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Department of

Homeland Security

Disaster Relief, Rapid Response Vessels

(Multi-Mission Training Ships)

A fleet of 5

Strategically located around the U.S.

Operated by MARAD

under the Custodial Care of the State Maritime Academies

- California Maritime Academy
- Texas Maritime Academy
- SUNY Maritime College
- Massachusetts Maritime Academy
- Maine Maritime Academy
 - Maine, Massachusetts, New York, Texas, & California



A 1412

2002 6 17

Details

as currently designed

- Length: 570' 173.7m
- Breadth: 79' 24.0m
- Draft: 25' 7.6m
- Gross Tonnage: 18,637 mtons
- Speed: 20 Knots
- Engines: 2 x 5340 kw (15,000 HP)
- Crew: 139 + 94

Current Mission

as designed

- Fleet Support & Land Support
 - Liquid supplies
 - Frozen supplies
 - Dry goods
 - Weapons
 - Medical
 - Back load..... waste management
 - VERTREP



Platform Mods

- Redesign propulsion plant
 - Multi-use
- Increase berthing & messing
 - From 233 to 800
 - Crew
 - Staff / Mission specialists
- Redesign interior spaces
 - Office / Conference / Comms Center Space
- Remove Unrep refueling capability
 - Retain fuel
 - Power generation
 - Helo Fueling
 - Small asset fueling



Mission Goals

- Communications center
 - Onboard broadband satellite communications
 - Containerized “comms” modules / repeaters
 - Wireless / microwave ship shore capability
- Modularized Containerized Hospital (MERZ)
 - 26 standard 20’ containers
 - 50 Bed Emergency Hospital
 - X-ray, scan modules
 - Intensive Care Module
 - Dental Suite
 - Labs
 - Supportable either shipboard or on shore.
- Modularized Gas Turbine Generator Modules
 - Ship or shore based
 - Fuel source from ship

Mission Goals continued

- Onboard Operations center for disaster relief
 - TOTAL CONCEPT READY
 - Totally capable of operating in any area of need.
 - Regional outreach for coordination.
- Deliberate Incident Command Center Plan in advance
- Defined Security platform
 - Protecting the ship as an asset
 - Using the asset to train and develop multi-agency plans
- Multi-Agency Training platform
 - 20 Plus two week at SEA opportunities per year
 - 5 Training sites located around the U.S. for training 10 months a year
 - Totally self supported training facility
- Maritime Academy Training Ship



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Project Sponsors

- Department of Homeland Security
 - USCG
 - FEMA
 - National Communication System
- Department of Transportation
 - Maritime Administration
 - Federal Aviation Administration
 - Federal Highway Administration
 - Federal Railroad Administration
 - Pipeline and Hazardous Materials Safety Administration
 - Surface Transportation Board
- Department of Defense
 - Army National Guard
 - Civil Support Teams
- Department of Commerce
 - USPHS
 - NOAA
 - EPA
 - Army Corps of Engineers
- Department of Energy
- Department Housing and Urban Development
 - Community planning and development

Project Partners

- **Shipyards**
 - General Dynamics NASSCO
 - Kvaerner Philadelphia
 - Ingalls
 - Lurssen
- **Regulatory agencies**
 - American Bureau of Shipping
 - DNV
- **Communications providers**
 - Boeing Connexions
 - SeaTel and or SeaWave
 - Telenor Satellite Services
 - Raytheon / Anschutz or Sperry
- **Safety & response vessel support**
 - Viking
 - Willard Marine or Zodiac or SeaArk
- **Medical Centers & Hospital Support**
 - Johnson & Johnson
 - State Medical Centers
- **Technology and Computer infrastructure**
 - DEKA Research & Technology
 - Technology Systems Inc.
 - Cisco Systems / Dell Computer or IBM
- **Propulsion components**
 - Caterpillar Marine Power Systems CAT / MaK
- **States of Maine, Massachusetts, New York, Texas & California**



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Main Propulsion Changes

- Diesel to Diesel/electric
- Fixed or CP propeller to Pod(s)
- Single Engine Room to Double
- Redundant buss system
- Single Rudder to Pod

Mission Support E-Generation

- Main Propulsion Generators
 - 2 MaK M43C 6 cylinder (5400 kW)
- Service Generators
 - 4 MaK M25 8-cylinder 4x2640 (10560 kW)
- Common split buss split E/Room redundant power plants
 - 1 main and 2 auxiliaries in each E/R
 - Each or both E/R's capable of supplying power to transformer modules (if needed) and to shore.

Mission Auxiliaries

- Water generation / Purification
 - Ship board use
 - Supply to shore Hot / cold /blended
- Heating
 - Ship
 - Shore via heat exchanger
- Waste (Garbage) Management
 - Ship Generated
 - Shore generated

Training Opportunities

- Medical
- Communications
- Electrical generation
- Water Making
- Waste Handling
- Hotel support
- Logistics
- Disaster planning



Medical uses

■ Disaster relief

- Internationally
 - Nationally
 - Statewide
 - Regionally
 - Locally
- The entire 26 units could be donated to a country in need on an immediate basis and replaced from stock units.
 - Upgrades can be accomplished at diverse manufacturing sites off ship.

Medical continued

■ Training

- Staff
 - Technicians
 - Medical teams
 - Support teams
 - First responders
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- At sea using the Hospital Modules
 - In Port using the Hospital Modules
 - Off Site using 1 or more modules at local facility or hospital

