

LPD 17 Amphibious Transport Dock

Executive Summary

- The lead ship was delivered to the Navy in July 2005.
- The Navy Board of Inspection and Survey report cited a large number of construction defects but noted potential for high capability.
- LPD 17 is designed to be more survivable than most older amphibious ships.

System

The LPD 17 class ship is a diesel engine powered ship designed to embark, transport, and deploy ground troops and equipment, and move them ashore by way of air-cushion landing craft (LCAC) or displacement utility landing craft (LCUs), by helicopter, or by MV-22 tiltrotor aircraft.

- The LPD 17 has a floodable well deck for LCACs.
- Flight deck and hanger facilities accommodate the Navy and Marine Corps helicopters and the MV-22.
- It has a Ship Self-Defense System with Cooperative Engagement Capability (CEC) as the combat system.
- Rolling Airframe Missile and NULKA decoy systems provide defense against anti-ship cruise missiles.
- Two Mk 46 (30 mm) gun systems and smaller caliber machine guns defend against small surface threats.

Mission

The Expeditionary Strike Group Commander employs LPD 17 class ships to conduct Amphibious Warfare. In this role, the ship can:



- Accommodate combat and support elements of a Marine Expeditionary Unit or Brigade
- Embark, discharge, and recover LCACs, LCUs, amphibious assault vehicles, and expeditionary fighting vehicles for seaborne assault missions
- Participate in aerial assault with Marine Corps aircraft embarked
- Carry and discharge combat service support elements and cargo to sustain the landing force
- Support non-combatant evacuation operations
- Be loaded and configured to conduct various crisis response missions such as humanitarian assistance

Activity

- The ship underwent no operational testing in FY05.
- The Navy Board of Inspection and Survey completed Acceptance Trials and issued a message report in early July 2005.
- The Navy took delivery of first ship, USS *San Antonio* (LPD 17) in late July 2005.
- The Navy completed the detailed design vulnerability assessment report in September 2005.
- The Navy altered the LPD 17 Acquisition Program Baseline to postpone IOT&E and achieve Initial Operating Capability by August 2007.

Assessment

- The Navy's Board of Inspection and Survey report, released less than three weeks before delivery, described USS *San Antonio* as "highly capable with great potential for future useful service to the fleet." The report also cited lead

ship construction as incomplete. Construction and correction of manufacturing defects continued after delivery. A fitting-out maintenance period is scheduled for January–March 2006. Post shipyard construction plans as well as cost overruns reported by the Navy raise concerns that the lead ship will not have all mission capabilities for IOT&E.

- The Navy presented a Test and Evaluation Master Plan to DOT&E in June prior to announcing a six-month delay in the latest start of Post Delivery Test and Trials. As of November 2005, the Navy had not proposed a viable post delivery schedule or aligned resources to ensure an adequate operational evaluation that includes appropriate Marine Corps participation. IOT&E will be split between the lead ship, LPD 17, and the second ship, LPD 18. The lead ship will conduct the amphibious warfare demonstration; Anti-Air Warfare self defense system capability testing will be split between the lead and second ship. Demonstration of short-range air threat

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defense systems will be done using the Navy's Self Defense Test Ship.

- In the vulnerability assessment report a variety of vulnerability models are exercised to determine the vulnerability of the *San Antonio* class ships to seven threat engagements including a terrorist threat scenario. The testing community for LPD 17 is actively planning for the total ship survivability trial on LPD 17 in FY06 and the full ship shock trial on LPD 19 in FY07. The survivability of the *San Antonio* class ships are designed to be improved over the 1970's-era amphibious ships they will replace, primarily due to:

- Reduced radar cross section signature design features
- Strengthened hull girder design
- Improved bulkhead connections
- Improved fragmentation protection
- Addition of fire insulation at fire zone boundaries
- Maximum use of redundancy and separation for vital systems

Recommendations

None.