

# Final



# LAY-UP PLAN

CAPE GIBSON/CAPE GIRARDEAU  
DTMA 8C-00027

## INTRODUCTION

Patriot Contract Services. LLC, As Ship Manager has three primary responsibilities related to returning a RRF vessel to Phase "V" Lay Up after either a Phase "V" Activation or Phase "O" Operation.

1. The Ship Manager will conduct the necessary planning and preparations including development and maintenance of lay-up plans and specifications.
2. PCS will ensure that the shipboard crew will detect and accurately document any and all known equipment and system malfunctions and deficiencies.
3. As Lay-up begins, the Ship Manager will assign a Port Engineer to supervise the lay-up procedures, repairs, and regulatory requirements necessary for an efficient deactivation.

If so directed by MARAD, The Ship Manager will accept the vessel from the operational commander on behalf of MARAD. Operations and/or Activation documents with Fuel Oil data will be recorded with copies sent to the local MARAD COTR and MAR-742.

The Ship Manager will arrange for and coordinate all lay-up services with the appropriate industrial assistance vendors (shipyard, repair companies, etc). The SHIP MANAGER will appoint an agent to administer the duties of arranging pilots, tugs, etc for husbanding the vessel to its berthing. Upon the vessel's arrival, The Ship Manager's local representative will contact regulatory agencies to assure the vessel meets all government guidelines.

Thorough and proper lay-ups are a necessary precondition to successful RRF ship activations and subsequent MSC Operations. Development of comprehensive Lay-Up Specifications by the experienced Ship Manager's staff is fundamental to the success of the lay-up process and subsequent Phase IV Maintenance. The Ship Manager will assign an experienced Port Engineer, who with the assistance of a MARAD surveyor, will draft a lay-up and repair specification; including the Standard Lay-Up Procedures (SLPs). Each Lay-Up plan and specification will differ depending on the after deactivation status of the vessel (ROS, Retention, no crew, fleet sites, etc).

**SHIP MANAGER PERSONNEL.**

**SHIP MANAGER**

Patriot Contract Services, LLC.  
2175 North California Blvd #1000  
Walnut Creek, CA 94596

**Personnel:**

Grant Stewart -	PCS RRF Program Manager	925-296-1909
Jay Mayse -	RRF Port Engineer	510-864-6014
Bobbi Wolff -	PCS Staff Manager	925-296-1906

**Ship Manager's local information:**

**Cape Gibson 510-864-6009**  
**Cape Girardeau 510-864-6043**

Mr. Jay Mayse has been assigned Port Engineer for the Cape Gibson and Cape Girardeau. Mr. Mayse will be the Ship Manager's local contact during Operations. In Case of Emergency, Mr. Mayse's local Home (phone (415) 382-8141.)

The Ship Manager's personnel, with assistance from the local agent, will "husband" the RRF vessel(s); Cape Gibson and Cape Girardeau, during Phase "V" deactivation in the San Francisco area.

**Local Agent during Operations in the San Francisco Bay Area:**

General Steamship

Ph: 510-652-9900

## **A. UPDATING LAY-UP SPECIFICATION.**

The assigned Port Engineer, in collaboration with the vessel's Phase "V" Activation Chief Engineer, would formulate the Lay-Up specification for solicitation. The Chief Engineer's voyage repairs and/or deficiencies would be included with the standard Lay-Up specification drafted by the Port Engineer. The voyage repairs and deficiencies, as noted by the Deck, Engine, and Steward departments to the Chief Engineer, would be input to the MARAD MARTS program.

A pre-Lay-Up sea trial and detailed material condition survey to assess the ship's condition could be performed by MARAD personnel, industrial assistance and Ship Manager personnel, if so directed by MARAD. Any deficiencies found could be included in the Lay-Up Specification.

The Invitation for Bid (IFB) Solicitation of the Lay-Up Specification would be out "on the street" for 30 days minimum. After the final specification has been solicited and additional work is determined to be needed to maintain the vessel's activation status (C-rating) - An amendment to the specification could be drafted and included with the original IFB Solicitation. If additional time is required to allow for bidders to prepare competitive bids on the Amendment, then the Ship Manager will determine extensions.

## **B. IDENTIFYING VOYAGE REPAIRS.**

The best asset to an efficient Ready Reserve fleet is a professional Ship Manager's crew; both shoreside and shipboard. The Ship Manager has instructed its entire staff to have the majority of vessel repairs done by shipboard staff. Any repairs performed by the shipboard crew will be both cost effective and done right because they have an excellent incentive; the crew must live with their ship 24-hours a day. Some Repairs could not have been completed during the voyage due to a variety of reasons; the piece of equipment could not be isolated, lack of parts, or the repair was not in a safe work area, thus the deficiency would require the assistance of industrial vendors.

At the completion of the vessel's assignment, The Chief Engineer (Engine Department) and the Master (Deck and Steward Departments) would provide a worklist; containing all repair items, no matter how minute, to effect a lay-up that leaves the vessel in the best possible state of readiness. Many voyage repairs only surface after the ship leaves port and is able to fully test the machinery and equipment under routine and stressful situations. The Chief Engineer would be the final editor of the repair list. Before the completion of the mission, The Chief would submit the list to the Port Engineer. If there happen to be any outstanding Regulatory items to maintain the readiness of the vessel that could not be corrected prior-to activation or during the voyage, they too would be addressed by the Port Engineer in the Specification for lay-up

## C. PREPARE SPECS FOR ABS AND USCG ITEMS.

MARAD has signed a Memorandum of Understanding (MOU) with the USCG listing items that require certification to afford MARAD the ability to operate its fleet of Ready Reserve vessels safely and in accordance with the United States Coast Guard and the American Bureau of Shipping. The Ship Manager keeps a list of the required certificates that is regularly updated. This list keeps the Port Engineer and the MARAD surveyor advised of any upcoming certificate expiration dates.

When the vessel returns from a government mission, the Ship Manager's Port Engineer will review the Master's and Chief Engineer's voyage reports pertaining to vessel repairs, USCG and ABS survey requirements, etc. The information gathered by the Port Engineer would be organized and assembled into a proposal for repairs (Lay-Up Spec) to be solicited to repair contractors to administer and correct the deficiencies. MARAD would instruct the Port Engineer as to the disposition of the vessel after the mission. This is vital to the final Lay-Up specification because it raises many questions that must be addressed:

- Will the vessel be laid-up dry or wet??
- Staffed with crew or no crew?
- Etc.

This information is critical to a successful planned and effective lay-up.

To identify the problem areas, the Port Engineer will review voyage reports, MARAD input and Pre-activation reports to build the Lay-Up specification. To prepare the document for solicitation, the Port Engineer will utilize years of experience by the Ship Manager's staff. Basic lay-up procedures will be followed and new requirements by ABS and USCG will be implemented in the Port Engineer's Lay-Up Specification

**D. LAY-UP SPECIFICATION COMPLETION.**

PCS, As Ship Manager has employed experienced personnel trained in the FAR, TAR, and MARAD requirements to ensure the Lay-Up Specification is completed accurately and quickly.

1. After the Specification is drafted and edited by the Port Engineer, it is given to the Ship Manager Contracts manager for review, final editing and inclusion of the contract 'boiler plate'.
2. When the Specification has been finalized by the Ship Manager, a copy is forwarded to MARAD's regional office Contracting Office for their comments.
3. Subsequent to MARAD's approval, the Specification is packaged and solicited as an Invitation of Bid (IFB) to all requested bidders.
4. All Repair facility bidders are given the required 30 days to prepare their bids. The sealed bids are received at the Ship Manager's office, accounted for, and opened at a public bid opening by the Ship Manager's Contract team.
5. The Ship Manager notifies MARAD and all bidders of the bid opening results.
6. MARAD then approves the lowest bidder and the Repair contract is awarded.

## **E. SHIPBOARD PREP FOR LAY-UP.**

The Master of the RRF vessel returning from an activation or an operation ensures that the crew assists in preparing the vessel for lay-up. Each Department head delegates through their department various tasks needing to be performed in order for the vessel to be deactivated smoothly.

### **STEWARD DEPARTMENT:**

The Steward Baker would be responsible for all the galley materials (pots, pans, utensils, etc), Linens, consumable stores, and storage rooms. All areas to be cleaned, inventoried, tagged and/or staged for the lay-up. All consumable stores will be either donated, consumed, or trashed.

### **DECK DEPARTMENT:**

The Chief Officer would be responsible for the vessel's topside preparation pertaining to lay-up. Stateroom Keys to be collected by the Chief Officer while Consumables, Expendables, Controlled Equipage, and High Value Items will be inventoried, tagged, and locked away under his/her direction.

### **LIFEBOAT and FIRE FIGHTING**

All Lifesaving and fire fighting equipment stowed in a separate locker.

### **HAZARDOUS MATERIALS**

Any Deck Department HAZMAT to be handled separately and included with the Engine Department HAZMAT, if compatible.

### **RADIO SHACK**

The Radio shack to be secured with all pertinent logs, files, records, code books and publications turned over to the Master, with required copies forwarded to the Ship Manager's office. Often, The ship's Radio Officer would be the first person to depart the ship and thus, the radio shack has to be secured early in the deactivation schedule. High Value Items (electronic, radio testing equipment and tools) to be secured and locked up properly by the Master.

## **E. SHIPBOARD PREP FOR LAY-UP.**

### **ENGINE DEPARTMENT**

The Chief Engineer, with assistance from the First Asst. Engineer, manages the phase down of the Engine Department and the numerous projects required to prepare the vessel for shut-down (draining of tanks and lines, activating alarms and D/H units, etc).

#### **ENGINEERING PLANT**

Several ship's engineers will remain for a number of days to safely secure the engineering plant. Boilers to be off-line and generators secured with shore power hooked up by midnight of the pay off day.

When the boilers are still hot and off line they must be watched periodically and fed with water to prevent "cook off" prior to "cool off". Two days are usually required and the water level must be maintained. All service water systems to be secured, sea valves closed and locked, coolers, heat exchangers and condensers secured. Main unit lube oil and turning gear secured when turbines temperature is down to Engine Room ambient. Leave Turning gear engaged.

#### **ENGINE ROOM/BOILER ROOM AND TANKAGE BOILERS -**

Prior to shutdown of boilers fireside tubes should have been thoroughly blown. This may be done anytime prior to going to lay berth or at sea trial when requested by MARAD.

Boiler Treatment chemicals should be used on the watersides and the boiler per the specifications and recommendations of the Drew Chemical Company and when requested by MARAD. These chemicals will be removed from the vessel during lay-up by an Industrial assistance company for stowage off the vessel. As standard practice, the Port Engineer would request the chemicals be returned to the vessel upon its activation.

#### **TANKAGE**

The Chief Engineer will have to pump and consolidate fuel oil for vessel trim and fuel oil settler retention levels. Lighter viscosity oil should be in the settler tanks, if available and must maintain the minimum of slack FO tanks.

**AIR CONDITIONING & DOMESTIC REEFERS -** All refrigerant in the condensers and lines should be pumped out into a receiver and bottled up. Fill the crank case up with oil for lay-up.

**F. SEATRIAL AND MATERIAL CONDITION SURVEY.**

The Ship Manager shall prepare a pre lay-up seatrial to attain comprehensive information about the vessel's operational status. This seatrial could be performed under mutual consent by MARAD and the Ship Manager. If Required by MARAD, Industrial assistance would be employed by the Ship Manager to check all machinery during the seatrial. A Vibration and Thermographic Analysis could be utilized to check for any deficiencies in the workmanship of the shipboard equipment following a Phase "O" Operation and returning the vessel for deactivation.

To do a complete and thorough material condition survey (MCS) requires a maximum of five (5) days. The likely scenario would be for a MCS team boarding the vessel, following a mission, to complete the survey in 24-48 hours.

The information gathered from a thorough material condition survey could be included in the Lay-Up specification prepared by the Port Engineer with help from the vessel's Chief Engineer and MARAD surveyor.

**G. TEMPORARY BERTHING AND HUSBANDING.**

PCS, as Ship Manager, has been assigned the CAPE GIBSON and CAPE GIRARDEAU which are "OUPORT" berthed vessels. Their "home port" is Alameda, Ca. After any call-outs, the vessel(s) would normally return to their berths in the Bay Area. After they have returned to their Outport berth, the vessel(s) would wait for transferring to the awarded shipyard for deactivation repairs.

All husbanding will be performed by the Ship Manager's personnel assigned to the outport location.

In the event there is a reassignment of the outport berthing, the Ship Manager shall utilize it expertise in husbanding to await the new positioning from MARAD.

## H. OUTFIT LIST DISPOSAL AND/OR SECURING OF:

The Ship Manager will provide to remove and secure all stores. In the event spares had been ordered during the mission, The Port Engineer shall receive these spares in Lay-Up Phase "V" for MARAD. Spares to be inventoried, marked and stowed with the RRF-ECSMIS and updated through PC-SAL.

Arms/Ammunition, Medical stores and Consumable Steward stores/provisions, such as fresh and frozen meats, produce, vegetables and foodstuffs would be off loaded in accordance with MARAD directives. If the vessel purchased stores overseas, these stores have to be quarantined and inspected by the FDA and/or USDA. The governing agency shall determine the stores consumption onboard the vessel or disposal from the ship.

Controlled equipment will be physically inventoried, verified intact, and locked away. When necessary, the Port Engineer may apply a MARAD seal.

Hazardous and other controlled substances would be handled per applicable regulations.

### SHIP'S STORES: (Deck, Engine, and Steward)

Ship's Stores; Ship's tools and equipment, including emergency gear, lifeboat and survival equipment, shall be gathered and secured by each department head. The methods for accomplishing security may vary depending on the circumstances associated with the deactivation. The point to be made is to protect the Government Property and its interests.

### VESSEL SPACES AND GARBAGE

All galley/pantry areas will be scrubbed and dried. Crew quarters are to be stripped, cleaned and prepared for lay-up. Wet garbage/plastics/dry trash would be separated and tagged with contents. The trash and garbage shall be handled and disposed as per applicable regulations.

Reefer boxes must be cleaned, dried out with gratings up, etc. The doors left open and blocked to relieve hinge loading. Secure the walk-in, reach-in and portable container type reefer boxes.

The Ship Manager may use industrial assistance to assist shipboard personnel during these cleaning tasks with MARAD approval.

### SHIPS PROVISIONS (REFRIGERATED)

Due to government requirements; meat, dairy and similar food products purchased overseas are forbidden to enter the United States. Any foodstuff coming in contact with the foreign purchased food stuffs will be examined. If warranted, Proper arrangements for disposition shall be made for all provisions and all other dry stores off loaded according to MARAD directives. Receipts would be obtained for all dispositions.

## **H. OUTFIT LIST DISPOSAL AND/OR SECURING OF:**

### PILFERABLE EQUIPMENT

High Value Items not included in the Controlled Equipage listing will be secured and sealed by the assigned Port Engineer. Highly pilferable equipment might include; tools, gauges, binoculars, radios, etc., used in the day to day activities of the vessel.

### CONTROLLED EQUIPAGE

The Ships Controlled Equipage will be physically inventoried, verified and locked safely away. These storage spaces would be sealed and marked by the Port Engineer. The Port Engineer shall be responsible for the Controlled Equipage as outlined in this contract.

### SLOP CHEST

The disposition of slop chest material will be undertaken by the Ship Manager personnel and handled within the Ship Manager's organization.

### FIREARMS

An inventory of serial numbers of MSC or MARAD provided small arms shall be conducted by the assigned Ship Manager's Port Engineer. The Port Engineer will then in turn return these arms to the appropriate government representative. The records indicating possession and subsequent disposition of firearms will be kept with the vessel, the Ship Manager, MARAD, and the MSC representative responsible for receiving the vessel's arms and ammunition.

### NARCOTICS AND MEDICAL STORES

All medicinal narcotics must be disposed of per the applicable rules. Receipts and sign offs are necessary for tracking and recording. MARAD COTR assists Ship Manager in determining how and where to dispose of controlled drugs. Often these supplies are "cross decked" to another government owned or operated ship. This method of removal also applies to reefer stores, dry stores and slop chest items, since these are now Government owned supplies and equipment. The necessary property transfer records are maintained on file aboard the ship and in the Ship Manager's office and subject to MARAD audit.

### HAZARDOUS MATERIALS

Any HAZMAT must be identified, inventoried and stowed or disposed-of according to the applicable EPA, State and Local Regulations. The Ship Manager's Port Engineer would be responsible for the stowing of HAZMAT if The disposal of such Hazardous Materials is normally accomplished in conjunction with the repair contract since the yard is normally set up to dispose of such Hazardous Materials.

## **I. PHASE DOWN OF CREW.**

Obviously, It is a necessity to have the crew assist in the vessel's lay-up. Their help allows the vessel to be prepared for any necessary repairs and procedures to be done through Industrial assistance.

It is understood that under most conditions the majority of the crew will be terminated (signed off) on the first day with the Chief Engineer and other key crew members remaining temporarily to assist outside contractors and complete the vessel shut-down. A skeleton crew (Master, Chief Mate, Chief Engineer, Assistant Engineers, and Steward) employed only to manage the repairing, cleaning, stowing, and securing of the vessel and its equipment. The Chief Engineer probably being the last crew member because of the position's knowledge of current necessary repairs, as the vessel enters deactivation and lay-up.

The housekeeping aspect to be completed within three or four days from the time of vessel shut down. All dirty linen inventoried, bagged, tagged and sent out for cleaning, laundering, and then received back by the assigned Port Engineer.

Phase V Lay-Up will start upon payoff of the crew. Key shipboard personnel will be phased out in accordance with approved Lay-Up plans not exceeding 15 man-days or 120 hours. At which time, Ship Manager shore staff (Port Engineers) will administer the duties of Lay-Up. The Lay-Up period shall only last a maximum of 20 days in the case of the Girardeau, and 5 days for the Gibson, unless extensive USCG regulatory work or there is a need for major industrial work.

Upon the completion of systems hookups at the lay berth, the vessel will enter the Maintenance phase: Phase IV. All changes in ship phases will be documented between the Ship Manager and MARAD for proper funding requirements.

## **J. SECURING PLANT AND MACHINERY.**

As the vessel prepares for lay-up, its Chief Engineer will draw upon the services of the remaining department heads and any additional Ship Manager's staff to secure engines, equipment and machinery. The skeleton crew will also prep all equipment and motors for the lay-up.

During securing, if any deficiencies are found, they will be communicated to the Chief Engineer and then the Ship Manager Port Engineer. Deficiencies will be entered into the MARAD MARTS system and possibly included in the Port Engineer's Lay-Up specification after discussions with the MARAD surveyor.

## **K. LAY-UP EQUIPMENT STATUS.**

The majority of the "lay-up" equipment is stowed on the vessel, while some equipment must be inventoried and warehoused. Any surplus "lay-up" equipment will be warehoused either in a MARAD facility or a warehouse at the selection of the Ship Manager.

The CAPE GIRARDEAU and CAPE GIBSON are presently outported in the San Francisco Bay Area. Following any government exercise, all the necessary "lay-up" equipment would be available to the ships at their respective berths upon their return. In the unlikely event the vessel is given a new lay-up location, other than where the activation occurred, the "lay-up" equipment should be transported to the vessel. The local MARAD surveyor and Port Engineer would oversee the positioning of this equipment.

When a vessel is placed in Phase "V" Deactivation with no ROS or retention crew aboard, the vessel is fitted with a variety of equipment (D/H units, alarms, etc.) to guarantee the vessel's readiness if there is a NO-NOTICE Activation and possible tour of duty. The Ship Manager's Port Engineer would enlist the help of the MARAD Surveyor to ascertain the possible re-assignment of the vessel after its mission to monitor the Lay-Up equipment and its availability.

**L. FINAL LAY-UP BERTH.**

The CAPE GIRARDEAU and CAPE GIBSON are outported at Alameda Point, Alameda, California. After any activations or operations, the vessel(s) will be returned to their original outport berth(s). The Ship Manager's personnel will oversee the movement of the Ready Reserve vessel back to its location for Deactivation and then to Phase IV Maintenance phase.

In the event the vessel requires husbanding, the Ship Manager will assign its local representative agent to handle these arrangements keeping the local Ship Manager's Port Engineer apprised of the vessel's status.

**M. PROPER MOORING AT BERTH SITE.**

According to United States Coast Guard regulations, the proper mooring of the deactivating vessel will comply with standard regulations outlined for the size and classification of the Ready Reserve vessel. A diagram listing the lines, cables, and fendering, with a copy sent to the local US Coast Guard office for compliance, is the rule.

It shall be the responsibility of the assigned Port Engineer to ensure that the vessel is properly moored at the berth site. The Port Engineer will enlist the help of the Ship Manager's Port Captain or the ship's Activation Master to guarantee the vessel is properly "tied-up".

## N. ACTIVATION OF ALARM SYSTEMS.

The onboard alarm panel is located on the Main Deck cross passageway of each. Any alarm that occurs will sound a loud audible horn and activate a strobe light on top of the vessel's bridge. A red light will denote Fire, a blue Flooding and an Amber light will identify an Intrusion Alarm.

All responding personnel shall check this alarm panel first to identify the type and location of the problem. Silencing the horn can be accomplished by moving the toggle switch to the down position. Access into the vessel(s) is only afforded by a Master key entrusted to the following persons on the list below:

1. Mr. Jay Mayse Port Engineer, PCS
2. Mr. Leonard LaGrappe MARAD Surveyor

The Alameda Point Fire Department and Security Department have been given Alarm Notification Procedures to follow in the event of an alarm. See Appendix A.

### FIRE

The CAPE GIRARDEAU and CAPE GIBSON are both equipped with Smoke Detectors and Fire Alarms throughout the vessel. Upon arrival at its berth, the vessel(s) will have these alarms activated. Routinely, all alarms are checked by the assigned Port Engineer. In the event, there is an assigned ROS crew, they will perform the monitoring of the alarms.

Each vessel under the direction of this Ship Manager and per USCG regulations has an approved "Fire Control Plan" aboard. The fire plan is stowed in a clearly marked metal weather tight tube affixed permanently at the vessel's gangway. The fire plan shall include the location of all exits, fire fighting equipment, fire hoses, portable fire extinguishers, fire pumps, piping, valves and shoreside fire hydrants' positions.

### FLOOD

Both ships are equipped with early warning signals indicating flooding on the vessel. The primary alarms are located in the Engine Room (Port and Starboard), Aft in the shaft alley and Forward in the Bow thruster. Any flooding in the Cargo Holds would require personal inspection during the required "walk-throughs".

## **N. ACTIVATION OF ALARM SYSTEMS.**

### INTRUSION

Intrusion Alarm systems would be started when the vessel is deactivated and the vessel has no crew aboard. The Alarm system is armed with door switches, motion detecting, and/or infra-red sensors when there is no supervision aboard the vessel and the vessel is highly at risk of theft, pilferage, and/or terrorism.

### DEHUMIDIFICATION

There is no present dehumidification alarms to be activated on the CAPE GIRARDEAU and CAPE GIBSON. The dehumidification systems on the vessel(s) are monitored regularly by the Ship Manager's assigned Port Engineer. Readings would be taken routinely to maintain a level of 38-44% relative humidity.

### CATHODIC PROTECTION SYSTEMS (CAPAC system or CPS)

There is no alarm for the Cathodic Protection System. This system will be checked regularly by either the Marad Surveyor or the Ship Manager's elected Port Engineer during routine tours of the vessel. After deactivation, the checking of the Cathodic protection will depend upon MARAD's decision to exercise its option during Phase IV Maintenance. As the vessel is deactivated, it will be the responsibility of the Port Engineer to check the CPS monthly.

## O. MULTIPLE LAY-UPS AND BERTHING.

The Ship Manager will follow the same exact format when exercising a multiple lay-up. A Port Engineer will be assigned with additional support coming from within the Ship Manager's shoreside staff.

The CAPE GIRARDEAU and CAPE GIBSON are berthed at Alameda Point, Alameda, California. Proper Moorings are dependent upon each specific berth and its relation to the navigational channels.

**Note:** Vessels may be side by side in a “nested” configuration or are subject to shifting to alternative alongside berthing. status of exact moor is flexible in accordance with MARAD’s berthing availability.

## **P. CONCLUSION.**

The Laying-Up of a MARAD vessel is very important to the Ready Reserve system. The Ship Manager has gained years of experience managing numerous lay-ups, activations, and operations and knows the importance of a good lay-up. When a vessel is laid up properly, it will be activated smoothly, quickly, and efficiently.

A Lay Up Plan is heavily dependent upon people; the Ship Manager team, the Maritime Administration staff and finally the Industrial Assistance companies.

All personnel within the Ship Manager company are essential to a successful deactivation but the key to lay-up is the Ship Manager's local representative; the Port Engineer. The primary assignment for the Port Engineer will be to draft the Repair Specification. The Port Engineer will team up with the local MARAD surveyor and the vessel's Chief Engineer to target specific goals that need to be achieved to prepare the RRF vessel for its next assignment. The Ship Manager's shoreside staff will complement the Port Engineer's efforts to complete and package the repair specification to comply with current government directives. Upon awarding the contract, the secondary assignment of the Port Engineer will be to supervise the repairs and lay-up procedures for the deactivated vessel.

**It should be noted that the lay-up methodology, i.e.; with no crew or with Reduced Operating Status (ROS) crew makes a major difference in HOW the vessel is deactivated. Hotel systems and boiler wet lay-up are the main items to be energized for an ROS crew. The 'cold iron' lay-up prevails when NO crew is assigned.**

