Industry Day

"A Towing, Salvage, and Rescue Common Hull Solution for the Fleet"

December 2010

Industry Day Agenda

- Program Office Introduction
- Contracts
- Why We Are Here & Program Overview
- Capabilities and Usage of Existing T-ATF and T-ARS Classes
- History of USN Towing, Salvage, and Rescue
- Potential Common Hull Solution
- Conclusion

Program Office Introduction

PMS325Q – Special Mission Ships

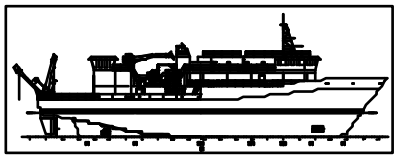
PMS325Q – Special Mission Ships

Acquires operating platforms for unique United States military and federal government missions. Oceanographic and hydrographic surveys, underwater surveillance, missile data collection and tracking, acoustic research and submarine support are examples of specialized ships.

- **USNS HOWARD O. LORENZEN (T-AGM 25) – Missile Range Instrumentation Ship for the Air Force**

- **T-AGS 66 – Oceanographic Survey Ship Stretched Modified Repeat Design with Moon Pool**

- **Ocean Class AGOR – General Purpose Oceanographic Research Ship**
  - **Govt. concept depicted.**



- **T-ATF 166 Replacement Ocean Fleet Tug**

- **T-AGOS Ocean Surveillance Ship**

PMS325 Points of Contact

- PMS325 Program Manager:
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Contracts

NAVSEA Contracts Directorate
(NAVSEA 02)

Rules of Engagement

- IAW FAR 15.201, the purpose of this Industry Day is to perform market research and exchange information to improve the understanding of the Government requirements and industry capabilities.
- Nothing herein is to be construed as constituting any commitment whatsoever on the part of the Government.
- The Navy is not soliciting, nor will the Navy accept, any proposals at this time.
- No recording devices may be used.
- If you are interested in this program, please monitor the Federal Business Opportunities (FBO) website at http://www.fedbizopps.gov.
- Please direct any comments, concerns, or questions regarding this event to Christina Zimmer at christina.zimmer@navy.mil (202-781-1646).

Questions

- No specific acquisition strategy or contractual plans have been developed at this time.
- Technical questions are welcome during presentations. Individual discussions between industry representatives and Government Program Office representatives will not be scheduled.
- The Government will provide index cards to capture questions that cannot be immediately answered during the conference. Electronic mail questions will be accepted by the NAVSEA Contracts Directorate.
- The Government will post questions and responses on the Federal Business Opportunities (FBO) site no later than 30 days after Industry Day.

Why We Are Here & Program Overview

PMS325Q – Special Mission Ships

Why We Are Here - Market Research

- FAR Part 10 requires the Government to conduct market research before developing new solicitation requirements for an acquisition. Results of market research are used to determine whether qualified sources exist and to obtain industry comments and information on future procurements.
- One of the ways the Government conducts market research is to hold an Industry Day. This venue offers a unique opportunity to inform industry of the future T-ATF/T-ARS replacement programs and the Government's desire to obtain a Common Hull solution.

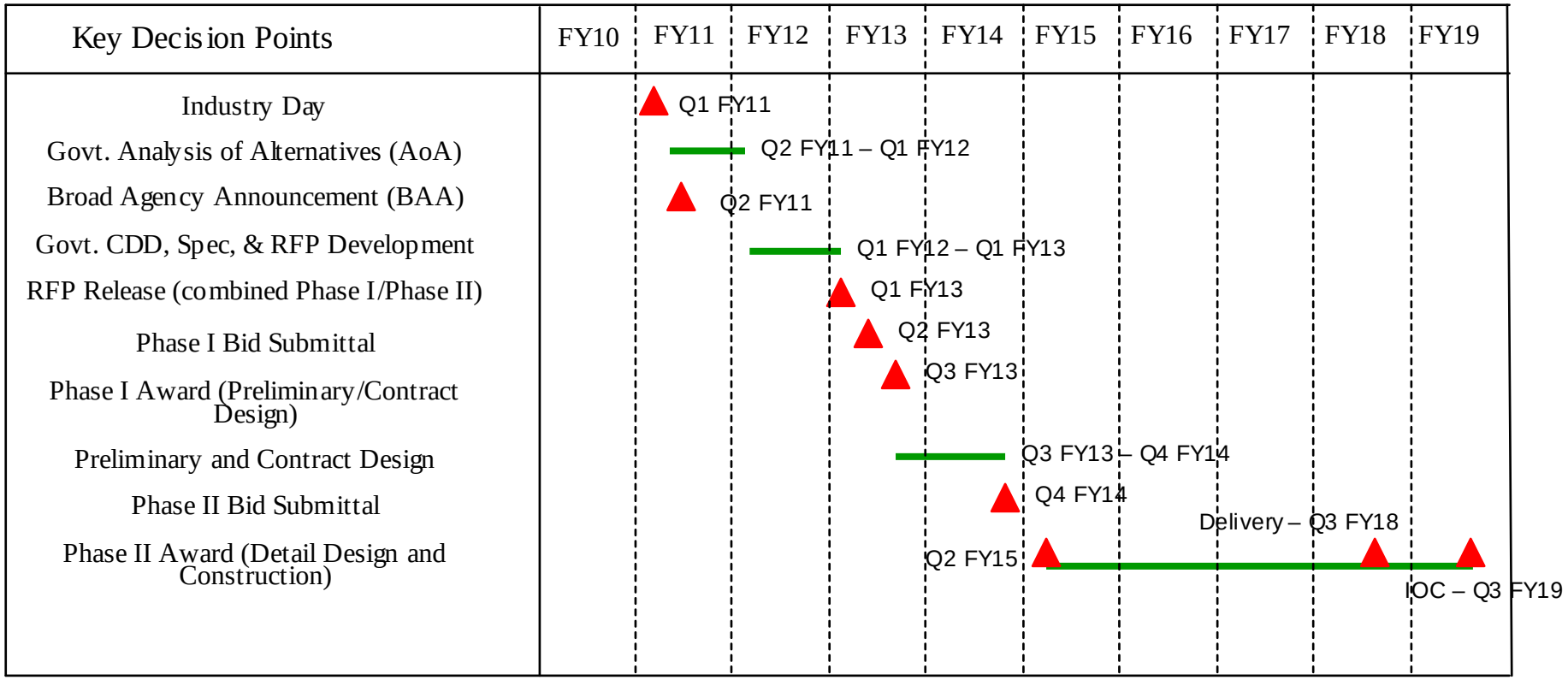
Program Overview

- Navy ocean towing, salvage, and rescue capabilities have been complimented with available commercial assets which has proved successful.
- The current T-ATF 166 and T-ARS 50 classes reach the end of their expected service lives starting in 2020 and 2025 respectively. At this time, the Fleet's organic ocean going tug, salvage, and rescue capabilities will be eliminated, creating US Navy capability gaps.
- The Navy intends to recapitalize the current T-ATF 166 class and explore recapitalization of the T-ARS 50 class as well:
  - Award of the first T-ATF ship for Detail Design and Construction (DD&C) is currently scheduled to occur in FY15 with a total build of four ships.
  - Award of the first T-ARS ship for DD&C is currently scheduled to occur in FY20 with a total build of four ships.
  - The Navy is currently performing market research applicable to the replacement of these ship classes in kind or via a common hull solution that replaces the existing T-ATF and T-ARS classes with a single ship class. Market research will be used to support the Analysis of Alternatives (AoA).
- A Government funded AoA is scheduled to be performed in FY11. The AoA will determine how the Navy intends to recapitalize the capabilities of the retiring T-ATF 166 and T-ARS 50 classes either through a shipbuilding acquisition program, modifying a commercial product, or lease/charter options.

Planned Future Events

- FY11 Broad Agency Announcement (BAA):
  - Following Industry Day, the Government intends to release a BAA seeking existing hull designs which can be utilized with limited modification and accommodate unique Government requirements and mission interfaces.
  - BAA offerors will be requested to identify their capabilities, facilities, and past experience. Approximately 2-4 awards will be given to those respondents deemed capable. The respondents will be tasked to perform a preliminary white paper study showing the integration of the Government requirements into their existing design.
  - Follow on tasking may be offered to those respondents that have identified Government areas of interest as deemed appropriate.
  - These deliverables will be made available during the decision process in order to confirm Industry's capability to provide a common hull solution utilizing their existing design.
- Two-Phase Approach:
  - FY13 Phase I Award to Multiple Bidders for Preliminary/Contract Design
  - Down-select to Single Bidder for FY15 Phase II Detail Design & Construction
- Planned Ship Deliveries:
  - Lead ship: FY18
  - Follow ships: FY19, FY20, FY21

Notional Program Schedule



Government Fiscal Year (FY) runs October 1st – September 30th (e.g. FY11 = Oct 2010 – Sept 2011).

Analysis of Alternatives (AoA)

- AoA trade-off studies scheduled to begin February 2011.
- AoA will determine whether the Navy will recapitalize the retiring T-ATF 166 and T-ARS 50 classes in kind or via a common hull.
- AoA will examine shipbuilding acquisition, modified commercial product, and lease/charter options.
- Key characteristics being evaluated:
  - Bollard Pull
  - Position Keeping Redundancy and Tolerance
  - Unobstructed Deck Space
  - Multipurpose Crane Capacity
  - Off-Ship Firefighting Capability
  - Accommodations
  - Sustained Speed
  - Unrefueled Range

Capabilities and Usage of Existing T-ATF and T-ARS Classes

Military Sealift Command

T-ATF/T-ARS Missions

T-ATF/T-ARS Mission Profile

- T-ATF & T-ARS used interchangeably for majority of taskings.
- “Routine” Operations include:
  - Towing
  - Deep Ocean Search and Recovery
  - Mobile Diving & Salvage Unit Embarked Operations
  - Submarine Rescue Vessel of Opportunity
  - Oil Spill Response
  - Humanitarian Assistance

T-ATF POWHATAN Class

Characteristics

- Length: 226 feet
- Draft: 15 feet
- Displacement: 2260 tons
- Max Speed: 15 knots
- Range: 10,000 miles at 13 knots
- Manned by 16 civilian crew w/ 4 MILPERS comms
- Bollard Pull: 75 short tons

- Accommodations for 20 transient personnel
- 7200 HP; 2 Controllable Pitch (CP) propellers w/ Kort nozzles
- Aviation features: VERTREP or high hover VERTREP depending on helo type (day and visual only)

T-ATF POWHATAN Class

Mission and Tasks

- Perform towing at sea operations including emergency tows.
- Provide fire fighting assistance to other ships.
- Act as support ship for the following operations if augmented with personnel and equipment:
  - Salvage including dewatering and debeaching.
  - Deep diving.
  - Emergency repair.
  - Open sea oil spill pollution abatement.
  - Submarine rescue and intervention at sea operations.

T-ATF POWHATAN Class

Capabilities

- Take position and maintain 4-point moor laid/recovered by another ship.
- 1250 gallon/min off-ship dewatering minimum.
- Receive fuel and stores at sea.
- Launch and recover USCG approved 24 ft rescue boat and 35 ft workboat.
- 10 ton crane capable of handling portable equipment.
- Load and deploy 2 sets of hydraulic beach gear over the bow.
- Space and weight reserves to load and deploy required supporting systems.

T-ARS SAFEGUARD Class

Characteristics

- Length: 255 feet
- Draft: 16 feet
- Displacement: 3300 tons
- Max Speed: 14 knots
- Range: 8,000 miles at 13.5 kts
- Manned by 26 civilian crew w/ 4 MILPERS comms
- Bollard Pull: 60 short tons

- Accommodations for 48 transient personnel
- Diesel engine propulsion in 2 CP propellers w/ Kort nozzles
- Aviation features: VERTREP or high hover VERTREP depending on helo type (day and visual only)

T-ARS SAFEGUARD Class

Mission and Tasks

- Mission: Support salvage operations in close proximity to the shore, including combat salvage, lifting, emergency repair, and rescue towing.
- Primary Tasks:
  - Lift submerged objects up to 150 deadweight tons
  - Off-ship firefighting
  - Rescue and open ocean towing
  - Air diving operations to a depth of 190 ft with recompression facility
  - Emergency underwater repair
  - Refloating stranded ships and other craft
  - Dewatering of sinking/sunken ships
  - Underwater salvage operations (independent and on short notice)
- Secondary Tasks:
  - Perform limited patrol, surveillance, and reconnaissance functions
  - Perform search and surface rescue
  - Collect hydrographic and oceanographic data
  - Detect, identify, and exercise limited self defense against low-flying air penetration, small high speed combatants, magnetic mines, and biological warfare/chemical warfare agents
  - Perform submarine rescue and intervention

T-ARS SAFEGUARD Class

Capabilities

- Maintain moor at a pier, buoy, or alongside another ship.
- Receive fuel, munitions, stores, and provisions while underway.
- Continuous operation in Sea State 6; Limited operation in Sea State 7.
- Repair parts, equipage, and consumables for 90 day endurance.
- Sufficient electrical plant capacity to service full electric load plus provide at least 50 kW to another ship or facility.
- Armament: Stowage for 20,000 rounds of .50 cal as well as blasting charges and detonators and pyrotechnic equipment.
- Shop and storage facilities to enable the ship to effect damage and salvage repair of other ships, self, and service supplemental loaded out equipment.
- 2,500 sq feet minimum storage aft to support loading of salvage and dive operations and supplemental equipment.

T-ATF vs. T-ARS Characteristics

Characteristics	T-ATF	T-ARS
Length (ft)	226	255
Draft (ft)	15	16
Displacement (long tons)	2260	3300
Max Speed (kts)	15	14
Endurance Speed (kts)	13	13.5
Range at Endurance Speed (miles)	10000	8000
Crew (civilian)	16	26
Military Personnel (comms)	4	4
Transient Personnel Accommodations	20	48
Bollard Pull (short tons)	75	60
Crane (short tons)	10	40
Diving System/Recompression Chamber	No	Yes
Aviation: VERTREP or high hover VERTREP; day/visual	Yes	Yes
Propulsion Type	Diesel	Diesel

T-ATF vs. T-ARS Assigned Tasks

Task	T-ATF	T-ARS
Towing - Rescue and Open Ocean	Organic	Organic
Deep Ocean Search and Recovery	Augmented*	Augmented*
Off Ship Fire Fighting	Organic	Organic
Dewatering	Augmented*	Organic
Debeaching	Augmented*	Augmented*
Deep Diving	Augmented*	Organic
Salvage	Augmented*	Organic
Emergency Repair	Augmented*	Organic
Oil Spill Pollution Abatement	Augmented*	Augmented*
Dynamic Lift	---	Organic
Humanitarian Assistance	Augmented*	Augmented*
Submarine Rescue	SRC & SRS	SRC Only
* Act as a support ship if augmented w/ personnel and equipment		

Non-Organic Enabling Systems

Non-Organic Enabling Systems to Support ATF/ARS Missions:

- Submarine Rescue Systems:
  - Submarine Rescue Chamber (SRC) Fly-away System
  - Submarine Rescue Diving and Recompression System (SRDRS)
    - Submarine Rescue System (SRS)
    - Assessment/Underwater Work System (AUWS)
    - Transfer Under Pressure (TUP) *(IOC in 2015)*
- Diver Life Support Systems (Surface Supplied, SCUBA, Recompression Chamber, Saturation *(2013)*)
- Deep Ocean Search and Recovery Systems, including ROVs
- Salvage Equipment (Pumps, Compressors, Welders, etc.)
- Hydraulic beach gear and legs
- Oil spill containment boom and collection systems

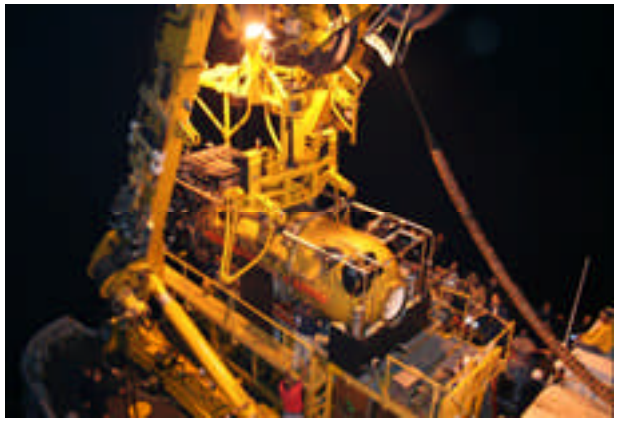
Individual Missions Often Require Multiple Supporting Systems

Submarine Rescue Diving and Recompression System (SRDRS)

- **US Navy's Deep Water Submarine Rescue Asset**

- **Submarine Rescue System – Rescue Capable System (SRS-RCS)**
  - Current capability
  - 16 Rescuees and 2 Attendants (18 total) / Sortie
  - Tethered vehicle (Pressurized Rescue Module – FALCON)
  - Successfully conducted over 220 Personnel Transfers at Depth
  - Interface between equipment and Vessel of Opportunity (VOO) deck are ship interface templates

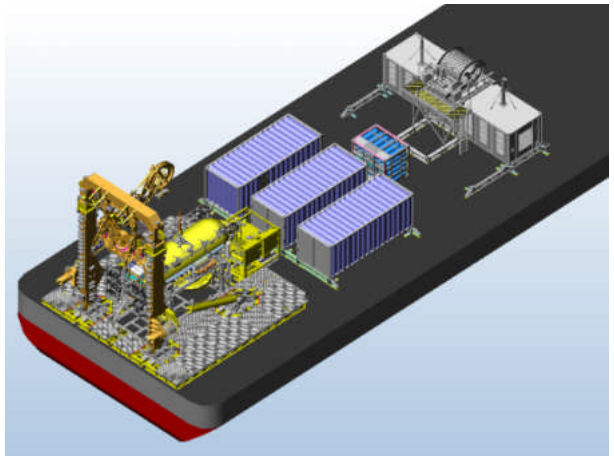
- **Submarine Rescue System – Transfer Under Pressure (SRS-TUP)**
  - Capability to rescue personnel up to 5 ATA (Atmosphere Absolute)
  - IOC in 2015



Top Level SRS Vessel of Opportunity (VOO) Requirements

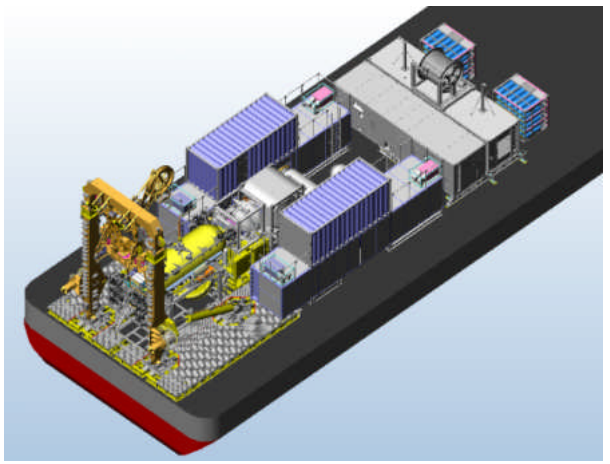
SRS-RCS:

- Deck Space = 33x88 ft
- Weight = 45 tonnes
- # Personnel = ~ 30
- Required Deck Strength = 5 t/m^2
- Sea State
  - Operational SS-4
  - Survivability SS-6
- Position Keeping
  - IMO DPS-2
  - 4-point moor



SRS-TUP:

- Deck Space = 34x98 ft
- Weight = 227 tonnes
- # Personnel = ~ 59
- Required Deck Strength = 5 t/m^2
- Sea State
  - Operational SS-4
  - Survivability SS-6
- Position Keeping
  - IMO DPS-2
  - 4-point moor



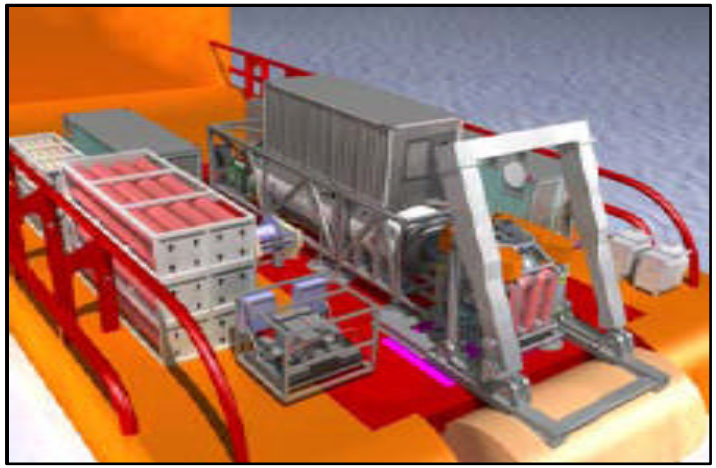
Submarine Rescue Vessels of Opportunity (VOOs)

- Commercial/Naval Vessels Transport SRDRS to Disabled Submarine (DISSUB)
  - **1 VOO for Intervention System**
  - **1 VOO for Rescue System**
  - **Transition to new Launch and Recovery System (LARS) greatly expands eligible VOOs world wide**
  - **Original LARS Ship Interface Template Sets (SITS) configuration remains operational**
  - **New VOO Specification Rev D Nov 2010**
- Potential commercial VOOs include:
  - **Naval Auxiliary**
  - **Offshore Supply Vessels (OSVs)**
  - **Platform Support Vessels (PSVs)**
  - **Anchor Handling Tug-Supply (AHTS) Vessels**

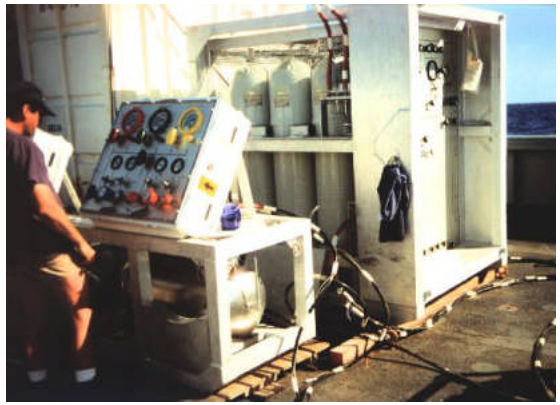
Rapid Access to VOO Essential to Minimize Time to First Rescue

Diver Life Support Systems

Atmospheric Diving Suit



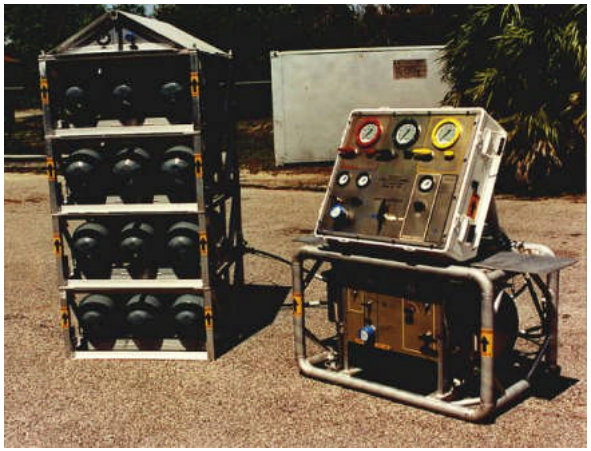
Saturation Fly-Away Dive System (SAT FADS)



Fly-Away Dive System

Transportable Recompression Chamber

Lightweight Dive System



Deep Ocean Search & Recovery Systems

Shallow Water Intermediate Search System (SWISS)

Fly Away Deep Ocean Salvage System (FADOSS) 60-Kip Ship Motion Compensator

Orion Side Scan System

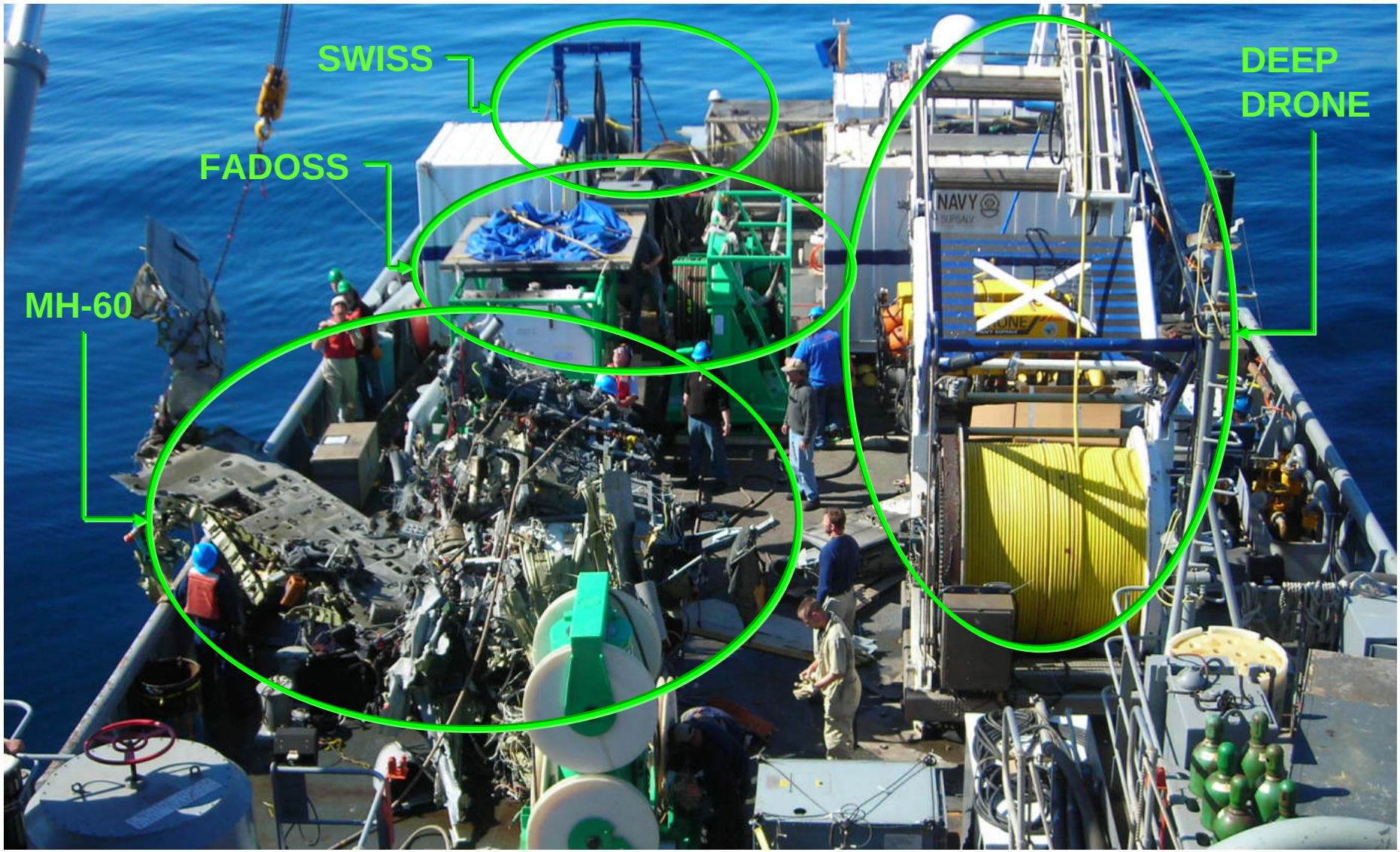
Towed Pinger Locator (TPL)

Magnum ROV

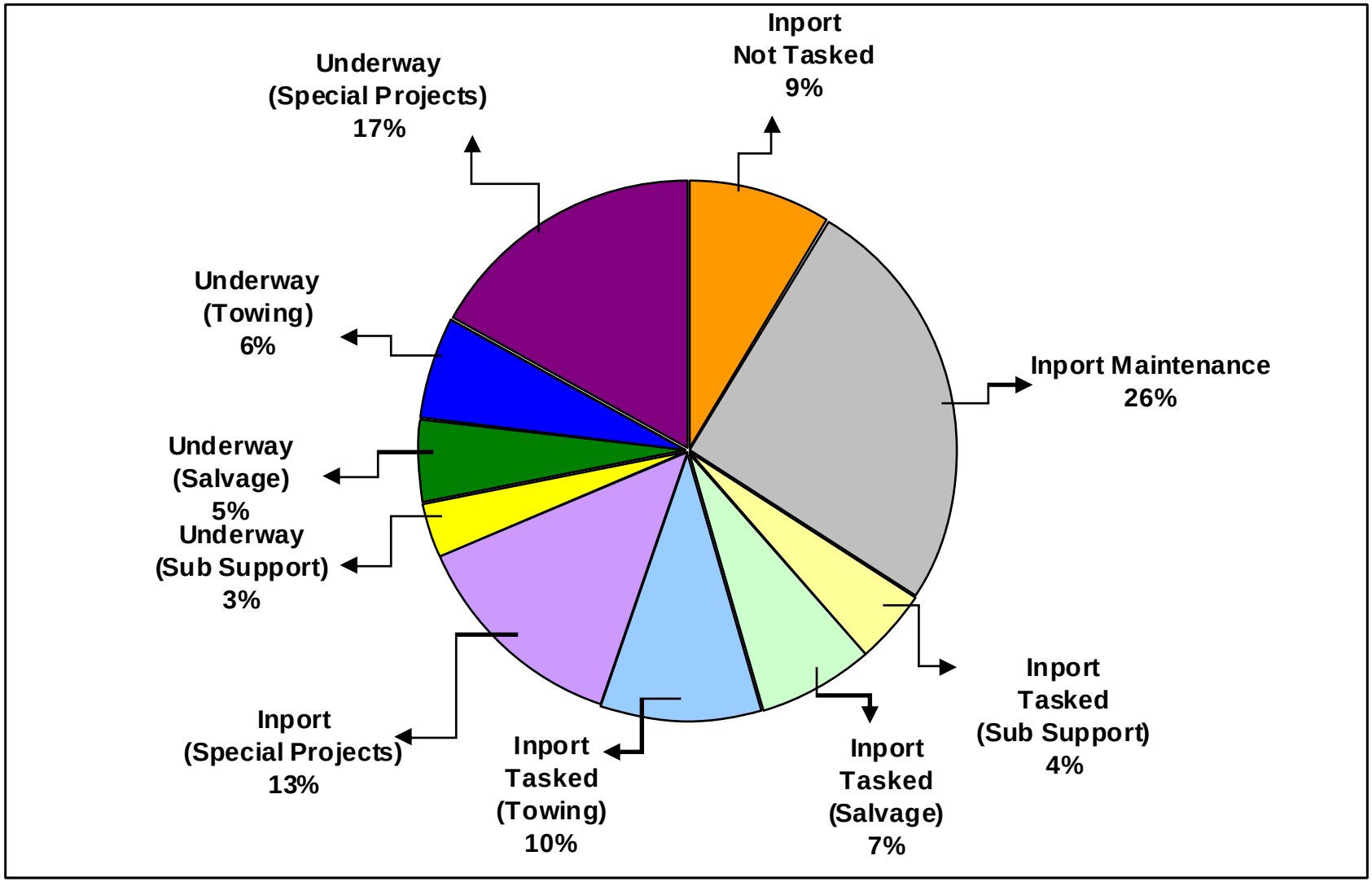
Deep Drone ROV

Cable-Controlled Underwater Recovery Vehicle (CURV) 21

Search & Recovery
(T-ATF)



2009 T-ATF/T-ARS Utilization



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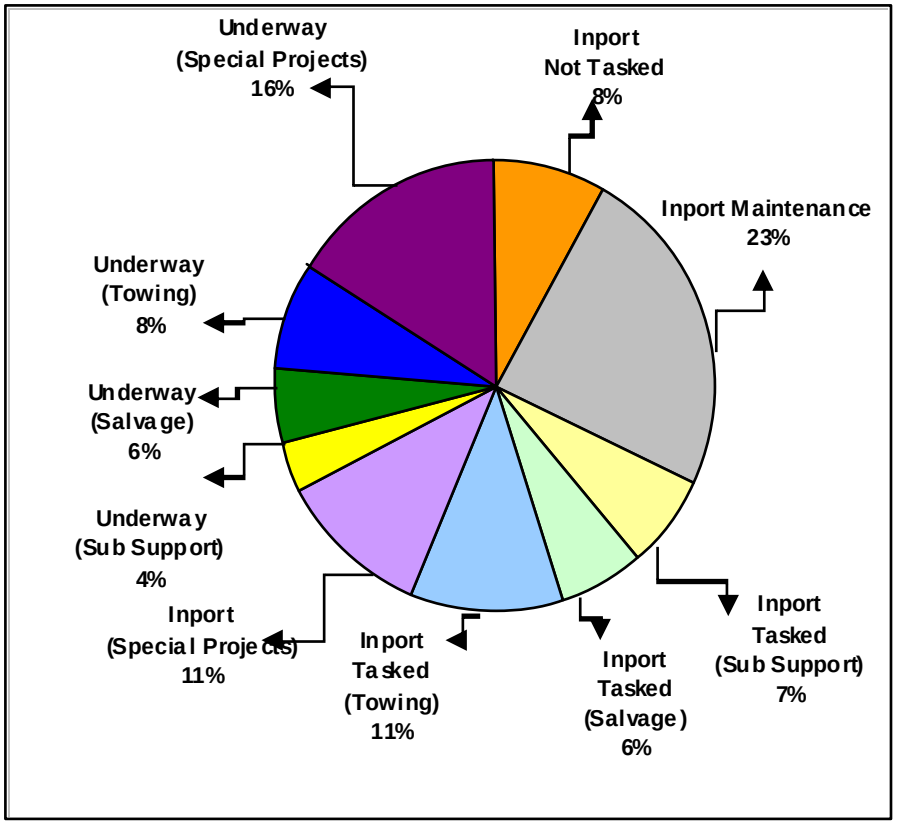
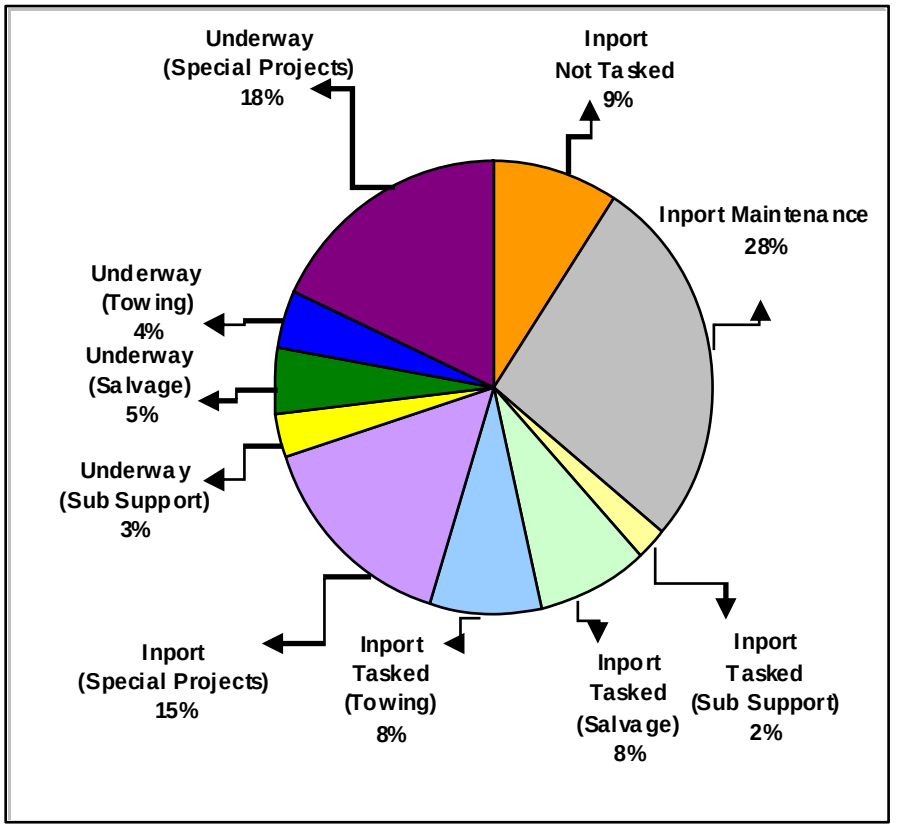


T-ATF



T-ARS

History of USN Towing, Salvage, and Rescue

Supervisor of Salvage and Diving

Naval Sea Systems Command, 00C

Navy Salvage: SUPSALV Assigned Missions

- **Authority**: **10 U.S.C. §7361-7364 (Salvage Facilities Act) authorizes the Secretary of the Navy to provide necessary salvage facilities.**
- **33 CFR Part 155 requires Salvage and Marine Firefighting in VRPs (Voluntary Compliance)**
- **SECNAVINST 4740.1 delegates Secretarial authority of SFA to SUPSALV -** ***"…the Supervisor of Salvage … is delegated all Secretarial authority in [10 U.S.C. 7361-7364] to provide salvage facilities for public and private vessels, and to acquire and transfer vessels and other salvage equipment."***
- **OPNAV 4740.2 is Navy's Salvage Requirement and Policy and directs SUPSALV:**

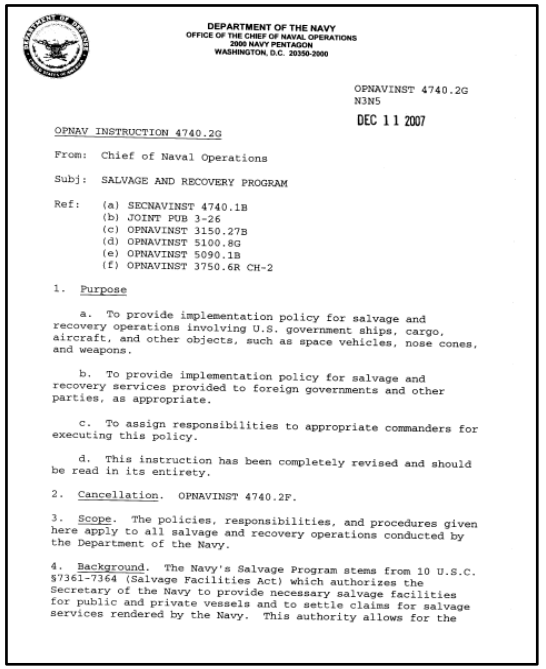
Undersea Ops: "Maintain and operate deep ocean search and recovery assets to a maximum depth of at least 20,000 feet of water."

Salvage Ops: "Assume responsibility for any salvage or recovery operation when so assigned…" and

"Coordinate salvage and recovery services…"

Salvage Support: "Provide Fleet Commanders with equipment and systems to assist in the accomplishment of salvage and recovery missions" and

"Provide for procurement, maintenance, and distribution of salvage and related pollution abatement material to the Emergency Ship Salvage Material (ESSM) bases."



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, D.C. 20350-2000

OPNAVINST 4740.2G
N3N5
DEC 11 2007

OPNAV INSTRUCTION 4740.2G

From: Chief of Naval Operations

Subj: SALVAGE AND RECOVERY PROGRAM

Ref: (a) SECNAVINST 4740.1B
(b) JOINT PUB 3-26
(c) OPNAVINST 3150.27B
(d) OPNAVINST 5100.8G
(e) OPNAVINST 5090.1B
(f) OPNAVINST 3750.6R CH-2

1. Purpose

a. To provide implementation policy for salvage and recovery operations involving U.S. government ships, cargo, aircraft, and other objects, such as space vehicles, nose cones, and weapons.

b. To provide implementation policy for salvage and recovery services provided to foreign governments and other parties, as appropriate.

c. To assign responsibilities to appropriate commanders for executing this policy.

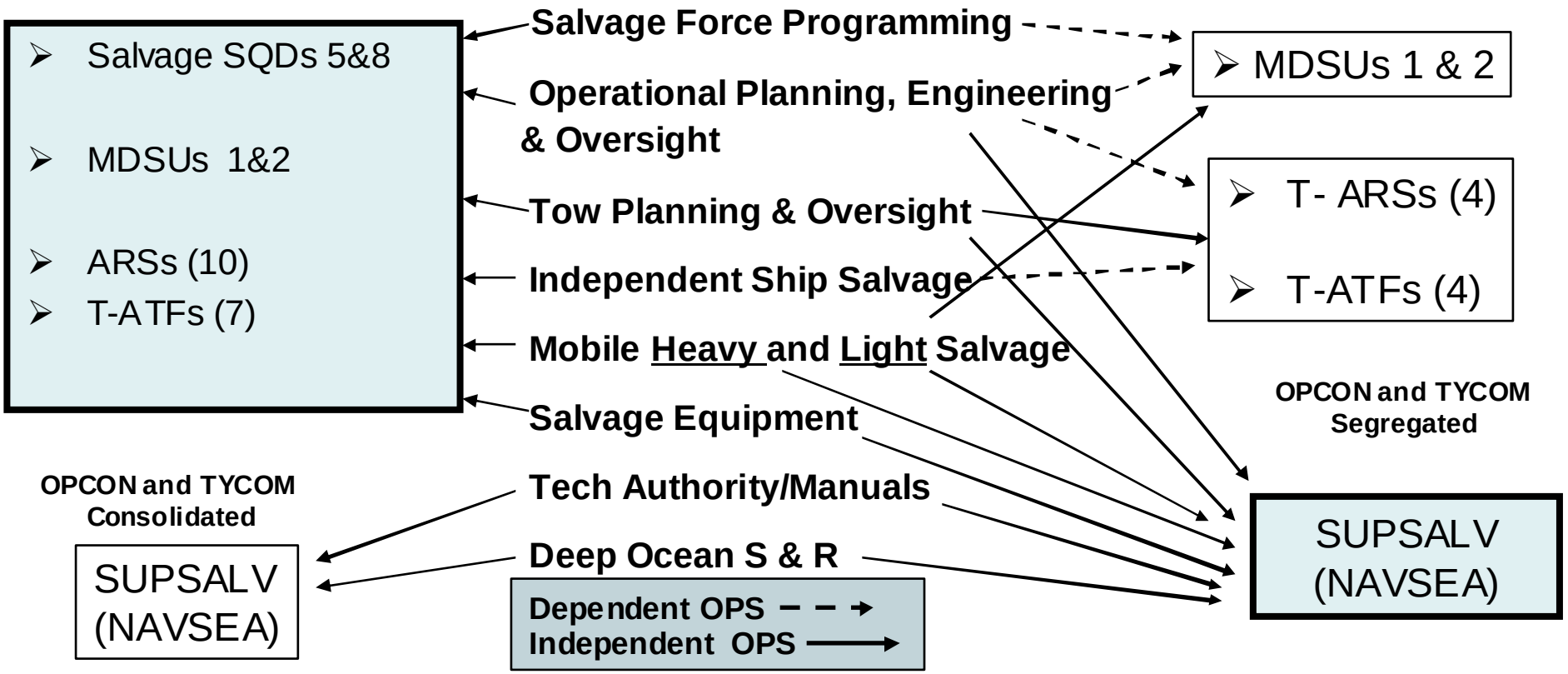
d. This instruction has been completely revised and should be read in its entirety.

2. Cancellation. OPNAVINST 4740.2F.

3. Scope. The policies, responsibilities, and procedures given here apply to all salvage and recovery operations conducted by the Department of the Navy.

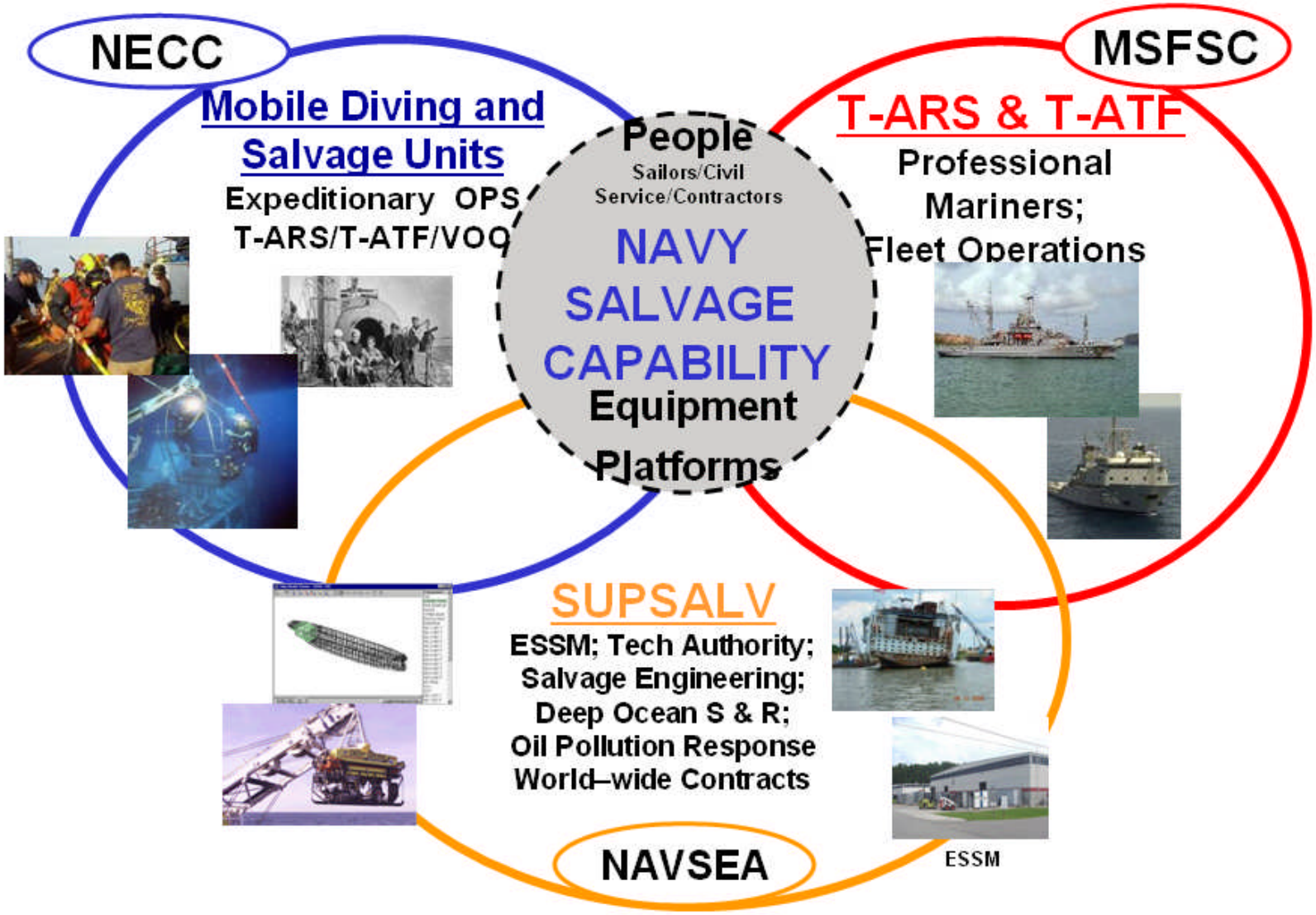
4. Background. The Navy's Salvage Program stems from 10 U.S.C. §7361-7364 (Salvage Facilities Act) which authorizes the Secretary of the Navy to provide necessary salvage facilities for public and private vessels and to settle claims for salvage services rendered by the Navy. This authority allows for the

Navy Salvage Capability: Decade of Migration



- SUPSALV now the center for Salvage and Towing expertise, operational planning and oversight.
- ESSM now a critical enabler for MDSU and Salvage Ship operational capability and training (Previous role focused on more static T-ATF and MDSU Reserve support).

Navy Salvage Capability Triad



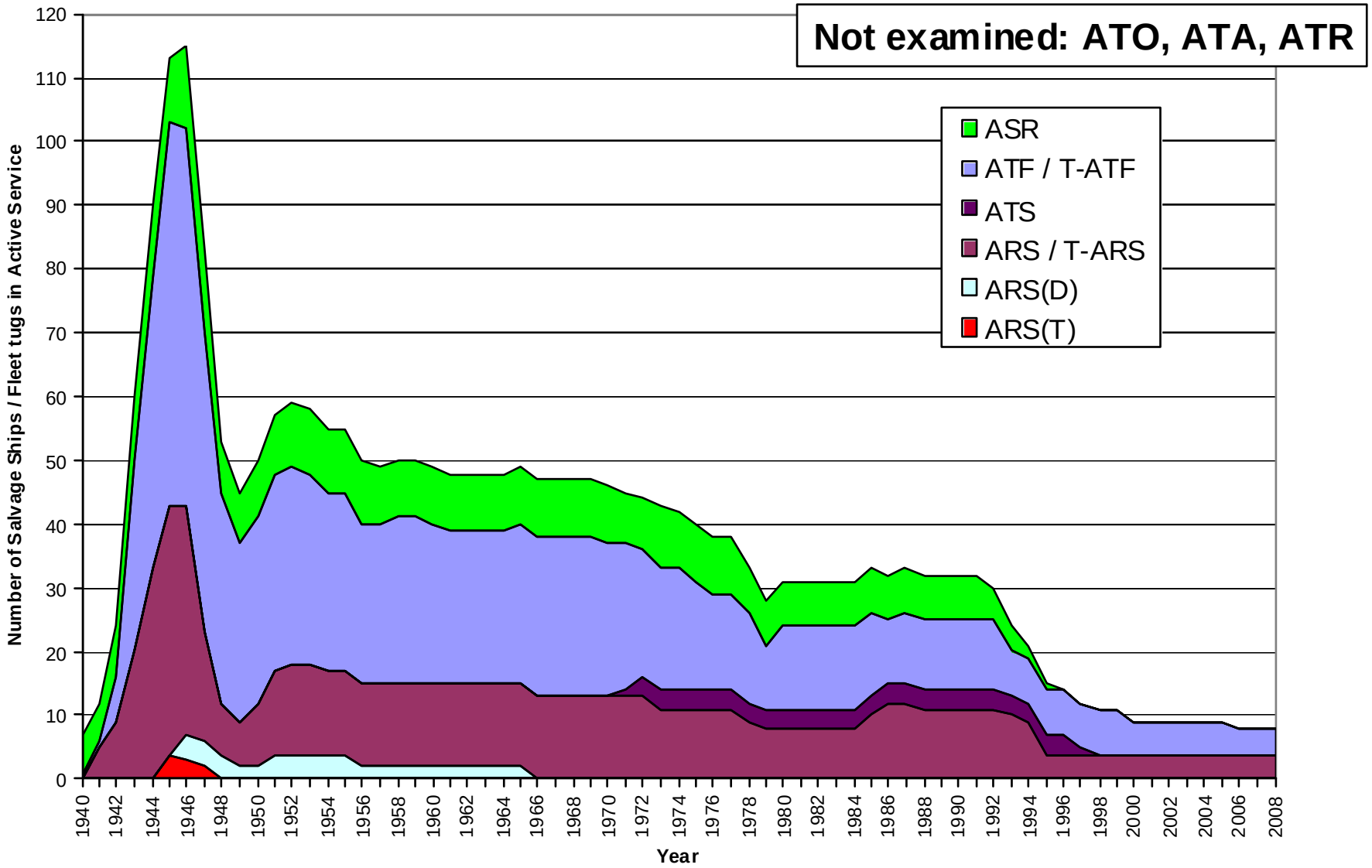
Historical Overview

- Pre World War II
  - Ad Hoc organization developed per operation then disbanded.
  - Small numbers, but foundations of salvage org/ConOps planted.
- World War II
  - Huge increase in numbers corresponding to large numbers of damaged ships, prewar ConOps validated.
  - 10 U.S.C. §7361-7364 (Salvage Facilities Act) of 1948 formalized Navy salvage requirement.
- Cold War
  - Korean War – limited need for salvage/tug.
  - Vietnam – increased need for salvage - open ocean & riverine ops.
  - Increased frequency of salvage of downed aircraft.
- Post Cold War
  - Drawdown in force levels.
  - Transition from USN to MSC operation.
  - Increased cooperation between Fleet divers, MSC operators, and NAVSEA.
  - Increased use of commercial services to augment.

Salvage and Fleet Tug Types 1929-2008

TYPE	Number of Ships / Classes	LOA (ft)	Displ. (tons)	Power (HP)	Service Span
ARS - Rescue and Salvage Ship 46 ships / 9 classes	7 x Viking (ARS 1)	187	1009	1400	1943-1953
	1 x Rescuer (ARS 18) 1 x Accelerate (ARS 30) 1 x Harjurand (ARS 31) 1 x Tackle (ARS 37)	175 unk 188 310	738 400 812 6500	unk unk unk 2780	1943-1946
	9 x Anchor (ARS 13)	183	1615	1200	1943-1946
	16 x Diver (ARS 5)	213	1900	3000	1943-1992
	6 x Bolster (ARS 38)	213	2050	3000	1945-1994
	4 x Safeguard (ARS / T-ARS 50)	**255**	**3300**	**4200**	**1985-Present**
ATF Fleet Ocean Tug 70 ships / 2 classes	63 x Navajo/ Cherokee (ATF 66) class	205	1675	3000	1943-1992
	7 x Powhatan (T-ATF 166) (4 active)	**226**	**2260**	**7200**	**1979-Present**
ATS Salvage and Rescue Ship	3 x Edenton (ATS 1) class	282	3200	6000	1971-1996
ARSD - Salvage Lifting Vessel	4 x Gypsy (ARSD 1)	244	816	2800	1946-1965
ARST – Salvage Base Ships	3 x ex-LST 1 x ex ARS	379	4500	1800	1945-1947
ASR - Submarine Rescue Vessel 20 ships / 4 classes	6 x Widgeon (ASR 1)	187	1009	1400	1929-1947
	9 x Chanticleer (ASR 7)	251	2015	3000	1942-1993
	3 x Penguin	251	2015	3000	1944-1993
	2 x Pigeon (ASR 21)	251	4570	6000	1973-1995

Salvage / Fleet Tug Force Levels 1940-2008



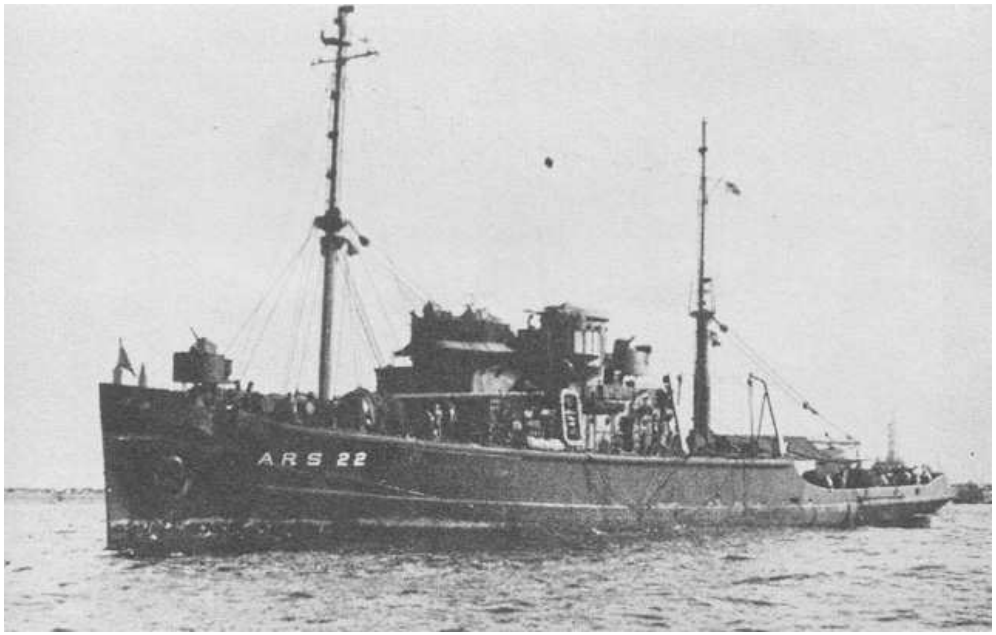
ANCHOR (ARS 13) Class

•183', **wooden-hulled**, World War II wartime construction.
•Nine ships / Four shipyards:
- •***Colberg Boat Works***, Stockton, CA (ARS 13-15)
- •***Snow Shipyard***, Rockland, Maine (ARS 16, 17)
- •***Bellingham Marine Railway***, Bellingham, WA (ARS 28, 29)
- •***American Car and Foundry***, Wilmington, DE (ARS 35, 36)

•Two built under Lend-Lease for UK, but retained by USN.
•All operated by USN crews.
•Two lost during war (one by US submarine 1/1/45, and one in typhoon of 9 Oct 45).

DIVER (ARS 5) Class

•16 ships.
•All built at ***Basalt Rock Co.*** ***Napa, CA*** in 1943-1944.
•**213', steel-hulled**, purpose-built, salvage ships of WW II construction.



•Originally planned without an automatic towing winch, so winches were diverted from ocean-going tugs.
•First of class arrived in time for Normandy.
•Cooper-Bessemer engines replaced in surviving ships by Caterpillars in 1960s and 1970s.
•Last of class decommissioned in 1992.

EDENTON (ATS 1) Class

- 3 ships, built in England in early 1970s for USN, fitted out in US after delivery.
- 3 others cancelled.
- Classification changed from salvage tug (ATS) to salvage and rescue ship (ATS) on Feb. '71.

Ocean towing, air diving ops to 190 ft, dynamic lift submerged objects up to 300 tons from a depth of 120 ft, and fighting off-ship fires.

"Planes for Ships" swap with UK

POWHATAN (T-ATF 166) Class

- 7 ships, built by ***Marinette Marine, WI*** in 1979-81.
- Designed for MSC operation; constructed to commercial standards.
- 7 delivered, 4 currently in service.

Ocean towing, fighting off-ship fires, act as support ship for diving, salvage, oil spill response, and submarine rescue.

SAFEGUARD (ARS 50) Class

- 4 ships, built by ***Peterson Builders, Sturgeon Bay, WI*** in 1985-86.
- Originally constructed to US Navy standards.
- Transferred to MSC 2006-2007, classification changed to T-ARS.

Ocean towing, debeaching, air diving ops to 190 ft, dynamic lift submerged objects up to 300 tons, 40 ton kingpost boom, fighting off-ship fires, and emergency repair, dewatering, refloating.

Historical Ops – USS Missouri aground

Aground on Thimble Shoals, Virginia January 1950. She was freed on the fifth attempt.

Historical Ops – "Knox on the Rocks" 1965

Photo # NH 74179 Salvage vessels pull USS Frank Knox off Pratas Reef, South China Sea, 1965

Aground on Pratas Reef, South China Sea, July 1965. Ships pulling are (from left to right): *Grapple* (ARS-7), *Conserver* (ARS-39), *Sioux* (ATF-75), *Greenlet* (ASR-10) & *Cocopa* (ATF-101).

Historical Ops – USS Spruance

29 January 1989: USS GRASP (ARS-51) and USNS MOHAWK (T-ATF 190) pull USS SPRUANCE (DD-963), aground near Andros Island, Bahamas.

Recent Ops – Firefighting

Monrovia, Liberia (Aug. 11, 2006) – Fleet Ocean Tug USNS APACHE (T-ATF 172) battles a fire aboard the freighter Tahoma Reefer. USNS APACHE rescued the freighter's crew and was able to bring the fire under control.

Recent Ops – Towing

Pearl Harbor (July 10, 2006) – Fleet Ocean Tug USNS NAVAJO (T-ATF 169) tows the amphibious assault ship USS BELLEAU WOOD (LHA 3) out to open waters for a sinking exercise (SINKEX).

Recent Ops – Search & Recovery

AV-8B Harrier jet recovered on-board USNS NAVAJO (T-ATF 169) from a depth of 3,800 feet.

Recent Ops – Debeaching

Pearl Harbor (February 9, 2009) – USNS SALVOR (T-ARS 52) attempts to free USS PORT ROYAL (CG 73) stranded on a coral reef.

Potential Common Hull Solution

NAVSEA 05D4 – Auxiliary & Special Mission Ships

Overview

- The Navy requires ocean towing, salvage, and rescue capabilities to conduct combat and non-combat operations:
  - Rescue and Assistance
    - Towing of Damaged Vessels
    - Conducting Submarine Rescue
    - Fighting Fires at Sea
  - Salvage of grounded/stranded vessels and harbor clearance
    - Conduct Manned and Remotely Operated Vehicle Diving Operations
    - Debeach and Raise Vessels and Craft
    - Conduct Salvage/Survey Assessments
    - Lift Sunken Objects
  - Recovery of Submerged Objects
    - Conduct Deep Ocean Search and Recovery
    - Lift Sunken Objects
  - Control Oil Spills
    - Conduct Oil Spill Containment and Recovery
- Current T-ATF 166 and T-ARS 50 classes reach the end of their expected service lives starting in 2020 and 2025 respectively.
- Recapitalization of the T-ATF and T-ARS is required, either in kind, or with a common hull Towing, Salvage, and Rescue Ship.
- A Government funded AoA is scheduled to be performed in FY11. The AoA will determine how the Navy intends to recapitalize the capabilities of the retiring T-ATF 166 and T-ARS 50 classes either through a shipbuilding acquisition program, modifying a commercial product, or lease/charter options.

Potential Common Hull Assumptions

- Comply with ABS Steel Vessel Rules Classification, USCG Certification, and other regulatory body regulations such as MARPOL and SOLAS.
- Civilian Mariner (CIVMAR) manned with embarked Military Detachment (MILDET) for mission operations.
- Navy standards and certification of aviation facilities (day only, visual meteorological conditions, high hover only).
- CONREP cargo and fuel receive stations.
- Military Sealift Command (MSC) standards for force protection.
- MSC standards for habitability for crew and Navy standards for embarking Navy personnel.
- Ships will be ready to get underway within 24 hours, and will be available for tasking a minimum of 270 days/year.
- Communications suite will be Government Furnished Equipment (GFE).

Potential Common Hull Capabilities

- **Towing Craft, Barges, Targets, all Navy Vessels:** ~150-200 short tons of bollard pull (force needed to tow CVN 68 & CVN 78 class ships at 5 knots in 30 knot winds).
- **Debeaching Force:** ~150-200 short tons of bollard pull plus the ability to carry and employ beach gear.
- **Winch/Connection Features:** Twin drum (side-by-side or waterfall); traction winch; shark jaws; auto-tow pins.
- **Position Keeping:** ABS Dynamic Positioning DP-2 or equivalent; 5 meter watch circle in Sea State 4, 30 knot wind, 2 knot current.
- **Salvage Equipment Stowage:** ~24,000 cubic feet partially accessible by deck crane.
- **Dynamic Lift:** ~300 short tons with associated rollers.

Potential Common Hull Capabilities (cont.)

- **Unobstructed Deck Space, Load, and Services for:**
  - Submarine Rescue Diving and Recompression System (SRDRS), including Transfer Under Pressure (TUP) plus Assessment/Underwater Work System (AUWS).
  - Manned and ROV diving operations.
- **Multipoint Moor Capability:** Carry and deploy mooring systems, to include SRDRS lightweight mooring system.
- **Multipurpose Crane:** ~60 short ton multipurpose crane amidships.
- **Firefighting:** ABS Fire Fighting Vessel Class 2 standard or equivalent.
- **Recompression Chamber:** Separate space off main deck with piping systems to host fly-away or installed recompression chamber.

Potential Common Hull Capabilities (cont.)

- **Port and Shallow Water Access:** ~15-18 ft allowable draft.
- **Boats:** One 7 meter RHIB and one 35 foot workboat.
- **Crew Accommodations:** ~25 pending manning analysis based on USCG requirements; MSC habitability standards.
- **Navy Personnel Accommodations:** ~42 pending manning analysis total transient Navy with Navy transient habitability standard.
- **Sustained Speed:** ~13 knots
- **Unrefueled Range:** ~10,000 NM at sustained speed

Conclusion

PMS325Q – Special Mission Ships

Conclusion

- Industry ideas and inputs critical to program success.
- Government intends to release Broad Agency Announcement (BAA) in 2011.
- If you are interested in this program, please monitor the Federal Business Opportunities (FBO) website at http://www.fedbizopps.gov. Any updates and/or changes will appear at this FBO website.
- Please turn in all index cards to Government before leaving. Future comments, concerns, or questions regarding this event should be directed to Christina Zimmer at christina.zimmer@navy.mil (202-781-1646).
- The Government will respond to questions no later than 30 days after Industry Day.
- **Thanks for your interest and attendance!**

Back-up

Bollard Pull vs. Ship Type (@ Beaufort 5 & Sea State 5)