dia. 6 x 37 strands, galvanized with a thimble eye at each end. Contractor shall lubricate new falls with Magnus Eva-Melt sluicing compound or equal. Contractor shall provide and install spreader bar with LBS. to weight test the falls. Furnish dry weight (water not to be used) and weight test port and starboard lifeboat falls and davits, to satisfaction of USCG and Owner's Representative and/or his representative. Falls are to be weight tested in the presence of USCG inspector, ABS and Owner's Representative and/or his representative prior to lifeboat weight tests. The Port lifeboat is rated for 36 persons. The Stbd. Lifeboat is rated for 39 persons.

Prior to USCG inspection, remove all lifeboat provisions and equipment presently stored in the boat deck storeroom, port side, and prepare for USCG inspection. Provide inventory of provisions and equipment with condition report to Owner's Representative detailing provisions, expiration dates and equipment needed for completion of inspection required by USCG. Upon completion of inspection, stow same in lifeboats in proper stowage areas. In addition, provide each lifeboat with radio (to be delivered to Master or C/M) and pyrotechnics specified elsewhere in this specification.

Provide certified Lister Diesel Engine Technician to service, commission and demonstrate proper operation of the port, motor lifeboat diesel engine. Renew air, fuel oil, and lube filters, and lube oil. Renew fuel in day tank with new, clean MDO, treated with approved algaecide, such as BioBor JF. Provide original service report and three copies to Owner's Representative. Starboard lifeboat is oar propelled.

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Lubricate all moving parts of davits and winches. Lubricate winch hand brake overrunning clutch with lubricant as per vessel's lube oil charts.

Remove from storage in Boat Deck level storeroom, portside, and install; rudder, rope ladders, gripe lines and lifelines, etc. for each lifeboat.

Furnish supporting personnel to assist crew to lower each lifeboat to the water and prove operation of all releasing gear. In addition, while port lifeboat is in the water, prove operation of engine, propulsion and steering systems. Re-stow boats in davits, test and prove operation of limit switches, emergency lighting, etc. The airline pre-filter/lubricator panel (stowed in port side boat deck locker) is to be used with Life Boat air motor. Ensure that filter media is in good working order. After all testing of lifeboats and gear, hoist lifeboats into davits and secure gripes, painters, etc. to make fully operational.

Fabricate and install a plastic placard (2 total) consisting of 3 inch white BLOCK letters on red background, each mounted with four CRES screws at each lifeboat station on boat deck level, in a location designated by the Owner's Representative, as follows: "LIFEBOAT STATION NUMBER 1" and "LIFEBOAT STATION NUMBER 2".

Port Motor Boat Diesel Engine: Lister Petter, Inc., model # ST2MGR2, S/N: 057798T2C-24.

241 INFLATABLE LIFE RAFTS (QTY 3) (ABS/USCG)

Provide labor and transportation to remove the inflatable life rafts (one Viking 6-person, one Viking 16-person and one Viking 20-person) and three (3) RAFTGO hydrostatic release units presently stored at the U.S. Maritime Administration Warehouse located at 1545 Crossways Blvd., Suite G, Chesapeake, Virginia and transport to vessel.

Install and connect hold-down straps currently stored in Port Boat Deck Level Locker. Install and connect hydrostatic release units and life raft painter lines. Remove each rope ladder from Boat deck level storeroom and install at each life raft station. Remove existing deteriorated Inflatable Life Raft Launching Instructions and Life Raft Station placards. Provide and install new Inflatable Life Raft Launching Instructions and Life Raft Station placards at a location designated by Owner's Representative in the vicinity of each life raft storage cradle.

Cradle locations:

- Viking 20-Person - on Boat Deck level just forward of port lifeboat station
- Viking 16-Person - on Boat Deck level just forward of starboard lifeboat station
- Viking 6-person - on the Upper Deck level at Forecastle head

Upon completion of above specified work, prove satisfactory installation to USCG.

CAPE LOBOS

ACTIVATION SPECIFICATIONS

Note: Check the rafts and release mechanisms for last service dates and remaining service life. Provide a condition report if the raft needs to be serviced before placing onboard.

242 MEDICAL SUPPLIES – HOSPITAL SPACE (ABS/USCG)

Contractor to receive and deliver to vessel, Bristol Bay medical kit presently stored at MARAD warehouse in Chesapeake, VA. Inventory in presence of Owner's Rep. Provide typewritten report of inventory, including expiration dates. Medical items are to then be stowed in Hospital Room, Poop deck port as directed and secured under lock and key.

243 FLAGS AND SIGNAL DEVICES (ABS/USCG)

Remove from storage in Radar Equipment room and Bonded Stores Room and place in proper areas and positions. Inventory all flags. Test all mechanical and electrical signal devices. Provide 6 ea. new lantern type batteries for signal lamps. Submit original and four copies of inventory list to Owner's Representative.

244 LIFEBOAT AND LIFE RAFT RADIOS (ABS/USCG)

Provide Owner's Representative with five ACR-VHF radios, Model number SR-102 with batteries, battery chargers, carrying cases for each and three spare batteries. Upon completion of sea trial, turn equipment over to Owner's Representative with all guarantees and manuals for government ownership and inventory.

245 EMERGENCY DIESEL GENERATOR (ABS/USCG)

Furnish certified OEM authorized Service Technician (Perkins Diesel) to inspect, service and operate the Emergency Diesel Generator.

Servicing the Perkins Diesel engine includes:

- Inspect and adjust V-belts as necessary.
- Test operation of air intake and outlet air dampers. Free-up and lubricate if necessary.
- Measure and adjust engine exhaust valve lash. Close up the valve cover using a new cover gasket.
- Measure and adjust fuel injector timing and stroke.
- Renew air, fuel and lube oil filters. Renew lube oil (see vessel Lubrication Chart).
- Drain and properly dispose of cooling water. Renew with water/anti-freeze mixture to protect system to 0 deg. F. Use Propylene Glycol or approved equal.
- Adjust fuel rack, governor linkage and emergency fuel shut-off device.

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- Test and adjust as necessary; over-speed trip, L.O. pressure shutdowns and alarms, and jacket water shutdowns and alarms.
- Test auto-start and changeover devices.

Start the engine and after parameters stabilize, operate under load continuously for a minimum of two hours. Demonstrate all safety, tripping, starting, electrical transfer and shutdown devices for USCG/ABS, and Owner's Representative. (See item 200).

Upon completion of the above repairs and tests, secure the unit and place in lockout condition until the ship is on ship's power. The generator and surrounding areas shall be left clean and dry with no oil, water or other fluids that could impose a safety hazard. Provide Owner's Representative with service report(s).

Engine data: Engine data: Perkins, model D3152

246 GALLEY AND PANTRIES (ABS/USCG)

All surfaces of galley and pantries, including bulkheads, deck, ceilings, counter tops, sinks, interior and exteriors of cabinets, dressers, shelves and fixed galley equipment shall be cleaned and disinfected.

Activate all galley electrical equipment, including range, ovens, microwave, deep fryer, steamer, toasters, kettles, etc. and prove operable. This shall include all equipment in pantries, mess rooms etc. Provide Condition report of all defects found.

Provide a Sanitation Inspection Report and De-ratting Certificate for entire vessel prior to crew arrival.

247 ACCOMMODATION LADDERS (QTY 2) (ABS/USCG)

Port and Starboard accommodation ladders are in place. Check condition of pneumatic winches, hoses, handrails, hardware and cradle. Using the pneumatic winch, each ladder is to be rigged out over the side and the ladder raised and lowered to prove system operational.

While ladders are rigged out, remove stanchions and handrails from storage and assemble onto the ladders. After inspection by USCG/ABS and Owner's Representative and/or his representative, disassemble and re-stow handrails and stanchions and return ladders to port and starboard stored positions and gripe in. Provide three (3) copies of the inspection report to the Owner's Representative.

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ACTIVATION SPECIFICATIONS

248 PILOT LADDERS (QTY 2) (ABS/USCG)

Remove two pilot ladders from storage in Elevator House #2. Inspect, and verify that ladders are in good serviceable condition. Any deficiencies are to be brought to the attention of the Owner's Representative. When found satisfactory, rig the port and starboard pilot ladders into their designated locations for use during Sea Trials.

249 DECK DRAINS (ABS/USCG)

All exterior deck drains on vessel weather deck and accommodation decks shall be cleared and proven clear to the satisfaction of attending Owner's Representative and/or his representatives.

250 VESSEL PYROTECHNICS (ABS/USCG)

Delivery of Pyrotechnics from contractor storage warehouse the pyrotechnics that was previously removed from the Cape Lambert and stow aboard according to Fire Control Plan, or as directed.

The USCG Approved pyrotechnics compliment consists of (approximately):

- Four (4) Line Throwing Apparatus
- Two (2) Man Overboard with Light & Orange Smoke
- Twelve (12) Hand Held Red Flare (60 sec) for each lifeboat (24 total)
- Twelve (12) Red Parachute Flare (40 sec) for each lifeboat (24 total)
- Two (2) Floating Orange Smoke for each lifeboat (4 total)
- Twelve (12) Red Parachute Flare (40 sec) for Bridge
- Two (2) Ring Buoy Smoke

251 COMMUNICATIONS - VESSEL (ABS/USCG) (for information only)

The new Motorola portable radios presently stored at the MARAD warehouse shall be transported to the vessel and used onboard the Cape Lobos or Cape Lambert which ever is activated first to be used for the ships navigation and communication requirements. Upon completion of sea trials, transfer the equipment to be held for the Cape Lambert, or shipped back to the MARAD warehouse as per owners, representative. Upon completion of sea trial, transfer equipment to Cape Lambert with all guarantees and manuals for government ownership and inventory.

CAPE LOBOS

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Provide five (5) Motorola portable UHF radios, model number P1225 (Intrinsically Safe) with Factory Mutual Approved ultra-high capacity batteries, with five (5) Rapid Rate battery chargers, five leather carrying cases with belt clip, five remote microphones and three spare Factory Mutual Approved ultra-high capacity batteries. These radios will be used for communication among the yard project personnel, Port Engineers and ship's Captain and C/E. Upon completion of sea trial, these radios will be turned over to the yard (The cost for this is already covered under item 003(T)).

252 ACTIVATION OF ELECTRONIC SUITE SYSTEMS (ABS/USCG)

In the presence of the Owner's Representative, the Contractor shall remove all Bridge navigation and communication gear from storage in Poop Deck level Bonded Stores Room and install on Bridge as per outline drawing in same location. Provide services of electronic technicians representing Seacoast Electronics, Jacksonville, Florida to make all inspections and tests and to activate and prove operational, all Bridge, Radio Room and Communication Room equipment including, but not limited to:

- Radar units
- Echo Sounder
- Radio Direction Finder
- Radiotelephones
- Course Recorder
- Loran-C Navigator
- Watch Receiver
- GPS/Transit Satellite Navigation System
- GMDSS
- Float-free EPIRB, including case (ACR Model RLB-23). Renew battery and HAMMAR hydrostatic release.
- Two (2) Alden MK1 SARTS. Renew each battery.

The Contractor shall prove the equipment operational by actual operation on all ranges, settings and functions. Demonstrate proper operation to USCG/ABS, and Owner's Representative. (See item 200.)

Seacoast technician to inventory all equipment and provide the Owner's representative with a list indicating Item, Model Number, Serial Number and locations. Provide original service report and three copies to Owner's Representative.

Servicing vendor: Seacoast Electronics, Inc.
240 Talleyrand Avenue
Jacksonville, FL 32202
Tel: 904-355-0343

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253 CARGO ELEVATORS, SHELL & CARGO DOORS & RAMPS (ABS/USCG)

Provide the services of an approved Manufacturer's Technical Representative (**Hagglund**) to inspect, service, start-up, and test the cargo elevators, cargo doors, cargo shell doors and ramps. All equipment, including safety devices, limit switches, gates, lights and sirens, etc. are to be tested and proven fully operational. All cargo hold watertight doors (approx. 6 each) and both shell doors are to be chalk tested and proven to USCG, ABS and Owner's Representative (see item 200). Contractor shall furnish support to assist technical representative as required.

Provide original service report and three copies to Owner's Representative.

Servicing vendor: MacGregor (USA) Inc.
P.O. Box 708
Pine Brook, NJ 07058
Tel: (973) 244-4100

DOCK TRIAL SPECIFICATION

300 DOCK TRIAL (ABS/USCG)

Conduct a Dock Trial in conjunction with the ship's crew for the purpose of testing the main engines and controls; diesel generators, propulsion shafting, and other related equipment needed to conduct underway operations and to prove repairs made previous to dock trials. The Contractor shall prepare and submit a complete written agenda checklist, test procedures and schedule in consultation with CLS Port Engineer for dock trials including time line and sequence of events for testing and operating machinery and equipment.

Not all systems or equipment require testing in an underway-operational mode since propulsion ability is not dependent upon those systems and/or individual equipment components. It is expected that testing of those components will be scheduled prior to actual dock trials.

The Contractor shall be responsible for any and all damages and the costs in repairing all damages to the vessel or any of its machinery as caused by the Contractor, sub-contractors or the Contractor's employees or representatives during the Dock Trials.

Schedule the completion of work detailed in this Specification to allow for the use of the equipment needed to conduct the Dock Trial. Consider that minor repairs and adjustments may be required as tests occur.

It is not expected that the dock trial will be conducted on a 24 hour basis, but on extended normal work day schedule with equipment being secured for nights and week-ends, unless the Contractor perceives unusual conditions, which dictate extended hours.

Ship Manager will provide licensed crew to start up the plant, conduct operational testing, operate the plant during dock trials, conduct operations during sea trials and secure the plant subsequent to sea trials. All operations will be in accordance with the Ship's Engineering Operations Manual procedures under the direction of the Chief Engineer provided. All required logs will be completed by the Engine Department watch-standers and will be the basis of data needed to complete required trial reports.

301 DOCK TRIAL SUPPORT PERSONNEL

The Contractor shall provide personnel during the entire start up and dock trial period, while the Ship Manager provided crew is onboard, to assist the Chief Engineer in making adjustments and minor repairs to equipment for which the Contractor was not responsible during work associated with this specification. For bidding purposes, assume two (2) days.

The following personnel shall be provided:

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- Two machinists
- Two marine electricians
- Two helpers
- Electronic Technician contracted for the activation
- One Ship Yard Supervisor

The following equipment shall be tested during Dock Trials:

- Main propulsion equipment, shafting and control system
- Ship's Service Generators
- Emergency Generator
- Sea Water Systems
- Pumps
- Fuel Oil Service System
- MSD
- OWS and Monitor
- Air Compressors
- Distilling Units (2)
- Engineroom Vent Fans
- Sea Suctions and Overboards
- Hot Water Heaters
- Lube Oil Coolers
- Jacket Water Coolers
- Lube Oil Purifiers
- Diesel Oil Purifiers
- Potable Water Systems
- Steering System and Emergency Steering Engine
- Cargo Elevators, Shell Doors and Ramps

Prior to the start of the actual dock trial during when the propulsion system will be operated to rotate the propeller, accomplish the following actions:

- Secure vessel with sufficient mooring lines/or tugs for dock trial. Watch the ship's position, strain on lines and dock bollards during the course of the trial.
- Ensure that each propeller is clear of lines or obstructions and shaft and rudder locks are removed before starting turning gear.
- Remove all shipyard personnel from the vessel except those directly involved in and required on board for the dock trial.

Upon completion of trials, allow shipyard workers back onboard to resume work.

302 SUBMIT REPORT OF DOCK TRIALS

Submit a dock trial report to the Owner's Representative as soon as possible upon completion of the dock trial. The report is a required prior to sea trials, which are expected to follow dock trials within 24 hours assuming that all concerned agree that the ship is suitable for underway operations. The dock trial report shall include condition reports, and deficiencies found, by all of the technical representatives attending the ship during dock trials, an assessment on the ability of the ship to conduct underway operations (sea trials) and any other pertinent information the Contractor chooses to include.

Any non-sail discrepancies found during the dock trial shall be corrected in the following 12-24 hrs to make the ship ready for sea trials.

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SEA TRIAL SPECIFICATION

400 FUEL OIL BUNKERS (DFM) (ABS/USCG)

At present condition, vessel has sufficient fuel onboard, and no bunkering is expected. However, if bunkers are required, CLS will notify the contractor, and the following shall paragraph shall apply.

The contractor shall provide make arrangements to load the fuel with the assistance of the vessel's licensed crew. Owner will furnish fuel through bunker suppliers in the region to supply required fuel for conducting the Sea Trials. The amount required (about 2,000 barrels during a 6 hour loading period). Provide necessary support personnel and install plugs with silicone caulking in upper deck scuppers and at all fuel oil air escape containment at upper deck. Provide five-gallon container where containment may not exist. Remove scupper plugs and caulking when fueling is completed and all lines are disconnected. Provide oil booming of transfer area if required by port regulations.

401 SEA TRIAL

Upon satisfactory completion of dock trials and ensuing important repairs, the ship will depart the Contractor's yard for sea trials.

A time period up to 72 hours may be required to complete sea trials which will include a 16-hour American Bureau of Shipping rated Shaft Horse Power ahead full power trial with a quick reversal from full power and an astern endurance trial to follow.

While enroute and before commencing open water trials, the ship shall be swung for compass compensation and RDF alignment.

The Ship Manager will provide a full crew to operate the ship during trials. If due to the number of riders, the USCG requires a/an additional inflatable life raft(s) and/or additional life jackets and survival suits, the Contractor shall be responsible for those logistics.

The Contractor shall provide the following services and support personnel for the sea trial:

- Provide Pilots, tugs and line handlers for outbound to and return from sea trials.
- Provide shipyard support personnel to ride the ship during trials to assist ship's crew, as needed, in minor repairs and adjustments.

The following skills shall be provided:

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- Two machinists
- Two marine electricians
- Two helpers
- One Ship Yard Supervisor
- In addition, provide OEM technical representative as specified per 200 series items elsewhere in these specifications to support the following equipment:
 - Main Diesel Engines
 - Ship's Service Generators
 - MECO Distiller
 - ATLAS Distiller
 - Electronic Suite Equipment
 - Bow Thruster
 - Machinery Vibration Analysis Survey Personnel
 - Thermographic Survey Personnel
 - Magnetic Compass Technician (may return ashore on pilot boat if compass compensation is complete at that point)

402 BOW THRUSTER SURVEY (ABS/USCG)

Provide the services of a Lips certified Technical Representative to test, adjust and witness operational testing of the bow thruster during sea trials. Provide original service report and three copies to Owner's Representative.

Service vendor: Marine Propulsion Services
460 Ponderosa Drive
Lake Echo, N.S.
Tel: (902) 829-3875

403 MACHINERY VIBRATION ANALYSIS SURVEY (ABS/USCG)

The contractor shall furnish the services of Reliability Maintenance Services, Inc. to take and record vibration readings on rotating machinery. The survey shall be accomplished while the vessel's propulsion plant and ship's systems are on line and during dock trials and sea trials, as applicable, to correctly diagnose main propulsion and auxiliary machinery during full load conditions.

In view of the above, it will be necessary for the analysis team to attend the ship during trials.

All principal motors, pumps, propulsion machinery, generating machinery and auxiliary machinery including compressors, winches and diesel engines shall be surveyed. The

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Owner's Representative will provide previous vibration analysis results for comparison and use in trend analysis.

Tri-axial vibration measurements shall be recorded at each bearing on all machinery being surveyed. Vibration measurements shall be taken in velocity inches per second peak versus cycles per minute. Any critical problems encountered shall be immediately brought to the attention of the Chief Engineer and Owner's Representative.

Prepare and submit a report in data format compatible with MS Office 97 (original and three copies) within ten (10) days after completion of the survey. Report, as a minimum, shall include the following:

- Number, identification and description of equipment surveyed
- A description of the equipment and/or instrumentation used to collect data for the survey
- Results obtained for each piece of equipment surveyed
- Fault diagnosis of each piece of equipment surveyed
- Comparison to the Owner-furnished baseline data
- Trend analysis (if appropriate)
- Recommended corrective action

Service Vendor: Reliability Maintenance Services, Inc.
879 West Park Avenue, PMB # 245
Ocean, New Jersey 07712
Tel: (732) 935-0665

404 THERMOGRAPHIC SURVEY (ABS/USCG)

The contractor shall furnish the services of Reliability Maintenance Services, Inc. to conduct an infrared survey of all main and auxiliary electrical equipment. The scope includes all switchboards (main and emergency), all motors, motor controllers, distribution and lighting panels.

The survey shall be accomplished while the vessel's propulsion plant and ship's system are on line and during dock trials and sea trials, as applicable, to correctly diagnose main propulsion and auxiliary machinery during full load conditions.

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Any critical problems encountered shall be immediately brought to the attention of the Chief Engineer and Owner's Representative. In view of the above, it will be necessary for the analysis team to attend the ship during trials.

Prepare and submit a report in data format compatible with MS Office 97 (original and three copies) within five (05) days after completion of the survey. Report, as a minimum, shall include the following:

- Number, identification and description of equipment surveyed.
- A description of the equipment and/or instrumentation used to collect data for the survey.
- Results obtained for each piece of equipment surveyed.
- Fault diagnosis of each piece of equipment surveyed.
- A minimum of three (3) color photographs indicating "Hot Spots" (no photocopies).
- Recommended corrective action

Service Vendor: Reliability Maintenance Services, Inc.
879 West Park Avenue, PMB # 245
Ocean, New Jersey 07712
Tel: (732) 935-0665

405 LUBE OIL SAMPLES

At the completion of operating all main propulsion machinery at the end of the Sea Trial period the contractor shall provide labor, equipment and materials to collect one (1) oil sample from each of the following ships equipment from a location designated by the Owner's Representative and/or his representative and ship to laboratory:

- Port Main Diesel Engine
- Starboard Main Diesel Engine
- Port Reduction Gear
- Starboard Reduction Gear
- Port Stern Tube
- Starboard Stern Tube
- Port Line Shaft Bearing
- Starboard Line Shaft Bearing
- #1, #2 & #3 Ships Service Generator
- Steering Gear

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ACTIVATION SPECIFICATIONS

Provide the services of an approved Oil Analysis Laboratory to perform analysis of above samples and provide original report to Owners Representative with three (3) copies.

The oils in these systems are Mobil products and these samples are to be submitted to Mobil oil testing labs for Spectro analysis. Copies of these analysis reports are to be given to the owner's Representative. Service Vendor contact for lab testing: Mobile Lubricants & specialties Co., 2255 Glades Rd. Suite 444W. Boca Raton Fl., 33431 POC Joseph P. Rodriguez Phone 561-912-1627 Fax: 561-997-1304.

Cape Lobos

*ACTIVATION
SPECIFICATION*

APRIL 2002

APPENDICES

APPENDIX A

CLS BID COVER LETTER

To: Prospective Bidders:

Crowley Liner Services, Inc. invites your proposal for the activation and sea trial availability of the Cape Lobos as described more fully in the solicitation letter and other files contained in the two attached documents. Complete instructions for responding are contained within the Solicitation Letter.

If you are unable to read these files for any reason, please contact me via email at patricia.murphy@crowley.com or by phone (904) 727-2624, direct line or (904) 726-4328, fax. If I am unavailable, the alternate contact is Cole Cosgrove at (904) 727-2615.

Please confirm by return email that you have received this document and that you are the correct contact for this project. If you do not wish to be considered for this project, please confirm this via email reply.

P a t r i c i a L . M u r p h y

Patricia L. Murphy
Contract Administrator
Crowley Liner Services, Inc.

Attachment 1 – Specifications
Attachment 2 – Solicitation Letter
Attachment 3 – Pricing Sheet

APPENDIX B

MARAD COATING GUIDELINES

APRIL 2000

Table A-1 (1) Approved Coatings; Exterior Surfaces

Manuf	Underwater Hull and Boottop		Underwater Hull and Boottop Optional Coatings for production		Freeboard and Vertical Topside <i>If aluminum superstructure - see alternate primers column.</i>		Decks		Alternate Inorganic Zinc Primers for Decks		Alternate Topcoats for Topside and Decks		Primers for Aluminum Surfaces (non-immersion)					
	SSPC SP-10 SSPC SP-12/WJ-2	Min DFT mils/microns	Min DFT mils/microns	SSPC SP-6 SSPC SP-12/WJ-3	Min DFT mils/microns	SSPC SP-6 SSPC SP-12/WJ-3	Min DFT mils/microns	Solvent-borne, Modified, Waterborne SSPC SP-10	Solvent-borne, Modified, Waterborne SSPC SP-10	Silicone Alkyd, Urethane	Silicone Alkyd, Urethane	Product Name	Product Name	Product Name	Min DFT mils/microns			
GENERIC	(2) coats High Solids Epoxy anti-corrosive - ea. coat	4	100	1. Epoxy Holding Primer over prepared surface.	3	75	(1) coat zinc rich epoxy	3	75	Primer and Intermediate as per Freeboard/Vertical Topside or alternate IOZ primer as shown.	Solvent-borne Modified Waterborne	Product Name	Sil. Alkyd	Product Name	(1) coat high solids epoxy	4	100	
	(1) coat scrubbable a/f	2	50	2. "Solvent-softenable" tie coat between epoxy anti-corrosive and anti-fouling	3	75	(1) coat high solids epoxy	4	100	65% solids minimum	Waterborne	Product Name	Urethane	Product Name	65% solids minimum			
	Mult. coats copper-ablative a/f - ea. coat	4	100		(1) coat high gloss modified (acrylic) epoxy or alternate topcoat as shown	1.5	40	(1) coat high gloss modified (acrylic) epoxy or alternate topcoat as shown	1.5	40	Topcoat: (1) coat high gloss modified (acrylic) epoxy or Non-Skid as appropriate				or	(1) coat surface tolerant high solids epoxy	4	100
AMERON	Amercoat 385	5		Cathacoat 302H	3		Cathacoat 302H	3		Solvent-borne Modified Waterborne		Sil. Alkyd	Amercoat 3203					
	Amercoat 385	5		Amercoat 385	5		Amercoat 385	5				Urethane	Amershield					
	Devran 214	2		Devran 229C	1.5		Devran 229C	1.5										
	Devoe ABC-3	4																
	Devoe ABC-3	4																
	Total DFT (min)	20		Total DFT (min)	9.5		Total DFT (min)	9.5										
CMP	Epicon Super	5		Epicon Zinc HB-2	3	75	Epicon Zinc HB-2	3		Solvent-borne Modified Waterborne		Sil. Alkyd	TT-E-490E					
	Epicon V	4					Epicon Marine HB-CL	5				Urethane	Unymarine					
	Ravax AF	2		Silvax SQ-HB	2	50	Epicon Marine AE	1.5										
	TFA-10	4																
	TFA-10	4																
	Total DFT (min)	19		Total DFT (min)	9.5		Total DFT (min)	9.5										
HEMPEL	Hempadur 45159 *	5		Hempadur 17369	3		Hempadur 17369	3		Solvent-borne Modified Waterborne	Galvosil 15689 None	Sil. Alkyd	None					
	Hempadur 45159 *	5		Hempadur 45159 *	5		Hempadur 45159 *	5				Urethane	Hempathane 5595U					
	Olympic 76600	5		Hempel's 558US	2		Hempel's 558US	2			Galvosil 15629							
	Olympic 76600	5																
		* below 55 F use Hempadur 17630																
	Total DFT (min)	20		Total DFT (min)	10		Total DFT (min)	10										
INTERNATIONAL	Intuf KH Series	4		Intzinc EPA075W	3		Intzinc EPA075V	3		Solvent-borne Modified Waterborne		Sil. Alkyd	Interlac #1 (LSA/ANTISTAIN)					
	Interclene BWA 360	2		Intuf KH Series	5		Intuf KH Ser	5				Urethane	Interlac #2 (LSA)					
	BRA 570/572	4		Intercare 755 Series	1.5		Intercare 755 Series	1.5					Interthane 990 Ser.					
	BRA 570/572	4																
		Total DFT (min)	18		Total DFT (min)	9.5		Total DFT (min)	9.5									
SIGMA	Uni.Primer US 7417US	4		S. Zinc Primer II 7402US *	3		S. Zinc Primer II 7402US *	3		Solvent-borne Modified Waterborne		Sil. Alkyd	None					
	Sigma TCC 5480	4		Sigma TCC 5480	4		Sigma TCC 5480	4				Urethane	Sigmadure HS 5521					
	Sigma AF 2133	2		Sigma CM US 7456 US	2		Sigma CM US 7456 US	2										
	Sigma AF 2133	2																
		* EP Univ. Primer US 7417 US over SSPC SP-12/WJ-3																
	Total DFT (min)	18		Total DFT (min)	9		Total DFT (min)	9										
JOTUN	65 Sovapon Mastic	4		513R27 Sovapon	2		Zinc Rich V13F4	3		Solvent-borne Modified Waterborne	V13F12 Inorganic Zinc n/a	Sil. Alkyd	521 Series Enamel	65 Sovapon Mastic	6			
	65 Sovapon Mastic	4					65 Sovapon Mastic	5				Urethane	40 Series					
	Hydroclean 60A2003	5		2853 Vinyguard	2		66 Series V-Kryl	1.5			13F12 Inorganic Zinc							
	Hydroclean 60A2001/2002	5					66 V-Kryl Enamel	1.5										
		Total DFT (min)	18		Total DFT (min)	9.5		Total DFT (min)	9.5									
SHER WILLIAMS	Seaguard P23RQ82	4		Zinc Clad IV	3		Zinc Clad IV	3		Solvent-borne Modified Waterborne	Zinc Clad II HS	Sil. Alkyd	B56Z Series	MIL-P-24441 Type IV Prime	3			
	Seaguard P23AQ81	4		B67 Series/B67V5	4		B67 Series/B67V5	4			Zinc Clad IV	Urethane						
	Seaguard A/F P30 Series	4		B70 Series/B60V15	3		B70 Series/B60V15	3			Zinc Clad XI							
	Seaguard A/F P30 Series	4										Polyurethane	Acrolon 218 HS	Dura-Plate 235	4			
		Total DFT (min)	16		Total DFT (min)	10		Total DFT (min)	10									

MARAD (Ready Reserve Force) Coatings Guidelines

Appendix A-1: Complete Coating Systems Renewal

Table A-1 (2) Approved Coatings; Interior Surfaces and Immersed Tanks

Manuf	Mach'y/Inter Space (not incl bilges)		Bilges		Holds/Pumprooms		Ballast/Sea Water Tks		Cargo Tks		Potable Water Tks		Cargo Tanks: Dual-Use Mifuels/Pot Wtr			
	Min DFT		Min DFT		Min DFT		Min DFT		Min DFT		Min DFT		Min DFT			
	mils/microns		mils/microns		mils/microns		mils/microns	mils/microns	mils/microns	mils/microns	mils/microns	mils/microns	mils/microns	mils/microns		
GENERIC	SSPC SP-3/SP-6 ea. coat (2) coats alkyd finish ea. coat	2 50 40	SSPC SP-10/SP-11 high solids epoxy, ea.	4 100	SSPC SP-3/SP-6 high solids epoxy Holds, ea. coat Pumprooms, each	4 100 4 100 6 150	SSPC SP-10 ea. coat	4 100	SSPC SP-10 ea. coat	4 100	SSPC SP-10 NSF Approved DFT ea. coat per NSF approval	5 125	SSPC SP-10	4 100	NSF PW Approval or MSC/USN PW Approval and DOD mifuel approval	
AMERON	Amercoat 5105 Amercoat 5105 Amercoat 5405 Amercoat 5405	2 50 2 50 1.5 40 1.5 40	Devran 230 HB Devran 230 HB	4 100 4 100	Devran 230 HB Total DFT (min) Holds Pumprooms	4 100 8 200 8 200 12 300	Amercoat 385 Amercoat 385	4 100 4 100	Bar Rust 236 HB Bar Rust 236 HB	4 100 4 100	Amerlock 400 Amerlock 400	5 125 5 125			Devran 133	
CMP	LZI Primer HB LZI Primer HB Evamarine Evamarine	2 50 2 50 1.5 40 1.5 40	Super Bondex Super Bondex	4 100 4 100	Super Bondex Total DFT (min) Holds Pumprooms	4 100 8 200 8 200 12 300	Biscon HB-NT Biscon HB-NT	4 100 4 100	Epicon T-500 Primer F Epicon T-500 Finish B	4 100 4 100	Epicon T-500 Primer F Epicon T-500 Undercoat Epicon T-500 Finish B	4 100 4 100 4 100			None	
HEMPEL	Hempalin 1218A Hempalin 1218A Hempalin 5214A Hempalin 5214A	2 50 2 50 1.5 40 1.5 40	Hempadur 17639 Hempadur 17639	5 125 5 125	Hempadur 45159 Total DFT (min) Holds Pumprooms	5 125 8 200 8 200 12 300	Hempadur 17639 Hempadur 17639	6 150 6 150	Hempadur 15509 Hempadur 15509	6 150 6 150	Hempadur 35739 Hempadur 35739	6 150 6 150			Hempadur 35739	
INTERNATIONAL	Interprime 234 Interprime 234 Interlac 665 Series Interlac 665 Series	2 50 2 50 1.5 40 1.5 40	Intergard KB 400 Ser Intergard KB 400 Ser	4 100 4 100	Intergard KB 400 Ser Total DFT (min) Holds Pumprooms	4 100 8 200 8 200 12 300	Intergard KB 400 Ser Intergard KB 400 Ser	4 100 4 100	Interline 604 Series Interline 604 Series	4 100 4 100	Interline 925(NSF) 1 coat or 2 coats, each at	12 300 7 175			INTL 5747/5748 INTL 5753/5754	
SIGMA	Sigmarine PrimerZP HS 5134 Sigmarine ZP 5134 Sigmarine BTd HS 5238 Sigmarine BTd 5238	2 50 2 50 2 40 2 40	Sigmacover TCP 7476 F Sigmacover TCP 7476 F	4 100 4 100	Uni.Primer US 7417US Sigma TCC 5480 Total DFT (min) Holds Pumprooms	4 100 4 100 8 200 8 200 12 300	Uni.Primer US 7417US Sigma TCC 5480	4 100 4 100	Sta-Guard Primer 5470 Sta-Guard Coating 5471	4 100 4 100	Sigma HSV 5476 Sigma HSV 5476	5 125 5 125			None	
JOTUN	Wetsall 3240 Wetsall 3241 39 Series Pilot II 39 Series Pilot II	2 50 2 50 1.5 40 1.5 40	65 Sovapon Mastic 65 Sovapon Mastic	4 100 4 100	65 Sovapon Mastic Total DFT (min) Holds Pumprooms	4 100 8 200 8 200 12 300	65 Sovapon Mastic 65 Sovapon Mastic	4 100 4 100	264 Sovapon 264 Sovapon	4 100 4 100	264 Sovapon 264 Sovapon	4 100 4 100			264 Sovapon, 51	
SHER. WILLIAMS	Kem Bond H.S. B50NZ3 Kem Bond H.S. B50NZ3 H.S.-B54Z400 Series H.S.-B54Z400 Series	3 75 3 75 2 50 2 50	Dura-Plate 235 Dura-Plate 235	4 100 4 100	Dura-Plate 235 Total DFT (min) Holds Pumprooms	4 100 8 200 8 200 12 300	MIL-P-23236 B Type IV N11G100/N11V100 MIL-P-23236 B Type IV N11-100 Series Finish	4 100 4 100	MIL-P-23236 B Type IV MIL-P-23236 B Type IV N11-100 Series Finish	4 100 4 100	Tank-O-Lon HS PW Epoxy Tank-O-Lon HS PW Epoxy	4 100 4 100			None	
	Total DFT (min)	10 250	Total DFT (min)	8 200	Total DFT (min)	8 200	Total DFT (min)	8 200	Total DFT (min)	8 200	Total DFT (min)	8 200	Total DFT (min)	8 200	Total DFT (min)	n/a

MARAD (Ready Reserve Force) Coatings Guidelines
Appendix A-1: Complete Coating Systems Renewal

Table A-1 (3) Approved Special Purpose Coatings

Manuf	Anchors and Chain	Rudder Interiors	Lifeboat Hulls	High Temperature	Non-Skid Coatings		Stack Bands			
	Chain Lockers	VOIDS and Cofferdams	Fiberglass Aluminum				Color	Acrylic Epoxy	Sil. Alkyd	Urethane
AMERON					Light Duty Light Duty / Sprayable Heavy Duty (Vehicles)	Product Name Product Name Product Name	Red White Blue			
					Helo Flight Decks (DOD-C-24667) Primer Rollable N-S	Product Name Product Name				
CMP					Light Duty Light Duty / Sprayable Heavy Duty (Vehicles)		Red White Blue			
					Helo Flight Decks (DOD-C-24667) Primer Rollable N-S					
HEMPEL	Hempadur 35539	Hempinol 10220		Silvium (up to 390 F)	Light Duty Light Duty / Sprayable Heavy Duty (Vehicles)		Red White Blue			
	Hempadur 35539			Silicone Aluminum (max 1,110 F)	Helo Flight Decks (DOD-C-24667) Primer Rollable N-S					
INTERNATIONAL					Light Duty Light Duty / Sprayable Heavy Duty (Vehicles)		Red White Blue			
					Helo Flight Decks (DOD-C-24667) Primer Rollable N-S					
SIGMA					Light Duty Light Duty / Sprayable Heavy Duty (Vehicles)		Red White Blue			
					Helo Flight Decks (DOD-C-24667) Primer Rollable N-S					
JOTUN	65 Sovapon Mastic	8250 Ballastite 500	66 Series V-Kryl or 40 Series Hardtop	6291 Solvaxxxx	Light Duty Light Duty / Sprayable Heavy Duty (Vehicles)	65 Series/1457 65 Series/1457 n/a	Red White Blue	66 Series V-Kryl	521 Series Enamel	40 Series Hardtop
	65 Sovapon Mastic	8250 Ballastite 500	65 Sovapon Mastic 66 Series V-Kryl or 40 Series Hardtop		Helo Flight Decks (DOD-C-24667) Primer Rollable N-S					
SHER. WILLIAMS					Light Duty Light Duty / Sprayable Heavy Duty (Vehicles)	ArmorSeal 300	Red White Blue			
					Helo Flight Decks (DOD-C-24667) Primer Rollable N-S					

Federal Color Standards
Stack Bands
Insignia Red.....FS 31136
Insignia White.....FS 17875
Insignia Blue.....FS 35044

Superstructure and Decks
Haze Gray.....

Miscellaneous
Int'l Orange.....FS 12197

RRF Color Scheme (Exterior Only)

1. Hull and Superstructure: Haze Gray overall
2. Decks and
3. Cargo Gear, Kingposts, Ro/Ro Ramp structure: Haze Gray fwd, upperworks black aft of stack
4. Markings: Black lettering on gray surface, white lettering on black surface

Table A-2 (1) Approved Industrial Maintenance Coatings; Exterior Surfaces

Manuf	Underwater Hull and Boottop		Freeboard and Vertical Topside		Decks	
	SSPC SP-10	Min DFT	Spot SSPC SP-10	Min DFT	Spot SSPC SP-10	Min DFT
	SSPC SP-12/WJ-2	mils/microns	SSPC SP-12/WJ-2	mils/microns	SSPC SP-12/WJ-2	mils/microns
Gen. Notes	Maintenance of underwater systems shall be determined on a case-by-case basis.		a. Maintenance of exterior coating systems shall generally consist of spot repairs and overcoating. When performed by an industrial contractor, the products applied shall conform to those shown on Appendix A-1 (repeated here).		c. When completely overcoating an existing topcoat, follow the manufacturer's recommendations for preparing the surface.	
	Spot repairs of anti-corrosive systems should not generally exceed 20% of the u/w hull surface.		b. Surface prep shown is for primers only.		d. Spot repairs to decks primed with inorganic zinc coatings should be performed using zinc rich epoxy.	
AMERON	Surface preparation for spot repairs must be made to the standards shown above.		Cathacoat 302H	3	Cathacoat 302H	3
			Amercoat 385	5	Amercoat 385	5
CMP	Surface preparation of existing anti-fouling coatings prior to touch-up should be per the manufacturer's recommendation.		Devran 229C	1.5	Devran 229C	1.5
			Total DFT (min)	9.5	Total DFT (min)	9.5
HEMPEL	Where the repair includes replacement of anti-fouling and retention of existing anti-corrosives, the anti-corrosive system should be prepared without sweep blasting (SSPC SP-7), if practical.		Epicon Zinc HB-2	3	Epicon Zinc HB-2	3
			Epicon Marine HB-CL	5	Epicon Marine HB-CL	5
INTERNATIONAL	MAR-611 approval. An existing system must be replaced if it will exceed 15 years before the next scheduled drydocking.		Epicon Marine AE	1.5	Epicon Marine AE	1.5
			Total DFT (min)	9.5	Total DFT (min)	9.5
SIGMA	When u/w system repairs are made, the same manufacturer's products should be used as existing, if practical. An alternate product by the same manufacturer may be substituted if necessary.		Hempadur 17369	3	Hempadur 17369	3
			Hempadur 45639	5	Hempadur 45639	5
JOTUN	No mixing of products by different manufacturer's is allowed without prior MAR-611 approval.		Hempel's 558US	2	Hempel's 558US	2
			Total DFT (min)	10	Total DFT (min)	10
SHER. WILLIAMS	MAR-611 approval.		Intzinc EPA075	3	Intzinc EPA075	3
			Intuf KH Series	5	Intuf KH Ser	5
SHER. WILLIAMS	MAR-611 approval.		Intercare 755 Series	1.5	Intercare 755 Series	1.5
			Total DFT (min)	9.5	Total DFT (min)	9.5
SHER. WILLIAMS	MAR-611 approval.		Sigma Zinc Primer II 7402U	3	Sigma Zinc Primer II 7402US	3
			Sigma TCC 5480	4	Sigma TCC 5480	4
SHER. WILLIAMS	MAR-611 approval.		Sigma CM US 7456 US	2	Sigma CM US 7456 US	2
			Total DFT (min)	9	Total DFT (min)	9
SHER. WILLIAMS	MAR-611 approval.		Zinc Rich V13F4	3	Zinc Rich V13F4	3
			65 Sovapon Mastic	5	65 Sovapon Mastic	5
SHER. WILLIAMS	MAR-611 approval.		66 Series V-Kryl	1.5	66 V-Kryl Enamel	1.5
			Total DFT (min)	9.5	Total DFT (min)	9.5
SHER. WILLIAMS	MAR-611 approval.		Zinc Clad IV	3	Zinc Clad IV	3
			B67 Series/B67V5	4	B67 Series/B67V5	4
SHER. WILLIAMS	MAR-611 approval.		B70 Series/B60V25 *	3	B70 Series/B60V25	3
			Total DFT (min)	10	Total DFT (min)	10

Table A-2 (2) Approved Industrial Maintenance Coatings; Interior Surfaces (excl. Tanks)

Manuf	Machinery/Interior Space (not incl bilges)		Bilges		Holds/Pumprooms	
	SSPC SP-3	Min DFT	SSPC SP-10/11	Min DFT	SSPC SP-3/SP-6	Min DFT
	SSPC SP-12/WJ-4	mils/microns	SSPC SP-12/WJ-2	mils/microns	SSPC SP-12/WJ-3	mils/microns
Gen. Notes	a. In general, notes a, b, and c of Table A-2 (1) also apply to maintenance of interior coating systems.		cleaning. Abrasive blasting in machinery spaces is not recommended; however, it may be authorized if conditions warrant.		is not practical.	
	b. Unless otherwise shown, the primary method of surface preparation for machinery spaces and bilges is hand-tool		c. Water Jetting (SSPC SP-12) is preferred when hand-tool cleaning		d. The application of an epoxy primer specially formulated for compromised surfaces may be considered if recommended by the manufacturer.	
AMERON	Amercoat 5105		Devran 230 HB Epoxy		Devran 230 HB Epoxy	
	Amercoat 5105		Devran 230 HB Epoxy		Devran 230 HB Epoxy	
CMP	Amercoat 5405		Devran 230 HB Epoxy		Devran 230 HB Epoxy	
	Amercoat 5405		Devran 230 HB Epoxy		Devran 230 HB Epoxy	
HEMPEL	Total DFT (min)		Total DFT (min)		Total DFT (min)	
	LZI Primer HB		Super Bondex		Super Bondex	
INTERNATIONAL	LZI Primer HB		Super Bondex		Super Bondex	
	Evamarine		Super Bondex		Super Bondex	
SIGMA	Evamarine		Super Bondex		Super Bondex	
	Total DFT (min)		Total DFT (min)		Total DFT (min)	
JOTUN	Hempalín 1218A		Hempadur 17639		Hempadur 45159	
	Hempalín 1218A		Hempadur 17639		Hempadur 45159	
SHER. WILLIAMS	Hempalín 5214A		Hempadur 17639		Hempadur 45159	
	Hempalín 5214A		Hempadur 17639		Hempadur 45159	
SHER. WILLIAMS	Total DFT (min)		Total DFT (min)		Total DFT (min)	
	Interprime 234		Intergard KB 400 Series		Intergard KB 400 Ser	
SHER. WILLIAMS	Interprime 234		Intergard KB 400 Series		Intergard KB 400 Ser	
	Interlac 665 Series		Intergard KB 400 Series		Intergard KB 400 Ser	
SHER. WILLIAMS	Interlac 665 Series		Intergard KB 400 Series		Intergard KB 400 Ser	
	Total DFT (min)		Total DFT (min)		Total DFT (min)	
SHER. WILLIAMS	Sigmarine ZP 5134		Sigmacover TCP 7476 F		Uni.Primer US 7417US	
	Sigmarine ZP 5134		Sigmacover TCP 7476 F		Sigma TCC 5480	
SHER. WILLIAMS	Sigmarine BTD 5238		Sigmacover TCP 7476 F		Sigma TCC 5480	
	Sigmarine BTD 5238		Sigmacover TCP 7476 F		Sigma TCC 5480	
SHER. WILLIAMS	Total DFT (min)		Total DFT (min)		Total DFT (min)	
	Wetsall 3240		65 Sovapon Mastic		65 Sovapon Mastic	
SHER. WILLIAMS	Wetsall 3241		65 Sovapon Mastic		65 Sovapon Mastic	
	39 Series Pilot II		65 Sovapon Mastic		65 Sovapon Mastic	
SHER. WILLIAMS	39 Series Pilot II		65 Sovapon Mastic		65 Sovapon Mastic	
	Total DFT (min)		Total DFT (min)		Total DFT (min)	
SHER. WILLIAMS	Kem Bond H.S. B50NZ3		Dura-Plate 235		Dura-Plate 235	
	Kem Bond H.S. B50NZ3		Dura-Plate 235		Dura-Plate 235	
SHER. WILLIAMS	H.S.-B54Z400 Series		Dura-Plate 235		Dura-Plate 235	
	H.S.-B54Z400 Series		Dura-Plate 235		Dura-Plate 235	
SHER. WILLIAMS	Total DFT (min)		Total DFT (min)		Total DFT (min)	
	Total DFT (min)		Total DFT (min)		Total DFT (min)	

MARAD (Ready Reserve Force) Coatings Guidelines
Appendix A-2: Maintenance of Existing Intact Coating Systems

Table A-2 (3) Approved Industrial Maintenance Coatings, Immersed Tanks

Manuf	Ballast/Sea Water Tks		Cargo Tks		Potable Water Tks		Dual-Use Milfuels/Pot Wtr	
		Min DFT		Min DFT		Min DFT		Min DFT
	SSPC SP-10		SSPC SP-10		SSPC SP-10		SSPC SP-10	
	SSPC SP-12/WJ-2	mils/microns	SSPC SP-10	mils/microns	SSPC SP-10	mils/microns	SSPC SP-10	mils/microns
Gen. Notes	a. In general, notes a, b, and c of Table A-2 (1) also apply to maintenance of tank coating systems.		b. Unless otherwise authorized by MAR-611, surface preparation in potable water and/or cargo tanks shall be by abrasive blast methods only.		c. Tank coating systems classified as POOR by ABS must be replaced at the earliest opportunity.			
AMERON	Amercoat 385	4	Bar Rust 236 HB	4	Amerlock 400	5	Devran 133	
	Amercoat 385	4	Bar Rust 236 HB	4	Amerlock 400	5		
	Total DFT (min)	0						
	SSPC SP-12/WJ-2							
	Pre-Prime 167	0.8						
	Devran 230 HB	4						
Devran 230 HB	4							
Total DFT (min)	8.8	Total DFT (min)	8	Total DFT (min)	10	Total DFT (min)		
CMP	Biscon HB-NT	4	Epicon T-500 Primer F	4	Epicon T-500 Primer F	4	None	
	Biscon HB-NT	4	Epicon T-500 Finish B	4	Epicon T-500 Undercoat	4		
					Epicon T-500 Finish B	4		
Total DFT (min)	8	Total DFT (min)	8	Total DFT (min)	12	Total DFT (min)	n/a	
HEMPEL	Hempadur 17639	6	Hempadur 15509	6	Hempadur 35739	6	Hempadur 35739	
	Hempadur 17639	6	Hempadur 15509	6	Hempadur 35739	6		
	Total DFT (min)	12	Total DFT (min)	12	Total DFT (min)	12	Total DFT (min)	
INTERNATIONAL	Intergard KB 400 Series	4	Interline 604 Series	4	Interline 925(NSF)		INTL 5747/5748	
	Intergard KB 400 Series	4	Interline 604 Series	4	1 coat	12	INTL 5753/5754	
					or			
				2 coats	7			
Total DFT (min)	8	Total DFT (min)	8	Total DFT (min)	19	Total DFT (min)		
SIGMA	Uni.Primer US 7417US	4	Sta-Guard 5470	4	Sigma HSV 5476	5	None	
	Sigma TCC 5480	4	Sta-Guard 5471	4	Sigma HSV 5476	5		
	Total DFT (min)	8	Total DFT (min)	8	Total DFT (min)	10	Total DFT (min)	n/a
JOTUN	65 Sovapon Mastic	4	264 Sovapon	4	264 Sovapon	4	264 Sovapon, 51	
	65 Sovapon Mastic	4	264 Sovapon	4	264 Sovapon	4		
	Total DFT (min)	8	Total DFT (min)	8	Total DFT (min)	8	Total DFT (min)	n/a
SHER. WILLIAMS	MIL-P-23236 B Type IV	3	MIL-P-23236 B Type IV	3	Tank-O-Lon HS PW Epoxy	4	None	
	N11G100/N11V100		N11G100/N11V100					
	MIL-P-23236 B Type IV	3	MIL-P-23236 B Type IV	3	Tank-O-Lon HS PW Epoxy	4		
Total DFT (min)	6	Total DFT (min)	6	Total DFT (min)	4	Total DFT (min)	n/a	

Table A-2 (4) Approved Ballast Tank Maintenance Coatings

a. Products listed herein are primarily intended to maintain the condition of an existing ballast tank coating system when complete replacement is not cost-effective.

b. These products may form the primary coating system of certain tanks, particularly those which are not ballasted on a frequent cycle (e.g. fore and after peak tanks). Coatings applied for this purpose must be approved by ABS.

Manufacturer	Coating	Type & Base	ABS Approved (y/n)
CMP	Aperia 3000HB	Semi-?, Bituminous	
Drew Marine Division	Navacoat Dry	Semi-Hard Asphalt	
Hempel	Hempinol 10220-19990	Semi-Hard, Bituminous	
International	Interbond JVA065	Semi-Hard (Proprietary)	
Plas-Chem	Versakote I	Semi-Hard (Proprietary)	
Royal Chemical	Easy Kote	Semi-Hard, Asphalt	
Sigma	Sigma Balamastic 7104	Semi-Hard	
Jotun	Ballastitie 500 # 8250	Semi-Hard (Proprietary)	
Previously Approved Soft and Semi-Soft Coatings.			
<i>Not Approved for reapplication without written approval of MAR-611.</i>			
Clearkin	Corrosion Master/Battier	Soft, wool-grease	n/a
Drew Marine Division	Magnacote/Magnacote Plus	Semi-soft (Proprietary)	n/a
Esgard	Bio Kote	Soft, vegetable oil	n/a
Eureka	Fluid Film Liquid A	Soft, wool max	n/a
Sharp	Sharpguard 610	Soft, vegetable oil	n/a
Valspar	Sovapon 264F2/W2	Semi-soft, Wax	n/a

MARAD (Ready Reserve Force) Coatings Guidelines
Appendix A-2: Maintenance of Existing Intact Coating Systems

Table A-2 (5) Approved General Purpose Maintenance Coatings

Manuf	Epoxies (Exterior and Interior)						Interior Spaces				
	Surface Tolerant	% Solids	Surface Prep (Min)	Surface Tolerant, 100% Solids for compromised surfaces and overcoating lead contaminated surfaces	Surface Prep (Min)	Zinc Rich	Surface Prep (Min)	Alkyd Accomodation and Machinery Spaces	Surface Prep (Min)	Latex Accomodation Spaces Only	Surface Prep (Min)
AMERON	Amercoat 385	66		Devoe Pre-Prime 167		Amercoat 68HS		Amercoat 5401HSA		Amercoat 220	
	Bar Rust 235	65									
	Devran 230 HB	65									
CMP											
HEMPEL	Hempadur 45159	85	SP3	Hempadur 35539	SP3	Hempadur 17369	SP3	Hempalin 1218A Primer&Topcoat	SP3	Hemucryl 18030 / 58030	SP3
INTERNATIONAL	Intertuf KH Series			Interbond 600		Interzinc 75V		Interlac 665 Series International 5347 (DOD-E-24607)		Intercryl 510WB/530WB	
SIGMA	Sigmacover TCP	80		Sigmaguard CSF	100	7402 US 65% VS		Sigmarine Primer ZP HS 5134 Sigmarine BTM HS 5238		Sigmatal Primer ZP 7143 Sigma Rust Gone 5612	
JOTUN	65 Sovapon Mastic	72		Pen-O-Prep 46V1	100	Barrier V13F4		Wetsall 3200 Series Pilot II 39 Series		Jotuplast 3037	
	Jotumastic 87	87									
SHER. WILLIAMS	Macropoxy 646			920 Pre-Prime B58T101	100	Zinc Clad IV		Indust Enamel HS B54Z400 Ser.		DTM Acrylic B66 Series	

APPENDIX C

RVO-09 HAZARDOUS MATERIALS

HANDLING PROCEDURES

 <p style="text-align: center;">CROWLEY LINER SERVICES RRF Vessel Operations Manual</p>	Prepared By: C. Cosgrove	No.: RVO - 09 Effective Date: Nov. 1, 2000 Page: 1 of 31
Hazardous Materials	Approved By: J. Farnell	Revision No.: 0

OVERVIEW

- Part A. HAZARDOUS MATERIALS COMMUNICATIONS PROGRAM
- Part B. WASTE MINIMIZATION PROCEDURE
- Part C. HAZARDOUS WASTE GENERATION PROCEDURE
- Part D. WASTE HAZARDOUS MATERIALS MANAGEMENT PROCEDURE
- Part E. WASTE HAZARDOUS AND NON-HAZARDOUS MATERIALS STORAGE PROCEDURE
- Part F. HAZMAT CARGOES

PART A. HAZARDOUS MATERIALS COMMUNICATIONS PROGRAM

Purpose

- 1.1 Ensure Company employees are provided with protection, training, and information on the hazardous chemicals/substances which may be present in the workplace. The program conforms with the Occupational Safety and Health Administration's (051-IA) hazards communication standards.
- 1.2 This program applies to all personnel and Company contractors working at Company facilities or on Company vessels. It also applies to visitors.
- 1.3 Allows hazardous chemicals/substances to be used, handled, and stored safely.

Senior Management's Responsibilities

- 1.1 Provide the resources necessary to ensure the program complies with 29 CFR 1910.1200 and Federal Standard 313B.
- 1.2 Establish a committee to assure hazardous chemicals are standardized and replaced, as practical, with products that are less hazardous.

Supervisor/Managers Responsibilities

- 1.1 Fully understand the hazardous communication procedures to be taken within his/her area of responsibility and ensure all personnel comply with these procedures.
- 1.2 One or more supervisor(s) from each area shall be trained and designated responsible for the hazardous materials communication program and its implementation.

- 1.3 Ensure all employees under his/her direction have received the required training.
- 1.4 Operations shall maintain a complete list of hazardous chemicals/ substances present in the workplace and assure labels are maintained or spare labels are available to be added to containers.
- 1.5 Inspect workplace regularly to ensure labels or other forms of warning are legible, written in English, and prominently displayed on the container or readily available in the work area throughout each shift. Labels in languages other than English are permitted as long as the required English label is also present. Assure chemicals are stored properly.
- 1.6 Assure direct reports have received the required training before using any hazardous product.
- 1.7 Review annually the information on Material Safety Data Sheets (MSDS) to ensure the safe handling of hazardous products used in the workplace. It is the supervisors responsibility to be knowledgeable of the known hazards and required compliance with the safety practices outlined on the MSDS.
- 1.8 Assure personal protective equipment (PPE) is available, in good condition, and worn by employees to meet the protection level requirements on the MSDS.

Purchasing Managers Responsibilities

- 1.1 Assure all new chemicals are received with a MSDS.
- 1.2 Assure only approved chemicals are purchased from an approved vendor list.
- 1.3 Approved materials list is as follows:

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Selig Industries Approved Product List

PRODUCT NAME / NO.	CONTAINER	PRODUCT DESCRIPTION AND USE	SPECIAL NOTES
19-SX-93	5 gal. pail.	Oil-based cutting fluid containing anti-bacterial agents to lengthen coolant life	Concentrate can be added to water max. 30:1 dilution depending on application and equip
140-SX-90	5-gal. pails 55 gal. drums	Citrus solvent degreaser which can be diluted with water.	Flash point of 142F
68-SX-87Epoxy Repair Putty	12 sticks per case.	Two part epoxy putty stick for repairs on water & fuel tanks, electrical, ceramic connectors, pipes and wood surfaces.	Hardens in 20 minutes
AP Absorbent	50 lb. bag	Clay pellets oil dry floor absorbent	
Away II	12, 8 oz. aerosol cans per case	Mosquito repellant for use on skin	
Big Easy	12 qts. per case with squirt top nozzle	Acid based rest room cleaner and lime scale remover.	Works great on running rust on painted deck surfaces
Brite Crème	12 qts. per case	Mild abrasive crème cleanser that leaves no residue when rinsed. Bacteriostatic registration for disinfecting hard surfaces..	Use on metal surfaces, pots & pans, sinks, and showers
Bully	45 lb., 5 gal. pail	Heavy-duty laundry detergent	
Clear Choice		Water based cleaner with a relatively neutral pH for maintaining waxed floors. Product works well when cleaning surfaces over head due to compatibility with skin. Safe on painted surfaces on deck areas of vessels. Good degreaser for removal of wet oils, however, it is not recommended for baked on carbon.	
Deluxe Sprazit Sprayer		Heavy duty, adjustable trigger sprayer for quart bottles.	Bottle sold separately.
Dial Bar Soap	72 bath size bars per case		.

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Double Trouble	12, 24 oz. aerosols per case	Insecticide for killing flying or crawling insects.	
Emerald Glo	5 gal. pail	Liquid hand dishwashing detergent	Pump available.
Environmental Master Mechanic	12, 20-oz. aerosols per case	Penetrating oil, lubricant and demoisurant. Excellent on electrical components, solenoids, armatures, bus work, switchgear, running lights.	Nonconductive, prevents corrosion and corona, 28 KV, 230 F. flash point.
Formula 098	12, 22 fluid oz. cans with 2 sprayers per case	Pure citrus extracts with no petroleum solvents for removal of heavy grease in drains, adhesives and light paint over spray.	Makes an excellent deodorizer. Flash point 118 F
Gabes Grit	9, 2500ml bottles per case	Abrasive grit lanolin hand soap for removal of heavy grease and oils.	Recommended for use in Iron Man metal wall dispenser.
Germaway	12 quart bottles with 2 sprayers per case	Ready to use liquid disinfectant cleaner.	Lemon fragrance
Gosh	12-quart case 55-gal. drum	Ready to use all-purpose degreaser	
Green Kleen	5-gal. pails 55 gal. drums	Concentrated water based degreaser	
Handyman	12, 24-oz. cans per case	Heavy duty paint, decal & gasket remover.	Excellent vertical cling.
Herbal Spring	12 qts. with 2 sprayers per case	Ready to use deodorant	Pleasant herbal fragrance
Hi-temp RTV Gasket Maker	12, 10oz. pressurized cans per case	Red silicone sealant/adhesive gasket maker in convenient pressurized tube.	
Iron Man Dispenser		Heavy-duty metal hand soap dispenser for mounting on walls.	Use with Gabes Grit, Orange Ruffy or Pink Magic handsoaps.
Klenite	45#, 5 gal. pail	Non-foaming, chlorinated, mechanical dishwashing powder.	Safe on aluminum
Kwik Zinc	12, 16 oz. cans per case.	Cold galvanizing in aerosol form for prevention of rust on metal.	Resistant to salt corrosion & water. Non-chlorinated.

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Lava	48/4 oz. bars of hand soap per case		.
Lectron 2020	12, 20 oz. cans per case	Non- flammable contact cleaner for cleaning of circuit boards, and electronic equipment. Do not use on plastics prior to testing.	
Linebacker	12, 24 oz. cans per case 5 gal. pails	Permanent protection against rust on metal surfaces. Durable in temperatures of 40 to 174 F. Dries to a flexible non-tacky, rust colored, wax type film.	Meets Mil-C-16173E Grade 4 specifications
Liquid Laundry Bleach	4, 1 gal.s per case	Industrial bleach which is approximately twice the strength of regular bleach	
Mold & Mildew Stain Remover	12 qts. per case with 2 sprayers	Ready to use chlorine based spray for cleaning tile & grout, showers, ceramic, Fiberglas.	
MR 50-5 Pump		Plastic pump designed to fit 5 gallon pails and various drum sizes.	Can be used with any water-based chemical.
NJ Finish	4/1 gal.s per case	High gloss non-yellowing floor finish.	Can be removed with Re-Mov wax stripper.
Nothing	12 qts. per case with 2 sprayers	Non-ammoniated glass cleaner.	Non-streaking, can be used on tinted windows, plexiglas, plastic and television screens.
No Grab	12, 8-oz. cans per case	Anti-seize lubricant effective in temperatures –250 F. to 2100 F. Extreme pressure characteristics up to 32000 psi. Resists water washout, salt spray, and steam.	
On & Off	12 qts. per case with 2 sprayers	Non-flammable oven and grill cleaner.	Low odor viscous liquid has excellent vertical cling.
Orange Ruffy	9/2500 ml. per case	Heavy duty citrus abrasive hand cleaner for removing tenacious soils of grease, oil, ink, paints adhesives.	Recommended for use in Iron Man wall mounted dispenser.
Pas-Key	4/1 gal.s per case	Converts rust to a blue-black metallo-organic complex ready for painting after a 24-hour cure period..	
Pinetax	4/1 gal.s per case	Extremely concentrated disinfectant cleaner containing 70 % Pine Oil. Designed for use throughout bathroom	Only 1.25 oz. per gallon water needed to disinfect.

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Pink Magic	9/2500 ml. per case	Pink hand and body soap	Can be used in Iron Man dispenser..
Re-Mov	4/1 gal.s per case	Non-ammoniated floor stripper.	Works fast, leaving no ammonia smell.
Rust Off W	5 gal. Pail	Concentrated Phosphoric Acid rust remover.	Leaves protective film if not rinsed
Seeze-Eze	12, 16-oz. cans per case	Aerosol anti-seize spray lubricant.	Contains copper and graphite and is effective up to 2000 F.
Selcoshine		Stainless steel cleaner and polish	Light lemon fragrance. Safe on all metals and Formica furniture and counter tops.
Slick	12 convenient 32 oz. shaker bottles per case.	Chlorinated, mild abrasive scouring powder	Removes stains easily and rinses well without leaving a residue behind.
Staph Kill Country	Dozen 20-oz. aerosols per case	Aerosol spray disinfectant	Pleasant country fragrance
Sunrise	4/1 gal.s per case	Blue colored dish detergent for washing dishes by hand.	
Super 101	5-gal. Pails 55 gal. Drums	Super concentrated, water based degreaser for removal of heavy greases, oils and baked on carbon.	Product works great in Engine room of vessels
Syn Tap	12, 16 oz. Aerosols per case	Water & Isopropyl Alcohol based cutting and tapping fluid	Low odor, safe on all metals, transparent for excellent visibility while working. Not for use on plastics..
T-Solv	5 gal. Pails	Non-flammable, fast evaporating safety solvent degreaser with a high dielectric strength.	Excellent for cleaning engines, generators, and radiators. Not for use on plastics.
Zone Defense	20 oz. aerosol cans 5 gal. Pails	Citrus based solvent degreaser for cleaning of heavy greases and oils.	Meets General Electric and Pratt Whitney specifications for cleaning of non-energized motors. Can also be used on non-energized circuit breakers, switches, armatures, stators, and porcelain insulators. Flash point of 142 F.

Safety/Loss Control Managers Responsibilities

- 1.1 Develop and maintain a hazardous communication program to meet federal and state requirements.
- 1.2 The program shall include requirements and procedures for:
 - a) labeling and warnings
 - b) MSDS
 - c) training
 - d) non-routine tasks, communication of hazards
 - e) communication of hazards contained in unlabeled piping.
- 1.3 Assure MSDSs are current, and provide all locations with appropriate updates.
- 1.4 Provide each workplace with copies of the program.
- 1.5 Participate on the committee to approve the use of hazardous chemicals in the workplace.

Employee's Responsibilities

- 1.1 Fully understand the MSDS for chemicals to which he/she is exposed and wear the required PPE.
- 1.2 Attend training sessions on hazardous communication.
- 1.3 Notify supervisor of damaged or illegible labels, and any other program deficiencies.
- 1.4 Request information on hazardous chemicals if not available on site.

PART B. WASTE MINIMIZATION PROCEDURE

Purpose

- 1.1. To define procedures, which meet federal, state, and local requirements, to reduce the use, accumulation, and storage of waste hazardous materials generated by the company; and to maximize efficiency and minimize potential impacts to the safety and health of personnel and to the environment by operating in a manner which prevents pollution and minimizes the generation of waste.

Scope

- 1.1. This policy applies to company activities which have the potential to affect air, land, and water quality.
- 1.2. The Pollution Prevention Act of 1990 (42 U.S.C. 13101) establishes the following national policy:
“The congress hereby declares it to be national policy of the United States that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environmental [sic] should be employed only as a last resort and should be conducted in an environmentally safe manner.”
- 1.3. The 1984 Hazardous and Solid Waste Amendments (HSWA) established as national policy that wherever feasible, the generation of hazardous waste is to be reduced or eliminated. Hazardous wastes that continue to be generated must be treated, stored, and disposed of to minimize any future threat to human health and the environment. RCRA requires that hazardous waste generators who are shipping wastes certify on the manifest the following:
“If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford” [40 CFR 262, Item 16].

Responsibility

- 1.1. Personnel involved in waste minimization shall comply with procedure requirements to his/her level of authority and responsibility.

Objective

- 1.1. Improve workplace safety and health.
- 1.2. Reduce company liability and cost associated with the use, management, transportation, and disposal of waste hazardous materials.

- 1.3. To maintain only minimal amounts of HAZMAT onboard vessels for use in Phase IV Maintenance Procedures, general ROS operations aboard ROS vessels, and potential transition to full operating status.

Procedure

- 1.1. Personnel shall only order chemicals which are on the Hazardous Materials Standardized List.
- 1.2. The Pollution Prevention Committee shall only approve chemicals which are less hazardous than existing products when reviewing requests for replacement products on the company's Hazardous Materials Standardized List.
- 1.3. Personnel shall order only the amount of product needed for the job or that can be expected to be used before the product's shelf life expires. All expired shelf-life items are to be disposed of in accordance with procedures and guidelines specified in this manual as much as they are not contradictory to Federal, State, or local regulation.
- 1.4. No RRF vessel shall transfer (donate hazardous materials or hazardous waste) to any private sector, state, or local/city government.
- 1.5. Personnel shall perform preventive maintenance and properly adjust equipment, in order to reduce emergency repair and waste generation.
- 1.6. Personnel shall use lids on volatile organic compound containers to slow evaporation.
- 1.7. Personnel shall use circulating hot water washers, or clean parts mechanically instead of using solvents, where possible.
- 1.8. Supervisors shall schedule similar tasks together to reduce cleanup.
- 1.9. Chlorinated solvents shall not be used on vessels or at facilities.
- 1.10. Products shall be reused, whenever possible, after operational approval and in compliance with the manufacturer's guidelines.
- 1.11. Personnel shall use out-of-date products for "non-spec" projects rather than purchasing new products, after operational approval and in compliance with manufacturer's guidelines.
- 1.12. Supervisors shall recycle wastes whenever possible. The company currently recycles newspapers, lead/acid batteries, white bond and computer paper, cardboard, and scrap metal.

Definitions

- 1.1. Disposal - For the scope of this procedure disposal means the permitted technique to permanently remove wastes generated by company facilities or operations.
- 1.2. Hazardous Waste - A waste may be deemed to be a hazardous waste if: (1) it is, or contains a hazardous waste listed in 40 CFR §261 Subpart D, or (2) exhibits any of the following characteristics: i) flash point <140° F; ii) pH>12 or <2; iii) reacts violently with water; or iv) exhibits a toxic characteristic as noted in 40 CFR §261 Subpart C.

- 1.3. NOTE: This term is frequently used incorrectly for any waste derived from hazardous materials. In this document the term will only be used in reference to wastes which have been determined to be hazardous by this definition.
- 1.4. Resource Conservation and Recovery Act (RCRA) - The federal act which forms the basis for all federal and state hazardous waste regulations. State hazardous waste regulations may be more stringent than federal regulations (see Non-RCRA Hazardous Waste definition).
- 1.5. Recycling - In general, the use of discarded materials in original or changed form rather than sending the materials for disposal. Precisely used, the term refers to using the material in the process from which it was first formed, e.g. paper being reused to make paper.

NOTE: Burning a waste for energy is not recycling.

- 1.6. Waste - Any discarded material, which includes any material which is abandoned, recycled, or considered inherently waste like (e.g. scrap metal).

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SELF-AUDIT CHECKLIST

NAME OF VESSEL: _____

Name of Auditor: _____

Date of Evaluation: _____

AUDIT QUESTION	YES	NO
GENERAL		
1. Have any external inspectors been granted access to the ship for an inspection related to environmental issues since the last inspection? If yes, have reports or correspondence relating to the inspection been retained? External inspectors include representatives from Customs, USCG, ABS, etc. Ref: COMSCINT 5090 1B, 3-1a3.		
a) Did the external inspectors in No. 1 present appropriate credentials?		
b) If the inspectors expressed an interest in liquid discharges (other than in MSD or OWS effluent from the ship, have the Port Engineer or shoreside staff been informed of that interest?		
c) If a "Notice of Violation," "USCG 835," or other official discrepancy was issued by the inspectors, was the Port Engineer or shoreside staff notified?		
d) Has the "Notice of Violation," "USCG 835," or other official discrepancy been corrected?		
2. Have requests for environmental inspections by representatives of a foreign country been refused and proper notification made? Ref: COMSCINT 5090 1B, 3-1a4.		
3. Does the ship do a self evaluation annually for environmental compliance with procedures, practices, and training? Ref: COMSCINT 5090 1B, 3-2, and TE-1 Section 19.2.3		
a. Was this checklist used to assist in the performance of this evaluation?		
4. When operating in foreign territorial waters or when visiting foreign ports, does the ship abide by environmental provisions contained in port visit clearances and/or in status of forces agreements (SOFA)? Ref: COMSCINT 5090 1B, 3-3, and TE-1 Section 19.2.1.2.		
5. Has the ship's Master assigned a person as the Ship Environmental Protection Coordinator? Ref: COMSCINT 5090 1B, 2-4d.		
POLLUTION PREVENTION		
1. Have all ROS/Non-ROS/MSC/MARAD employees presently on board, received general and MARAD specific environmental awareness training commensurate with the employee's position in the company to ensure that they fully understand the environmental protection responsibilities of MARAD, as well as their roles in the proper execution of those responsibilities? Ref: TE-1 Sec 19 and COMSCINT 5090 1B, 4-1.		
HAZARDOUS MATERIALS POLICY		
1. Have all ROS/Non-ROS/MSC/MARAD employees presently on board, received general and MARAD specific hazardous material training commensurate with the employee's position in the company to ensure that they fully understand the hazardous material policies of MARAD, as well as		

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their roles in the proper execution of those policies? Ref: TE-1 Sec 19 and COMSCINT 5090.1B.		
2. Has the ship maintain an inventory of all hazardous materials onboard, and performed the annual joint survey with the MARAD Marine Surveyor. Ref: TE-1 Sec 19.2.3 .		
a) Has the ship manager acquired MSDS for all hazardous materials on board the vessel, and maintain them in a Right-To-Know Folder or Yellow Folder labeled "Ship's Name - Inventory of Hazardous Materials Aboard". Ref: TE-1 Sec 19.2.3.1		
b) Has all portable fire extinguisher and installed fire suppressant for hazardous material storage areas been inspected and re-certified on an annual basis.		
SEWAGE		
1. Marine Sanitation Devices (MSDs) Ref: COMSCNOTE 4730 of 3 Dec 92, enclosure (1)		
a) Are signs posted a all toilets and slop tanks warning against introducing disinfecting cleaners, paper towels, grease, solvents, industrial wastes, unapproved cleaning products, etc. into the sewage system?		
b) Are procedures posted for discharging the sewage to a shore facility through a deck connection?		
c) Is the shore connection clearly labeled?		
d) Does the MSD space contain warning plaques and operational procedures indicating		
(1) Spill and leak cleanup procedures?		
(2) Personnel cleanup procedures?		
(3) Prohibition on smoking, eating, and drinking in the space?		
(4) Procedures for handling and storage of MSD chemicals?		
(5) Schedule for adding chemicals?		
e) Is overboard effluent collected for testing?		
f) Have there been any complaints about the systems operation? If yes, have port engineers or other shore personnel been notified of the problems?		
g) Are instructions posted regarding the proper operation of the MSD within 3 nm of shore? Ref: 33USC 1322.		
2. For ships with Collection, Holding and Transfer (CHT) systems. Ref: COMSCNOTE 4730 of 3 Dec 92, enclosure (2).		
a) Are signs posted at all toilets and slop tanks warning against introducing disinfecting cleaners,paper towels, grease, solvents, industrial wastes, unapproved cleaning products, etc. into the sewage system?		
b) Are procedures posted for discharging the sewage to a shore facility through a deck connection?		
c) Is the shore connection clearly labeled?		
d) Are all valves and piping stenciled to identify service and direction of flow?		
e) Does the CHT space contain warning plaques and operational procedures indicating:		
(1) Presence of toxic or flammable fumes in the tank?		
(2) Spill and leak cleanup procedures?		
(3) Personnel cleanup procedures?		
(4) Prohibition on smoking, drinking, and eating in space?		
f) Are instructions posted regarding the proper operation of the CHT within 3 nm of shore? Ref: 33 USC 1322		
OIL TRANSFER AND CARGO SLOPS DISPOSAL PROCEDURES		

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1. Does the ship have written procedures with clearly defined responsibilities for oil transfer operation? Ref: 46CFR35.35 Cargo Handling, 33CFR151.10 Control of Discharge of Oil, and TE-1 Section 19.6.2.-MARD & MSC Directives Governing the Discharge of Oil & Oily Mixtures.		
AIR		
1. Is the ship implementing operations and maintenance procedures to prevent stack emissions in violations of State and local regulations? Ref: COMSCINT 5090 1B, 4-5.		
a) Specifically does the ship comply with the regulations on smoke opacity during the operation and lighting off, securing, baking out, or testing of boilers or the lighting off, securing, and testing of internal combustion engines.		
b) In port, does the ship minimize the operation of boilers and diesel engines by using shore supplied "hotel" services such as steam and electricity?		
2. Does the ship ensure that ODS (Ozone Depleting Substance) equipment is in properly functioning, leak-free state? Ref: COMSCINT 5090 3B, 7c1.		
3. Does the ship procure mission critical ODS from the ODS Reserve (Stockpile)? If no, see 3a. Ref: COMSCINT 5090 3B, 7c2.		
a) Does the ship obtain an ODS Procurement Approval (Waiver) for the open purchase of ODS? Ref: COMSCINT 5090 3B, 7c2.		
4. Are personnel performing maintenance on refrigeration and air conditioning equipment EPA certified? Ref: COMSCINT 5090 3B, 6a6.		
5. Does the ship record consumption of ODS? Ref: COMSCINT 5090 3B, 7c3.		
a) Do records show that the ship is meeting established leakage rates? Ref: COMSCINT 5090 3B, 7c3.		
6. Does the ship have a policy of replacing small refrigeration equipment (ice makers, coolers, etc.) when it no longer functions properly? Replacement equipment must use an alternate refrigerant. Ref: COMSCINT 5090 3B, 6b3.		
OIL AND OILY WASTE		
1. Does the ship report the occurrence of a sheen or oil spill in accordance with the MSC Oil Spill Response Plan? Ref: COMSCINT 5090 1B, 5-5, MARAD Vessel Response Plan TE-1 Section 19.1.1.		
2. Does the ship have a "Non-convention" International Oil Pollution Prevention (IOPP) certificate? ABS issues this certificate on behalf of the USCG. Ref: COMSCINT 5090 1B, 2-1b4.X-perMARAD/USCG MOU		
3. Does the ship maintain an Oil Record Book(s)? Ref: 33 CFR 151.25, and MARAD TE-1 Section 19.6.4 - Maintenance of Oil Record Books (All Phases).		
a) Does the Oil Record Book demonstrate that the ship is compliant with oil discharge restrictions? Ref: 33 CFR 151.10 and 33 CFR 157.25.		
4. Does the ship conduct Emergency Procedures Drills once a quarter? Ref: COMSCINT 5090 1B, 5-2a.		
5. Does the ship conduct a "Qualified Individual Notification" drill quarterly (if operating in US waters)? Ref: COMSCINT 5090 1B, 5-2b.		
6. Does the ship record when the above drills are held? Ref: COMSCINT 5090 1B, 5-2d.		
USED OIL MANAGEMENT POLICY		
1. Does the ship collect, separately store, and label, used lube oils for shoreside reclamation? Ref: COMSCINT 5090 1B, 4-10b.		
WASTE (HAZARDOUS, MEDICAL AND SOLID)		

PART C. HAZARDOUS WASTE GENERATION PROCEDURE

Purpose

- 1.1. To define procedures which meet federal, state, and local requirements for company and contractor operations which generate hazardous wastes.

Scope

- 1.1. This procedure is applicable to company facilities and operations which generate hazardous wastes and contractors who generate waste at company facilities, except where such facilities or operations are required to comply with alternative, equally stringent procedures.

Responsibility

- 1.1. Personnel involved in hazardous waste generation or contractor-generated waste shall comply with procedure requirements to his/her level of authority and responsibility.

Procedure

- 1.1. Company facilities which generate hazardous wastes shall follow the hazardous waste management standards of a large quantity generator as defined by the appropriate state or federal regulations (see "Related Documentation").
- 1.2. ESQA
 - 1.2.1. Determine which facilities generate hazardous wastes, and what quantity of hazardous wastes are generated annually by each facility, by calendar month.
 - 1.2.2. Obtain and maintain a United States Environmental Protection Agency (EPA) Identification Numbers (ID No.) for company facilities which generate more than 220 pounds of hazardous waste per calendar month.
 - 1.2.3. The following wastes shall not be included in generator status determination:
 - Wastes specifically exempted from regulation as hazardous wastes (for example, spent lead-acid batteries accumulated and sent off-site for recycling);
 - Residues in empty containers that did not contain acute hazardous waste; and
 - Used oil accumulated to be sent for recycling.
 - 1.2.4. The following wastes shall be included in generator status determination: hazardous wastes generated during the calendar month; hazardous wastes packaged and shipped off-site for treatment, storage, or disposal; hazardous wastes treated on-site; residues in empty containers that contained acute hazardous wastes; unknown wastes; and wastes awaiting test results to determine RCRA characterization.
 - 1.2.5. Perform annual facility/operation inspections to ensure that the facility or operation is in compliance with applicable regulations.

- 1.3. Facility/Operations Manager
 - 1.3.1. Coordinate compliance with appropriate hazardous waste accumulation and storage, and documentation procedures in order to provide the information required for compliance with this procedure (see Section “Related Documentation”).
 - 1.3.2. Ensure the documentation of quantities of hazardous waste generated by the facility in a calendar month and forward this information to ESQA.
- 1.4. Vessel Personnel
 - 1.4.1. Ensure that wastes removed from vessels are appropriately containerized and labeled (see Section “Related Documentation”).
 - 1.4.2. Vessels shall not offload waste hazardous materials without the approval of the Facility/Operations Manager or his/her representative.
 - 1.4.3. Vessel personnel must develop and maintain an inventory of all hazardous materials onboard. The Hazardous Materials Management System Inventory Sheet in Section. “Forms” is to be used.
- 1.5. RRF Vessel Inventory
 - 1.5.1. Prior to deactivation, and/or on an annual basis if no activation has occurred, the Ship Manager shall conduct a joint survey with the MARAD Marine Surveyor to determine:
 - a) The physical inventory of hazardous materials, solvents, chemicals, and waste products of known and unknown classification.
 - b) An assessment of their containers.
 - c) Based upon the results of the survey, the MARAD representative will make a determination as to the retention or removal of any hazardous materials, solvents, and chemicals.
 - d) Waste shall be removed as required.
 - 1.5.2. Four (4) binders with bright yellow characteristics will be prepared and labeled “SHIP’s NAME - Inventory of Hazardous Materials Aboard”. Each folder will contain a copy of the inventory and copies of the complete set of all appropriate MSDS. Distribution of the folders and their contents shall be as follows:
 - Ship’s record files in Chief Engineer’s office
 - Ship Manager
 - MARAD Region Office (COTR)
 - Reserve Fleet Site Office if vessel is at NDRF site
- 1.6. Containment and stowage shall consider the following:
 - Preventing deterioration of containers
 - Preventing spillage/turnover of containers
 - Inhibiting or eliminating leakage and breakage of containers which could produce poisonous gasses, flammable atmospheres, chemical corrosion, or spontaneous chemical combustion
- 1.6.1. Ensure waste awaiting transport has the required labeling on waste containers and documentation of wastes prior to the waste being accepted for storage in an

area designated the “waste hazardous materials storage” area by the senior vessel officer.

- 1.7. The door to each stowage location will be posted with appropriate signs, i.e. “WARNING - FLAMMABLE Materials Stowed Inside.” If a door is not marked, it is the senior vessel officer’s responsibility to post it.
- 1.8. Contractor
 - 1.8.1. Ensure that contractor-generated waste is discharged in compliance with appropriate company procedures, as outlined in Section “Related Documentation.”
 - 1.8.2. Supply the appropriate material safety data sheets for materials that are not company standard to the responsible company representative before bringing the material onto a company facility.
 - 1.8.3. Ensure that wastes are containerized at the end of each work shift, when possible, and removed from the company facility at the end of the job.
 - 1.8.4. Ensure that waste containers are adequately labeled during the performance of the contract.
 - 1.8.5. Perform an adequate profile of each waste stream that is generated as part of the work to ensure appropriate waste disposal.
 - 1.8.6. Complete required labeling of waste containers and documentation of wastes awaiting transport prior to the waste being accepted for storage in the waste hazardous materials storage area by the hazardous materials coordinator.

Definitions

- 1.1. Disposal - For the scope of this procedure disposal means the permitted technique to permanently remove wastes generated by the company, contractors, or operations.
- 1.2. Documentation - The paperwork, including but not limited to, manifests, bills of lading, waste profiles, land ban restriction declarations, dangerous cargo manifests associated with accumulation and storage, and transportation of waste hazardous materials. Documentation as defined for this procedure also includes, the marks, labels, and placards required by the Department of Transportation for the shipment of hazardous materials and defined in 49 CFR §172.
- 1.3. EPA ID Number - Any facility which generates more than 220 pounds per month or any company which transports hazardous waste must have an EPA ID number. EPA ID numbers are used in two ways: i) to identify generators of hazardous waste; and ii) to identify transporters of hazardous waste. A Generator EPA ID Number is facility specific - one for each address where hazardous wastes are generated. A Transporter EPA ID Number is company specific.
- 1.4. Hazardous Material - A substance or material, including a hazardous substance, hazardous waste, marine pollutant, or elevated temperature material (as defined by 49 CFR §172.101) which has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported. NOTE: Throughout this document the term “hazardous materials” will be used to include all regulated wastes, including hazardous wastes.

- 1.5. Hazardous Substance - Any substance as designated by 40 CFR §302.4. NOTE: Hazardous substances, which include hazardous wastes, are a subgroup of hazardous materials.
- 1.6. Hazardous Waste - A waste may be deemed to be a hazardous waste if: (1) it is, or contains a hazardous waste listed in 40 CFR §261 Subpart D, or (2) exhibits any of the following characteristics: i) flash point <140° F; ii) pH>12 or <2; iii) reacts violently with water; or iv) exhibits a toxic characteristic as noted in 40 CFR §261 Subpart C. NOTE: This term is frequently used incorrectly for any waste derived from hazardous materials. In this document the term will only be used in reference to wastes which have been determined to be hazardous by this definition.
- 1.7.
- 1.8. Recycling - In general, the use of discarded materials in original or changed form rather than sending the materials for disposal. Precisely used, the term refers to using the material in the process from which it was first formed, e.g. paper being reused to make paper. NOTE: Burning a waste for energy recovery is not recycling.
- 1.9. Waste - Any discarded material, which includes any material which is abandoned, recycled, or considered inherently waste like (e.g. scrap metal).

Related Documentation

- 1.1. Safety, Health, and Environmental Procedures Manual
- 1.2. Code of Federal Regulations
- 1.2.1. Title 40: Chapter I - Environmental Protection Agency large quantity generator §262.34
- Subchapter D - Water Programs, §100 to §149
 - Subchapter I - Solid Wastes, §260 to §399
 - Subchapter R - Toxic Substances Control Act, §700 - §789

PART D. WASTE HAZARDOUS MATERIALS MANAGEMENT PROCEDURE

Purpose

- 1.1. To define procedures for the management of waste hazardous materials generated or transported by the company.

Scope

- 1.1. This procedure is applicable to company facilities which generate, accumulate, or store waste hazardous materials, and to company operations which transport waste hazardous materials, except where such facilities or operations are required to comply with alternative equally stringent procedures.
- 1.2. **The Federal Facilities Compliance Act clarifies the regulations concerning military ships and other public vessels for the generation and storage of hazardous waste. The law specifies that the vessel shall not be subject to the storage, manifest, inspection, or record-keeping requirements of RCRA until the waste is transferred to a shore facility. However, the RCRA rules would apply if:**
 - • The waste is stored on the vessel for more than 90 days after the vessel is placed in reserve or otherwise is not longer in service,” or
 - • The waste is transferred to another vessel, within the territorial waters of the United States, and the waste is stored for 90 days after the date of transfer

Responsibility

- 1.1. Personnel involved in waste hazardous materials documentation, characterization, and transportation shall comply with procedure requirements to his/her level of authority and responsibility.

Procedure

- 1.1. Characterization of waste hazardous materials
- 1.2. The Hazardous Materials Coordinator (HMC) shall make the primary waste characterization of waste streams generated at the facility based on the documentation provided by facility or vessel personnel generating the waste.
 - 1.2.1.1. For outported vessels, vessels in the RRF Fleet, or other managed vessels, the local port manager, port engineer, port captain, or senior vessel person (in order of his/her level of authority and responsibility) is designated as the Hazardous Materials Coordinator (HMC).
 - 1.2.2. ESQA shall determine whether or not waste streams at the company's facilities are hazardous wastes.
 - Review the regulations which control the waste.
 - Review documentation associated with the products used in the generation of the waste.
 - Review the process that generated the waste.
 - Perform an analysis on a sample of the waste stream.

1.2.3. Unknown wastes shall be managed as a hazardous waste until proven otherwise.

1.3. Documentation of waste hazardous materials

1.3.1. Facility Managers shall ensure that the documentation associated with the accumulation, storage, and transportation of company generated waste hazardous materials complies with local, state, and federal regulations, as well as company policy (see Section “Related Documentation”).

1.3.2. The Operations Manager shall ensure that the documentation associated with the transportation of third party waste hazardous material complies with local, state, and federal regulations *specifically Title 49: Subtitle B - Other Regulations Relating to Transportation, Chapter I - Research and Special Programs Administration, Department of Transportation, Subchapter C - Hazardous Materials Regulations, §171 to §177, as well as company policy (see Section “Related Documentation”)*.

1.3.3. The Facility Manager or Operations Manager shall contact ESQA in the event that interpretation of documentation regulations or procedures is required.

1.3.4. Documentation shall be in English and legible.

1.3.5. Abbreviations and jargon terms shall not be used.

1.3.6. Documentation which may be exposed to adverse weather conditions shall be protected from such weather.

1.3.7. Labeling kits shall be used to document facility and vessel wastes (see Hazard Communication Part A. of RVO-09).

1.3.8. The Facility Manager shall ensure that a record is kept of hazardous wastes shipments sent off site for disposal. At a minimum this shall include:

1.3.8.1. A spreadsheet of each hazardous waste shipment which will include:

- Date of shipment.
- Hazardous Waste Transporter Company and EPA ID number.
- Type of waste (as described on the manifest).
- Quantity of Waste.
- Transfer, Storage or Disposal Facility and EPA ID number.
- Date of Completed Manifest Return.

1.3.9. Original completed (signed by authorized disposal facility) Uniform Hazardous Waste Manifest for each shipment

1.3.10. Original applicable waste profile documentation

1.3.11. Original “Land Ban Restriction” documentation, if applicable.

1.3.12. The Facility Manager or Operations Manager, in coordination with ESQA, shall ensure that any state required annual report relating to hazardous waste generation or transportation is completed.

NOTE: This reporting is mandatory for Alaska, California and Washington facilities, or facilities which send waste to Missouri for disposal.

- 1.4. Transportation of company generated waste hazardous materials
- 1.4.1. ESQA shall approve the disposal site of company generated waste hazardous materials before the waste is removed from the facility.
- 1.4.2. Waste hazardous materials shall only be transported by contractors who have been approved by the ESQA and Risk Management.
- 1.4.3. Contractors
- Contractors shall be registered with the United States Environmental Protection Agency for the transportation of hazardous wastes.
 - Contractors shall have a valid Department of Transportation Hazardous Materials Certificate of Registration, as well as appropriate local and state permits and licenses.
- 1.4.4. Only wastes which have been determined to be hazardous wastes shall be transported on a Uniform Hazardous Waste Manifest.
- 1.4.5. Wastes which have been determined to be non-hazardous shall be transported on a bill of lading or non-hazardous waste manifest.
- 1.4.6. Waste hazardous materials shall be removed from a company facility only after the Hazardous Materials Coordinator has given approval.
- 1.4.7. No unscheduled pickups of waste hazardous materials shall be permitted.
- 1.4.8. Facility or Operations Manager
- Understand the waste hazardous materials transportation procedure to be implemented within his/her area of responsibility and ensure personnel comply with this procedure.
 - Ensure that contractors comply with company procedures for the transportation of waste hazardous materials as outlined in "Related Documentation".
 - Contact ESQA with respect to questions which may arise from the contractor's handling or storage of wastes or the interpretation of local,
- 1.4.9. ESQA
- Perform due diligence audits of proposed contractors for the transportation of hazardous waste.
 - Coordinate with the Risk Management Department in the approval of waste disposal and transportation subcontractors.
 - Review the Waste Hazardous Materials Transportation Procedure annually.
- 1.4.10. Hazardous Materials Coordinator
- Coordinate compliance with the waste hazardous materials transportation procedure at his/her facility.
 - Coordinate approval of hazardous material disposal subcontractors, and ultimate disposal method selection, with ESQA. Contractors shall not be utilized until the approval of ESQA has been given.
 - Ensure that the correct packaging, containers, labels and placards are used for the transportation of hazardous materials.
 - Ensure that appropriate documentation is completed before any shipment of hazardous materials leaves the facility (see "Related Documentation").

1.5. Third Party Hazardous Waste

1.5.1. Shipments of hazardous waste shall only be accepted for transportation after review with ESQA.

1.5.2. Shipping personnel shall ensure that the documentation associated with the hazardous waste offered for shipment complies with appropriate company requirements (see "Related Documentation").

Definitions

- 1.1. Disposal - For the scope of this procedure disposal means the permitted technique to permanently remove wastes generated by company facilities or operations.
- 1.2. Documentation - The paperwork, including but not limited to, manifests, bills of lading, waste profiles, land ban restriction declarations, dangerous cargo manifests associated with accumulation and storage, and transportation of waste hazardous materials. Documentation as defined for this procedure also includes, the marks, labels, and placards required by the Department of Transportation for the shipment of hazardous materials and defined in 49 CFR §172.
- 1.3. EPA ID Number - Any facility which generates more than 220 pounds per month or any company which transports hazardous waste must have an EPA ID number. EPA ID numbers are used in two ways: i) to identify generators of hazardous waste and ii) to identify transporters of hazardous waste. A Generator EPA ID Number is facility specific - one is assigned to each address where hazardous wastes are generated. A Transporter EPA ID number is company specific.
- 1.4. Hazardous Material - A substance or material, including a hazardous substance, hazardous waste, marine pollutant, or elevated temperature material (as defined by 49 CFR §172.101) which has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported. NOTE: Throughout this document the term "hazardous materials" will be used to include all regulated wastes, including hazardous wastes.
- 1.5. Hazardous Material Coordinator - A company representative appointed by the department or facility manager to be responsible for compliance with hazardous materials regulations and procedures. This individual shall provide a single point of contact for ESQA with respect to waste hazardous and non-hazardous materials management.
- 1.6. Hazardous Waste - A waste may be deemed to be a hazardous waste if: (1) it is, or contains a hazardous waste listed in 40 CFR §261 Subpart D, or (2) exhibits any of the following characteristics: i) flash point <140° F; ii) pH >12 or <2; iii) reacts violently with water; or iv) exhibits a toxic characteristic as noted in 40 CFR §261 Subpart C. NOTE: This term is frequently used incorrectly for any waste derived from hazardous materials. In this document the term will only be used in reference to wastes which have been determined to be hazardous by this definition.
- 1.7. Uniform Hazardous Waste Manifest - The documentation as specified in 40 CFR §262 Appendix to be used as shipping papers for the transportation of hazardous waste.

- 1.8. Waste - Any discarded material, which includes any material which is abandoned, recycled, or considered inherently waste like (e.g. scrap metal).

Related Documentation

- 1.1. Code of Federal Regulations
- 1.2. Title 49: Subtitle B - Other Regulations Relating to Transportation, Chapter I - Research and Special Programs Administration, Department of Transportation, Subchapter C - Hazardous Materials Regulations, §171 to §177
- 1.3. Title 40: Chapter I - Environmental Protection Agency
 - Subchapter D - Water Programs, §100 to §149
 - Subchapter I - Solid Wastes, §260 to §399
 - Subchapter R - Toxic Substances Control Act, §700 - §789
- 1.4. Company EPA identification number for the transportation of hazardous waste: Crowley Liner Services, Inc. can be obtained through the Dir., Vessel Operations Office.

PART E. WASTE HAZARDOUS AND NON-HAZARDOUS MATERIALS STORAGE PROCEDURE

Purpose

- 1.1. To define procedures, which meet federal, state, and local requirements, for the accumulation and storage of waste hazardous and non-hazardous materials generated by the company.

Scope

- 1.1. This procedure is applicable to company facilities which generate, accumulate, or store waste hazardous and non-hazardous materials, except where such facilities or operations are required to comply with alternative equally stringent procedures.

Responsibility

- 1.1. Personnel involved in waste hazardous and non-hazardous materials accumulation and storage shall comply with procedure requirements to his/her level of authority and responsibility.

Procedure

- 1.1. Company facilities which generate waste hazardous materials shall follow the accumulation requirements stipulated for a large quantity generator of hazardous wastes in federal regulations (see Section "Related Documentation").
- 1.2. Company facilities shall store non-hazardous wastes prior to disposal in a manner not to attract, or be accessible, to animals.
- 1.3. Wastes streams which are not hazardous wastes but could pose a hazard if not properly managed shall be handled in a more controlled manner than other non-hazardous wastes [e.g. asbestos-containing materials, PCBs (polychlorinated biphenyls),

glycols, regulated garbage, and non-hazardous oily spill debris and gravels (petroleum contaminants other than crude, including but not limited to turbine fuel, diesel fuel, hydraulic fluid, etc.)).

- 1.4. The length of time facilities may accumulate hazardous wastes on site depends on the hazardous waste generator status of the facility.
 - 1.4.1. Facilities which are classified as conditionally exempt small quantity generators (CESQGs) do not have an accumulation time limit as long as the 220 pound per month limit is not exceeded, and no more than 2,200 pounds are accumulated at one time.
 - 1.4.2. Facilities which are classified as small quantity generators (SQGs) can accumulate hazardous waste for up to 90 days, with the following exceptions:
 - If the nearest treatment, storage, or disposal facility (TSDF) is more than 200 miles from the facility, hazardous waste may be accumulated on site for a maximum of 270 days.
 - If the nearest TSDF is less than 200 miles from the facility hazardous waste may be accumulated on site for a maximum of 180 days.
 - 1.4.3. Facilities which are classified as large quantity generators (LQGs) can accumulate hazardous waste for a maximum of 90 days on-site.
- 1.5. ESQA (or designee)
 - 1.5.1. Determine the hazardous waste generator category of each company facility. This determination shall be performed annually.
 - 1.5.2. Perform site inspections to ensure that the hazardous and non-hazardous material storage areas are in compliance with applicable regulations and that waste disposal documentation is being adequately performed.
 - 1.5.3. Assist Operations in the establishment of correct documentation, waste hazardous materials control procedures, and regulation interpretation.
- 1.6. Supervisor/Manager
 - 1.6.1. Understand the waste hazardous and non-hazardous materials accumulation and storage procedure to be implemented within his/her area of responsibility and ensure personnel comply with this procedure.
 - 1.6.2. Contact ESQA with respect to questions which may arise from the accumulation and storage of waste materials or the interpretation of local, state, or federal regulations.
 - 1.6.3. Designate one person who shall be trained as the hazardous materials coordinator (HMC).
 - 1.6.3.1. For outported vessels, vessels in the RRF Fleet, or other managed vessels, the local port manager, port engineer, port captain, or senior vessel person (in order of his/her level of authority and responsibility) is designated as the Hazardous Materials Coordinator (HMC).
 - 1.6.4. Designate an area of the facility to be the hazardous waste storage area for the accumulation and storage of waste hazardous materials scheduled for disposal.

- The hazardous waste storage area shall only be used to: store waste hazardous materials; and accumulate sufficient quantities of materials for economic disposal.
- The hazardous materials shall be segregated according to waste/chemical type, and shall be clearly labeled.
- The hazardous waste storage area shall be able to contain liquid hazardous waste (secondary containment - in a bermed area with a liner compatible with the waste, or inside a building with a cement floor (no cracks) and a lip on the doorway, etc. The containment shall have a sufficient volume to hold at least 110 percent of the volume of the single largest container. Outdoor secondary containment shall have a sufficient volume to hold at least 110 percent of the volume of the single largest container, plus an allowance for precipitation or be covered.
- The HMSA shall be clearly posted with appropriate signs, which at a minimum include: "Waste Hazardous Materials Storage Area" and "No Smoking" signs.

1.6.5. Designate, with the assistance of ESQA, satellite accumulation areas where waste hazardous materials may be accumulated before being moved to the hazardous waste storage area. Satellite accumulation within a facility's boundaries shall adhere to the following criteria:

- One type of waste hazardous material may be accumulated in a satellite area.
- The waste hazardous material shall be accumulated in a container, the total capacity of which shall not exceed 55 gallons for a single satellite accumulation area.
- The container used shall be good condition.
- The container or its liner material must be compatible with the waste hazardous material it is storing.
- The container shall be covered and tightly sealed during storage.
- The container shall not be opened, handled, or stored in a manner which may cause it to rupture or leak.
- The container shall be marked with the words "Hazardous Waste" and the contents clearly identified.
- The container shall be managed in compliance with hazardous waste container requirements once the container is full. The full container shall be moved to a central accumulation area within three days.
- The designated satellite accumulation area shall be posted with a sign stating "Hazardous Waste Satellite Accumulation Area."

NOTE: Multiple satellite accumulation areas can be designated for separate waste streams if the separate areas are clearly posted and the floors marked (using paint or tape) to separate the areas.

1.6.6. Designate at least one area of the facility to be a Non-Hazardous Waste Storage Area for the accumulation and storage of non-hazardous waste scheduled for disposal.

- This area shall **only** be used to store non-hazardous waste and accumulate sufficient quantities of materials for economic disposal.
- The non-hazardous materials shall be segregated according company procedures, and shall be clearly labeled.
- This area shall be clearly posted with appropriate signs, which at a minimum include: "Non-Hazardous Waste Only."
- Waste containers are correctly labeled and other forms of warning are legible, written in English, and prominently displayed on the storage container.

1.7. Hazardous Materials Coordinator

1.7.1. Coordinate implementation of the waste hazardous materials accumulation and storage procedure at his/her facility, including appropriate documentation (see Section "Related Documentation").

1.7.2. Inspect workplace, satellite accumulation areas, and HMSA regularly to ensure:

1.7.2.1. No unauthorized accumulation of waste hazardous materials which require disposal or transfer to the HMSA.

1.7.2.2. Ensure that hazardous materials are being stored in appropriate containers.

1.7.2.3. Ensure empty containers are removed from HMSA, and all annotations are removed from the containers.

- Empty containers are not hazardous waste, unless the container contained an acute hazardous waste.

NOTE: Regardless of the criteria listed below a container is not considered to be empty until all possible material is removed from it by common practice such as pumping, pouring, scraping, or aspirating.

- Containers of 100 gallons or less must contain no more than 1 inch of residue on the bottom, or no more than 3 percent by weight of the container's total capacity.
- Containers larger than 110 gallons must contain no more than 0.3 percent residue by weight of the container's total capacity.
- Waste pressurized gas containers and pressurized cylinders are considered empty when their pressure approaches atmospheric pressure.

1.7.2.4. Waste containers are correctly labeled and other forms of warning are legible, written in English, and prominently displayed on the storage container (see Section "Related Documentation").

1.7.2.5. Waste containers holding hazardous waste must be:

- In good condition. If the container begins to leak, contents must be transferred to a new container or overpacked in a larger container.
- Compatible with the waste they hold.
- Handled in a manner to avoid leaks or spills.
- Marked with the words "Hazardous Waste" and the date accumulation of the waste began.

1.7.3. Assure that hazardous waste manifest record keeping and reporting requirements are in compliance (see Section "Related Documentation").

1.8. Facility/Vessel Personnel

1.8.1. Understand the non-hazardous waste accumulation and storage procedure to be implemented within his/her area of responsibility.

1.8.2. Ensure that wastes to be removed from a vessel or facility are appropriately containerized and labeled.

1.8.3. Ensure that wastes are placed in the appropriate accumulation area. Wastes shall not be left outside designated accumulation areas.

Definitions

- 1.1. Disposal - The discharge, deposit, injection, dumping, spilling, leaking, or placing of any waste into or on any land or water so that such waste or any constituent thereof may enter the environment or be emitted into the air or be discharged into any waters including groundwater.
- 1.2. Documentation - The paperwork, including but not limited to, manifests, bills of lading, waste profiles, land ban restriction declarations, dangerous cargo manifests associated with accumulation and storage, and transportation of waste hazardous materials. Documentation as defined for this procedure also includes, the marks, labels, and placards required by the Department of Transportation for the shipment of hazardous materials and defined in 49 CFR §172.
- 1.3. Hazardous Material - A substance or material, including a hazardous substance, hazardous waste, marine pollutant, or elevated temperature material (as defined by 49 CFR §172.101) which has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported. NOTE: Throughout this document the term "hazardous materials" will be used to include all regulated wastes, including hazardous wastes.
- 1.4. Hazardous Material Coordinator - A company representative appointed by the department or facility manager to be responsible for compliance with hazardous materials regulations and procedures. This individual shall provide a single point of contact for ESQA with respect to waste hazardous and non-hazardous materials management.
- 1.5. Hazardous Substance - Any substance as designated by 40 CFR §302.4. NOTE: Hazardous substances, which include hazardous wastes, are a subgroup of hazardous materials.
- 1.6. Hazardous Waste - A waste may be deemed to be a hazardous waste if: (1) it is, or contains a hazardous waste listed in 40 CFR §261 Subpart D, or (2) exhibits any of the following characteristics: i) flash point <140° F; ii) pH>12 or <2; iii) reacts violently with water; or iv) exhibits a toxic characteristic as noted in 40 CFR §261 Subpart C. NOTE: This term is frequently used incorrectly for any waste derived from hazardous materials. In this document the term will only be used in reference to wastes which have been determined to be hazardous by this definition.
- 1.7. Non-Hazardous Waste - A waste which is defined as solid wastes but does not meet the definition of hazardous under the Resource Conservation and Recovery Act (RCRA), and which is to be discarded. Examples of non-hazardous wastes include materials such as kitchen refuse (garbage), glass, paper, cardboard, wood, Styrofoam, and punctured empty aerosol cans.
- 1.8. Non-RCRA Hazardous Waste - A waste which is defined as a hazardous waste by state regulations, although not by federal definition (e.g. any soil containing more than 1,000 parts per million of lead is a California Hazardous Waste).
- 1.9. Resource Conservation and Recovery Act (RCRA) - The federal act which forms the basis for all federal and state hazardous waste regulations. State hazardous waste regulations may be more stringent than federal regulations (see non-RCRA hazardous waste definition).

- 1.10. Satellite Accumulation Area - An area at the point where the waste hazardous material was generated used to accumulate the waste. This area is distinct from a central storage area where waste hazardous materials are consolidated for off-site shipment. Interpretation of the definition of what constitutes a satellite area differs by state.
- 1.11. Waste - Any discarded material, which includes any material which is abandoned, recycled, or considered inherently waste like (e.g. scrap metal).

Related Documentation

- 1.1. Safety, Health, and Environmental Procedures Manual
- 1.2. Code of Federal Regulations
- 1.2.1. Title 40: Chapter I - Environmental Protection Agency
- Subchapter D - Water Programs, §100 to §149
 - Subchapter I - Solid Wastes, §260 to §399
 - Subchapter R - Toxic Substances Control Act, §700 - §789

PART F. HAZMAT CARGOES :

Purpose

- 1.1. To define procedures for the management of waste hazardous materials accepted for transport or shipment aboard owned or managed vessels.

Scope

- 1.1. This procedure is applicable to company vessels which transport hazardous waste or materials, except where such operations are required to comply with alternative equally stringent procedures.

Responsibility

- 1.1. Personnel involved in hazardous materials documentation, characterization, and transportation shall comply with procedure requirements to his/her level of authority and responsibility.

Procedure

- 1.1. Before accepting any hazardous cargoes on board, the vessel has to be equipped and certified for receiving such cargo. All deck officers are to have completed training and have valid Hazmat certification in accordance with 49 CFR § 172.704.
- 1.2. Before actually loading any Hazmat cargoes, proper notification and information about the Hazmat cargo intended to be loaded on board has to be given to the vessel.
- 1.2.1. This information should include:
- a basic description and technical name as described in 49CFR §§172.202 and 172.203(k) as applicable
 - amount of the hazardous cargo

- trailer/container number, or any other type of container used for transport
- Emergency Response telephone number in accordance with 49CFR §172.604

1.2.2. This basic information on the Hazmat cargo as described is to be handed over to the Chief Mate on board in advance of the loading, allowing for sufficient time to plan the stowage correctly with respect to safety zones, segregation, separation, and securing. Preparations for emergency's, crew safety meetings, and training, where applicable, are to be done in accordance with regulated safety standards.

- 1.3. This information, once verified by the Chief Mate, should be communicated to each watch officer responsible for cargo storage.
- 1.4. Hazmat cargo that has not been properly prestowed and documented as described above should be rejected for loading and not be allowed to enter the ship. The Master or senior officer on board is to be notified immediately. Should this cause any delays to operations, the Marine Manager is to be notified as well and a log book entry made detailing the circumstances.
- 1.5. The Chief Mate or the Officer in charge shall also check that the Hazmat container or trailer is properly placarded and marked and that no leaking or damage to the unit can be observed.
- 1.6. Before allowing any Hazmat unit to be loaded on board, the Chief Mate shall carefully plan the loading in accordance with the IMDG Code. Once properly stowed and secured the Chief Mate shall convene, as necessary, appropriate crew for instruction and preparedness in emergency procedures.
- 1.7. All relevant information and all the dangerous goods documents shall be stored in the Hazmat storage pocket located on or near the bridge and in the Hazmat binders.

HANDLING AND STOWAGE OF HAZMAT CARGO**The Handling and Stowage of Hazmat Cargo :**

Carefully plan all Hazmat cargo to be loaded and stowed on board in accordance with requirements given in the IMDG-Code, considering such aspects as separation, segregation, safety zones and general safety. A special safety meeting should be held on the particular hazards involved, depending on the commodity. Discussions should include, clean-up and handling procedures, safety hazards, health and emergency medical requirements after the cargo is loaded for the coming voyage.

Check and compare the Dangerous Cargo Manifest with the cargo being loaded in order to verify that all paperwork is accurate. Any discrepancy should be corrected, and the incident should be reported to the DPA for follow up corrective action with land operations in that port.

An annotated Cargo Plan, which indicates the location of each Hazmat unit, and a copy of the hazard information shall be posted in a conspicuous place in the accommodation area.

Empty containers, trailers, or other receptacles that previously contained Hazmat cargo and have not yet been cleaned or sanitized, shall be considered to contain the same Hazmat material they previously carried. Particular attention is to be paid to proper placarding of these types of loads.

When Class 1 (Explosives other than Class 1.4s) cargo is loaded or discharged, neither radio nor radar transmitters shall be used. Portable VHF or UHF radios may be used, but no closer than 2 meters from the Class 1 material. No bunkering is allowed during these operations, unless prior authorization has been issued in writing by the Port Authority. Class 1 cargo that appears to be affected by moisture shall be refused.

Materials, such as protective clothing, SCBA units, fire-fighting equipment and medical equipment are to be maintained in accordance with applicable references. Ensure, during monthly Safety Equipment Inspections there is sufficient supply on board. The Chemical Response Locker is to be inventoried and checked at least quarterly.

Maintain a heightened safety awareness and training for the duration of the voyage and have contingencies planned for each Hazmat unit, in the event of an accident with the hazardous material.

PART G. WASTE MANAGEMENT PROGRAM

PURPOSE

- 1.1** The purpose of this procedure is to ensure that wastes including trash, food waste garbage, oily waste, plastics or other refuse wastes generated aboard CLS vessels are handled in accordance with 33 CFR §151.57(c)(3).

SCOPE

- 2.1** This procedure is applicable to CLS vessels and shall be adhered to by vessel personnel.

RESPONSIBILITY

- 3.1** The vessel master shall ensure adherence to this procedure.

DEFINITIONS

- 4.1** For the purpose of this Procedure the following definitions apply:
 - 4.1.1** "**Trash**" means dry waste generated by ship's personnel and their activities aboard.
 - 4.1.2** "**Garbage**" means food associated material, food-waste associated material or trash that has come in contact with food or food waste generated in the galley and messrooms.
 - 4.1.3** "**Food Waste**" means unused food or organic material used in the preparation of food or the organic waste derived from the preparation and serving of food.
 - 4.1.4** "**Oily Waste**" means waste containing oil or contaminated with oil. This includes oily rags used in cleaning or wiping oil, oil soaked absorbent materials, used filters containing oil and clothing contaminated with oil.
 - 4.1.5** "**Waste Hazardous Materials**" is materials that are deemed to be wastes by vessel personnel and are a substance or material, including a hazardous substance, hazardous waste, marine pollutant, or elevated temperature material (as defined by 40 CFR § 172.101) which has been determined to pose an unacceptable risk to health, and property when transported.

GENERAL

- 5.1** Two types of ship-generated wastes require special handling, but are not specifically covered in the Coast Guard regulations. These are Garbage and Oily Wastes.
- 5.2** Garbage which is to be disposed of in the United States and originates on any ship which has been in the last two years engaged in foreign commerce outside of the United States; or which has transited the Panama Canal; or which is arriving from Hawaii or other U.S. Territories is regulated by the U.S. Department of Agriculture, Animal and Plant Health Inspection Service.

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5.3 Garbage that arrives in the State of California from any other state is regulated by the State of California Department of Food and Agriculture (USDA). Due to the broad base of the California regulations almost any Garbage disposed of in California will be designated as APHIS-regulated waste. Therefore, any Garbage that could be identified as APHIS-regulated garbage shall be treated as APHIS garbage, regardless of the origin of the stores on board the vessel. (See Section 6.7).

5.4 The disposal of ship-generated Oily Wastes are regulated more stringently than other ship-generated trash. These restrictions vary on a state-by-state basis, but are particularly stringent for Oily Wastes to be disposed of in California, where Oily Wastes are designated as a non-RCRA hazardous waste (see [ROV-09, PART E](#)).

PROCEDURE

6.1 Vessel personnel shall follow the Summary of Trash and Garbage Disposal Restrictions, for Disposal at Sea (see Table 1) which serves as a means to decipher the regulations for disposing trash and garbage at sea and the coding required for record keeping. (See [ROV-09, PART E](#).)

**Table 1 – Summary of Trash and Garbage Disposal Restriction
For Disposal at Sea**

Trash or Garbage Type	Code	Disposal Area
Plastics – includes synthetic ropes, plastic bags, wrappings, 6-pack holders, plastic containers, plastic packing material.	1	Disposal prohibited anywhere.
Floating dunnage, lining and packing material.	2	Disposal prohibited less than 25 miles from nearest land.
Paper, rags, glass, metal, bottles, crockery and similar trash.	4	Disposal prohibited less than 12 miles from nearest land.
Paper, rags, glass, metal, bottles, crockery and similar trash ground to less than 1 inch (25 mm).	5	Disposal prohibited less than 3 miles from nearest land.
Food waste not ground.	5	Disposal prohibited less than 12 miles from nearest land.
Food waste ground to less than 1 inch (25 mm).	5	Disposal prohibited less than 3 miles from nearest land.

6.1.1 When ship-generated waste is mixed with either Oily Wastes or Garbage, the mix of material shall be treated as if the entire mix is made up of the most stringently regulated waste.

6.2 Trash

6.2.1 Trash generated by crewmembers through the course of their daily activities aboard the ship shall be collected for disposal ashore at facilities which have the capability of receiving trash. This includes trash that is collected from crewmembers' living quarters, lounges, and work areas (such as the cargo control room or engine control room).

6.2.2 Because ships staying in port for extended periods cannot dispose of other trash and garbage into the marine environment, shoreside facilities shall be capable of receiving all ship-generated wastes while the ship is at that facility.

- 6.2.3** This trash may or may not contain plastics, but in order to avoid the possibility of trash containing plastics being inadvertently disposed of at sea this type of trash shall be collected and disposed at ashore.
- 6.2.4** Trash shall be collected and contained in the trash bags provided by the company.
- 6.2.5** These bags shall be tied shut with the tying device provided to prevent the contents from spilling out when the bags are transported from the ship for disposal ashore.
- 6.2.6** Plastic trash bags are also available but every effort shall be made to avoid using them.
- 6.2.7** Trash collected shall be compacted using the trash compactor in order to reduce the volume of the trash.
- 6.2.8** When the trash-compactor boxes are full they shall be removed from the compactor and sealed with the tape provided.
- 6.2.9** Full boxes shall be stowed in the trash compactor room until they can be deposited ashore to a proper shore reception facility.
- 6.2.10** Large trash items such as cardboard boxes, newspapers, scrap steel or other metals, glass or crockery, or other items in which plastic is not mixed or a part of may be disposed of at sea in accordance with the above listed restrictions. Every effort shall be made, however, to avoid littering the surface of the ocean with any ship-generated trash.
- 6.2.11** All trash generated in the galley shall be segregated from other trash. This trash may have small quantities of food waste in it, or it may have been in contact with food or food waste garbage. Therefore, it shall be handled according to APHIS regulations when it is disposed of ashore (See Section 6.5).
- 6.2.12** Non-APHIS regulated trash shall not be placed into APHIS bins ashore. APHIS bins are reserved for regulated galley trash.
- 6.3** Plastics
- 6.3.1** Disposal of plastics of any type from the ship into the marine environment is prohibited.
- 6.3.2** Plastics from ships shall be disposed of to shoreside facilities.
- 6.4** Food Waste
- 6.4.1** Food waste generated in the galley and messrooms shall be retained on board the ship for disposal at sea in accordance with the above listed restrictions.
- 6.4.2** For sanitary reasons food waste shall be disposed of daily, through the garbage disposal, when the ship is more than 3 miles from the nearest land.
- 6.4.3** When the ship is in port, food waste shall be held aboard in sealed containers until the ship returns to sea where the food waste shall be disposed of according to the restrictions listed above.

6.4.4 Food waste may be disposed of in port, however, if sufficient quantities of food waste garbage accumulate so as to create a sanitation hazard, while the ship is in port, then the food waste shall be compacted, packaged, and disposed of ashore in accordance with APHIS regulations.

6.4.5 While food waste is being held aboard for any period, care shall be taken to ensure that it is kept in properly-sealed containers which do not leak and which protect it from scavenging sea gulls or other birds or rodents.

6.5 Garbage

6.5.1 Garbage which is scheduled for disposal in the United States shall be handled in the manner described below.

6.5.1.1 Garbage shall be collected in the trash bags provided and compacted in the trash compactor for handling.

- The full compactor boxes shall be sealed with the tape provided.
- The box shall then be marked with the letters "APHIS" using a black marker pen to ensure that this trash is handled according to APHIS regulations.

6.5.1.2 When retained on board the boxes shall be kept in a covered, and closed container which is stowed inboard of the ship's rail.

6.5.1.3 Garbage can only be removed from the ship with the authorization and supervision of the USDA (or the Department of Food and Agriculture (DFA) in the State of California.)

6.5.1.4 The local USDA or California DFA officer shall be contacted to obtain authorization to remove regulated garbage from the ship.

6.5.1.5 When transported from the ship to shore it shall be ensured that garbage boxes are closed and not leaking.

6.5.1.6 Garbage shall be deposited ashore in an USDA approved storage bin or dumpster maintained by an establishment/facility which is in compliance with APHIS regulations.

- If this storage bin or dumpster is not directly supervised by USDA then it shall be kept closed and locked until it is supervised by USDA or by a facility in compliance with APHIS regulations.

6.5.1.7 Only garbage shall go into an APHIS bin.

6.5.1.8 APHIS-marked boxes shall only be placed inside a shoreside APHIS container. None may be placed on the ground.

6.5.1.9 Enough room shall be left in the container for the lid to close properly. If there is insufficient room in the APHIS container to place the boxes and still allow the container to close, excess boxes shall be returned to the vessel until another APHIS container is supplied.

6.6 Oily Wastes

- 6.6.1** Oily wastes are not to be discharged from the ship into the marine environment at any time or in any location.
- 6.6.2** These wastes are to be retained aboard the ship and tightly packed in steel drums with a sealed top until picked up by a waste hazardous materials disposal firm for transportation to an EPA-approved disposal site.
- 6.6.3** Trash or garbage shall not be put in the drums with the oily waste.
- 6.6.4** Arrangements for the off loading and proper disposal of oily wastes shall be made through the operations department in the office.
- 6.6.5** Two oily waste reduction programs shall be employed where the vessel's trade permits.
- 6.6.5.1** Oily Rags will be recycled where possible.
- Washable shop rags shall be used at every opportunity to clean up spills or wipe down equipment.
 - These rags shall be retained until provisions can be made for their cleaning and recycling. The only restriction for turning in rags soiled with oil is that they shall be free of standing liquid.
 - Rags retained aboard awaiting recycling shall be treated as oily waste while aboard and kept in tightly sealed drums.
 - A laundry service to clean and return oily shop rags.
- 6.6.5.2** Oil filters will be recycled where possible.
- Oil filters shall be drained as much as possible and stored in a separate 55-gallon Department of Transportation-approved barrel until arrangements can be made for their recycling.

6.7 Recordkeeping

- 6.7.1** Waste disposal both at sea and on shore shall be appropriately documented on the form "[Discharges of Refuse](#)" (CLS Form No.: [CC-655](#)) which is included as part of this procedure as Attachment 1.
- All waste discharges, whether to shoreside facilities or overboard at sea, shall be recorded in the section in the left column of the form labeled "For All Discharges".
 - The quantity of waste discharged shall be recorded in cubic meters (m³).
 - The waste discharged shall be assigned a type code according to the codes presented at the bottom of the form.
- 6.7.2** For disposal to shore the center portion of the form shall be completed.
- Multiple codes can be used for mixed wastes.
 - APHIS regulated waste shall be identified with Code 5.
- 6.7.3** For waste discharges at sea the right-hand portion of the form shall be completed.

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- One line shall be used for each code.
- The distance to shore shall be estimated and is entered in miles.

6.7.4 The master shall sign the form and certify its accuracy.

6.7.5 The form shall be retained aboard ship for two years.

RELATED DOCUMENTATION

7.1 Code of Federal Regulations Title 33, Chapter O, Part 151

APPENDIX D

**CLS TERMS AND CONDITIONS
FOR SHIPYARD PROCUREMENTS**

CROWLEY LINER SERVICES, INC.

TERMS AND CONDITIONS

The following documents are incorporated into the contract and follow this page:

- **Appendix 150-B: Commercial Procurement Clauses (SER)**
- **Appendix 150-D: CLS Required Insurance for Shipyards/Vessels**
- **Terms and Conditions Applicable Under this Contract**
- **Supplemental Terms and Conditions - Environmental Handling, Transportation, and Disposal of Hazardous and Regulated Materials**

APPENDIX 150-B
CROWLEY LINER SERVICES, INC. ("CLS")
COMMERCIAL PROCUREMENT CLAUSES

**GENERAL PROVISIONS APPLICABLE TO PRIME/SUBCONTRACTS FOR INSTALLATIONS
REPAIRS, ALTERATION, RENEWALS AND SERVICES TO MARAD VESSELS AND THEIR EQUIPMENTS**

SER 01 Contractor Status/Workmanship Except as otherwise provided in the specifications covering the work to be performed by the Contractor, the Contractor as an independent Contractor and not as an agent or employee of CLS shall furnish all labor, materials, supplies, equipment, facilities and services required to perform and fully complete, and shall perform and fully complete, all work covered by the specifications to meet the requirements of the American Bureau of Shipping, the United States Coast Guard, and all Governmental Agencies, or other regulatory agencies, having jurisdiction in the premises, and to the satisfaction of CLS or its accredited representative, in order that the vessel at the time of the completion of the work may have the highest classification and rating for a vessel of its type by the American Bureau of Shipping, insofar as the classification and rating of the vessel may be dependent upon the work called for in the Plans and Specifications and approved changes therein. All workmanship and /or material is to be of the best quality and in accordance with the best commercial marine practices.

SER 02 Contractor Removals If the removal or shifting of any parts of the vessel or her fittings, stores, etc., is required for the carrying out of the work covered by specifications, the same shall be done by the Contractor and all such removals shall be subsequently replaced and any damage or loss resulting therefrom shall be made good by the Contractor at his expense, subject to the limitations stated in Paragraph 8. and 10. hereof. Should any portion of the vessel's structure, housing, fixtures, or equipment require alteration in order to carry out the work covered by the specifications, the Contractor shall make such alteration together with necessary replacement without additional cost to CLS.

SER 03 Commercial Marine Practice The Contractor shall be responsible for and shall pay all expenses of shifting, drydocking, wharfage, towage, dockage, running lines, water testing and/ or refilling tanks and/or boilers, or disposal and removal of garbage and other such items to the extent the same are the Contractor's responsibility in accordance with normal commercial marine practice. Should the work covered by the specifications make it impracticable to use the ship's machinery and /or boiler plant for supplying steam and/or electric lighting, the Contractor shall supply such steam and/or electric lighting as may be necessary without extra charge. When the work covered by the specifications is performed at the vessel's loading and/or discharging berth, the Contractor is relieved from responsibility for and the expense of the aforementioned items to the extent the same are CLS's responsibility in accordance with normal commercial marine practice.

Shifting and Towing: Provide necessary tow preparation, towing gear, tugs, pilots, riding crew, and line handlers plus all required equipment and permits to pick up the vessel at its layberth and deliver to Contractor's facility as a Dead Ship. It shall be the Contractor's responsibility (No less than 48 hours prior to towing) to:

- 1.) Obtain USCG load-line exemption and "Permit to Proceed."
- 2.) Obtain standard towing liability insurance.
- 3.) Provide documents to the SM Port Engineer that verify that items (1) and (2) above have been completed.

For all tows to/from Contractor's repair facility, Contractor to provide an independent marine consultant recognized by Contractor's insurance carrier and comply with recommendations for suitability for a tow trip.

All vessel moves are for the Contractor's Account. All disconnections and reconnections of services to the vessel are for the Contractor's Account. Contractor is to install shaft and rudder locks prior to each tow. Any alterations to D/H System or weather closures required for tow to be restored to original configuration upon vessels return to layberth. The riding crew shall be equipped with three (3) portable radio transceivers of same frequency, one at the vessel's bow, one at the stern, and one with attendant alongside the Pilot on the bridge.

The Contractor is responsible for coordination with the Port Authorities and the cognizant authority at the layberth. Contractor shall provide tugs, pilots and line handlers for all arrivals, departures, and as required to shift the vessel for performance of work during the contract period, and shall provide labor to handle lines and gangway for all moves.

SER 04 Tank Cleaning All tanks under alteration and/or repair shall be cleaned and/or washed and/or steamed out by the contractor as may be necessary before any work is done thereto, and the oil or water tightness of the portion of the tanks affected by repairs shall be proven to the satisfaction of the American Bureau of Shipping and CLS, or its accredited representative.

SER 05 OSHA/EPA Regulations Applicable. The Contractor agrees to comply with all applicable safety, health and environmental regulations pertaining to for ship repair.

SER 06 Vessel Closures in Drydock While at drydock, the Contractor shall be responsible for the proper closing of all openings in the vessel's underwater body and the keeping of the crew adequately informed thereon, provided however, that that crew shall notify the Contractor prior to making any changes in openings, transfers of weights, or shifts of ballast.

SER 07 Contractor use of Ship's Facilities. In case any of the vessel's machinery, equipment or fittings, such as winches, pumps, rigging, pipe lines, etc., is used by the Contractor, he shall be held responsible for their reconditioning, if necessary, and shall make good any damage resulting from such use subject to the limitations stated in Paragraphs 8. and 10. hereof.

SER 08 Contractor Safety Responsibilities/Liabilities

a. The Contractor shall inspect all work areas and use its best efforts to prevent accidents, injury or damage to all employees, persons and properly in and about the work covered by the specifications and to the portion of the vessel upon which the work is done; and the Contractor further agrees that through its foremen, supervisors, or other responsible representatives it will notify CLS at once if any condition is or creates an unsafe, dangerous or improper place in which to work and the Contractor assumes the responsibility for seeing that such condition is corrected before proceeding with the work.

b. The Contractor assumes all the risks of and shall be responsible for any and all damage or injury (including death) to persons or property caused by the negligence of the Contractor, its subcontracts, their agents and/or employees, in performing any of the Contractor's obligations set forth in the specifications and/or these general provisions. The Contractor shall indemnify and hold harmless CLS and the vessel against all liability, suits, actions, claims, costs or demands of any nature and description to which CLS or the vessel may be subject or put by reason of damage or injury (including death) to any person or property not covered by the Longshoremen's and Harbor Workers' Compensation Act as amended (33 U.S.C. & 901, et seq.) caused by the negligence of the Contractor, its subcontractors, their agents and/or employees in performing any of the Contractor's obligations set forth in the specifications and/or these general provisions. Contractor shall maintain Workman's Compensation and Employer's Liability Insurance and Longshoremen's and Harbor Workers' Compensation Insurance for full protection of Contractor's employees in accordance with applicable state and federal requirements.

c. The Contractor shall be responsible for and make good as its own cost and expense any and all loss or damage of whatsoever nature to the vessel (or part thereof), its equipment, movable stores and cargo, and CLS's materials and equipment, and resulting from the Contractor's negligence.

d. CERTIFICATE OF INSURANCE MINIMUM INSURANCE COVERAGE:

[SEE TERMS AND CONDITIONS Appendix 150-D: CLS REQUIRED INSURANCE FOR SHIPYARDS /VESSELS](#)

SER 09 Owner's Salvage/Scrap Rights. All salvage, scrap and other material removed from the vessel is to be and/or become the property of CLS unless otherwise specified.

SER 10 Contractor's Warrantee In case any work done or material furnished shall, within six (6) months from the date of the acceptance of the work or materials by CLS, prove defective or deficient, and be so reported to the Contractor within that time, such defects or deficiencies shall, at the Contractor's expense, be made good to the satisfaction of CLS. The liability of the Contractor to CLS hereunder on account of such omissions, defects or deficiencies shall not exceed beyond the actual repair or replacement thereof, CLS will, if and when practicable, afford the Contractor an opportunity to correct such defects or deficiencies; but, when, because of the condition or location of the vessel or for any other reason, it is impracticable or undesirable to return the vessel to the Contractor, such correction shall be effected at the Contractor's expense at such other location or locations and by such other contractor or contractors as CLS may determine.

SER 11 Changes, Prior Authorization Required No additional or extra work shall be performed nor shall any change be made in the work covered by the specifications unless authorized by CLS prior to the performance of such additional, extra or changed work.

SER 12 Free of All Claims, Liens or Fines Upon completion of the work covered by the specifications, the vessel shall be free and clear of all fines, claims and liens in favor of unpaid workmen, subcontractors or materialmen of any nature resulting from or in any way related to the performance of such work.

SER 13 Financial Capability Requirement The Contractor shall supply upon request of CLS evidence satisfactory to CLS, that the Contractor is financially able to satisfy all of its obligations relative to the work covered by the specifications.

SER 14 Intellectual Properties The Contractor shall pay for and protect the vessel and CLS against any claim for royalties, patent rights, and patent liability arising as a result of the performance of the work covered by the specifications, except in respect of claims relating to components or processes required thereby to be installed or used.

SER 15 Federal, State and Local Taxes The Contractor shall pay all United States, County, City or other taxes, assessments or duties assessed, made or levied against the material to be used in the performance of the work covered by the specifications, or imposed in consequence of its sale to the Contractor.

SER 16 Notice to Proceed/Performance Period The Contractor's liability with respect to time is to commence at the time set forth when the contract is awarded and to cease only when all work specified herein has been completed to the satisfaction of CLS, or its accredited representative and when all Contractor's equipment, tools, etc., and all rubbish have been removed from the vessel. The Contractor's time is subject to extension in case of strike, or labor difficulties, or fire, or explosion or causes beyond the Contractor's control.

SER 17 Time Extensions/Performance Period It is mutually agreed that the waiving of, or the granting extension of time on one or more items of the work covered by the specifications shall not abrogate the contract as a whole, nor shall it relieve the Contractor from the obligation of complying with all the other terms and conditions of the contract in the time and manner specified. The issuance of requisitions for additional work shall in no way relieve the Contractor from complying with the terms of the contract unless specifically agreed in writing.

SER 18 Federal Contractual Requirements

1. Subcontracts for commercial items and commercial components (Oct 1995)

(a.) Definitions

“Commercial item” as used in this clause, has the following meaning:

- (1) Any item, other than real property, that is of a type customarily used for nongovernmental purposes and that--
 - (i) Has been sold, leased, or licensed to the general public; or
 - (ii) Has been offered for sale, lease, or license to the general public;
- (2) Any item that evolved from an item described in paragraph (1) of this clause through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation;
- (3) Any item that would satisfy a criterion expressed in paragraphs (1) or (2) of this clause, but for--
 - (i) Modifications of a type customarily available in the commercial marketplace; or
 - (ii) Minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. "Minor" modifications means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor.
- (4) Any combination of items meeting the requirements of paragraphs (1), (2), (3), or (5) of this clause that are of a type customarily combined and sold in combination to the general public;
- (5) Installation services, maintenance services, repair services, training services, and other services if such services are procured for support of an item referred to in paragraphs (1), (2), (3), or (4) of this clause, and if the source of such services--
 - (i) Offers such services to the general public and the Federal Government contemporaneously and under similar terms and conditions; and
 - (ii) Offers to use the same work force for providing the Federal Government with such services as the source uses for providing such services to the general public;
- (6) Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions. This does not include services that are sold based on hourly rates without an established catalog or market price for a specific service performed;

(7) Any item, combination of items, or service referred to in subparagraphs (1) through (6), notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a Contractor; or

(8) A nondevelopmental item, if the procuring agency determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local Governments.

“Subcontract”, as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b.) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or non-developmental items as components of items to be supplied under this contract.

(c.) Notwithstanding any other clause of this contract, the contractor is not required to include any FAR provision or clause, other than those listed below to the extent they are applicable and as may be required to establish the reasonableness of prices under Part 15, in a subcontract at any tier for commercial items or commercial components:

(1) 52.22-26, Equal Opportunity (Feb 1999);

(2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (April 1998);

52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998)

(d.) The contractor shall include the terms of these clauses, including this paragraph, in subcontracts awarded under this contract.

2. CLS and the Contractor each hereby certifies to the other that it does not and shall not maintain any facilities provided for employees which are unlawfully segregated, or permit employees to perform services at any location under its control or that of its subcontractors where unlawfully segregated facilities are maintained, and that it will require its nonexempt subcontractors to furnish a similar certification prior to the award of any nonexempt subcontract.

3. CLS and the Contractor each hereby certifies to the other that each will make a good faith effort to maintain a DRUG FREE WORKPLACE. Controlled Substances are defined in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812, and as further defined in regulation at 21 CFR 1308.11 to 1308.15. Federal, State, and local laws and regulations are to be fully complied with while engaged in this contract.

SER 19 Master Agreement Cancellations Save for the warranties and representations contained therein, this Agreement cancels and supersedes all other Master Agreements of a like nature between the parties. This Agreement shall be effective immediately upon execution and govern all work performed by Contractor for CLS from and after the date of execution; provided, however, that this Agreement may be terminated by either party by delivery of written notice of termination to the other party, termination to be effective as of the date specified in the notice (not to be earlier than 30 day after delivery).

SER 20 Conflict of Contract Terms. The provisions set forth herein shall, unless specifically stated in writing to the contrary, apply to all work performed on behalf of CLS by Contractor, its employees, agents or representatives. In the event that the United States of America is a party to a contract involving CLS and Contractor, the terms and conditions in such a contract shall prevail over inconsistent terms and conditions that are contained herein. WHEREFORE, IN CONSIDERATION OF the mutual covenants contained herein, the parties intending to be legally bound have executed this agreement as of the date of the applicable order.

(a) This Contract shall be governed by and construed in accordance with the Laws of the State of Florida without regard to conflict of laws.

(b) Any and all claims, controversies and Disputes of whatsoever nature arising out of this Contract shall be decided by arbitration in the City of Jacksonville, State of Florida, pursuant to the Rules of the Society of Maritime Arbitrators, Inc. before a Board of three persons, consisting of one arbitrator to be appointed by the Owner, one by the Contractor and one by the two so chosen. The decision of any of the three on any point or points shall be final. Either party hereto may call for such arbitration by service upon the other, within one hundred twenty (120) days after the claim, dispute or controversy has arisen, of a written notice specifying the name and address of the arbitrator chosen by the first moving party and a brief description of the disputes or differences, which such party desires to put to arbitration. If the other party shall not, by notice served upon the first moving party within twenty days of the service of the first notice, appoint its arbitrator to arbitrate the disputes or differences specified then the first moving party shall have the right without further notice to appoint a second arbitrator, who shall be a disinterested person, with precisely the same force and effect as if said second arbitrator had been appointed by the other party. In the event that the two arbitrators fail to appoint a third arbitrator within twenty days of the appointment of the second arbitrator, either arbitrator may apply to the Society of Maritime Arbitrators, Inc. above mentioned for an appointment of a third arbitrator and the appointment of such arbitrator on such application shall have precisely the same force and effect as if such arbitrator had been appointed by the two arbitrators. Until such time as the arbitrators finally close the hearings either party shall have the right by written notice served on the arbitrators and on the other party to specify further disputes or differences under this Contract for hearing and determination. Awards made in pursuance to this article may include costs, including a reasonable allowance for attorneys' fees, and judgment may be entered upon any award made hereunder in any court having jurisdiction in the premises. The arbitrators shall be commercial persons experienced in the maritime industry.

APPENDIX 150-D
CLS REQUIRED INSURANCE FOR SHIPYARDS / VESSELS

Contractor, at its sole cost and expense (including the cost of all deductibles), shall procure and maintain in force during the term of this Agreement the following insurance coverages for Services and/or Goods supplied under this Agreement:

1. Workers' Compensation insurance, covering applicable statutory benefits in the State where work is being performed; Employer's Liability insurance in an amount of at least \$5,000,000 and the policy will be endorsed to cover benefits under the U.S. Longshoremen's and Harbor Workers' Compensation Act, and Maritime Employers Liability (Jones Act). This policy shall cover 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.
2. Commercial General Liability insurance, on a per occurrence basis, endorsed to cover premises operations, products/completed operations, personal injury and broad form contractual liability, broad form property damage and liability for independent contractors; with no watercraft exclusion, with limits of at least \$5,000,000 any one occurrence and \$5,000,000 in the aggregate.
3. Automobile Liability insurance, including liability insurance coverage on vehicles which may be used by Contractor in connection with this Agreement with limits of liability not less than \$1,000,000 any one occurrence.
4. Shiprepairers Legal Liability insurance with limits of liability not less than \$5,000,000 any one vessel and/or occurrence, including coverage as per standard American or London Institute clauses.
5. Should this Agreement require consulting services, Professional Liability insurance, with limits of liability not less than \$1,000,000 any one occurrence, covering Services to be performed by Contractor under this Agreement.
6. Sudden and Accidental Pollution insurance or Environmental Impairment insurance, with limits of liability not less than \$5,000,000 per occurrence, and any other public liability or other environmental impairment coverage required by Federal, State or local regulatory authorities.
7. Should the Services supplied under this Agreement include use of Contractor's vessels, Protection and Indemnity or other Marine Liability insurance, with limits of liability not less than \$1,000,000 per occurrence.
8. Should the Services supplied under this Agreement include use of Contractor's aircraft, Aircraft Liability insurance, with limits of liability not less than \$5,000,000 per occurrence.

The Workers' Compensation / Employers Liability insurance Policy shall be endorsed to waive all rights of subrogation against Crowley and the United States of America.

All other policies shall be endorsed to name Contractor, the United States of America, Crowley, including any company or entity, parent of, subsidiary to or affiliate with Crowley, as additional insureds and shall be endorsed to waive all rights of subrogation against Crowley and the Property.

APPENDIX 150-D
CLS REQUIRED INSURANCE FOR SHIPYARDS / VESSELS(con't)

If Contractor maintains insurance limits higher than the limits listed above then Crowley shall benefit from those higher limits on the same terms and conditions as provided by this Agreement.

Contractor shall require all subcontractors performing services under this Agreement to maintain in force insurance of the types and amounts specified in this Agreement.

All insurance policies maintained by the Contractor shall contain a cross liability provision which provides that, in the event of one of the insureds incurring liability to any other of the insureds, the policy shall cover the insured against whom claim is made or may be made in the same manner as if separate policies has been issued to each insured. All policies of Contractor shall be primary insurance as to any insurance provided or carried by Crowley, and shall not contain any "benefit of insurance", "other insurance" clauses or other contractual provisions which in any way lessen or diminish the full amount of insurance provided to Crowley by the Contractor. The coverages afforded to Crowley as an additional insured shall at least be equal to the coverages afforded the Contractor under such policies and shall in all respects include coverages for the obligations of Contractor under this Agreement.

All insurance policies shall contain a clause stating that there is no recourse against the United States of America for payment of premium.

The aforesaid policies will be endorsed to provide Crowley and the United States of America with thirty (30) days' written notice prior to cancellation or reduction in coverage required by this Agreement. The insurance policies shall be issued by insurance companies with a Best's rating of at least "B" or equivalent, and shall be subject to Crowley's approval, which shall not be unreasonably withheld. Contractor shall provide Crowley with certificates of insurance prior to the supply of Services and/or Goods under this Agreement. Commencement of this Agreement without receipt of the aforesaid certificates shall not constitute a waiver of the obligation of the Contractor to maintain the required insurance coverages and to provide Crowley with the aforesaid certificates.

Should Contractor fail to procure or maintain any of the aforesaid insurance coverages, or by any act or omission, vitiate or invalidate any of the aforesaid insurance coverages, Contractor shall indemnify Crowley and the other beneficiaries of said insurance to the extent they or any of them suffers or incurs loss, damage, liability or expense in consequence of such failure, act or omission.

It is expressly understood that the Contractor shall notify Crowley Risk Management Department of any accident involving the Property, advising names of parties involved, location of accident, witnesses, and confirmation of prompt reporting to the responsible insurance agent of the Contractor, as identified on the Contractor's certificate of insurance.

Certificates of Insurance should be sent to:

Crowley Maritime Corporation
Risk Management Department
155 Grand Avenue, # 700
Oakland CA 94612

fax: (510) 251-7625
email: kimberly.stotler@crowley.com

CROWLEY LINER SERVICES, INC.
TERMS AND CONDITIONS APPLICABLE UNDER THIS CONTRACT

1. Any proposal submitted which includes modifying, restricting, or changing the CLS Services Clauses Terms and Conditions, herein, will be subject to review and potential disqualification.
2. Purchases made by the Contractor under this contract are NOT EXEMPT from state and local taxes because such tax imposition may fall directly on the U.S. Government. A Certificate of Exemption WILL NOT be provided.
3. CLS reserves the right to reject all proposals and/or make the award to the contractor who, in the opinion of CLS, is the most desirable for Owner's purposes. CLS intends to award this contract on the basis of best value analysis. CLS will consider the costs of transit of the vessel to and from the shipyard in the overall evaluation
4. Contractor's liability shall commence immediately upon receiving "Notice to Proceed". The Contractor's liability shall cease when all repairs, renewals and replacements are complete, when all equipment, tools, appliances and debris have been removed and vessel is tendered back to CLS.
5. Where a recommended contractor or material item appears within a specification item, the specific recommended subcontractor or supplier is NOT to be considered as a sole source.
6. While the specifications are as complete as possible, additional work may be generated during the course of the contract period. Any additional repairs are to be brought to the attention of the Port Engineer immediately. Additional work, which results in added costs, may be carried out ONLY WHEN AUTHORIZED IN WRITING.
7. It is understood all work will be performed in accordance with CLS Terms and Conditions-Environmental Handling, Transportation and Disposal of Hazardous and Regulated Materials. Contractor agrees to carry out all work required under this contract in such a manner as to be in compliance with all applicable Federal, State, and local health and safety regulations. The Contractor further agrees to take all necessary precautions to prevent pollution and to dispose of all solid and liquid wastes, which may include noxious liquid slop, in conformity with all Federal, State and Local waste, disposal regulations.
8. The successful awarded Contractor may not be listed as Debarred, Suspended or proposed for Debarment.
9. This contract proposal is for a public vessel. Therefore, a USCG Certificate of Financial Responsibility(Water Pollution) is not required, and Maritime Lines are not permitted. (Note: Non-requirement of the Contractor to obtain a Certificate of Financial Responsibility(Water Pollution) does not relieve the Contractor of any responsibilities of liabilities as may otherwise be set forth in this contract in regards to water pollution or any related environmental damage or hazard.)
10. Contractor will comply with MARAD Policy and Procedure for handling hazardous material, solvents, chemicals and waste products.
11. The Contractor will perform the work as an independent contractor and not as an employee or agent of CLS or MARAD.
12. There will be no direct communications between Contractor and MARAD relating to this contract which could result in a contract change (constructive or actual) unless specifically authorized by CLS in advance in writing. This does not limit any statutory or regulatory provision

CROWLEY LINER SERVICES, INC.
TERMS AND CONDITIONS APPLICABLE UNDER THIS CONTRACT

13. The Contractor specifically agrees to indemnify and hold harmless the Vessel, DOT/MARAD, and Crowley Liner Services, Inc. from and against all liens or other claims of what ever nature by the Contractor or any of its subcontractors. Should any such lien attach to the Vessel, the contractor agrees to immediately ensure the release of such lien. The Contractor will indemnify and hold harmless the Owner, CLS, and the Vessel from and against any and all loss or damage to property whether the Owner, or CLS, its representatives of either, including without limitation any damage sustained by the Vessel, its machinery or fittings, and any and all claims, liabilities, actions and causes of actions which may at any time be asserted against Owner, CLS or the Vessel, their representatives or employees, on account of injury to or death of persons including without limitation the employees of the Contractor, Owner, or CLS, while the Vessel is in the custody of the Contractor, at the Contractor's yard or undergoing repairs, except and to the extent attributable to the negligence of Owner, CLS or the representatives or employees of either.
14. A "Ship Delivery/Redelivery Certificate" shall be executed between CLS and Contractor when custody of the vessel is transferred from CLS to Contractor for contract performance, either prior to towing, or upon arrival of vessel in Contractor's facility if vessel arrives under its own power. The "Ship Delivery/Redelivery Certificate" shall *remain* in effect until a *superseding* "Ship Delivery/Redelivery Certificate" is executed upon redelivery of the vessel from Contractor to CLS. If vessel returns to Contractor's facility after a sea trial, a "Ship Delivery/Redelivery Certificate" will again be executed. As noted on the "Ship Delivery/Redelivery Certificate", Contractor accepts vessel with all fixtures, stores and appurtenances, including liquids and slops.
15. CLS may terminate all or any portion of this contract at any time irrespective of whether or not a default has occurred. It shall be considered an event of default if: (a) Contractor fails to deliver the goods or services or at the time specified in this contract; (b) any or all of the goods or services fail to comply fully with the requirements of this contract; (c) Contractor fails to comply with any provision of this contract; (d) CLS determines that Contractor's performance pursuant to this contract is in doubt and Contractor fails to provide CLS adequate assurance of performance within ten (10) days after CLS's written notice thereof; (e) Contractor makes any statement or performs any act which CLS reasonably believes to be a repudiation of this contract in whole or in part, or, (f) a petition is filed by or against Contractor under the bankruptcy laws of the United States or foreign laws of a similar nature or Contractor makes a general assignment for the benefit of its creditors or a receiver is appointed for any of Contractor's assets. Contractor shall continue performance to the extent the contract is not terminated. Upon termination hereunder, CLS may procure goods or services from another source upon such terms as CLS deems appropriate and, if such termination was pursuant to any default, Contractor shall be liable to CLS for any costs or expenses incurred by CLS in excess of the contract price or the portion of the contract price applicable to any portion of the supplies subject to a partial termination. If such termination was not pursuant to a default, an equitable adjustment will be agreed upon to compensate Contractor for work performed, provided, however, that the total of all payments due under this contract shall in no event exceed the contract price and Contractor shall not be entitled to anticipatory profits. If CLS terminates this contract for a default, liquidated damage provisions are applicable to Contractor even in the event of a reprocurement. Pending defaults based on delays which Contractor believes were on account of "force majeure" will be reconsidered by CLS under subparagraph (d) above provided an appropriate claim with substantiating evidence is presented by the Contractor within the ten (10) day response period. Labor shortages and inclement weather will not be considered as "force majeure" unless the Contractor can demonstrate it to be an extraordinary circumstance.
16. Failure to delete any lien provisions from any standard Red Letter Clauses shall be considered non-responsive to this proposal
17. The officers and crew of CLS will have free access to and from the vessel through the Contractor's facility. The officers and crew will be permitted to engage I normal maintenance activities provided such activities do not interfere with the performance of the contract. Such officers and crew shall be bound by the work practices and procedures of the Contractor with respect to safety when shoreside within the Contractor's facility.

CROWLEY LINER SERVICES, INC.
TERMS AND CONDITIONS APPLICABLE UNDER THIS CONTRACT

18. It is understood that the successful contractor will comply with Contractor's responsibilities (a) under Executive Order 11246, as amended, relating to Equal Employment Opportunity, non-segregated facilities and Affirmative Action Program and, with respect to requiring Subcontractor and Suppliers to comply therewith; (b) under Executive Order 11701 which provides for the listing of job vacancies by Federal Contractors and Subcontractors; (c) under Executive Order 11458 related to utilization of Minority Business Enterprises and, for Contracts of \$500,000 or more, the Minority Business Subcontractors Program; and (d) under regulations issued pursuant to such order as applicable.
19. FINANCING/PAYMENT TERMS: Progress payments will be negotiated as to stages of completion. There will be a 10% retainage until final payment. Standard payment terms are NET 30 days calculated from the day after the CLS Jacksonville office is in receipt of a valid invoice for goods and/or services. Discount terms may be proposed for quicker payment. At the close of the contract, to submit a "valid" invoice for 100 percent completion Contractor must deliver a signed Contractor's Release and Certification of Completion. Proposals for other financing/payment terms may be offered by the Contractor. CLS reserves the right to select the financing/payment schedule that is most advantageous to CLS.
20. Payment will be made upon receipt of a valid invoice in such form as CLS may reasonably request supported by appropriate documentation as CLS may specify. Such invoice shall bear such certifications as CLS may specify and as may be required by law. CLS may apply or set off against any amount due Contractor the amount, estimated in good faith by CLS if not liquidated, of any indebtedness or claim of any kind of Contractor to CLS, whether or not arising under this contract.

Crowley Liner Services, Inc.
Supplemental Terms and Conditions
Environmental Handling, Transportation, and Disposal of Hazardous and Regulated Materials

The Contractor shall pursue work without detriment to the environment and perform all work consistent with industry wide standards and laws and regulations governing the control of pollution of the environment without additional cost to CLS. Additionally:

- (a) Contractor agrees to indemnify, defend and save CLS harmless from and assumes any liability, payment, expense (including reasonable attorney's fees) or loss resulting from the failure by the Contractor for any reason to comply fully with every federal, state or local law, statute, regulation, rule, ordinance, treaty or government directive which directly or indirectly regulates or affects the collection, handling, storage, transportation or disposal of any hazardous material, hazardous waste or other regulated material encountered by the Contractor hereunder, and from and against any and all claims, suits, liabilities, directly or indirectly, based on damage to, or destruction of, any property (including the property of Contractor), or injury (including death) to any person or property arising out of or attributable to any negligent or willful act or omission to act, of or by Contractor, its agents or subcontractors in performing the contract hereunder. Such indemnification liability shall be binding upon successors in interest of the Contractor, and shall survive Contract final payment.
- (b) Contractor agrees that in Contract performance hereunder, Contractor shall comply with all applicable federal, state and local laws, rules and regulations regarding any hazardous material, hazardous waste or other regulated material. It is understood and agreed that all performance under this Contract is subject to all applicable waste regulations of the Environmental Protection Agency, Department of Transportation, the applicable state Department of Water Resources, OSHA, US Coast Guard, and/or other government agencies having jurisdiction over the operations of the CLS and Contractor with respect to the goods and services specified herein.
- (c) CLS shall have the right to inspect and obtain copies of all written licenses, permits or approvals, issued by any governmental entity or agency to Contractor which are applicable to this Contract; to inspect and test, at its own expense, the handling, loading, transportation, storage, treatment or disposal operations conducted by Contractor in the performance of this Contract regarding any hazardous material, hazardous waste or other regulated material.
- (d) Contractor shall be liable for the maintenance and production of records regarding the goods and services performed under this Contract relating to hazardous material, hazardous waste or other regulated material for a period of ten years from the effective date of the Contract. Sixty (60) days prior to the expiration of this period, Contractor shall notify CLS in writing of the expiration period coming due and provide CLS with the option of obtaining the records from the Contractor. If CLS elects to obtain the records, Contractor shall facilitate the transfer of them in accordance with CLS's direction (40 CFR Part 264).
- (e) If any hazardous material, hazardous waste or other regulated material is transported and/or disposed of by or for Contractor hereunder, Contractor shall comply or ensure subcontractor compliance with all manifest system and record keeping requirements set out in federal environmental regulation 40 CFR Part 263. Contractor shall ensure a tracking methodology for the purpose of maintaining absolute control and accountability from initial collection to final disposition of any and all hazardous material, hazardous waste or other regulated material hereunder. Contractor shall provide CLS copies of manifests within 30 days after signature on the manifest.
- (f) Contractor by its offer and acceptance of this Contract acknowledges that it or subcontractor are qualified and certified in compliance with all applicable laws for the provision of goods or services under this contract which in any way related to hazardous material, hazardous waste or other regulated material. Contractor shall provide CLS with its or its subcontractor's EPA number when hazardous waste or material is handled, transported and/or disposed of.

APPENDIX E

PRICING SHEET

<u>BID PRICING SHEET</u>		
GENERAL REQUIREMENTS		
A.	STANDARDS AND EXHIBITS:	
B.	GENERAL:	
C.	HAZARDOUS WASTE:	
D.	MATERIAL/ WORKMANSHIP:	
E.	PIPING:	
F.	INSULATION:	
G.	ELECTRICAL:	
H.	COATINGS AND FINISHES:	
I.	INSPECTIONS:	
	SUBTOTAL GENERAL REQUIREMENTS	
001	TOWING (ABS/USCG)	
A	INSPECTION FOR TRIP IN TOW (ABS/USCG)	
B.	TOWING	
002	PRODUCTION, PLANNING AND SCHEDULING	
	SUBTOTAL TOWING AND PRODUCTION CONTROL	
003	GENERAL SERVICES	
300(A)	BERTHING AND WHARFAGE	
003(B)	FIRE PROTECTION	
003(C)	GANGWAY	
003(D)	GAS FREE CERTIFICATES (ABS/USCG)	
003(E)	DECK COVERING PROTECTION	
003(F)	TEMPORARY LIGHTING	
003(G)	SHORE POWER	
003(H)	COMPRESSED AIR	
003(I)	CLEAN BALLAST WATER	
003(J)	PUMPS	
003(K)	PORTABLE TOILETS	
003(L)	DEBRIS COLLECTION	
003(M)	WATCHMAN	
003(N)	OFFICE FACILITIES AND ADMINISTRATIVE SERVICES	
003(O)	TELEPHONE SERVICES	
003(P)	VENTILATION	
003(Q)	ELECTRICAL	
003(R)	ELECTRICAL SERVICE	
003(S)	CRANE SERVICE	
003(T)	COMMUNICATIONS (YARD)	
003(U)	PROVIDE TECHNICAL DOCUMENTATION	
	SUBTOTAL GENERAL SERVICES	
	ACTIVATION SPECIFICATION	

200	INSPECTION FOR CERTIFICATION (COI) (USCG)	
201	KEYS AND LOCKS AND SECURITY DEVICES	
202	UNDERWATER HULL BLANKS (ABS/USCG)	
203	STACK COVER REMOVALS (ABS/USCG)	
204	REMOVAL OF DEHUMIDIFICATION SEALING (ABS/USCG)	
205	SECUREMENT OF D/H SYSTEMS (ABS/USCG)	
206	FIRE PUMPS (3) (ABS/USCG)	
207	FIRE HOSE CONNECTIONS AND FIRE HOSES (ABS/USCG)	
208	EMERGENCY EQUIPMENT (ABS/USCG)	
209	OIL WATER SEPARATOR	
210	POTABLE WATER STERILIZER (ABS/USCG)	
211	POTABLE WATER TANKS (QTY 2) (ABS/USCG)	
212	DISTILLERS (2) (ABS/USCG)	
212(A)	NIREX	
212(B)	MECO	
213	MAIN PROPULSION PLANT (ABS/USCG)	
214	SHIP'S SERVICE DIESEL GENERATORS (QTY 3 AT 845 kW) (ABS/USCG)	
215	EMERGENCY STEERING DIESEL ENGINE (ABS/USCG)	
216	MACHINERY AND PIPING SYSTEMS (VARIOUS) (ABS/USCG)	
217	GAUGE CALIBRATION (VARIOUS) (ABS/USCG)	
218	PRESSURE VESSELS (ABS/USCG)	
219	BILGE WELL TESTING, CARGO HOLDS (ABS/USCG)	
220	PURIFIERS (QTY 5) (ABS/USCG)	
221	AIR COMPRESSORS (ABS/USCG)	
222	DOMESTIC REFRIGERATION AND A/C SYSTEM (ABS/USCG)	
223	HVAC SYSTEMS (ABS/USCG)	
223(A)	STATEROOM AND OTHER ACCOMODATION SPACE REPAIRS	
224	SWITCHBOARDS, MAIN AND EMERGENCY (ABS/USCG)	
225	ELECTRICAL INSULATION RESISTANCE READINGS (ABS/USCG)	
226	ELECTRICAL CIRCUITS AND LIGHTING CIRCUITS (ABS/USCG)	
227	SAFETY SHUTDOWNS (ABS/USCG)	
228	CATHODIC PROTECTION SYSTEM (ABS/USCG)	
229	BATTERIES AND CHARGERS (ABS/USCG)	
230	GYRO COMPASS AND REPEATERS (QTY 3) (ABS/USCG)	
231	COMPASS ADJUSTMENT (ABS/USCG)	
232	ALARMS (ABS/USCG)	
233	NAVIGATION LIGHTS (ABS/USCG)	
234	NAME BOARDS (QTY 2) (ABS/USCG)	
235	RPM AND RUDDER ANGLE INDICATORS (REPEATERS) (ABS/USCG)	
236	CARGO HATCH COVER (ABS/USCG)	
237	SMOKE/FIRE DETECTING SYSTEM (ABS/USCG)	
238	FIXED CO2 AND PORTABLE FIRE EXTINGUISHING (ABS/USCG)	
238(A)	FIXED CO2 SYSTEMS	
238 (B)	PORTABLE FIRE EXTINGUISHERS	
239	LIFEBOATS - EQUIPMENT AND STORES (QTY 2) (ABS/USCG)	
240	INFLATABLE LIFE RAFTS (QTY 3) (ABS/USCG)	
241	MEDICAL SUPPLIES - HOSPITAL SPACE (ABS/USCG)	
242	FLAGS AND SIGNAL DEVICES (ABS/USCG)	
243	LIFEBOAT AND LIFE RAFT RADIOS (ABS/USCG)	
244	EMERGENCY DIESEL GENERATOR (ABS/USCG)	
245	GALLEY AND PANTRIES (ABS/USCG)	
246	ACCOMMODATION LADDERS (QTY 2) (ABS/USCG)	

247	PILOT LADDERS (QTY 2) (ABS/USCG)	
248	DECK DRAINS (ABS/USCG)	
249	VESSEL PYROTECHNICS (ABS/USCG)	
250	COMMUNICATIONS - VESSEL (ABS/USCG) (for information only)	
251	ACTIVATION OF ELECTRONIC SUITE SYSTEMS (ABS/USCG)	
252	CARGO ELEVATORS, SHELL & CARGO DOORS & RAMPS (ABS/USCG)	
	SUBTOTAL ACTIVATION ITEMS	
	DOCK TRIAL SPECIFICATION	
300	DOCK TRIAL (ABS/USCG)	
301	DOCK TRIAL SUPPORT PERSONNEL	
302	SUBMIT REPORT OF DOCK TRIALS	
	SUBTOTAL DOCK TRIAL	
	SEA TRIAL SPECIFICATIONS	
400	FUEL OIL BUNKERS (DFM) (ABS/USCG)	
401	SEA TRIAL	
402	BOW THRUSTER SURVEY (ABS/USCG)	
403	MACHINERY VIBRATION ANALYSIS SURVEY (ABS/USCG)	
404	THERMOGRAPHIC SURVEY (ABS/USCG)	
405	LUBE OIL SAMPLES	
	SUBTOTAL SEA TRIALS	
	<u>GRAND TOTALS</u>	

APPENDIX F

FIRE, FLOOD AND INTRUSION ALARMS

(NOT ATTACHED)

SCHEMATIC IS AVAILABLE ONBOARD

APPENDIX G

DEAD SHIP TOW

NOTIFICATION PROCEDURES



Commanding Officer
U. S. Coast Guard
Marine Safety Office Hampton Roads

200 Granby St
Norfolk, Va. 23510
Staff Symbol: WWM
Phone: (757) 441-3453
FAX: (757) 441-3262
www.uscg.mil/d5/mso/hamptonroads

Captain of the Port Policy

DEAD-SHIP TOWS & TUG ESCORTS

Effective May 21, 2001, all persons involved in dead-ship tows or tug escorts (required for vessels with partial power or steering malfunction) within, or transiting through, the areas listed below must comply with this policy:

- Chesapeake Bay entrance and Hampton Roads, VA and adjacent waters - regulated navigation area (described in Title 33 Code of Federal Regulations (CFR) Part 165, Subpart 501);
- James River;
- York River.

NOTE: The requirements listed below are minimum requirements and responsible parties, their surveyors and towing companies maintain ultimate responsibility for conducting a safe tow.

Definitions

<i>Dead-Ship Tow</i>	The movement of a vessel that is operating at less than 50 percent of its designed main propulsion output or with a malfunctioning primary steering gear.
<i>Draft</i>	Maximum depth of the vessel below the waterline.
<i>Horsepower</i>	Designed shaft horsepower of the vessel.
<i>Length</i>	Length overall of the towed vessel.
<i>Partial Power</i>	A vessel operating at above 50 percent but below 100 percent of its designed main propulsion output (e.g., an engine malfunctioning, one of two or more engines disabled or malfunctioning, inability to apply reverse propulsion, damaged or fouled propeller, etc.).
<i>Responsible Party</i>	The company responsible for taking the initial action to prevent, mitigate or clean up an oil or chemical spill or respond to an emergency.
<i>Sail Height</i>	Height from the waterline to the highest continuous weather deck or any cargo above that deck.
<i>Partial Steering Malfunction</i>	A vessel operating with damage to its designed steering system, other than its main steering gear [e.g., damaged rudder, damaged steering pump (one or both), etc.].

Requirements for Dead-Ship Tows

1. Towing companies contracted to conduct dead-ship tows of vessels **over 400 feet in length** must submit a proposal to conduct the tow to the Coast Guard Marine Safety Office Hampton Roads (MSO) at least **48 hours** before the start of the towing operation. Proposals may be made by **fax** at (757) 441-3262 or (757) 483-8641 (24 hr) using the enclosed form entitled “**Dead-Ship Tow Proposal**” (Enclosure 1). Proposals may also be made on the **worldwide web** at <http://www.uscg.mil/d5/mso/hamptonroads/dst.htm> (*Waterways Management*). A follow-up telephone call is required to ensure the proposal was received. When approved, the MSO will assign a **reference number** and reply by telephone with a follow-up by fax or e-mail.
2. The proposal must contain the following information about the towed vessel: name, call sign, flag, length, draft and sail height, as well as the type and amount of oil products on board and a drawing or description of where the oil is located. The proposal must also contain the total number of tugs and their horsepower, place of departure and destination, the date and time of departure, the duration of the tow, and the name and 24-hour telephone number of the Responsible Party.
3. Towing companies, vessels, or their agents must **contact the MSO** at (757) 441-3453 or (757) 441-3298 (24 hr) **when the tow is completed** and must also report any **changes in status** of an approved tow as soon as possible (e.g., date or time of departure, destination, tugs, etc.).
4. The MSO will draft a Notice to Mariners that will be broadcast on Channels 16 and 22A VHF-FM during the dead-ship tow operation to advise other vessels to use caution when in the area.

The table below was developed in cooperation with the Hampton Roads maritime industry in 2001 and should be used when developing your proposals. These minimums apply for wind conditions of 25 knots or less.

DEAD-SHIP TOWS			
VESSEL	<i>or</i>	VESSEL	MINIMUM #
# OF TUGS W/			
LENGTH	SAIL HEIGHT	OF TUGS	TUG HORSEPOWER
<u>FOR EACH</u>			
400 – 499 FT	< 21 FT	2	1 > 2,500 + 1 > 2,000
500 – 599 FT	21-30 FT	2	1 > 3,000 + 1 > 2,000
600 – 699 FT	31-40 FT	3	1 > 3,000 + 2 > 2,000
OVER 700 FT	> 41 FT	4	1 > 3,000 + 3 > 2,000

TOWING OF MORE THAN ONE DEAD-SHIP: If a multiple tow of more than one dead ship is planned, a detailed tow plan must be submitted to the MSO for approval at least **four working days** before the start of the tow.

Requirements for Tug Escorts

1. **Captain of the Port Orders/Controls:** Responsible Parties should understand that the Captain of the Port will refer to this policy when determining minimum vessel controls in casualty situations. A Captain of the Port Order will normally be issued and will outline specific requirements for the vessel (e.g., an inbound vessel may be required to anchor seaward of the Hampton Roads Bridge Tunnel for Coast Guard boarding prior to being escorted to a pier, anchorage, or dry-dock for repairs).
2. Vessels with partial power or steering malfunction (or their agents) must submit their proposal for tug escort **as soon as possible**. Proposals may be made by **telephone** at (757) 441-3453 or (757) 441-3298 (24 hr) or **fax** at (757) 441-3262 or (757) 483-8641 (24 hr) using the enclosed form entitled “**Tug Escort Proposal**” (Enclosure 2). Proposals may also be made on the **worldwide web** at <http://www.uscg.mil/d5/mso/hamptonroads/tug.htm> (*Waterways Management*). A follow-up telephone call is required to ensure the proposal was received. The MSO will reply by telephone and/or faxed Captain of the Port Order.
3. The proposal must contain the following information about the vessel needing the tug escort: name, call sign, flag, length, draft and sail height, as well as a description of why the vessel’s power or maneuverability is impaired. The proposal must also contain the total number of tugs, their horsepower, and their top speed to be used for the escort.

The table below was developed in cooperation with the Hampton Roads maritime industry in 2001 and should be used when developing your proposals. These minimums only apply for wind conditions of 25 knots or less.

VESSELS WITH PARTIAL POWER OR STEERING MALFUNCTION

<u>VESSEL LENGTH</u>	<i>or</i>	<u>VESSEL SAIL HEIGHT</u>	<u>MINIMUM # OF TUGS</u>	<u># OF TUGS W/ MINIMUM TUG HORSEPOWER FOR</u>
400 – 699 FT		< 40 FT	1 or 2 Escorts	1 > 3,000 (<i>or</i>) 2 > 2,000
OVER 700 FT		> 41 FT	2 Escorts	1 > 3,000 + 1 > 2,000

NOTE: Any escort tug must be able to maintain sufficient speed to render assistance to the escorted vessel throughout its transit to a pier, anchorage, or dry-dock.

NOTE TO TOWING COMPANIES: When a towing vessel (with tow) experiences partial or complete loss of steering or propulsion, the towing company shall contact the MSO at (757) 441-3453 or at (757) 441-3298 (24 hr) and shall make immediate arrangements to have another tug relieve the damaged vessel of its tow.

L. M. BROOKS
Captain, U.S. Coast Guard
Captain of the Port Hampton Roads

*Encl: (1) Dead-Ship Tow Proposal
(2) Tug Escort Proposal*

APPENDIX H

CLS CONTRACTOR SAFETY

GUIDELINES AND PROCEDURES



**CROWLEY LINER
SERVICES, INC.**

**RRF SHORESIDE
PROCEDURES**

CONTRACTOR SAFETY REQUIREMENTS

Prepared By: C. Cosgrove

Approved By: G. Farnell

Signature in Master File

No.: **RSS-05**
Effective Date: **11/01/01**
Page 1 of 5

Revision No.: **0**

Subject: CONTRACTOR SAFETY REQUIREMENTS

1. Purpose

- 1.1 The purpose of this procedure is to identify the minimum safety requirements CLS expects from its contractors.

2. Scope

- 2.1 This procedure applies to all contractors and their employees who work onboard CLS vessels.

3. Responsibility

- 3.1 Each contractor shall be responsible for ensuring that all contractor and subcontractor personnel comply with all applicable federal, state and local requirements.

4. Procedure

4.1 Pre-Job Meeting

- 4.1.1 Understanding of the safety and health requirements of the job is critical to the overall success of the project. Contractors shall be required to attend a pre-job meeting to discuss Contractor Safety requirements and jobsite safety/hazard information.

4.2 Reporting to Work

- 4.2.1 Contractor Supervisory personnel shall report to the appropriate CLS supervisor upon arrival at the work location. Contractor management shall ensure that Contractor personnel are given a safety and health orientation for familiarization with potential jobsite hazards and emergency procedures.

4.3 Accident, Injury and Illness Reporting

- 4.3.1 All work related accidents, injuries and illnesses shall be reported immediately or as soon as safely possible to the appropriate CLS representative. It is the responsibility of the Contractor's designated person-in-charge to ensure that all accidents on the property or vessels of CLS involving personnel injury or illness, fire and/or explosions, property damage, hazardous materials spills and vehicles are reported to CLS and to all applicable federal, state and local governments having jurisdiction.

4.4 Contractor Responsibilities

- 4.4.1 Contractor shall designate a person-in-charge for administration of these requirements and provide the person's name, title and phone number.

- 4.4.2 Contractor shall ensure that all Contractor personnel are qualified and trained to perform the contracted services.

- 4.4.3 Contractor shall provide its personnel with proper and well-maintained equipment and tools necessary for the particular task being performed, unless otherwise specified by the CLS Contractor or other language.

- 4.4.4** Contractor shall adhere to all applicable federal, state and local regulations pertaining to a particular operation for which its services are contracted.
- 4.4.5** Contractor shall be responsible for ensuring that all operations are conducted in a safe manner, and for promptly correcting and reporting to CLS and to Contractor's employees and subcontractors all known or suspected hazards or unsafe conditions.
- 4.4.6** Contractor shall ensure the work area is maintained in a clean and orderly fashion. Contractor shall be responsible for supplying its personnel with all necessary personal protective equipment and other safety equipment, unless otherwise stated in the CLS Contractor or other language.
- 4.4.7** Contractor shall be responsible for enforcing CLS safe work policies, practices and procedures as specified in this document, in order to provide a safe working environment.
- 4.4.8** Contractor personnel violating any CLS safety policy, practice or procedure, or applicable governmental regulation shall be subject to immediate removal from CLS property.

4.5 Personal Protective Equipment

4.5.1 Head Protection

- A non-conductive hard hat that meets the requirements of ANSI Z89.1.

4.5.2 Foot Protection

- Safety shoes or full shelled boots or work shoes in good condition, with slip resistant and oil resistant soles, that meet ANSI Z41.1 requirements shall be worn.

4.5.3 Eye/Face Protection

- Eye protection shall be worn while performing work on CLS vessels. Minimum protective eyewear shall be safety glasses with side shields. All eye/face protection shall meet ANSI Z87.1.

4.5.4 Hearing Protection

- Hearing protection devices that meet the standards of OSHA 1910.95 shall be worn in all posted high noise areas. Hearing protection is required in all known or suspected areas with noise levels of 85 dBA.

4.5.5 Protective Clothing

- Protective clothing shall be worn when handling hazardous materials or chemicals, when such is specified by the applicable Material Safety Data Sheet (MSDS). Protective clothing that becomes contaminated with hazardous materials or chemicals shall be decontaminated at the end of each work shift, and/or disposed of properly.

4.5.6 Hand Protection

- Appropriate protective gloves shall be worn where there is risk of exposure to high temperatures, sharp edges, chemicals or any other conditions or materials that may cause injury to the hands.

4.5.7 Fall Protection

- All work performed over 8' above ground, deck, or where a fall hazard of 8' exists shall be in accordance with the applicable requirements of OSHA and CLS requirements.
- Work performed from ladders should be minimized whenever possible. Ladders shall be properly secured and fitted with safety shoes and of a proper length to perform the task.

4.5.8 Respiratory Protection Equipment

- Respiratory protection equipment shall be utilized whenever work involves potential exposure to atmospheres that are oxygen deficient or contain contaminants that may be harmful to health.
- Contractor respiratory protection equipment shall be selected, inspected, maintained and used).
- Contractor shall ensure that personnel using respiratory protection equipment have received appropriate respiratory protection training and fit testing.
- Breathing air used in supplied-air or self contained respiratory protection equipment shall meet or exceed the standards of Grade "D" air.

4.5.9 Other Personal Protective Equipment

- In addition to the personal protective equipment described above, special situations may require the use of additional personal protective equipment. Contractor shall be solely responsible for recognizing when such equipment is required and shall be responsible to provide such equipment.

4.6 Safe Work Practices - The following items recognize basic safe work practices:**4.6.1 Safety Meetings**

- Prior to beginning work, Contractor personnel shall conduct a safety meeting to discuss safe procedures and work practices.

4.6.2 Smoking

- Smoking is prohibited on all CLS vessels except in designated smoking areas.

4.6.3 Signs

- All Contractor personnel shall be familiar with and comply with all signs posted throughout CLS vessels.

4.6.4 Lockout/Tagout

- All contractors shall be familiar with and comply with CLS site-specific lockout/tagout procedures while working on powered equipment, when performing confined space entry operations or when engaged in other work activities where the control of potentially hazardous energy is necessary to ensure personal safety.

4.6.5 Confined Space Entry

- All Contractors performing work involving confined space entry shall be in accordance with applicable federal and state regulatory standards.

4.6.6 Hot Work**4.6.6.1 All welding, cutting, and brazing shall be done in accordance with CLS, USCG, and local Fire Department regulations, which includes the use of the following safety precautions:**

- Proper eye, face and hand protection shall be worn at all times during hot work operations.
- Gas cylinders shall be secured upright at all times.
- Spark arrestors/backflow preventers shall be utilized on all gas cylinders in use.
- Fire extinguishers/hose lines shall be positioned and ready for immediate use.
- Fire watches shall be maintained during welding activities where there is a reasonable exposure to combustible materials.
- Electric welding cables shall be free of any splices within 10' of the electrode holder.

Safety, Health, and Environmental Procedures

No.: **RSS-05**
Effective Date: **11/01/01**
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Revision No.: **0**

Subject: **CONTRACTOR SAFETY REQUIREMENTS**

- Electric welding cables which have been spliced further than 10' from the electrode holder shall be equal to or better than the original insulation material.

4.6.7 Hazard Communication

- CLS shall provide, upon request, an appropriate Material Safety Data Sheet (MSDS) for hazardous chemicals or materials maintained at each location.
- Contractor shall maintain an on-site appropriate MSDS for any hazardous material or chemical which Contractor brings on-site. Such hazardous materials or chemicals shall be properly stored and labeled in accordance with USCG and local Fire Department regulations.

4.6.8 Training

- Contractor employees shall be appropriately trained to perform the assigned task.

4.7 Contractor Waste

4.7.1 Contractor shall notify the appropriate CLS Representative.

4.7.2 Contractor shall place waste in designated area.

4.7.3 Contractor shall be responsible for appropriate waste disposal unless otherwise stated by Contract.

APPENDIX I

LIST OF REMOVALS

APPENDIX J

LIST OF SEA VALVES

LIST OF SEA VALVES

No.	DESCRIPTION	SIZE/TYPE	LOCATION/FRAME
1	MAIN SW OVBD	12", MANUAL GEAR BUTTERFLY	E/R, STBD, 36
2	SEA CHEST BLOW OUT	1/2" GLOBE VALVE	E/R, STBD, 36
3	FIRE PUMP OVBD	6", RIGHT ANGLE GLOBE	E/R, STBD, 37
4	SEA CHEST BLOW OUT	1/2" GLOBE VALVE	E/R, STBD, 37
5	MAIN SEA SUCTION, HIGH	12", MANUAL GEAR BUTTERFLY	E/R, STBD, 38
6	MAIN SEA SUCTION, LOW	12", MANUAL GEAR BUTTERFLY W/REACH ROD	E/R, STBD, 38
7	STBD FIRE PUMP SUCTION	6", MANUAL GEAR BUTTERFLY W/ REACH ROD	E/R, STBD, 38
8	MAIN SW RECIRC	6", BUTTERFLY VALVE	E/R, STBD, 38
9	SEA CHEST VENT, LOW	2", GATE VALVE	E/R, STBD, 38
10	A/C COOLING SUCTION	3", GLOBE ON HIGH SEA CHEST BOX	E/R, STBD, 38
11	SEA CHEST BLOW OUT, HIGH	1/2", GLOBE VALVE	E/R, STBD, 38
12	SEA CHEST BLOW OUT, LOW	1/2" GLOBE VALVE	E/R, STBD, 38
13	SEA CHEST BLOW OUT, LOW	1/2" GLOBE VALVE	E/R, STBD, 38
14	BALLAST SEA, HIGH	20", AIR ACTUATED BUTTERFLY	E/R, STBD, 39
15	BALLAST SEA, LOW	20", AIR ACTUATED BUTTERFLY	E/R, STBD, 39
16	SEA CHEST VENT, HIGH	2" RIGHT ANGLE GLOBE	E/R, STBD, 40
17	MSD BY-BASS OVBD	4", STOP CHECK	E/R, PORT, 21
18	SEA CHEST BLOW OUT	1/2", GLOBE VALVE	E/R, PORT, 21
19	MSD PUMP OVBD	2", GATE VALVE	E/R, PORT, 23
20	SEA CHEST BLOW OUT	1/2", GLOBE VALVE	E/R, PORT, 23
21	BILGE OVBD	6", MANUAL BUTTERFLY	E/R, PORT, 30
22	SEA CHEST BLOW OUT	1/2", GLOBE VALVE	E/R, PORT, 30
23	BOILER BLOW, UNUSED	1 1/2", STOP CHECK VALVE	E/R, PORT, 32
24	MAIN SW OVBD	12", GEARED BUTTERFLY	E/R, PORT, 36
25	SEA CHEST BLOW OUT	1/2", GLOBE VALVE	E/R, PORT, 36
26	EVAP. BRINE OVBD	1 1/2", BALL VALVE	E/R, PORT, 37
27	PORT FIRE PUMP SUCTION	6", GEAR BUTTERFLY W/ REACH ROD	E/R, PORT, 38
28	MAIN SW RECIRC	6", BUTTERFLY VALVE	E/R, PORT, 38
29	MAIN SEA SUCTION, LOW	12", GEAR BUTTERFLY W/ REACH ROD	E/R, PORT, 38
30	SEA CHEST BLOW OUT, LOW	1/2", GLOBE VALVE	E/R, PORT, 38
31	SEA CHEST BLOW OUT, LOW	1/2", GLOBE VALVE	E/R, PORT, 38
32	SEA CHEST VENT, LOW	2", GLOBE VALVE	E/R, PORT, 40
33	BALLAST SEA, LOW	20", AIR ACTUATED BUTTERFLY	E/R, PORT, 40
34	BALLAST SW OVBD	20", AIR ACTUATED BUTTERFLY	E/R, PORT, 40
35	SEA CHEST BLOW OUT,	1/2", GLOBE VALVE	E/R, PORT, 40
36	EMER FIRE PUMP OVBD	3", GLOBE, VALVE	BT COMP, STBD, 211
37	EMER FIRE PUMP SUCTION	6", GATE W/ REACH ROD	BT COMP, PORT, 206
38	SEA CHEST BLOW OUT	1/2", GLOBE VALVE	BT COMP, PORT, 206
39	SEA CHEST VENT	2", GLOBE VALVE W/ REACH ROD	BT COMP, PORT, 206

No.	DESCRIPTION	SIZE/TYPE	LOCATION/FRAME
40	MAIN DECK SCUPPER 2 (TWO) TOTAL	5", GLOBE VALVES WITH REACH RODS	21 1/4" BELOW MAIN DK, P.&S. FR. 49
41	MAIN DECK SCUPPER 2 (TWO) TOTAL	5", GLOBE VALVES WITH REACH RODS	21 1/4" BELOW MAIN DK, P.&S. FR. 107
42	MAIN DECK SCUPPER 2 (TWO) TOTAL	5", GLOBE VALVES WITH REACH RODS	21 1/4" BELOW MAIN DK, P.&S. FR. 188
43	CHAIN LKR PMP DISCHG.	2 INCH	FRAME 211 - 212 PORT
44	STEERING GEAR BILGE	2 INCH	FRAME 1 - 2 STBD

APPENDIX K

PREVIOUS MEGGER READINGS

CAPE LOBOS

ACTIVATION SPECIFICATIONS

Appendix K

PREVIOUS MEGGER READINGS

(NOT AVAILABLE)

APPENDIX L

LIST OF HULL BLANKS

**CAPE LOBOS
LIST OF SEA BLANKS**

No.	DESCRIPTION	SIZE/TYPE	LOCATION/FRAME
13	BILGE OVBD	19" DIA ROUND, 10 BOLTS, 41 LBS.	FRAME 29-30 PORT, 16'9" AB
9	MAIN SW OVBD. PORT.	24" X 28" OVAL, 16 BOLTS, 75 LBS.	FRAME 35-36 PORT, 16'9" AB
8	MAIN SW OVBD. STBD.	24" X 28" OVAL, 16 BOLTS, 75 LBS.	FRAME 35-36 STBD, 16'9" AB
3	BALLAST SW OVBD	32" X 37" OVAL, 24 BOLTS, 134 LBS.	FRAME 39-40 PORT, 16'9" AB
1	EMER FIRE PUMP SUCTION	28" DIA ROUND, 18 BOLTS, 84 LBS.	FRAME 205-206 PORT,
17	MSD BY-BASS OVBD	16" DIA ROUND, 8 BOLTS, 29 LBS.	FRAME 21-22 PORT, 17'2" AB
6	BILGE & FIRE PUMP OVBD	18" DIA ROUND, 10 BOLTS, 31 LBS	FRAME 36-37 STBD, 15'7.5" AB
5	MAIN SEA SUCTION, PORT	6'8" X 12'5" X 1/2" PLATE BLANK, 107 BOLTS, 1602 LBS.	FRAME 38-40 PORT,
4	MAIN SEA SUCTION, STBD.	6'6" X 21'10" X 1/2 " PLATE BLANK, 164 BOLTS, 2920 LBS.	FRAME, 38-40 STBD,
	MSD PUMP OVBD	2", NOM. DIA. PIPE. PLUMBER PLUG.	FRAME 22-23 PORT, 17'2" AB.
	BOILER BLOW	1 1/2"NOM. DIA. PIPE. PLUMBER PLUG	FRAME 32-33 PORT, 16'9" AB
	SLUDGE PUMP OVBD.	2" NOM. DIA. PIPE, PLUMBER PLUG	FRAME 36-37 PORT, 16'9" AB
	EMER FIRE PUMP OVBD	3" NOM. DIA. PIPE, PLUMBER PLUG	FRAME 209-210 STBD, 24' AB