



CAPE LAMBERT DEACTIVATION SPECIFICATION

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

M/V CAPE LAMBERT

DEACTIVATION

and

LAY-UP

SPECIFICATION

PREPARED BY:

Crowley Liner Services, Inc.

9487 Regency Square Blvd.

Jacksonville, FL 32225

M/V CAPE LAMBERT

ACTIVATION SPECIFICATIONS

DISTRIBUTION LIST

| No. | Location/Organization | Issue Date | Code |
|------------|------------------------------|-------------------|-------------|
| 1 | CLS RRF Program Office | | |
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| 4 | M/V CAPE LAMBERT | | |
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M/V CAPE LAMBERT

ACTIVATION SPECIFICATIONS

RECORD OF REVISIONS:

| Rev | Sections Replaced | Replaced By | Date |
|------------|--------------------------|--------------------|--------------|
| 0 | Original Issue | | 22 Mar. 2002 |
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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 Lambert 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:

| | |
|---------------|--|
| Lambert.pdf | Solicitation Letter |
| "" "" | Cape Lambert Activation Specification |
| "" "" | CLS Terms and Conditions |
| PricesLam.xls | Pricing Submission for the Cape Lambert including Additional Pricing Information |

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

1. Electronic file labeled PricesLam.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

December 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

CAPE LAMBERT

DEACTIVATION SPECIFICATIONS

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VESSEL PARTICULARS

| | |
|---|--|
| VESSEL: | M/V CAPE LAMBERT |
| OFFICIAL NUMBER: | D681926 |
| CLASSIFICATION (AMERICAN BUREAU OF SHIPPING): | A1 - AMS |
| AMERICAN BUREAU OF SHIPPING ID NUMBER: | 7330343 |
| NATIONALITY: | UNITED STATES |
| PORT OF REGISTRY: | NORFOLK, VA |
| CALL SIGN: | KJCJ |
| 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) | 15' 06" |
| DRAFT AFT (PRESENT) | 20' 09" |

DEACTIVATION SPECIFICATIONS

001 GENERAL REQUIREMENTS:

These general requirements in intent, scope and definitions shall be applied to this Specification Package for all Items 001 through 808 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. 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.
- 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

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- 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. 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.

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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 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.
- 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 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.
- 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.

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

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- 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.

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:**

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- 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, 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

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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:

- 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

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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.

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

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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.

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). 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.

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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.

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 of the ship. 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.

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- 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

003(F) TEMPORARY LIGHTING

Temporary lighting is to be provided for each particular application, as required, by the Contractor in all work areas, and cost to be included in the respective line items.

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.

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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.

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 vessel is not allowed.

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

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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, 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.

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- 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) 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.
 - 20) Provide the four Computers & equipment, for the Cape Lambert availability, they are to be transferred after use during this availability.
 - 21) 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.
 - 22) All copying, fax equipment to be installed and serviced by Contractor.

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.

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003(O) TELEPHONE SERVICES

A minimum of five telephones (six if the fax machine does not have an integral transceiver) with at least five 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.

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.

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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 40 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 40 hours is for lifts not 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

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configuration change report MA-985 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.

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, Craft Foreman 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

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representative or regulatory Bodies. Aforementioned notification requirements shall also apply to these designated work sequences.

2. 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.

3. 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

B. 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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600 ACTIVATION OF DEHUMIDIFICATION (D/H) SYSTEM (USCG/ABS)

There are a total of eight D/H machines. One Pro Tec 600 machine is located in the upper engine room, four Cargocaire, Munters, style 120 are located in each Weather Deck Elevator machinery rooms, one Cargocaire, Munters, style 120 located in the fwd. foc'sle port side, one Cargocaire, Munters, style 120 located on main cargo deck, after stbd. to D/H Conex box and one Pro-Tec, model 150-R located in after M/G set room, weather deck after, stbd.

When the fire main line is proven drained, clear and dry, connect the Pro Tec 600 D/H machine, via ducting, to the fire main line and align the fire main line to affect distribution of D/H air throughout the vessel.

Re-install existing flexible distribution ducting to wheelhouse and bow thruster room and to all other locations where removed.

Contractor to provide temporary electric service to the D/H machines, power up and test all systems. Prove satisfactory operation of all equipment and systems to the Owner's Representative and/or his representative. Upon completion of testing, wire all for normal JRRF operation.

Servicing vendor: ProTec, Inc.
216 Lafayette Road
Hampton, NH 03842-4104
Tel: (603) 964-9421

601 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) and heating elements (approximately 20). Readings shall be taken at motor (and at controller if readings are low and the circuit found suspect). (Contact Owner's Rep. for list of previous readings.)

This item includes but 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, bow thruster motor, 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. Any

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motor with electrical insulation readings of 400,000 ohms, or less, shall not be energized without the express permission of Owner's Representative.

602 DEHUMIDIFICATION SEALING OF VESSEL (ABS/USCG)

The vessel shall be sealed to maximize dehumidification system effectiveness. Openings to dehumidified spaces shall be sealed with a sealing system meeting the specifications described below.

Intent: All openings to be dehumidified spaces defined as ventilation openings, cowl and mushroom ventilators, skylights, hatches and doors shall be sealed using a strippable, sprayable, vinyl-plastic sealing material.

Installation: All openings shall be sealed with ProTec Protective Sealing System (PSS) or equal. The sealing system shall be a spray-applied, vinyl-plastic, semi-adhering, strippable sealing material. The sealing system shall have an effective life of 15 years and be applied at 40 mils. The sealing system shall have been used successfully for sealing ships under dehumidification for a period of five years.

- A. Seal all vents for potable, sewage tanks and soil drain lines.
- B. Seal all vent openings for double bottom, deep, wing, storage, etc., tank vents.
- C. Seal off all ventilation intake and exhaust terminals, goosenecks, mushrooms, etc. to the engine room, living quarters, storerooms, shops, and other spaces on the outside decks.
- D. Seal all exterior doors.
- E. All natural vent hinged covers shall be closed and dogged tight and sealed with ProTec protective sealing system.
- F. Reinstall stopper bars and associated hardware to the inside of all superstructure exterior doors (approx. 12 each), Which were removed, identified and marked for location during activation.
- G. The only exception to item (D) and (F) above, will be two (2) designated doors for access into the quarters. Designated doors interior and exterior, to be painted yellow, clearly labeled in letters 4 inch high, minimum, interior as "Emergency Exit" and exterior as "D/H Entry" (currently painted, but repaint as required after reinstallation of bars). One door is located on starboard side aft, Upper Deck level and the other is located port side, aft, Bridge Deck level. Both doors will have hasps and chains installed and heavy-duty brass pad locks keyed alike. Provide Owner's Representative with two (2) sets of keys for each pad lock.

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- H. Remove two Main Diesel Engine and three Ship's Service Diesel Generator stack covers from storage in number 1 cargo hold, reinstall, secure and seal. Close and dog down all remaining vent closures atop stack area (approx. 5).
 - I. Seal off the forward and aft whistle horn and seal up the clear view windshield wiper windows in the wheelhouse.
 - J. Seal off all cable runs passing through external bulkheads and any other areas.
 - K. Seal all vent openings and goosenecks (air escapes) on upper deck, forecastle deck, poop deck, boat deck, bridge deck, etc.

603 BALLAST TANK CLEANING AND TREATMENT (ABS/USCG)

Confirm ballast quantities in all ballast tanks by sounding and comparing result with existing "Ballast Plan". Confirm with Owner's Rep. to determine if any tank had been used for ballasting. Any ballast tank that was used during activation must be filled with fresh water and flushed clean. Ballast tanks that are to be left empty must be confirmed as empty. These tanks are to be opened, ventilated, certified "Safe for Men" and pumped dry using portable pumps. Empty status to be confirmed by Owner's Rep. and the tanks then closed-up on new gaskets and thread wicking. The Contractor shall provide a list of all openings sealed with Fr.# and location.

The Lower After Peak Tank is to be left filled with 300 LT fresh water and sodium silicate corrosion inhibitor (Drew Ameroid CIL or equal) at a dosage of 1 liter per 10 tons of water, and Dow Propylene Glycol Industrial anti-freeze dosed to provide protection to zero degrees Fahrenheit. Provide Owner's representative with two (2) new sampling kits for vessel.

604 UPPER DECK HATCH COVER TARPAULIN (ABS/USCG)

Contractor to recover forward hatch cover gray vinyl cover from storage location and replace over hatch cover and secure with securing lanyards. Hatch cover is on Weather deck, stbd. side at #1 Hold area.

605 TESTING D/H ZONES (ABS/USCG)

Upon completion of the reinstallation and resealing areas in the D/H zone, Contractor shall apply a test to each D/H zone area by using one 600 CFM blower connected to a convenient opening. A valve shall be provided between the blower and the opening.

Seal the zone and evacuate it until a vacuum of 3 inches of water, as measured on a manometer, is achieved then secure the blower and close the valve. The pressure

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differential shall not drop more than 1 inch of water over a 20-minute period. Prove foregoing to the Owner's Representative and/or his representative.

606 SHIP'S REFRIGERATION SPACES (ABS/USCG)

Each refrigerated storage box must be cleaned and disinfected.

- Break out and thaw room
- Fish box
- Meat box
- Dairy box
- Vegetable box

Secure all box doors in the open position, tightly blocked up with double shim wedges, from the bottom to prevent doors from sagging, to allow for distribution of dehumidified air during lay-up.

607 IDENTIFICATION OF REMOVALS

Contractor shall provide a type written list of all removals, blank installations, electrical disconnection's, shaft locks, etc made during the deactivation contract. Provide original and three (3) copies to Owner's Representative. This data is also to be duplicated and presented on 3 1/2 in floppy disc in MS Word.

List shall contain the item #, system affected, description, location, and any pertinent comments. Use the following format for List of Removals:

| Removal No. | System affected | Description | Location | Comments |
|-------------|-----------------------------|------------------------|--------------------------|-----------------------------------|
| 1. | Main sea water Circ. System | L.O. cooler drain plug | Fr. 41 lower E.R. | 3/4 inch NPT brass pipe plug. |
| 2. | Fire Main | Blank installed | Fr. 46 port, upper deck. | Blank installed at flanged joint. |
| 3. | Fire Main | Drain valve open | Fr. 85 upper deck | 3/4 inch valve |
| 4. | Potable water | Hydro pneumatic tank | Fr. 23 port E.R. | Manhole cover removed. |

608 DRINKING FOUNTAINS AND ICE MAKERS (ABS/USCG)

Disconnect the water supply lines, filters and the drain lines at the drinking fountains and icemakers (drain all internal tanks). Blow clean, dry air through the lines until lines are dry. Leave lines disconnected. Clean and wipe dry the drinking fountains and icemakers. Wrap the drinking fountains in clear plastic and seal with tape. All fittings for each unit

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are to be stored in plastic sealed bag(s) attached to each unit. A total of six drinking fountains and two icemakers are involved. Drain all dishwashers and booster heaters in the galley.

609 DRAINING OF PUMPS (ABS/USCG)

Remove plugs and drain the liquid end(s) of all pumps, with the exception of the following:

- Two F.O. Transfer pumps
- Lube oil pumps
- Main Engine Salt Water Circulating Pumps
- Main Engine Fresh Water Circulating Pumps

All saltwater service pumps except as noted above shall be thoroughly flushed with fresh water prior to blowing down.

Do not re-install drain plugs that were removed to accomplish drainage, all to facilitate D/H distribution. Remove coupling guards and if possible, rotate 180 degrees and install fasteners to one side to hold guard. Install left over fasteners in place, hand tight, all to facilitate MARAD JRRF to be able to operate motor during Phase IV. Remove packing, clean out stuffing boxes/glands. Pre-cut new packing for each pump and place it in sealed plastic bags, along with any lantern rings and the casing drain plugs, and wire to pump. These removal areas are to be well marked with florescent paint so as to be easily recognizable.

Disconnect couplings on all pumps, except the above listed pumps. All grids, nuts, bolts, etc. from the couplings shall be placed in individual plastic bag(s), wired closed with tags attached to each bag, clearly indicating the pump that the coupling parts belong to. Wire bags to their respective pumps. Each pump motor shall be marked with florescent paint to facilitate MARAD JRRF during Phase IV. Submit a report with three copies, detailing the location of such drain plug removals/openings to the Owner's Representative in writing two days after completion of work on this item. (This should be similar the list generated by the Contractor during the Activation phase.)

610 SALT WATER SYSTEMS - DRAINING (ABS/USCG)

Upon completion of regulatory and repair work, flush, drain and dry out all lines and components in salt water systems including: all bilge, ballast, fire, salt water service piping and manifolds, except as noted below. These systems shall be flushed with a mixture of fresh water and sodium silicate followed by a flush with a pre-mixed, non-toxic propylene glycol anti-freeze and rust inhibitor (Cameo or equal). Thoroughly drain and blow out all lines and manifolds with clean, dry compressed air. Open all traps, strainers, plugs and other system low points to ensure complete drainage and drying. Any flanges that are broken and/or plugs removed to accomplish this item, shall be stored in

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sealed plastic bags, clearly tagged, and wired nearby. Affected areas shall be clearly marked with florescent paint.

Note: The following piping systems (partial) are to be used for cooling the main and auxiliary engines from the After Peak Tank and are not to be drained.

- Main Seawater suction header between sea chests.
- Ballast piping between Seawater suction header and After Peak Tank. (Remaining ballast piping is to be isolated by existing valves and drained.)
- Ballast return piping from After Peak Tank to Seawater suction header.
- Seawater cooling discharge to After Peak Tank.

Submit a report with three copies, detailing the location of such removals/openings to the attending Owner's Representative in writing two days after completion of work on this item.

611 SANITARY SYSTEM (ABS/USCG)

Connect air to the sanitary system and pressurize the system with air. Thoroughly drain and blow out each system and commode with clean, dry air until all water is removed. Close up system, removing all Contractor provided hoses, using new gaskets and fasteners. Remove commode seats and replace with 1/2 inch plywood blanks with bolt holes matching commode seat and install on each commode (These were removed during Activation). Reinstall commode seats over the plywood to prevent fouling. Upon completion, each stateroom is to be locked to prevent yard workmen from entering.

612 MARINE SANITATION DEVICE (MSD) (ABS/USCG)

Open, pump out, flush with fresh water and disinfect the Marine Sanitation Device (MSD) and associated piping. Clean tank lids and leave tank lids and drain valves open. Fabricate and attach new rubber gaskets to unit. Loose fasteners, gaskets, etc. are to be sealed in a plastic bag and wired in vicinity of removal for easy identification.

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

613 FRESH WATER SYSTEMS - DRAINING (ABS/USCG)

Upon completion of regulatory and repair work, flush with fresh water, drain and dry out all fresh water piping systems and components, and drain lines in systems. Thoroughly drain and blow out all lines and manifolds with clean, dry, compressed air.

Open out all traps, strainers, plugs and other system low points to ensure complete drainage and drying. Any flanges that are disconnected and any plugs removed to

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accomplish this item, shall be bagged, clearly tagged, and wired nearby. Removal sites shall be clearly marked with florescent paint.

Drain all gray water systems (sinks and showers) and flush systems with a pre-mixed, non-toxic propylene glycol anti-freeze and rust inhibitor mixture in concentrations that will prevent freezing down to minus 30 degrees Fahrenheit.

Drain the two domestic water tanks, remove the manhole covers and wipe the tanks dry, removing any loose scale or cement. Bolt the manhole covers adjacent to the opening with a new gasket. Cover the openings with half-inch mesh hardware cloths. String all removed nuts on wire and attach to the covers.

Drain the potable water pressure tank, close off the pump's discharge valves to the system tank. Connect up air to the pressure tank and pressurize to approximately 80 PSI. In a similar manner, isolate the hot water circulation pump and pressurize the hot water heaters tanks (2).

With air pressure on the hot and coldwater sides of the system, starting at the upper most outlet (in the bridge toilet), open all water valves until all water is blown clear. Open valves one at a time from the top, working down, until all water is blown clear.

When all of the above has been blown dry to the satisfaction of the Owner's Representative and/or his representative, shut off the air to the tanks and allow them to blow down under pressure until empty.

Open manhole/inspection plates on potable pressure tank and hot water heaters, clean out and completely wipe dry. Inspection plates will be left open with covers secured adjacent to the openings with new gaskets and hardware attached. All loose fasteners, gaskets, etc. are to be sealed in a plastic bag and wired adjacent to removal area so as to be readily available.

All shower valves and non-spring loaded sink faucets shall be left open.

Submit a report with three copies, detailing the location of such removals/openings to the attending Owner's Representative in writing two days after completion of work on this item.

614 GYRO COMPASS REPEATERS AND COMPASS

Remove the two repeaters from the bridge-wings and magnetic compass from Flying Bridge and stow in the controlled equipment locker, interior quarters, under D/H at an Owner's Representative designated area aft of Galley. Seal exterior cable ends at each repeater stand using vinyl tape and scotch-kote sealer or equal. Replace covers and seal with waterproof tape.

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**615 MAIN DIESEL ENGINES LAY-UP & INSPECTION SERVICES
(ABS/USCG)**

The intent of this item is to clean, inspect, service, test and lay-up the Port & Stbd. Crossley Pielstick 18-PC 2-V (British version) Main Propulsion Diesel Engines as per Manufacturer's Recommendations.

Furnish all of the necessary labor (2 outside machinist's), equipment, materials and technical representative (Mr. Lennart Rosengren of Lindholmen Engineering Company, P.O. Box 23039, Jacksonville, Florida 32241-3039, telephone 904-739-3457, fax: 904-739-5851) required to accomplish the lay-up of the vessel's P/S main diesel engines in full compliance with manufacturer's recommendations. All work accomplished in connection with this item shall be to the satisfaction of the U.S. Coast Guard, attending ABS Surveyor, Owner's Representative and/or his representative.

These engines are located at the lower level of the engine room between frames 25 and 37.

The following is a list of required items to preserve these engines.

1. Wash down exterior of the main engines with 3000 PSI. Hot water at 130-180 degrees F. to remove all grease oil and debris.
2. Drain oil in the rocker gear system and wipe out the reservoir tank. Renew the rocker gear lube oil and filters. (Mobilgard 312)
3. Replenish oil supply in main engine rocker gear sumps to normal operation level with Mobilgard 312. Inspect sump covers for leaks and repair as necessary. Main engine sumps should be OK both engines will have less than 100 operating hrs on the lube oil.
4. Install stack covers.
5. The Port and Stbd. main engines have had their jacket water systems drained, flushed and filled with propylene glycol. The systems have also been treated with "Diesel Engine Water Treatment" (DEWT). Test the systems and add-de-mineralized water treated with corrosion inhibitor (DEWT), and propylene glycol anti-freeze protected to -30 degrees F. as found necessary. Circulate the system treated water for two (2) hours minimum.
6. Renew filter material on the main engine turbochargers.
7. Renew the oil in the main engine turbochargers, total of 4.
8. Remove the crankcase access covers from # 1 and # 18 cylinders on each engine to facilitate circulation of dehumidified air. Install bronze mesh screens over each access. Secure screens in place with retainer ring at outer diameter.
9. Coat fuel racks with preservative.

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10. Remove two inspection covers from the top of the each reduction gear set. Cover access with bronze mesh screens secured in place on mounting studs with 1 /2- inch spacer, then the covers are to be secured atop the spacers.
11. Provide the services of and Manufactures Authorized Technical Representative to open clean and inspect the "Moatti" lube oil filters (Model numbers LGM 280 BM & LSM 280BN each engine). Provide for inspection by the Owner's representative. Reassemble in good order with new gaskets seals, and demonstrate proper operation.
12. Provide the services of and Manufactures Authorized Technical Representative to open clean and inspect the "Moatti" fuel oil filters (Model numbers FGMN 120-RN & FSMN 120 RN each engine). Provide for inspection by the Owner's representative. Reassemble in good order with new gaskets seals, and demonstrate proper operation.

All inspections by the Owner's Representative and, or his representative, Technical Representative and Regulatory Bodies, shall be scheduled by the Contractor to permit sufficient time for all of the above individuals to perform a thorough inspection or survey.

No work on the main diesel engines shall be deemed completed and approved without the inspection and consent of the Owner's Representative and/or his representative, Technical Representative and Regulatory Bodies.

Upon completion of the above specified work, provide service certificates (Original and three copies) to Owners Representative, stating all work performed

**616 AUXILIARY DIESEL ENGINES DEACTIVATION AND LAY-UP
(ABS/USCG)**

Provide the services of a Caterpillar service technician to advise and supervise the lay-up of Auxiliary Diesel Generators # 1, # 2, and # 3. Each generator is a Model # 3512 Caterpillar. These engines are located on the mid-level of the engine room between frames 25 & 37.

The following is a list of required items to preserve these engines.

1. Provide services of a Caterpillar service technician to advise and supervise the lay-up of the diesel generators, which includes all necessary labor and materials
2. Install stack covers.
3. Renew air intake filters.
4. Renew lube oil and fuel oil filters.
5. During the last deactivation the jacket water systems of each generator were drained flushed and filled with the proper amount of propylene

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Glycol and treated with corrosion inhibitor (Each engine holds approximately 86 gals. of jacket water). Check the systems and replenish the systems with de-mineralized water and adjust chemicals to their proper levels. If necessary top off system with de-mineralized water treated with corrosion inhibitor and propylene glycol anti-freeze protect to -30 degrees F. Circulate treated water for a minimum of two (2) hours.

6. Remove one crank case access cover on each side of the engine and on opposite ends. Install bronze mesh screen over each access and secure in place with bolts and retainer. Secure access covers adjacent to opening.

All inspections by the Owner's Representative and or his representative, Technical Representative and Regulatory Bodies, shall be scheduled by the Contractor to permit sufficient time for all of the above individuals to perform a thorough inspection or survey.

No work on the generator diesel engines shall be deemed completed and approved without the inspection and consent of the Owner's Representative and/or his representative, Technical Representative and Regulatory Bodies.

Upon completion of the above specified work, provide service certificates (Original and three copies to Owners Representative, stating all work performed

Provide OEM service technician(s) and all necessary labor and materials to deactivate and lay-up the following diesel engines as per manufacturer's recommendations:

1. Emergency Fire Pump Engine, Mitsubishi-Sulzer, 6DS7 nr. 223262
2. Emergency Steering Engine, Sabb, Model 2GS, S/N 401
3. Emergency Generator, Detroit Diesel mod. 2-71, L215, 5189693
4. Port Life Boat Engine, Lister Peller Inc., Model 2838ST2MG84
5. Emergency Air Compressor, Yanmar mod. L90E-DE, nr. 05549

Note: Emergency Air Compressor is to be left operational. Renew lube oil, lube oil filter, and fuel filter. Upon completion of work, charge starting air system to satisfaction of Owner's Rep.

Upon completion of above specified work, provide service certificates (original and three copies) to Owner's Representative, stating all work performed to lay-up these engines.

617 COMPRESSED AIR SYSTEMS (ABS/USCG)

Completely drain all moisture from the compressed air, starting air and control air systems, by blowing down at the lowest points. Blow down the air receivers, dryer,

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filters, traps, lines, etc. Remove air receiver manhole covers and wipe down receiver interiors. Close-up receivers on new gaskets.

On air dryer, provide services of refrigeration tech rep. to lay-up refrigeration side as per manufacturer's recommendations. Dryer is Hankison Corp. model F-100. On airside, blow out with clean dry compressed air, open drains and bleed dry. Leave valves open.

618 PURIFIER LAY-UP (QTY 5) ABS/USCG)

Provide the services of a Alfa-Laval technical representative to open, inspect, clean and preserve each purifier for lay-up.

Provide Owner's representative with a written report of findings.

Upon completion of all work, re-assemble each purifier in good order.

Drain water from operating water tanks and piping. Remove, clean and reassemble the operating water tank supply filters.

Machinery data: One (1) diesel oil purifiers, two (2) Heavy Oil Purifiers and two-(2) lube oil purifiers as follows:

Two - Alfa-Laval Purifiers, Type MAPX 309BGT-14-60, nrs. 11971, 11972

Two - Alfa-Laval Purifiers, Type MAPX 309BGT-14-60, nrs. 2927025, 2927024

One - Alfa-Laval Purifier, Type MAB104B-24-60, nr. 2921392

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

619 OILY WATER SEPARATOR AND MONITOR (ABS/USCG)

Provide services of Hamworthy Technical Representative to properly preserve for lay-up. Completely drain the oily water separator, including the monitor in the aft, lower engine room. Connect compressed air and thoroughly blow dry. Include flow meters, piping and attached equipment. Clean sensing element lens. Upon completion, prove dry to Owner's Representative and/or his representative.

Under no circumstances shall any cleaning effluent be dumped/drained to the bilge.

Machinery Data: Hamworthy, size HS5, spec. GO, W04195001

620 A/C AND REEFER CONDENSERS (ABS/USCG)

Open up the salt-water sides of the following coolers by removing the heads and inspection plates. Completely flush, clean and drain S.W. sides and clean gasket landing. Fabricate new gaskets and leave adjacent to removals with fasteners stored in sealed

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plastic bag, ready for installation. Clean heads, tube sheets, and air lance tubes. Air test each cooler at 45 PSI and prove tight. The following coolers are involved.

- Two domestic refrigeration condensers
- One A/C refrigeration condenser

621 A/C & DOMESTIC REFRIGERATION SYSTEMS (ABS/USCG)

Freon shall be evacuated from the air conditioning (R-22) and domestic refrigeration (DuPont Suva R-134a) systems into approved storage bottles procured and furnished by Contractor. Bottles should be color coded and marked with type of coolant. Provide and install a 2 PSI nitrogen head on each system and post warning signs that each system is under 2 PSI nitrogen head.

Secure all valves in the system and bring oil level in all compressors to above the shaft seal. Tag compressors to alert oil condition. Remove coupling guards and if possible, rotate 180 degrees and install fasteners to one side to hold guard. Install left over fasteners in place, hand tight. Disconnect and remove couplings and stow nuts, bolts and coupling parts in a sealed plastic bag or equal. Mount bag on each respective unit. All to facilitate MARAD JRRF to be able to operate motor during Phase IV. Stow all reclaimed Freon storage bottles in CONEX box on Main Cargo Deck, or as directed by the MARAD Surveyor.

Mark each motor with fluorescent paint to indicate coupling disconnected.

The following compressors are involved:

- Domestic refrigeration compressors (2)
- Air conditioning compressor (1)

622 DISTILLERS (2) (ABS/USCG)

622(A) MECO

Provide MECO Authorized Technical Representative to assist the Contractor clean and lay-up distiller with Manufacturer's recommendations. Prior to cleaning, Contractor to notify Owner's representative and submit technical representative's recommendations. Dispose of liquids in accordance with all local, state and federal ordinances. Under no circumstances shall any cleaning effluent to be dumped/drained to the bilge.

Upon completion of cleaning and inspection of the unit by the Technical representative, Owner's Representative and/or his representative, perform manufacturer's recommended lay-up procedures that includes, but not limited to: Draining, flushing with fresh water and drying of all piping and components, including:

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- Evaporator
- Demister
- Feedwater strainers
- Immersion Heater Tank
- Dearator Tank
- Pumps
- Heat Exchangers
- Chemical Injection System
- All piping, including piping to potable water tank

Remove and identify all drive belts and store in sealed plastic bag(s) secured to the unit with zip ties. Clean and apply a rust prevention protection coating, such as Protecto-Flex or equivalent, to all steel sheaves on the compressors, pumps and motors. Upon completion, provide original and three copies of the technical representative's report to the Owner's Representative (see procedures in Appendix K).

622(B) NIREX

Provide NIREX Authorized Technical Representative to assist the Contractor clean and lay-up the distiller. Clean the distiller in accordance with the Manufacturer's recommendations.

Prior to cleaning, Contractor to notify Owner's Representative and submit technical representative recommendations. Dispose of liquids in accordance with all local, state and federal ordinances.

Under no circumstances shall any cleaning effluent to be dumped/drained to the bilge. Upon completion of cleaning and inspection of the unit by the Technical Representative, Owner's Representative and/or his representative, perform manufacturer's recommended lay-up procedure (see procedures in Appendix K).

623 FIXED & PORTABLE EXTINGUISHING SYSTEMS (ABS/USCG)

The fixed high-pressure CO2 systems are to be disarmed, deactivated and all hoses disconnected and covered with plastic sandwich type bags secured in place by elastics. All cylinder bottles shall have existing owner-furnished caps installed. Portable bottles are to be collected, inventoried and stowed in the Poop Deck level CO2 Room. Provide Owner's Rep. with three (3) typewritten copies of inventory showing; type of extinguisher, location removed from and size.

All Fire Station fire fighting equipment, such as fire hoses, nozzles, fog nozzles, fire axes, etc. are to be removed from Fire Stations about the vessel and neatly stowed in the Poop Deck level CO2 room. Fire hoses are to be neatly coiled for storage. Provide

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Owner's Rep. with three (3) typewritten copies of inventory showing; type of equipment, and location removed from.

624 LIFEBOATS AND DAVITS (ABS/USCG)

Lifeboats (2 each) shall be removed from the falls, stowed and secured in existing wooden cradles located in the main cargo hold with existing wires and turnbuckles. Secure falls to the existing four (4) designated deck connections (shackles) and apply tension to falls.

Prior to removal of boats from existing davits, remove stores, provisions and equipment from each lifeboat and properly stow in Port, Boat Deck level, Storage Locker.

Remove and store both lifeboat ropes and ladder in Port, Boat Deck level storeroom.

Provide certified Lister Diesel Engine Technician to service, de-commission and lay-up the diesel engine and systems as per Manufacturer's recommendations. (See item 616)

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

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

Remove the inflatable life rafts, hydrostatic release units and ladders from their respective stowage positions. These rafts & equipment are to be stored on the after main deck cargo hold, secured onto pallets. Gear related to each raft to be stored with its respective raft.

Three (3) life rafts total; two (2) Viking, (one 6 person and one 16 person); 1 CrewSaver, 20 person.

626 MISCELLANEOUS LIFESAVING EQUIPMENT (ABS/USCG)

626(A) SAFETY/LIFESAVING EQUIPMENT

- Gather all life preservers and survival suits from each of the crew's cabins, Engine Room, Bridge, miscellaneous spaces and areas and store in the Poop Deck level coat locker. Remove chemical water lights, all batteries and transfer to Owner's Representative for disposal.

626(B) EMERGENCY GEAR

- Remove and store Emergency Gear (Scotts air packs, line throwing apparatus, Fireman's Suits, EPIRB, SARTS, etc.), as directed by Owner's Representative.

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- Remove and store all life ring buoys as directed by Owner's Representative. Remove batteries from lighted buoys and transfer to Owner's representative for disposal.
- Remove, and transfer all lantern 6-volt batteries to the owner's representative for disposal.

Note: Batteries to be removed and transferred to Owner's Representative for disposal.

626(C) PYROTECHNICS

- Light, smoke and line-throwing devices shall be removed from the vessel in their containers, transferred to Owner's Representative for disposal (List in Activation Specification).

Contractor to inventory all of the above items prior to storage and/or transfer and provide four typewritten copies of the inventory to the Owner's Representative of all equipment, where stored and/or where transferred.

627 NAVIGATION SIDE LIGHTS (ABS/USCG)

Remove, clean and store the port and starboard side navigation lights. Store in Controlled Ekipage Locker, Bonded Stores locker, Poop deck, aft. or at Owner's Representative designated location.

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

Remove, clean and store the port and starboard name boards in deck locker, boat deck, port, or in Owner's Representative designated location.

629 NAVIGATION INSTRUMENT COVERS

Remove from storage and reinstall existing covers on all weather deck controls, lights and machinery (approx. 23 each).

630 LOOSE EQUIPMENT (GFE) STORAGE

630(A) DESIGNATED BY OWNER'S REPRESENTATIVE

Remove, inventory, transfer and store all ship's equipment, as designated by Owner's Representative in the aft, Poop Deck level Bonded Store's, including the following:

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- Televisions and entertainment systems
- Binoculars
- Azimuth circles
- Sextants
- Inclinometers
- Bulkhead and desk mounted electronic equipment
- Office Equipment (copiers, printers, fax machine, calculators, typewriters, etc.)
- Handheld radios with battery including microphones, cases, spare batteries and chargers.
- Clocks
- Other such equipment designated by the Owner's Representative.
- Provide an inventory list, plus three (3) copies, which is to include quantity, manufacturer and serial number to the Owner's Representative. Provide and install new heavy-duty padlock with four (4) duplicate keys for the storeroom and turn over to Owner's Representative. Compare list to Owner's Representative list of "Controlled Equipage" and note all discrepancies. (Owner's Representative to be notified as soon as possible of discrepancies.)

630(B) BRIDGE EQUIPMENT

Remove and inventory all loose and easily removable equipment located on bridge. Transfer and store in Controlled Equipage Locker as designated by Owner's Representative.

- Provide an inventory list, plus three (3) copies, which is to include quantity, manufacturer and serial number to the Owner's Representative.

631 BATTERIES (RADIO, EMERGENCY, ALARM & STARTING, ETC.) (ABS/USCG)

Disconnect battery cables from terminals, clean cable ends and terminal posts. Coat cable ends with anti-corrosive compound. Clean and neutralize all battery lockers, boxes, trays and surrounding areas. Remove and transfer ashore for disposition by Owner's Representative. The following batteries are involved:

- Emergency Fire Pump Engine, consists of two each Group 24, 12- volt.
- Emergency Steering Engine, consists of two each D-8, 12-volt.
- Emergency Diesel Generator Engine consists of one each D-8, 12-volt.
- Ship's Service Diesel Generators (3), consists of two each (Total of six)12 volt lawn tractor batteries, wired in series for a 24 volt system.
- General Alarm, consist of two each D-8, 12-volt.

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- 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).
- After Steering Emergency Escape Hatch (3units), consists of 2 each, 6 volt dry cells, total six
- Emergency Air Starting Compressor Diesel Engine, consists of one heavy duty deep cycle 12 volt marine battery.

632 TANK SOUNDINGS (ABS/USCG)

24 hours prior to departure for James River Reserve Fleet, take soundings of all fuel, ballast, fresh water, non-potable water, diesel oil, clean and dirty lube oil tanks, void spaces and bilge wells, etc. Record results and furnish four typewritten copies of soundings with type of liquid and quantity calculations to the Owner's Representative as follows.

- Two (2) copies, each sealed in a clear plastic envelope and taped to the back of the door in both the Chief Engineer's Office, and Master's Office.
- Two (2) copies to Owner's Representative for distribution.

633 DIESEL OIL TANKS (ABS/USCG)

Prior to vessel's departure for the James River Reserve Fleet, inject the recommended dosage of an approved fuel treatment biocide into all tanks containing diesel oil (Approximately 2300 barrels total). Biocide must be properly metered into fuel as it is being circulated in tank. A licensed Marine Engineer may be required for fuel transfer.

634 VALVES, LAY-UP (ABS/USCG)

When all drainage is completed, accomplish the following requirements:

- A. Close the fuel oil service pumps and fuel oil transfer pump suction and discharge valves. All fuel oil manifold and transfer system valves shall be closed and lock-wired.
- B. After sea chest blanks are installed and proven tight, close all sea valves tightly, chain the valves and padlock them to prevent accidental operation. Manufacture and install plastic, engraved placards reading, "BLANKED OVERBOARD". Provide the Owner's Representative with two (2) keys for each padlock. Each padlock shall be heavy duty, commercial brass, punch marked with an identification number on the side of the padlock and on both keys for padlock. Each padlock will have a different number.

Provide two (2) sets of keys on different key rings and four key lists with identification numbers, location and valve identification to the Owner's Representative.

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635 HAZARDOUS MATERIALS SURVEY

Prior to cleaning of vessel, Contractor shall arrange and provide labor, materials, equipment and supervision to conduct and complete, in conjunction with Owner's Representative and/or his representative, the Hazardous Material Survey and Ship Condition Report.

Upon completion, Contractor shall provide Owner's representative with report of conditions found. On owners supplied form found in "Appendix C".

636 FINAL CLEANING OF VESSEL (ABS/USCG)

Upon completion of vessel's deactivation activity and prior to the vessel's return to the JRRF, furnish necessary labor, materials, equipment and supervision to completely clean all of the following spaces, including the inside and outside surfaces of all port lights and windows:

636(A) STATEROOMS AND OFFICES

All bulkheads and overhead paneling shall be cleaned with fresh water, cleaning solvent and wiped dry. All desktops, shelves, cabinets, bunks and lockers shall be cleaned in a similar manner.

All shelves containing Technical Manuals, Folders, Notebooks, etc. are to be neatly arranged. All loose paper not relevant to Vessel shall be disposed of, while any papers having relevancy to the vessel shall be neatly stored in a manila envelope in the room where found.

All bed linen (approx. 100 sheets, 50 pillow cases, 50 blankets, etc.) shall be gathered, washed, dried, folded, bagged, itemized, sealed, returned and placed in storage in accordance with the Owner Representative's direction.

636(B) SHOWERS AND WATER CLOSETS

Remove to trash any remaining toilet paper, paper towels, soap and any other personal toiletries left by the previous occupant. Wash down all overhead and bulkhead surfaces with fresh water and cleaning solvent. Scrub and clean all toilet bowls, seats and bases. Clean all washbasins and medicine cabinets. Clean mirrors, interior of medicine cabinet, faucets, soap dishes, etc. Scrub down all deck tiles/flooring with heavy detergent to remove soap scum. Remove all dirt, mildew, etc., and leave dry.

636(C) STOREROOMS, LOCKERS AND HOSPITAL

Wash down all overheads and bulkheads with fresh water and cleaning solvent. Clean all shelves, storage racks, slop sinks, bins, etc., with fresh water and solvent and wipe dry. Scrub and clean decks with heavy-duty detergent and leave dry.

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636(D) PASSAGEWAYS AND STAIRS

Wash down all passageway overheads and bulkheads with fresh water and cleaning solvent to remove grease and stains. Wash down glass enclosures on bulkheads in passageways at all deck levels. Wash down all lighting fixtures and globes, or lens, inside and out.

Clean all interior louvered grills and diffusers. Scrub all passageway decks with heavy duty cleaning detergent to remove any/all grease and grime. This item includes all stairwells and interior fire stations.

636(E) GALLEY, PANTRIES AND MESS ROOMS

All loose galley and pantry utensils, all crockery, all pots, pans and Trays shall be gathered, cleaned thoroughly, inventoried, boxed, sealed, labeled and placed in storage in accordance with the Owner Representative's direction.

All remaining equipment; sinks, ranges, dish washers, mixers, counter tops, interior and exterior, shall be washed down and left clean and dry.

Range tops shall be cleaned, stoned and left with a light coating of vegetable oil on the surfaces. Range interior to be de-greased and cleaned. Deep fryer shall be emptied and cleaned.

The exhaust canopies shall be de-greased and cleaned. Replace screens. All exhaust and wall-mounted shall be cleaned.

All galley lighting fixture lenses shall be removed, degreased and cleaned inside and out. Refrigerators shall be defrosted and interiors and exteriors cleaned and doors wired open.

All icemakers shall be blown out and cleaned inside and out. All decks and drains shall be washed down, cleared and blown down. All bulkheads shall be washed down. Secure all loose and adrift gear and chairs in crew and officer's mess and lounge areas for tow.

636(F) MACHINERY SPACES

Machinery spaces shall include: anchor windlass room, all motor generator rooms, all elevator machinery rooms, all electrical rooms, all fan rooms, steering gear room and escape trunk, CO2 room, cargo holds, forward and aft ramp areas, bow thruster room, emergency generator room and engine room.

All surfaces within the above machinery spaces shall be thoroughly de-greased and cleaned. All foreign material such as fuel oil, grease, rags, water, dirt and

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loose scale shall be removed and disposed of in accordance with all local, state and federal ordinances and areas left clean and dry.

Cleaning shall include beams, ladders, ladder dirt shields, stringers, gratings and grating supports, piping, bilge wells, external surfaces of machinery, uptakes, waste heat boiler, machine shop and water closet.

636(G)ENGINE ROOM BILGES AND FLOOR PLATES

De-grease and wash the engine room bilge areas. De-water and remove all debris from bilges and leave dry. Dispose of oily waste in accordance with all local, state and federal ordinances.

636(H)WEATHER DECKS

All weather decks, houses, housetops, ladders, hatches, rails and stack are to be cleaned. All grease deposits, trash and other foreign materials are to be removed and disposed of in accordance with all local, state and federal ordinances. Wash down with fresh water all of the above areas with a nozzle pressure of 70 PSI using a 1-1/2 inch fire hose. All deck drains and scuppers are to be cleared and proven as running free.

Upon completion of all cleaning, provide inspection of all of the above for Owner's Representative and MARAD Representative for approval. Upon approval and at least 48 hours prior to the vessel's departure from the Contractor's facility, the Contractor shall provide for an inspection for issuance of a De-ratting Certificate. Original and four (4) copies of the certificate shall be delivered to the Owner's Representative prior to the vessel's departure.

637 FLOOR COVERING PROTECTION

Upon completion of all industrial activity, when directed by the Owner's Representative and before the vessel's final departure from the Contractor's facility, accomplish the following:

- A. Remove all temporary protective floor covering to scrap.
- B. Clean, wax and buff decks throughout vessel.
- C. Clean, mechanically shampoo and dry the carpeting.
- D. Replace protective floor coverings as listed below with Contractor-furnished vinyl-coated fabric of 1G-13-9 Forest Green Taffeta (or equal in style, warranty and guarantee). The fabric comes in 30 inch and 60 inch

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widths and is to be installed bulkhead to bulkhead with continuous duct tape on both edges of fabric.

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

Areas to be covered with vinyl-coated fabric are:

- Interior passageways
- Galleys
- Mess Rooms
- Lounges
- Master's Office
- Chief Engineer
- Pantries
- Galleys
- Wheelhouse
- Stairwells

638 WATERLINE MARKINGS

Upon completion of all work and final ballasting, Contractor shall provide all labor, equipment and materials to paint waterline reference markings at vessels bow and stern as follows:

- Four (4") inch wide stripes are to be painted along the waterline extending thirty-six (36") inches from bow and rudder towards amidships on the port and starboard sides of the vessel. A second stripe of same size is to be painted three (3) feet above each of the first stripes.
- Stripes are to be painted on with two (2) coats of Contractor furnished Scotchlite (S368N) yellow, reflective, fire hydrant paint (or equal), allowing suitable time for drying between coats.

639 SHIP CONDITION (PHASE IV RETENTION)

Forty-eight (48) hours prior to the ship being towed from the Contractor's facility, the Contractor, Owner's Representative and/or his representative and JRRF personnel will make a joint survey of the ship from stem to stern and bilge to top of the wheelhouse surveying the general condition of the ship.

The inspection is to identify any items that may have been missed for which the Contractor is responsible in order that they may be completed prior to the tow.

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Make the ship ready for tow to the JRRF mooring site. Contractor to install exterior rudder locks and shafting locks in conjunction with Item 641.

640 ACTIVATION OF ALARMS (ABS/USCG)

In anticipation of the vessel's return to lay-up under the MARAD lay-up program, re-install existing fire, flooding and intrusion alarm systems. See Appendix F for drawings of existing fire, flooding and intrusion alarm systems drawings.

Conduct tests of fire, flood and intrusion alarms to include demonstration of both audible, visual alarms and strobe lights for the Owner's Representative and/or his representative.

Upon satisfactory demonstration to Owner's Representative and/or his representative that all systems are correctly installed and function properly, secure all systems at the control panel and leave ready for activation upon the ship's arrival at JRRF.

Upon vessel's arrival at JRRF, provide the services of Gately Communications Co., 501 Industry Drive, Hampton, VA 23661, (757) 826-8210, to ensure proper operation of Fire, Flood and Intrusion Alarm System between vessel and JRRF base unit.

641 TOWING (ABS/USCG)

Install Rudder and Shaft locks.

- A. Shaft Lock consists of two pipe beams with eyes on ends to be secured to padeyes on rudder and hull. Beams were fabricated for circumstance and are port and stbd. specific. Rudder must be adjusted for proper fit of each component.
- B. Shaft Locks are two spade plates, one for each shaft. Corresponding coupling bolt nuts must be removed for installation. Spade end fits into recess under shaft in hull beam. Replace nuts and harden after locks are in place.

Provide tugs (number of tugs to 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. Tow the vessel as a dead ship in accordance with the MSO COTP policy letter from the Contractor's facility to 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.
- B. 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

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- have a minimum notification of five working days with updates every 24 hours. 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.
- C. 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.
- D. 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.
- E. Each person is required to have all safety equipment including steel-toed work shoes, hard hat 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.
- F. 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 as being assured.
- G. Should the need arise for the use of tugs to move the ship, including shifting piers at the Contractor's facility, movement will be for the Contractor's account.
- H. While vessel is under tow in open, unrestricted waters, provide towboats sufficient to tow vessel at average voyage speed of six knots, and to meet the USCG regulations.
- I. Notify local USCG, of each respective ports, of any ship movements.
- J. The following is provided as general minimal guidelines for all phases of towing vessel (both arrival and departure towing):
1. **Weather** - Always check, and heed, the weather forecast for the entire route of your tow.
 2. **Anchors** - Ensure anchors on the vessel being towed are rigged and ready for letting go.

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3. **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.)
 4. **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.
 5. **Towing Plan** - Towing companies should file a towing plan with the Coast Guard offices in the ports of exit and entry and one (1) copy to Owner's Representative.
 6. **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.
 7. **Helicopter Assistance** Ensure adequate stand-by provisions/contracts are available should emergency helo assistance be required.
 8. **Water Taxi/Launch** - Ensure adequate stand-by provisions/contracts are available should a water taxi/launch service be required.
 9. **Certificates** - Supply Owner's Representative with copies of Regulatory Body clearances for tow.
 10. **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.

Cape Lambert

*DEACTIVATION
SPECIFICATION*

APRIL 2002

APPENDICES

APPENDIX A

CLS BID COVER LETTER

To: Prospective Bidders:

Crowley Liner Services, Inc. invites your proposal for the deactivation and lay-up availability of the Cape Lambert 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.

Patricia L. Murphy

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 | Silicone Alkyd, Urethane | SSPC SP-6 SSPC SP-12/WJ-3 | 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 Product Name Product Name | Sil. Alkyd Urethane | Product Name Product Name | (1) coat high solids epoxy 65% solids minimum or (1) coat surface tolerant high solids epoxy | 4 | 100 | 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 | | | | | | | | | | |
| | 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 Non-Skid as appropriate | 40 | Topcoat: (1) coat high gloss modified (acrylic) epoxy or Non-Skid as appropriate | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 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 | | Solvent-borne Modified Waterborne | Galvosil 15689 None | Sil. Alkyd | None | | | | | | |
| | Hempadur 45159 * | 5 | | | | | Hempadur 45159 * | 5 | | | | Urethane | Hempathane 5595U | | | | | | |
| | Olympic 76600 | 5 | | | | | Hempel's 558US | 2 | | | | | | | | | | | |
| | 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 | | | | | | | | | | | |
| | 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 | | 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 | | | Zinc Clad IV | Urethane | | | | | | | |
| | Seaguard A/F P30 Series | 4 | | | | | B70 Series/B60V15 | 3 | | | Zinc Clad XI | | | | | | | | |
| | Seaguard A/F P30 Series | 4 | | | | | | | | | | | | | | | | | |
| | | Total DFT (min) | 16 | | Total DFT (min) | 10 | | Total DFT (min) | 10 | | | | Polyurethane | Acrolon 218 HS | | | | | |
| | | | | | | | | | | | | | | | | | | | |

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 | |
| 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 | 40 |
| | (2) coats alkyd primer | | (2) coats surface tolerant | | (2) coats surface tolerant | | (2) coats high solids epoxy | | (2) coats high solids epoxy | | (x) coats high solids epoxy | | (x) coats high solids epoxy | |
| 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) | 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)

- Hull and Superstructure: Haze Gray overall
- Decks and
- Cargo Gear, Kingposts, Ro/Ro Ramp structure: Haze Gray fwd, upperworks black aft of stack
- 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 | 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 Sovapone Mastic | 4 | 264 Sovapone | 4 | 264 Sovapone | 4 | 264 Sovapone, 51 | |
| | 65 Sovapone Mastic | 4 | 264 Sovapone | 4 | 264 Sovapone | 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 | | |
| | N11-100 Series Finish | | N11-100 Series Finish | | | | | |
| | 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 | Sovapone 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.

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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

BID PRICING SUBMISSION SUMMARY

| | <u>ESTIMATED</u> |
|-------------------------|------------------|
| SECTION 001-002: | \$0 |
| SECTION 003: | \$0 |
| SECTION 600: | \$0 |
| GRAND TOTAL | <u>\$0</u> |

ITEMIZED BID PRICING

| <u>ITEM</u> | <u>DESCRIPTION</u> | <u>ESTIMATED</u> |
|-------------|---|------------------|
| | SECTION 001-002 | |
| 001 | GENERAL SERVICE | |
| 002 | PRODUCTION SCHEDULE | |
| | SECTION 001-002 TOTAL | <u>\$0</u> |
| | SECTION 003 GENERAL SERVICES | |
| 003(A) | BERTHAGE/WHARFAGE | |
| 003(B) | FIRE PROTECTION | |
| 003(C) | GANGWAY | |
| 003(D) | GAS FREE CERTIFICATES | |
| 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 | |
| | SECTION 003 TOTAL | <u>\$0</u> |
| | SECTION 600 DEACTIVATION | |
| 600 | ACTIVATION OF DEHUMIDIFICATION(D/H) SYSTEM | |
| 601 | ELECTRICAL INSULATION READINGS | |
| 602 | DEHUMIDIFICATION SEALING OF VESSEL | |
| 603 | BALLAST TANK CLEANING AND TREATMENT | |
| 604 | UPPER DECK HATCH COVER TARPAULIN | |
| 605 | TESTING D/H ZONES | |
| 606 | SHIP'S REFRIGERATION SPACES | |

| | | |
|--------|--|------------|
| 607 | IDENTIFICATION OF REMOVALS | |
| 608 | DRINKING FOUNTAINS AND ICE MAKERS | |
| 609 | DRAINING OF PUMPS | |
| 610 | SALT WATER SYSTEMS - DRAINING | |
| 611 | SANITARY SYSTEM | |
| 612 | MARINE SANITATION DEVICE (MSD) | |
| 613 | FRESH WATER SYSTEMS - DRAINING | |
| 614 | GYRO COMPASS REPEATERS | |
| 615 | MAIN DIESEL ENGINES LAYUP & INSPECTION SERVICES | |
| 616 | AUXILIARY DIESEL ENGINES DEACTIVATION & LAYUP | |
| 617 | COMPRESSED AIR SYSTEMS | |
| 618 | PURIFIER LAYUP (QTY 5) | |
| 619 | OILY WATER SEPARATOR AND MONITOR | |
| 620 | COOLERS, CONDENSERS AND HEAT EXCHANGERS | |
| 621 | A/C AND DOMESTIC REFRIGERATION SYSTEMS DISTILLERS (QTY 2) | |
| 622 | (A) MECO | |
| 622 | (B) NIREX | |
| 623 | FIXED & PORTABLE EXTINGUISHING SYSTEMS | |
| 624 | LIFEBOATS AND DAVITS | |
| 625 | INFLATABLE LIFE RAFTS (QTY 3) | |
| | MISCELLANEOUS LIFESAVING EQUIPMENT | |
| 626(A) | SAFETY/LIFESAVING EQUIPMENT | |
| 626(B) | EMERGENCY GEAR | |
| 626(C) | PYROTECHNICS | |
| 627 | NAVIGATION SIDE LIGHTS | |
| 628 | NAME BOARDS (QTY 2) | |
| 629 | NAVIGATION INSTRUMENT COVERS | |
| | LOOSE EQUIPMENT (GFE) STORAGE | |
| 630(A) | DESIGNATED BY OWNER'S REPRESENTATIVE | |
| 630(B) | BRIDGE EQUIPMENT | |
| 631 | BATTERIES (RADIO, EMERGENCY, ALARM & STARTING) | |
| 632 | TANK SOUNDINGS | |
| 633 | DIESEL OIL TANKS | |
| 634 | VALVES - LAYUP | |
| 635 | HAZARDOUS MATERIAL SURVEY | |
| | FINAL CLEANING OF VESSEL | |
| 636(A) | STATEROOMS AND OFFICES | |
| 636(B) | SHOWERS AND WATER CLOSETS | |
| 636(C) | STOREROOMS, LOCKERS AND HOSPITAL | |
| 636(D) | PASSAGEWAYS AND STAIRS | |
| 636(E) | GALLEY, PANTRIES AND MESS ROOMS | |
| 636(F) | MACHINERY SPACES | |
| 636(G) | ENGINE ROOM BILGES AND FLOOR PLATES | |
| 636(H) | WEATHER DECKS | |
| 637 | FLOOR COVERING PROTECTION | |
| 638 | WATERLINE MARKINGS | |
| 639 | SHIP CONDITION (PHASE IV RETENTION) | |
| 640 | ACTIVATION OF ALARMS | |
| 641 | TOWING | |
| | SECTION 600 TOTAL | \$0 |

| | |
|--------------------|-------------------|
| GRAND TOTAL | <u><u>\$0</u></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 EACH</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

| | | |
|--|---|--|
|  <p>CROWLEY LINER SERVICES, INC.</p> <p>RRF SHORESIDE PROCEDURES</p> <p>CONTRACTOR SAFETY REQUIREMENTS</p> | Prepared By: C. Cosgrove | No.: RSS-05 Effective Date: 11/01/01 Page 1 of 5 Revision No.: 0 |
| | Approved By: G. Farnell Signature in Master File | |
| 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.

- 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

MECO AND NIREX LAY-UP PROCEDURES

APPENDIX K

MECO and NIREX Distiller Activating Procedure

MECO

1. Install all plugs and close all vents.
2. Clean preservative off sheaves and install belts. (Total 3)
3. Replenish vapor compressor sump oil.
4. Install piping modifications in the distillate to potable tank line to allow water to be diverted to bilge/ovbd.

NIREX

1. Install all plugs and close all vents.
2. Open shell, remove blocks used to hold shell open and the plastic and copper wire used to keep debris out of plate packs.
3. Remove debris from shell.
4. Flush sea water and distillate circuits.
5. Clean gasket surface of shell and the gasket with acetone. Install gasket using OEM recommended glue. Allow to cure for 12 hours, minimum.
6. Hydrostatically test plate packs to verify gaskets intact. Report leaks that cannot be readily corrected.
7. Close-up the shell and hydrostatically test to 10 psi. using clear fresh water. No leakage allowed.
8. Clean Ameroyal tank of any debris and flush, then test using clear fresh water.

APPENDIX L

LIST OF HULL BLANKS

CAPE LAMBERT 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 ½" 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 |
| | | | |