
US Navy Towing and Salvage Ship Recapitalisation

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SYNOPSIS

The US Navy is pursuing how to best recapitalise the US Navy salvage and towing ships (T-ATFs and T-ARSs). US Navy organic salvage capability depends heavily on these vessels operated by the Military Sealift Command (MSC). These ships are manned by civilian mariners and augmented by active duty Mobile Diving and Salvage Unit (MDSU) companies, search and recovery capability or other mission packages as necessary. The T-ATF 166 class fleet tug was designed to meet the Navy's need for open ocean tows and the T-ARS 50 class salvage ship was designed primarily for salvage and rescue missions with a secondary towing mission. The T-ARS class was built as active duty US Navy-manned ships; they were transferred to MSC in 2007. There are currently four ships of each class in service. They were all delivered in the early 1980s and are reaching the end of their expected service lives.

BACKGROUND

Following World War II, the Salvage Facilities Act (10 U.S.C. §7361-7364) authorised the US Navy to provide salvage facilities and oil spill response capability for public and private vessels. The Oil Pollution Act of 1990 (OPA-90), as amended, will soon require salvage, marine fire-fighting, and oil pollution response capabilities to be specified in all vessel response plans. Public vessels, while legally exempt from OPA-90, exercise voluntary compliance with the regulations. To this end, in addition to wartime requirements, the US Navy maintains a salvage capability commensurate to meet the Navy's own peacetime needs, support the OPA-90 needs of public vessels, and implementable plans to expand capabilities to meet exigent contingencies and circumstances.

With the above in mind, over the past two decades the US Navy Salvage capability has changed significantly. In 1990, US Navy Salvage was robust with salvage and towing ships and mobile diving and salvage units in a centralised organisation that could independently plan and resource light and heavy salvage operations.

Over the past 20 years the US Navy salvage fleet has reduced from 20 ships and mobile forces of 300-plus personnel, to eight ships and mobile diving and salvage forces of less than 200 personnel. In 1990 US Navy Salvage was centrally organised in two self-sufficient deployable squadrons. Today, the remaining ships and uniformed forces are spread throughout separate parent commands and operational commanders and therefore resource management and operational planning are decentralised.

Today's US Navy Salvage Capability is a 'TRIAD' force that includes:

1. The operational/fleet salvage forces assigned to the two Mobile Diving and Salvage Units under Navy Expeditionary Combat Command (NECC);
2. Salvage and towing ships (T-ARSs and T-ATFs) within Military Sealift Command (MSC);
3. The salvage and ocean engineering, equipment support, and contractor support forces under the Navy Supervisor of Salvage and Diving (SUPSALV) of Naval Sea Systems Command.

These three salvage capabilities are commonly referred to as the TRIAD of US Navy Salvage. This decentralised organisation requires strong interdependence between the Navy salvage triad components to build a complete salvage capability across the range of projected operational situations. This interdependence necessitates continuous integrated tactical training between these key salvage force providers and is a reason the next generation US Navy salvage ship must be versatile and interoperable.

RECAPITALISATION

Beginning the process of replacement for the T-ATF and T-ARS ships, a number of studies were conducted and input gathered from US Fleet operators and various 'customers' as to the mission requirements these ships are and will be called upon to perform. The most cost-effective means by which to acquire this capability is being studied.

Both current US Navy classes (T-ATF and T-ARS ships) are performing as designed and additionally are performing a significant number of the same missions whether it is point-to-point tows or salvage support. Also, the variety of required missions has greatly diversified and now includes submarine rescue, oil spill response, deep ocean search and recovery,

expeditionary diving and salvage support, etc. Because of the extent of mission overlap and the fact that many of these missions utilise 'plug & play' equipment brought on-board for that particular task, incorporation of required capabilities of both the T-ATF and T-ARS into a single class of replacement vessel or T-ATS(x) class is being explored.

With respect to the acquisition itself, as the offshore oil industry has developed and moved into deeper water in the past couple of decades the ships built to support it have become more and more capable. Many of these ships have the bollard pull capable of towing large production platforms and contain inherent capability to support mooring systems and other complex support associated with the off-shore industry. Vessels with large, open decks to carry mission equipment, dynamic positioning, capable ship-board cranes and accommodations for mission operators and technicians are more commonplace. A ship that combines these characteristics would very nearly meet all of the preliminary requirements, and it is hoped that the US Navy can engage industry during the research and development phase.

As a result, the US Navy is reviewing various potential acquisition strategies including Government Owned and Government Operated (GOGO); Government Owned and Contractor Operated (GOCO); or, Contractor Owned and Operated/Chartered (COCO). These options will continue to be reviewed, market surveys conducted and the alternatives analysed over the next year. Additionally, a number of factors associated with

US Navy ship design and acquisition may complicate the effort to procure 'off-the-shelf' or adapt a straight commercial industry design. Space and equipment redundancy specifications, communication capability, command and control space requirements etc, will need to be considered as the Analysis of Alternatives (AOA) proceeds and the US Navy begins to balance the priorities of wartime and contingency operations versus peacetime mission capability.

Regarding operational capability, from the various studies, reports and consultations with all stakeholders, a set of primary and secondary characteristics was developed for the next US Navy salvage ships which are being refined and compiled into an Initial Capabilities Document (ICD), one of the initial steps in the ship acquisition process. The projected ship class characteristics are still preliminary, however, the primary capability requirements being pursued are:

- Increased bollard pull: 135-185 tonnes;
- Increased crane/lift capacity: NLT 55 tonnes;
- Increased and interoperable deck space for deep ocean search and recovery, fly-away saturation diving and submarine rescue systems: 410-505m²;
- Mission accommodations: about 25 crew plus 42 mission personnel;
- DP II/III.

Prepared 26th January 2010 – the requirements and capabilities expressed in this paper are preliminary and subject to change.