



# FACEPLATE

The Official Newsletter for the Divers and Salvors of the United States Navy  
Volume 11, No. 2 / September 2007

*In This Issue...*

*USS BOONE Rudder Replacement*

*M/V TONG CHENG Rescue*

*USS OGDEN Repairs*

FACEPLATE is published by the Supervisor of Salvage and Diving to make the latest and most informative news available to the Navy diving and salvage community. Discussions or illustrations of commercial products do not imply endorsement by the Supervisor of Salvage and Diving or the U.S. Navy.

Articles, letters, queries and comments should be directed to the Commander, Naval Sea Systems Command, NAVSEA 00C, 1333 Isaac Hull Ave. SE Stop 1070, Washington Navy Yard, DC 20376-1070. (Attn: FACEPLATE). Visit our website at <http://www.supsalv.org>. To view an electronic version of Faceplate in PDF format go to our website and click on the word FACEPLATE located in the left hand column. This link will direct you to our list of FACEPLATE issues.

**Captain Richard Hooper, USN**  
 Director of Ocean Engineering  
 Supervisor of Salvage and Diving  
 NAVSEA 00C  
[richard.hooper@navy.mil](mailto:richard.hooper@navy.mil)

**Captain John Gray, USN**  
 Supervisor of Diving  
 Editor-In-Chief  
[john.g.gray@navy.mil](mailto:john.g.gray@navy.mil)

**LCDR Jim Bladh, USN (Ret.)**  
 Managing Editor  
[jimbladhsr@aol.com](mailto:jimbladhsr@aol.com)

**NDCM (MDV) Danny Boyd, USN**  
**NDCM (MDV) Fred Orns, USN**  
**NDCM (MDV) Brian Pratschner, USN**  
 Fleet Liaison Editors  
[danny.boyd@navy.mil](mailto:danny.boyd@navy.mil)  
[frederick.orns@navy.mil](mailto:frederick.orns@navy.mil)  
[brian.pratschner@navy.mil](mailto:brian.pratschner@navy.mil)

**Zoya Gorbunova**  
 Production Manager  
[zoya.gorbunova@navy.mil](mailto:zoya.gorbunova@navy.mil)

**Otto C. Adams**  
 Graphic Designer  
[oadams@roh-inc.com](mailto:oadams@roh-inc.com)

# SUPSALV SENDS

As I write this article in July, the Working Divers Conference (WDC) held in May 2007 is still fresh in my mind. The centerpiece of this year's conference was our in-depth review of what will be the core of Revision 6 of the USN Diving Manual. We used the WDC forum, consisting of a significant percentage of all the Master Divers in the Navy, to review the key elements that need to be in place to roll out the Diving Manual Revision.



*Captain Rich Hooper.*

Specifically, the WDC reviewed three elements of this rollout and I would urge all Diving Lockers to make this part of your in-house training curriculum.

The first and most important element of the Diving Manual Revision rollout is already in place. The complete revision of the air diving procedures and air diving tables that constitute the new Chapter 9 of the Diving Manual was promulgated by AIG 07-07, available on the SUPSALV website at <https://secure.supsalv.org/home.asp>. The procedures and tables are the mature product of ten years of work including testing, rigorous analysis, and Fleet Diver feedback. Bottom line is that these new tables and procedures represent a quantum step forward in safe diving practices and correct identified safety deficiencies in the existing air tables that have been part of the manual virtually without significant change for fifty years.

Second, the conference familiarized the Navy Diving community with the operation and procedures of the Oxygen Regulator Control Assembly (ORCA), a key material element that enables the proper implementation of the preferred air diving decompression regime in the revised Diving Manual: decompression

with oxygen. SUPSALV is procuring sufficient ORCAs to outfit Fleet Diving commands.

Third, the conference reviewed and briefed the training requirements for Oxygen Worker Training, a necessary element for commands to manage the oxygen systems which will be required for the Revised Diving Manual.

The final elements that must be in place prior to issuing the revised Diving Manual are the training curriculum and logistics support material to support the new procedures and the new ORCA. SUPSALV is working closely with the Naval Diving & Salvage Training Center to ensure that the proper elements are in place before shifting to Revision 6 of the Diving Manual.

Another notable event for the Navy Diving Community announced at the WDC was our shift to the KM37 surface supplied UBA. After a thorough technical review, testing at NEDU and operational testing with Fleet Diving commands, the Supervisor of Diving has placed the KM37 on the Authorized for Navy Use (ANU) list and has issued AIG 07-10 that provides logistics support details on the KM37. Effectively, the KM37 is the replacement surface supplied UBA for the MK 21. SUPSALV and Navy Diving commands will be using this helmet as a replacement for the MK 21 as it becomes unserviceable. As SUPDIVE announced at the WDC, NAVSEA 00C is seeking priorities from Fleet Diving commands to receive KM37 helmets as part of our FY08 procurement of KM 37 helmets.

Looking to the future, Steven Covey, the author of *The Seven Habits of Highly* ("SUPSALV Sends" continued on p. 5)

## In This Issue

SUPSALV Sends .....	2	Survey of WWII Torpedo Bombers .....	16	MDV Advancements .....	23
USS BOONE Rudder Replacement .....	3	MK V Monument Update .....	17	34 Years Ago in Faceplate .....	24
Portable Air Monitor .....	6	EODMU 5 Participate in Thai Diver Night ....	18	Captain Chris Murray Retires .....	25
New Training Facility at NDSTC .....	7	Family Donates Squalus Memorabilia .....	19	The Old Master .....	26
M/V TONG CHENG .....	8	USS OGDEN .....	20	NAVSEA Sailor of the Year .....	27
SAFEGUARD Divers Increase Proficiency .	11	From The Managing Editor .....	21	From SUPDIVE .....	27
Those DAM Divers .....	12	DC Divers Charity Golf Classic Update .....	21	WDC 2008 Agenda .....	28
Working Divers Conference 2007 .....	14	Command in the Spotlight .....	22		

### Cover photo:

ND1 Josh Moore welds a repair patch on the submerged bow of amphibious transport dock USS OGDEN (LPD5) while the ship was in port at Naval Base San Diego. ND1 Moore is a member of the Southwest Regional Maintenance Center (SWRMC) Dive Locker's underwater welding team. (Photo by Mass Communication Specialist Senior Chief Andrew McKaskle).

# Emergent Underwater Rudder Replacement on USS BOONE (FFG 28)

By: LCDR Jay Young

On 30 November 2006, the Office of the Supervisor of Salvage and Diving (SUPSALV) received a most disturbing message from Commander, Atlantic Fleet Naval Surface Forces (CNSL). USS BOONE (FFG 28), while deployed to the western Mediterranean Sea to support North Atlantic Treaty Organization (NATO) Maritime Operations, had lost all steering control and material inspections were underway to determine the root cause of the failure. After extensive inspections on the operating systems in the steering gear room, the root cause was not discovered. After exhausting investigative efforts internal to USS BOONE, the investigation turned external to the ship. On-site Canadian Divers inspected BOONE's rudder and verified the worst. BOONE's rudder was lost at sea.

BOONE had a very limited amount of maneuverability following the loss of her rudder and the ship was eventually towed to Naval Station Rota, Spain to



U.S. Navy Divers conducting supervisor checks.



U.S. Navy Divers preparing for diving operations.

commence a complex repair availability. In order to support the emergent repair on BOONE, U.S. Pacific Fleet confirmed that USS CROMMELIN (FFG 37) would provide the replacement rudder. Pearl Harbor Naval Shipyard placed CROMMELIN in the dry dock on 06 December 2006. CROMMELIN's rudder was removed and shipped to Rota, Spain within five days. SUPSALV compiled over 50,000 pounds of equipment and loaded out a U.S. Air Force C-5 transport aircraft to ship all of the required equipment from Norfolk, VA to Rota, Spain.

On 14 December 2006, all of the operational support equipment arrived in Rota, Spain and the repair operation was underway. Divers from USS EMORY S LAND (AS 39), Southeast Regional Maintenance Center (SERMC), and Puget Sound Naval Shipyard completed the rudder installation phase of the repair operation.

## Initial Inspection and Rudder Stock Preparation

Divers commenced the repair operation by conducting several inspection dives to assess the damage to the rudder stock. The initial inspection revealed that the rudder stock had damaged threads, the rudder key was ripped from the keyway in the rudder stock, and the key securing bolts had been sheared flush with the base of the keyway. Several dives were required to remove the damaged threads from the rudder stock and to remove the sheared bolts from

the keyway. Divers also removed the fairwater surrounding the rudder stock hull seal using both hydraulic and pneumatic cutting tools to expose the hull seal for inspection.

Proper rigging technique was essential to ensure the safety of all Divers involved. Navy Divers installed four 6-ton hydraulic chain hoists into the ship's lifting tunnels at four points surrounding the rudder stock in accordance with the approved



Damaged rudder stock threads.

rigging plan. The Divers also installed one 6-ton load cell in series with each chain hoist to monitor the load during the rigging evolution to prevent overloading any of the chain hoists.



Cleaned rudder stock keyway with sheared fasteners removed.



Rudder stock key installed into the keyway.

A new rudder key was manufactured prior to commencing the repair operation. The new rudder key was manufactured with a small amount of slack to account for variations between the actual keyway and the keyway drawing dimensions. The key to keyway tolerance was less than 0.002 inches which required precise machining of the rudder key to ensure a proper fit. Key installation quickly became an iterative process of measurements and machining to ensure all tolerances were met. Divers installed the rudder key and the four key fasteners into the rudder stock on 18 December using the specified torque requirement of 110 ft-lbs.

### Rudder and Rudder Nut Installation

Divers completed all of the underwater preparations on 19 December, and



Rudder lifted from the pier using a three point lift.

the replacement rudder was ready for installation. Using the approved rigging plan, the 30,000 pound rudder was lifted from the pier and lowered into the water astern of BOONE.

Using the pier crane, the Divers moved the rudder under the stern of the ship and transferred the load from the crane to the four existing chain hoists. A diesel Hydraulic Power Unit (HPU) Model 6 provided the hydraulic pressure to the four chain hoists and the Divers had underwater control of all four chain hoists through remote actuators. Each Diver controlled two chain falls and the Divers raised the rudder up and onto the rudder stock using an alternating process of actuating the port and starboard chain falls. The rudder was raised to its final position just below the hull seal and the chain falls were left in tension to maintain the rudder's position.

After successfully installing the rudder onto the rudder stock, Navy Divers proceeded to install the rudder nut onto the end of the rudder stock to secure the rudder into position. Divers transported the 700-pound rudder nut to the rudder stock and commenced the arduous process of threading the nut onto the stock.

Divers completed the installation and applied a final torque of 3,000 ft-lbs to firmly secure the rudder nut onto the stock. The Divers disconnected the four hydraulic chain hoists from the rudder completing the rudder installation phase of the repair procedure on 21 December 2006.

### Rudder Alteration and Welding

The rudder was successfully installed onto the rudder stock by the Divers and the alteration and welding operation commenced on 22 December. The alteration and welding phase of the operation was completed



Rudder lowered into the water with Diver assistance.

using Divers from Phoenix International Incorporated. SUPSALV engineers designed a securing mechanism to be installed into the rudder nut to prevent the nut from backing down the threaded stock. The Divers used an underwater hydraulic drill press to drill two holes through the rudder nut and into the rudder stock. The holes were drilled on opposite sides of the rudder nut to a depth of 4.5 inches using a 1-inch diameter drill bit. One securing pin was installed in each hole.



Rudder nut ready for installation onto the rudder stock.

Two side mount dry chamber habitats were fabricated on the pier and installed on the port and starboard sides of the rudder to enclose the rudder nut access cavity. The port and starboard habitats were installed on 24 December and external rigging was set and tightened to secure the habitats to the rudder surface and mechanically compress the gasket.



1" diameter hole drilled into the rudder nut using an underwater hydraulic drill press.

The first Diver struck an arc in the starboard habitat on Christmas Day 2006. The Divers welded a cover plate over each of the pin holes to secure the pins in place and two stopper plates around the nut as a secondary means of preventing rotation. Once the alterations were complete, the port and starboard access cover plates were fit-up and welded into place leaving the rudder nut cavity watertight. Divers

completed the welding operation on 28 December. Divers removed the dry chamber habitats, the rudder counterweight, and the rigging equipment to complete the repair operation.

During the rudder replacement operation, the repair team worked around the clock, seven days a week, to complete the repair and return BOONE to sea. Twenty-eight days after BOONE lost her

rudder, the final piece of rigging was removed from the underside of BOONE. The Divers exited the water at 12:10pm on 28 December 2006 and BOONE was underway at 12:40 pm to continue operations in support of the Global War on Terror.

Over a hectic five-week period, numerous individuals worked extremely hard to complete the emergent repair on BOONE. U.S. Navy Divers and contrac-



Habitat fabricated and installed to complete dry chamber welding.

tor personnel worked all across the U.S. and overseas to ensure success. The repair operation flexed the capability and responsiveness of several activities and each activity passed the test with flying colors. Mission Accomplished!

---

*LCDR Jay Young is an Engineering Duty Officer/Diver currently working as a Project Manager at the Underwater Ship Husbandry Division at NAVSEA 00C.*

---

## SUPSALV SENDS

(“SUPSALV Sends” continued from p. 2)

*Effective People*, said in Habit #2 to “begin with the end in mind.” Toward that end, Captain John Gray, the Supervisor of Diving, has already set the agenda for next year’s WDC based on the Fleet feedback received this year (see p. 28 of this issue). Prominent on next year’s agenda are subjects that were clearly at the forefront of the Navy Diving leadership: fielding the Extreme Lightweight Diving System, Contaminated Water Diving Procedures for present day equipment, and our fielding plan for more effective Contaminated Water Diving Equipment. We have set this agenda to focus NAVSEA’s efforts on these critical diving program subjects but welcome your additional input in responding to your needs. Specific input can be provided to NAVSEA’s Fleet Liaison Master Divers, whose contact information is listed on p. 2.

This issue of FACEPLATE has some superb articles illustrating the skill and

peerless mission execution of the Navy Diving Community. MDSU ONE’s story of the salvage of the M/V TONG CHENG is a textbook story of inter-service cooperation between the Navy and the U. S. Coast Guard but also of how Navy salvage should be conducted in the 21st century. MDSU ONE’s Commanding Officer, CDR Dan Colman, not only focused all the appropriate elements of MDSU’s capability on the salvage but also called in engineering support and ESSM equipment support from SUPSALV to compliment and augment as required. BRAVO ZULU to MDSU ONE!

Another notable article is about the waterborne replacement of the USS BOONE’s rudder in Rota, Spain. This story illustrates the value of the Navy Diver. In this case, without the skill of Navy Divers, a warship of the line of the most powerful Navy in the world would have been forced to drydock overseas to fix damage or to be towed back to

CONUS. Instead, due to the efforts and innovation of Navy Divers, the warship were able to get underway without either an overseas drydocking or trans-oceanic tow. BOONE’s rudder replacement not only allowed her to return across the Atlantic to her homeport without restriction, but also allowed her to complete her deployment.

Although articles in this issue of FACEPLATE detail the exceptional accomplishments of particular commands, they really speak to the whole Diver community. Take the opportunity to provide us all the exploits of your part of the community by submitting articles to FACEPLATE so that your fellow Divers can learn from your missions and innovations.

Until next time, dive safe.

SUPSALV SENDS.

# New Portable Air Monitor (PAM) Undergoes Field Testing

By: LT Jim Pearson, RN

As many of you are aware, the current method for ensuring air quality standards for compressors in the Fleet is the Air Sampling Program. The program involves mandatory semi-annual air purity testing of compressors used to supply Divers' air. Gas sampling kits supplied by a contract laboratory are sent to the field where gas samples are taken and then returned to the laboratory for analysis. Analytical results are reported to the field indicating a pass or fail based on the specifications for diving air in the U.S. Navy Diving Manual (para. 4-3.1).

There are several drawbacks with this semi-annual approach and, as some of you may have experienced first hand, it is a fairly awkward procedure which must be performed with great care to ensure meaningful results. Probably the most significant drawback of sending samples to a laboratory for analysis is the lack of real-time feedback to the operator. If a compressor is malfunctioning, the first you may know of it is when you have to deploy your standby Diver to recover an unconscious Diver. It may be many months before you realize a compressor is operating outside of parameters if the problem is small and you are not due to sample.

To try and address some of these issues the Navy Experimental Diving Unit (NEDU), in conjunction with several manufacturers, has developed a number of in-line air quality monitors or PAMs. Out of these prototype monitors, the Geotech DIVEAIR2, is currently undergoing field testing with both Mobile Diving and Salvage Units One and Two.

Dr. Richard Lillo and Mr. Jim Caldwell from NEDU have been working hand-in-hand with manufacturers for a number of years to develop a prototype monitor with the unique capability to test

for O<sub>2</sub>, CO<sub>2</sub>, CO, total hydrocarbons, and other particulates in one package. When NEDU was satisfied that the Geotech PAM could monitor air to a suitable level of accuracy, the unit was passed to NDSTC for a more thorough testing in 2006. Senior Chief Geyman, EN1 Bosland, and EM2 Salazar worked diligently over many months testing the monitor. With their help we have been able to iron out some of the initial problems with the monitor.



*DIVEAIR2 in its original casing.*

The Geotech DIVEAIR2 pictured has since been reboxed and now comes in a small "pelican" style case. It comes with an audio and visual alarm to alert the operator if any of the elements being tested fall outside of permissible limits. It contains a rechargeable battery and can be linked to a computer to download test results. In parallel to field testing the PAM, NAVSEA is looking at developing a new reducer which will be both robust and low maintenance and allow the PAM to be connected to any in-service compressor.

A portable air monitor will have several applications in addition to

supporting routine compressor testing. As seen during diving operations following Katrina, the ability to test air quality before running your compressor in a potentially contaminated air environment would be extremely beneficial. This same technique could be used prior to using compressors on ships or in the vicinity of engine exhausts. The monitor can be used "in-line" allowing compressor air output to be monitored continuously and alerting the operator to possible compressor malfunctions or the presence of a "bad" air source. It should also be possible to attach a PAM directly to a SCUBA bottle allowing Divers to check air obtained from commercial sources when the mission demands.

Because this monitor is unique, there is likely to be interest from other branches of the military such as Submariners and Aviators who also require the ability to test breathing air in this way. There has also been interest from the commercial diving community who can see the benefit of being able to test their compressor air output real-time.

Upon successful completion of field testing, NAVSEA will look at purchasing a number of air monitors which can be strategically deployed where they will be most effective. The current air sampling program will continue to run unchanged while the initial batch of monitors are used to determine how this new capability can be best exploited and identify any shortfalls with the system that may have made it through field testing.

Thanks to all those that have put time and effort into testing this unit. Your efforts are very much appreciated and will undoubtedly benefit the Fleet when PAMs hit the front line.

---

*LT Jim Pearson is a Royal Navy Exchange Officer currently specializing in contaminated water diving at NAVSEA 00C.*

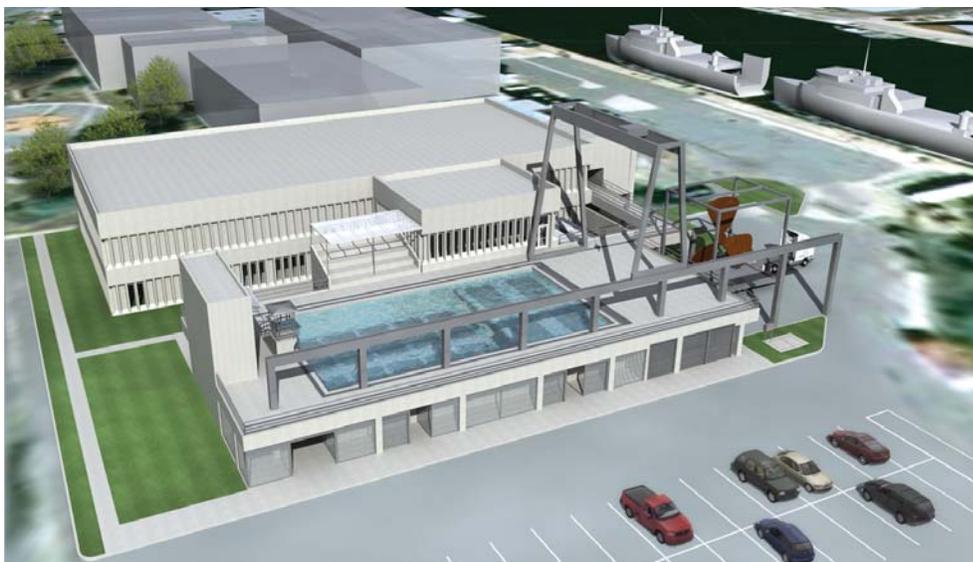
---

# Dive School Breaks Ground on New Training Facility

By: AOC Ray Davis

On 23 February 2007 the Naval Diving and Salvage Training Center broke ground on a 13 million dollar training and pool facility to support increased DoD demand for Diver training. Military Construction (MILCON) project P-315 will construct the Joint Aquatic Combat Diver Training Facility (JACDTF) consisting of a 40' by 75' by 40' deep training tank with support facilities for an overhead 60-ton gantry crane, surface supplied diving stations, and applied classroom facility.

The JACDTF was originally conceived as an underwater ship husbandry training facility. New requirements and demand for additional trained divers to support joint DOD Anti-Terrorist Force Protection (ATFP), home land security missions, and support of the Global War on Terror (GWOT) are driving extra stu-



*Conceptual drawing of Joint Aquatic Combat Diver Training Facility.*

dent through-put beyond what can be accommodated utilizing NDSTC's existing training tank. The JACDTF will be a key training complex preparing military Divers to conduct vital waterborne missions. These missions range from emergent ship husbandry to keep ships waterborne on-station to direct and indirect combat actions.

The Naval Diving and Salvage Training Center (NDSTC) conducts high-risk Diver training for Joint U.S. Military Divers and Allied Nations. NDSTC currently simulates underwater diving exercises in low visibility and turbid water. This is not conducive to instructing detailed underwater tasks which include propeller blade changes, masker belt cleaning, sonar transducer maintenance, enclosed space diving, EOD training, and SDV training. The new facility will allow

these detailed skill sets to be taught in a controlled, high visibility area. An improvement in Diver skill level will provide an estimated 10% reduction in costly on-the-job-training (OJT). This reduction in OJT will likely result in significant

annual cost avoidance and most important, a more effective combat force.



*Construction progress, June 2007.*



*Construction progress, June 2007.*

The JACDTF will enable NDSTC to safely train the increased numbers of students in relevant projects and underwater Explosive Ordnance Disposal training requirements that will ultimately support Homeland Defense, ATFP, and GWOT missions. Diver manning levels in Navy, Marine Corps, Air Force, Coast Guard, Army, and other DOD, Federal, and State organizations will benefit from the JACDTF.

*AOC Ray Davis is currently assigned to NDSTC in Panama City, FL.*



# VESSEL IN NEED, INDEED!

The Emergent Temporary Patching and Dewatering of the Chinese M/V TONG CHENG

By: CDR Dan Colman

On 19 January 2007, the TONG CHENG, a Chinese Flagged Motor Vessel en route from Pusan, Korea to the Panama Canal, reported to the U.S. Coast Guard Sector Honolulu that she had a 29-inch crack in her port hull and was experiencing progressive flooding in her number two cargo hold. The vessel requested to enter Honolulu to conduct repairs before continuing on her voyage. TONG CHENG was down by the bow approximately eight feet and getting worse. Her normal draft forward was 33 feet, but with the cracked hull and progressive flooding she was drawing greater than 43 feet. She was losing stability. To compound the problem the weather was deteriorating and the seas were expected to build.

The U.S. Coast Guard (USCG) sprang into action and stood up an Incident Command Center (ICC) to gather the expertise to assess the ship's problem and weigh the risks of allowing the ship to enter Honolulu to conduct repairs versus the risks that the vessel's hull would fail and the ship would sink, 26 crewmembers might be lost, and 150,000 gallons of heavy fuel oil would be released in Hawaiian waters. The first challenge the ICC had to address was that the ship could not accurately report the damage to her hull because the crew could not enter the affected cargo hold due to containers blocking the access. Structural engineers from the Navy's Supervisor of Salvage and the U.S. Coast Guard's Naval Architectural Branch studied the ship's drawings and pictures taken from aircraft flyovers. As a result, the engineers grew increasingly concerned over the structural integrity of the vessel and the realization that the worst case scenario would happen if something was not done to stop the progressive flooding and dewater the vessel to relieve the water pressure on the forward bulkhead of the num-

ber two cargo hold—the aft bulkhead of cargo hold number one. The salvage engineers' calculations revealed that if TONG CHENG lost her cargo hold num-



MDSU ONE Det 9 Divers MDV Valentine, ND2 Gerasimchik, and ND2 Smith review hot tap procedures.

ber one, in addition to already losing cargo hold number two, the ship was certain to sink. It was no longer a matter of if, it was a matter of when. Meanwhile the National Oceanographic and Atmospheric Administration (NOAA) conducted spill trajectories to estimate the potential damage to Hawaii's fragile environment if the ship sank. Spill trajectories indicated that the closer the vessel got to the Hawaiian coastline the greater the impact on the environment if the vessel released its fuel into the ocean. All of this information made the risk of allowing TONG CHENG to close Honolulu too great unless action was taken to reduce the risk.

While the ICC studied the problem and weighed the risks of allowing the vessel to proceed into Honolulu, TONG CHENG was directed to remain 80 nautical miles South Southwest of Oahu. This location, due to the prevailing winds and seas, was chosen to reduce the threat to the environment if the vessel came

apart. The ship was escorted by USCGC WALNUT to rescue the 26 Chinese crewmembers in case the ship sank while a decision and a plan were formulated.

The ICC needed a better assessment of the TONG CHENG's hull to see the reported damage and determine the risk of the ship's hull failing. Enter the Heavy Lifters from Mobile Diving and Salvage Unit (MDSU) ONE.

On 21 January, TONG CHENG went dead in the water (DIW) to allow U.S. Navy Divers from MDSU ONE to inspect her hull. Chief Warrant Officer Jason Deatrick, a Diving Warrant Officer, was sent as part of an advance party to assess the

ship and develop a tag out plan to de-energize pumps and other machinery that could pose a hazard to Divers in the water. Language barriers compounded the problem of developing a tag out plan. Fortunately, the ICC dispatched on-scene translators to liaise between the dive team and the ship's crew. Once the ship was tagged out, Divers entered the water on the port side to investigate the damage. The survey was hazardous but the risk was manageable, as Divers tended from the surface conducted a thorough hull survey on a ship rising and falling with the seas. Divers located the crack 30 feet below the water-line, but reported that the crack had grown from 29-inches long to 56-inches long (1/8-inch wide). Additionally, they discovered two additional 6-inch "L"-shaped cracks that were spreading like a crack in a car windshield. Deatrick's team captured underwater video and stills that were forwarded to the ICC to fill in information gaps that could help decision

makers decide whether or not to allow the ship to enter port.

The salvage engineer team evaluated the underwater video and assessed that the ship's hull was failing and that it was not a matter of if the ship would sink, it was a matter of when the ship would sink if no action was taken. Meanwhile, the Heavy Lifters developed a plan to affect emergency repairs to patch the multiple cracks. If the cracks could be patched, the ship could be dewatered and stability restored. This would reduce the risk of the ship's hull failing and the risk of a catastrophic release of fuel into the water.



*MDSU ONE Det 9 Diver NDC Richardson inspects damage to TONG CHENG's hull 80 nm at sea.*

MDSU ONE proposed a plan to apply a temporary patch using a 2-part epoxy. The plan was discussed with Engineering Duty Officers from the Navy's Supervisor of Salvage, who although skeptical, were optimistic that the plan had potential for success and could offer no other options or alternatives. Their concerns were valid since the ship had to make an 80-nautical mile transit into 4-6 foot seas with a patch that could be compared to a temporary filling in a tooth. However, it was this or nothing.

The following day, with the weather window for diving operations closing, TONG CHENG again went DIW and was tagged out for diving operations. MDSU ONE Detachment NINE, led by CWO Deatrick and NDC(MDV) Paul Adams, deployed SCUBA Divers to install the temporary patches that required a 4 to 6-hour cure time to harden. At the four-hour mark Divers returned to check the integrity of the patch and reported that the patch appeared to be intact and holding, but could not be certain until dewatering began and the water level in the cargo hold dropped.

With that in mind, MDSU ONE turned their attention to how best to assist the U.S. Coast Guard Strike Team with dewatering the vessel. MDSU ONE had transferred several trash pumps (pumps named for their ability to pump large vol-

umes of water and debris) to the American Islander, a USCG contract vessel. Two of these pumps were eventually transferred to the TONG CHENG, but it became apparent that it would be difficult to employ them both because containers crowded the TONG CHENG's main deck and only one scuttle to cargo hold number two was accessible for dewatering. This scuttle could only accommodate one pump. The good news was that the ship's installed pumps and the one trash pump were able to dewater the space enough to confirm the temporary patch was holding and no additional cracks existed.

The ICC considered cutting access holes in the deck to place additional hoses and get more pumps running. However, hot work could not be done because explosive gases in the cargo hold could not be ruled out. The pumping would proceed slowly using a combination of (1) trash pump and the ship's installed pumps and eductors. As soon as a little ground was gained another set back was suffered. The vessel's installed pumps failed from nearly 30 days of continuous pumping. Now the only pump dewatering the ship was one 350 gallon per minute trash pump. The options were narrowing, but the patch was holding and dewatering, although slow, continued with minor changes in draft and soundings.

With the temporary patch holding and one pump continuously dewatering the vessel, the decision was made to allow TONG CHENG to close Honolulu. The problems appeared to be passed and opening. Because of the seawater in the cargo hold the ship's forward draft was too deep (approximately 43 feet) to enter port and conduct repairs so the ship was diverted to Honolulu anchorage one nautical mile off the coast. Now the challenge was how to dewater the vessel enough to raise the ship's draft to at least 35 feet forward to allow the ship to enter Barbers Har-

bor and go pier side. The challenge remained that the main deck was crowded with containers that could not be off loaded at anchor and hot work was still ruled out because the absence of explosive gases could not be confirmed.

Again, MDSU ONE sprang into action and developed an alternative plan for dewatering the cargo hold at anchor. With no other means available, MDSU ONE briefed the ICC on a procedure called hot tapping. The procedure is used to remove liquid loads from sunken vessels that are inaccessible by normal pumping means. Hot tapping involves using a hole saw to cut 4-inch diameter holes in which ball valves are installed. The valves are connected to suction hoses and pumps that remove liquid from tanks. Despite the name, the procedure does not involve any welding which made it safe for an environment that may or may not have an explosive atmosphere. The only risk was if the procedure were not done properly, the contact water from the cargo hold would escape into the environment. Additionally, hot tapping on the TONG CHENG at anchor would be more difficult than a hot tap on a ship settled on the ocean floor because the ship was swinging at anchor. The threat still remained that the ship's hull or the forward bulkhead in cargo hold number two could fail. To compensate for the difficulty, the detachment rehearsed

the hot tap procedure topside on a support barge moored alongside TONG CHENG prior to attempting the procedure in the water. MDSU ONE last used hot tapping in 2003 to recover nearly 2,000,000 gallons of diesel fuel from the USS MISSISSINAWA, a WWII Tanker sunk by a Japanese torpedo in Micronesia's Ulithi Atoll in 1945.

With the hot tap plan approved by the ICC, MDSU ONE rapidly deployed two short tons of MDSU ONE Surface Supplied Diving Equipment and Emergency Ship Salvage Materiel equipment on-board the Maritime Spill Response Corporations (MSRC) Oil Spill Response Barge (OSRB). The OSRB was the vessel to which the contact water in TONG CHENG's hold would be pumped once the hot taps were installed and the pumps were ready to move water. Simultaneously, structural engineers determined the best locations to install the hot tap assemblies based on locations that would be the most successful for removing the fuel-contaminated water.

On 24 January Detachment Nine set up a surface supplied diving station and made final preparations to install the hot taps. The installation of the first hot tap flange and valve was completed in 3 hours, the remaining two hot taps were completed in significantly less time with the last hot tap taking little more than an hour to complete. The hot tap assemblies were installed on the starboard side of TONG CHENG's hull in cargo hold number two at 14, 21, and 28 feet beneath the waterline.

Once the hot taps were installed the pumps were rigged. However, a new set of obstacles had to be overcome. The OSRB was significantly higher than the TONG CHENG, which created a static head in excess of what the pumps could overcome. The pumps struggled to take suction and continuously lost their prime. The MDSU ONE pumping crew worked



*MDSU ONE Det 9 Diver ND2 Gerasimchik installs the hot tap flange.*

tirelessly throughout the night to develop a plan to overcome the static head. And finally with a combination of trial by error and ingenuity they perfected a pumping configuration that progressively increased in capacity until they were dewatering at a rate of 8,000 to 12,000 gallons per hour.

The pumping crew continued to dewater through 25 January and until the only pump remaining was on the hot tap located at 28 feet of seawater. The TONG CHENG's soundings for cargo hold number two decreased from over 9 meters to 5 meters and the draft decreased from 40 plus feet to 35 feet, the minimum required to go pier side at the repair facility. At 0430, MDSU ONE Detachment Nine prepared for the final diving evolution. They had remained on-station during the dewatering evolution in order to respond to a hot tap failure, now they would secure and cap the hot tap valves and recover the hoses. This was no more significant than any other part of the operation, however, it was pivotal in that MDSU ONE had overcome every obstacle and their success relied on this final evolution. Should the hot tap fail it could prove difficult to patch. Fortunately, the final diving evolution went as smoothly as every other and TONG CHENG was ready to enter port. At 0900 the ship weighed anchor and got underway with her escorts and safely made the transit to Barbers Harbor.

The Heavy Lifters of MDSU ONE using their core values of ingenuity, agility and perseverance, assisted the U.S. Coast Guard with the emergent temporary repairs, assisted the USCG Strike Team with dewatering the stricken vessel during the 80 nautical mile transit to anchorage, developed a plan to dewater TONG CHENG at anchorage from below the water line, overcame the obstacles of pumping against a high static head, and had successfully reduced the vessel's draft, all of which allowed her to safely enter port for permanent

repairs. In doing this MDSU ONE prevented the catastrophic failure of TONG CHENG's hull that would have released over 150,000 gallons of petroleum liquid load to the environment and the possible loss of life.



*MDSU ONE Det 9 Diver MDV Valentine installs hot tap drill.*

Mobile Diving and Salvage Unit ONE is an expeditionary diving and salvage command that is part of Explosive Ordnance Disposal Group ONE and falls under Commander, Navy Expeditionary Combat Command (CNECC) which was established in January 2006. CNECC combines expeditionary forces that include Mobile Diving and Salvage Units, Explosive Ordnance Disposal Mobile Units, Sea-Bee Battalions, and Riverine Combat Commands under one umbrella to standardize manning, training, and equipping of expeditionary forces.

---

*CDR Dan Colman is Commanding Officer of Mobile Diving and Salvage Unit ONE located in Pearl Harbor, HI.*

---

# SAFEGUARD Divers Increase Proficiency During Dive Ops

By: Mass Communication Specialist 2nd Class (SW) Adam R. Cole

SASEBO, Japan – USS SAFEGUARD (ARS 50) completed a series of training dives over a three-day period (January 29-31, 2007) off the coast of its forward-deployed home in Sasebo, Japan.



HMCS(SW/DV) Michael Bowe-Rahming steadies a dive platform for two Divers of USS SAFEGUARD (ARS 50) during at anchor dive operations off the coast of its forward-deployed home of Sasebo, Japan.

The training consisted of more than 14 deep sea dives and 10 recompression chamber dives, testing SAFEGUARD Divers in a number of situations and overall increased their proficiency to carry out the ship's primary mission: rescue and salvage.

"The more proficient we are within our mission area, the better we can respond to real-world contingencies that may arise," said LCDR Doyle K. Hodges, SAFEGUARD Commanding Officer. "This type of training enhances the professional development and capabilities of all members of the team."

Such contingencies are never far away for SAFEGUARD, which less than a year ago, salvaged a U.S. Air Force F-16C fighter jet that crashed in the Yellow Sea off the coast of the Republic of Korea.

Over the course of the three-day training dives in Sasebo's outlying waters, SAFEGUARD Divers utilized

the "mud monster," a training device that is shaped in the form of a large cube made to represent submerged materials, like the F-16. Dives practiced patching the monster and also lifting it to the surface.

Amidst the various practical skill enhancement training dives, SAFEGUARD Dive Crew was also tested in relation to responding to medical casualties and general dive emergencies to further challenge the crew in those circumstances.

"The more you dive, the more proficient you get," said Navy Diver 2<sup>nd</sup> Class Ryan Steinkemp of SAFEGUARD. "With this kind of training you become more calm and more certain in emergency

situations."

Overall, the dives went well, said NDCS(DSW/SW) Clifford E. Morin, 1<sup>st</sup> Class Diver.

During the dives, Morin was not only able to relay his 17-year Naval Diving career experience to the SAFEGUARD Divers, but was also able to hone his knowledge and proficiency as he soon departs to Pensacola, FL, to undergo an examination to become a Master Diver.



HM2(SW/DV) Sam Green of USS SAFEGUARD (ARS 50) recovers from a training dive.



ND2 Ryan Steinkemp steadies himself on a dive platform during at anchor dive operations.

"For me, the biggest thing is mastering watch management, crisis management, and solving problems," said Morin, who led the Dive Teams through the majority of the drill sets. "To get ready for Master Diver evaluations, it has just been a series of successive learning experiences, including all the ones from SAFEGUARD. I think I'm ready."

And in turn, said Morin, SAFEGUARD crew is ready for whatever operation may be in the future.

SAFEGUARD (ARS 50) is a rescue and salvage ship commanded by LCDR Doyle K. Hodges and serves under Commander, Expeditionary Strike Group (ESG) 7/Task Force (CTF) 76, the Navy's only forward-deployed amphibious force. Task Force 76 is headquartered at White Beach Naval Facility, Okinawa, Japan. For more information on CTF 76, visit [www.ctf76.navy.mil](http://www.ctf76.navy.mil).

# Those DAM Divers

By: NDCS(MDV/SW) Jason M. Brustad



With all relationships, there is a beginning. In this case, what started out with a simple phone call and a little “out of the box” thinking ended with a strong bond between two Department of Defense agencies. The Naval Undersea

assists in meeting and maintaining these important aspects.

Like “Big” Navy, the ACOE has nationwide commands, or districts (i.e., Portland District, Seattle District, Omaha District, etc.) where each has its own Commander, specific mission statement, and geographical areas of responsibility. All districts are required to meet established directives and requirements but they do have the autonomy to implement and enforce more conservative diving and safety requirements as they deem necessary to meet unique operational situations and/or distinctive safety parameters. Guidance for all ACOE Diving Operations falls under the U.S. Army Corps of Engineers, Safety and Health Requirements Manual (EM-385-1-1).



*NUWC Keyport Dive Team (left to right): NDCS(DSW/SW/SS) Todd Manny, ND1(DSW) Mike Barnett, HM2(FMF) Guernsey, ND2(DSW) Jay Cox, ND1(DSW/SW) Chad Christensen, ND1(DSW/SW/SS) Benjamin Hill, NDCS(MDV/SW) Brustad, ND1(DSW) Gray Ladd.*

Warfare Center (NUWC) Division Keyport Dive Locker has been fortunate enough to develop a unique working association with the Portland District Army Corps of Engineers (ACOE) by providing crucial diving services to various projects under the District’s jurisdiction. These projects, better known as dams, span the mighty Columbia River and include Bonneville, the Dalles, John Day, and Willow Creek Dams. These projects are crucial to the national power grid, and in some cases, have provided electricity to various regions in Canada, most notably, during the blackouts that hit the Northeast in 2003.

Additionally, they are integral to maintaining the Columbia Basin waterway infrastructure, ensuring commercial and recreational vessel access, agricultural needs, recreational areas, and the health of fish and wildlife are maintained at the highest levels. The unique bond shared by NUWC and the ACOE,

Typically, the Portland District employs contracted Divers on and around those dams previously mentioned. In regard to safety, one major area of concern involves the dynamics of differential pressures associated with the extreme variation in water levels inherent with any dam. To give you an idea, the Dalles Dam has an upstream water depth of approximately 130 feet, yet the downstream side of the dam on the spillway is approximately 15 to 20 feet. Calculate the differential pressure, and you can see the potential for catastrophe, especially if diving on the upstream side of the dam. With this in mind, the Portland District has developed, by comparison, exceptionally strict safety and operational requirements for all diving contractors.

By strict, this means the Portland District requires all contracted diving companies to meet certain administrative and operational directives that significantly mitigate potential problems. Any company, civilian or military, goes through a qualification process with the ACOE prior to being eligible to dive on Portland District projects. Administratively, contractors are required to submit the following in explicit detail: Dive Operational Plan, Emergency Management Plan, and Activity Hazard Analysis Plan (or Operational Risk Management Plan in Navy terms).

This is no easy or quick task and involves a substantial amount of information gathering. They are also required to provide evidence that Dive Team personnel have been trained through an accredited commercial diving course or military Dive School, are currently certified in CPR and first aid, have a current medical exam on file, and can use emergency oxygen systems and Automated External Defibrillators.



*ND2(DSW) Jay Cox is the first Navy Diver to utilize an ACOE man-basket for diving operations via an approved NAVSEA Diver handling waiver. This training/preparatory dive was conducted to verify that the surface interval time from 30 to 40 fsw could be met.*

For diving systems, contractors are required to meet nearly the same standards that any Navy Diving command would in obtaining system certification from NAVSEA. This includes, but is not limited to, quality assurance documentation covering hydrostatic testing of air flasks,



*Diver prepares for a dive to measure undermining of the end sill apron on the downstream side of the Dalles Dam located on the Columbia River.*

hoses and umbilicals, gauge calibration, relief valve testing, and current air sampling results on file. We, as Navy Divers, are familiar with all of these items and consider nothing less. But for those who are running a business, meeting those requirements to qualify comes at a price.

Taking this into consideration, there are a very limited number of commercial diving companies qualified to dive on these projects, and when they are, the costs to employ them can reach anywhere from \$7,000 to \$9,000 a day. Given the situation, the ACOE has limited choices from whom they can secure diving services and almost no option on the financial costs sustained in hiring them.

This is where NUWC Keyport Diving Locker was able to provide another option. That option was to qualify NUWC Keyport with the Portland District. In doing so, Keyport was able to bring their abilities and expertise into the different realm of inland diving. Not only could we offer our years of combined experience, but it would allow us the opportunity to enhance our own professional development. This new arena



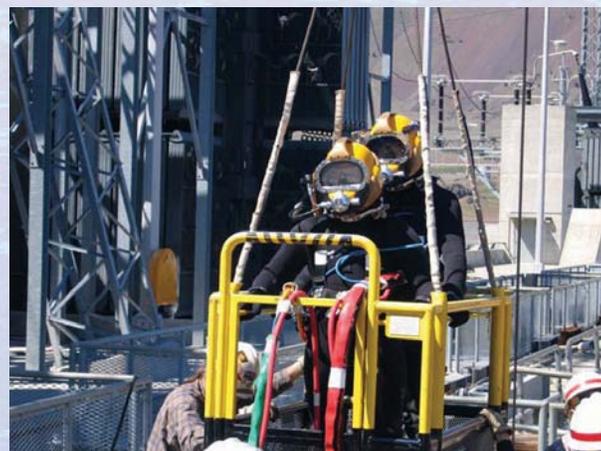
*ND1(DSW/SW) Chad Christensen assists NDCS(DSW/SW/SS) Todd Manny entering the water to conduct an end sill apron inspection on the downstream side of The Dalles Dam.*

of diving would also significantly lower ACOE financial expenditures.

Once the Keyport Divers were fully qualified to dive on Portland District projects, the ACOE had a cost effective option in their arsenal to complete maintenance items requiring diving services. With the dams having a precise and very limited operational window for conducting scheduled repairs, largely in part due to the salmon life cycle and the never-ending power needs, it is imperative that once a deficiency is identified that all involved parties work quickly to meet the targeted date.

Changes to a set schedule can adversely affect a wide array of organizations. Accurate coordination of all parties is paramount in achieving the solution.

To date, Keyport Dive Locker has conducted six diving operations (2 of those emergent) for the Portland District. These jobs have included debris removal from the navigation locks and the recovery of a Ford truck that had inadvertently entered the upstream side of the Bonneville Dam, an emergent repair to a “door dog” critical for locking an “isolation” door to a main turbine unit and a second annual end sill inspection of the Dalles Dam. These



*ND2 Kevin Smith and ND1 Gray Ladd are lifted into the scroll case of Main Power Unit 6 of The John Day Dam to remove a VBS that had fallen into the intake.*

operations have all been successfully completed at a cost savings of over \$200,000 for the Portland District.

Recently Keyport responded to an emergent

job at the John Day Dam (just east of the Dalles) to recover a Vertical Barrier Screen (VBS) that had fallen into the scroll case upstream of the intake side of Main Power Unit #6. This VBS is crucial in managing the health of the salmon spawning cycle and posed a serious threat to damage the main turbine. The main turbine was secured for the obvious reasons, therefore, not producing power. With what was at stake, this critical recovery had high interest throughout the District.

One significant obstacle for this job was the physical location of the VBS, where access was limited. Entrance into the scroll slot, in addition to the approximate 20 feet of freeboard, made getting Divers in and out of the water in a timely manner a concern. Additionally, the VBS was in an approximate depth of 130-140 feet, therefore a surface decompression dive using SUR D O<sub>2</sub> was planned, another first for the Navy/ACOE partnership.

In coming up with a solution, another “first ever” was achieved. Working extensively with NDCM (MDV) Pratschner and Rob Warren (NAVSEA), Captain Harrison (OPNAV N873), Scott Ichiki (PSNS/OE Crane Engineer), Jerry Balcolm (John Day Dam Safety Officer), and Rick Benoit (ACOE District Diving Coordinator), Keyport (“DAM Divers” continued on p. 24)



# Working Divers Conference

## Panama City, Florida

May 2007

# Navy Divers Assist in Survey of WWII Torpedo Bomber Devastators

By: Safeguard (ARS 50) Public Affairs

JALUIT ATOLL, Republic of Marshall Islands – Divers and other crew members from USS SAFEGUARD (ARS 50) assisted the Naval Historical Center (NHC) and the International Group for Historic Aircraft Recovery (TIGHAR) in a scientific survey of two submerged World War II aircraft in waters Oct. 12, 2006.

The submerged aircraft – lost since the early days of World War II – are U.S. Douglas Torpedo Bomber Devastators (TBDs), which played a primary role in the war's outset, yet no example of them exists in any museum.

Over the four days of diving, the survey team collected data and sampled material from the TBDs for scientific analysis to evaluate their suitability for possible recovery and preservation at a later date.

Divers from SAFEGUARD, supported by representatives from Commander, Logistics Group Western Pacific (CLWP) and Mobile Diving and Salvage Unit (MDSU) One, assisted the Naval Historical Center through a separate but complementary engineering and salvage analysis. SAFEGUARD's presence provided an additional margin of safety for both the Navy and civilian Divers, since the ship carries a recompression chamber and trained diving medical technicians in the event of any diving-related injuries.

"This was a unique opportunity for SAFEGUARD to be involved in the conservation and preservation of an important part of Naval history," said LCDR Doyle Hodges, SAFEGUARD Commanding Officer. "Just the process of getting to the wreck site in the Marshalls gives you a good appreciation for the bravery of the Sailors who took these aircraft with rudimentary navigation systems

across thousands of miles of open ocean. Additionally, the diving conditions in the lagoon were terrific."

SAFEGUARD, the Sasebo, Japan-based rescue and salvage ship, has been conducting a regularly scheduled



LTJG Tyler Y. Smith and Navy Diver 3<sup>rd</sup> Class (SW) Zach D. Dimare of USS SAFEGUARD (ARS 50) inspect their diving gear and test communications prior to entering the water. Photo by Navy Diver 2<sup>nd</sup> Class Morgan B. Wade.

deployment involving goodwill port visits and training throughout the Western Pacific.

The ship conducted a scheduled port visit in Majuro, the capitol of the Republic of Marshall Islands, during which SAFEGUARD Sailors were able to visit a local school. After the port visit, SAFEGUARD was then able to assist in the assessment of the World War II aircraft resting nearby in Jaluit Atoll through diving, survey, medical, and boat support.

It is not unusual for the Divers of SAFEGUARD to be asked to examine submerged aircraft, but it is exceptional when the aircraft have been submerged for nearly 65 years and are the last of their type, said Hodges.

The Naval Historical Center and the National Museum of Naval Aviation have been interested for some time in assessing the condition of these two aircraft, according to officials of those organizations.

These planes were lost in the first U.S. offensive strikes of World War II, going directly after the Japanese headquarters on the Marshall Islands immediately following the bombing of Pearl Harbor. They were launched from USS YORKTOWN (CV 5) during that initial strike, but because of the weather conditions, the pilots of the bombers could not make a return from the sortie, ran out of fuel, and made emergency landings in the large central lagoon near the Jaluit Atoll.

Although obsolete during the majority of the war, TBDs served with distinction at the Battle of Midway. At Midway, the Devastators suffered horrendous losses, but by diverting the Japanese fighter cover, they enabled the American dive bombers to do their deadly work and contributed significantly to that critical victory, one that would turn the tide of the Pacific War.

The two TBD Devastators that sank in Jaluit have remained in the same spot since they were lost in the war – one resting on a coral ledge at only 50 feet and the other on the bottom at 130 feet. The shallower airplane was found and identified in 1997. The deeper Devastator was located in 2002. In 2004, TIGHAR, which is a civilian nonprofit historical foundation, conducted a survey of the aircraft to explore the possibility that one could be recovered and preserved for exhibition at the National Museum of Naval Aviation.

Initial results were promising and this year TIGHAR applied for, and was granted, permits from both the Republic of the Marshall Islands and the Naval Historical Center to do a more detailed evaluation of the state of preservation of the two aircraft, including the collection of sample material for scientific testing and metallurgic analysis that made the recent survey successful.

Dr. Robert Neyland, NHC underwater archaeologist, accompanied the TIGHAR expedition as the U.S. Navy observer. Neyland recommended that

Navy salvage experts also provide support in order to plan for the logistics of recovery and transport of one of the aircraft at some future date. SAFEGUARD would end up providing that support linkage.

During the recent survey operation, the TIGHAR team, at their own expense, mapped the extent of corrosion to both wrecks and conducted analysis of water chemistry, aluminum thickness measurements, and site mapping.

The combined TIGHAR and Navy research will now provide the data for

preservation and potential recovery and determine if it is feasible and desirable to lift and restore one of the TBD aircraft, according to officials of the organizations.

“SAFEGUARD Divers were proud to be a part of a survey effort that shows promise of leading to a successful recovery of a TBD Devastator,” said NDCS (SW/MDV) Jeffrey Sampson, SAFEGUARD Master Diver. “The data recovered while working with TIGHAR and the Naval Historical Society will be an integral part of future salvage and preservation operations.”

*USS SAFEGUARD (ARS 50) is a forward deployed rescue and salvage ship operating out of Sasebo, Japan, and is part of Task Force 76, the Navy's only forward deployed amphibious force. For more information, please visit [www.ctf76.navy.mil](http://www.ctf76.navy.mil).*

## MK V Monument Update By: Bob Barth

The Institute of Diving (IOD) MK V Monument Committee would like to provide you all with an update to the progress of the project. Committee members have met with local monument companies to discuss the shape, size, and color of the granite that will make up the base of the monument.

The production of the initial clay model is nearing completion. The committee receives pictures on a weekly basis for our comments and suggestion to ensure the end product is technically accurate and to ensure we erect a “JAKE” that all graduates (past, present, and future) of Navy Dive Schools will all be proud of.

There still seems to be some confusion because of our committee's previous association with Homeland Security Policy Institute Group (HSPIG) and their endeavor to erect a Man In The Sea Memorial at the Washington Navy Yard. Without going into a long explanation of the past, let us say this. “The MK V Monument project is an endeavor to erect an eight foot tall bronze JAKE monument to celebrate all graduates of all U.S. Navy Diving Schools. We are not associated with HSPIG. We have decided the most logical place to erect the monument is at the Naval Diving and Salvage Training Center (NDSTC) in Panama City, FL.”

On June 12, 2007 the Committee signed a contract with Divers Gifts & Collectables to produce the MK V Monu-

ment. In addition to the monument, in an effort to raise the required funding, the committee has decided to produce 300 each, 18-inch certified, serialized, limited edition, exact replicas, in solid bronze statuettes of the monument for sale. There will only be 300. First come, first served. The price of these statues is \$2,000 each. Considering the cost of similar small bronze quality statuettes, this is a great price! Following finalization of the design, the first run is expected to be available for shipping around the beginning of October. We are taking orders now. Reservations require payment in full. The first run pour of the statues you can reserve (with payment) a specific serial number if you wish. After the first pour you will have to be happy with what ever serial number is available. At the time of writing this document nine numbers are presently reserved, #001, #005, #007, #021, #049, #056, #057, #072, #081, and #300. If you have any questions please contact any of the committee members.

**Bob Barth**.....(850) 785-6249 or (805) 819-7220 (C)

**Dave Sullivan**.....(850) 234-4162 or (850) 819-4163 (C)

**Ed Delanoy**.....(850) 235-5230

**Dave Thompson**.....(850) 234-4697

**Kellard Jansen**.....(850) 235-5264 or (850) 271-3260 (C)

**Jim McCarthy**.....(850) 271-1441 or (850) 819-6360 (C)

We encourage and are still accepting donations for this effort. However, in addition to the sale of the 300 statuettes, we



have come up with an additional way of adding to the funds that are required. We are providing “drawing” tickets at \$10 each. We have printed 1,000 of these tickets. The winning ticket will be drawn either at the erecting of the MK V Monument or when the 1,000<sup>th</sup> ticket is sold, whichever occurs first. As of today, 142 have been sold. For those of you that have already purchased tickets, which were originally “raffle” tickets for the “sitting Jake”, your tickets are now for the above described statuette. We will be reprinting the “drawing” tickets and stapling the corresponding ticket stub to your stubs. The statuette for this drawing is serial #001.

Please help in spreading the word on this project. The sooner we sell the 300 statuettes, the sooner the MK V Monument will be erected. We will be giving the [www.markvmonument.org](http://www.markvmonument.org) website a face-lift very soon and updating it on a regular basis.

Additionally, progress of the MK V Monument project can be viewed at <http://www.diversgifts.com>. The MK V Monument Committee

# EODMU 5 Members Participate in Thai Diver Night of PT

By: Mass Communication Specialist 2nd Class (SW) Adam R. Cole

**T**HUNG PRONG, Kingdom of Thailand – Four U.S. Navy Diving specialists and a trio of senior supporters went through a small portion of Royal Thai Navy (RTN) Diver physical training (PT) with Thai diving students May 11, 2007. The dive specialists are in Thailand to participate in Cobra Gold 2007, a multi-national exercise conducted through May 18, 2007.

ND2 Josh Amberger, ND2 Curtis Fees, IS1 (SW/AW) Shannon Blake, and SK3 Kenneth Wieners, all members of Explosive

Ordnance Disposal Mobile Unit (EODMU) 5, worked with the RTN on a number of dive and EOD mission areas and went through seven



ND2 Curtis Fees and other dive members of Explosive Ordnance Disposal Mobile Unit (EODMU) 5 line up next to a formation of Royal Thai Navy dive candidates as part of an extensive 36-hour physical training stretch of Cobra Gold 2007.



ND2 Josh Amberger and dive candidates from the Royal Thai Navy push up a log as part of an extensive 36-hour physical training stretch of Cobra Gold 2007.

hours of intense PT alongside students of the RTN Diver course.

The training pushed the participants through rigorous athletic training that consisted of running nearly eight miles, swimming 1,000 meters, performing 500 push-ups and sit-ups, and completing various leg raises, flutter kicks, as well as about two hours of log drills, which consist of performing calisthenics with a log.

“It was very challenging. I don’t think you see how far you can push the human body until you put it through that kind of strain,” said Amberger. “Even though it was difficult, none of us thought about giving up, it was a matter of not only earning the respect of the Thais but also not giving up on them.”

Throughout the week of Cobra Gold 2007 training, featuring chamber dives and handling improvised explosive devices among other lessons, the U.S. Navy personnel observed the Thai dive students getting physically trained as part of the Thai dive curriculum.

Physical fitness is a focus of the Thai Dive School for about the first month. As a culmination aspect of the initial physical training period, there is a 36-hour, no sleep, all-out push. That push is what U.S. Navy Divers got a taste of by participating in all seven hours of training with the Thai students.

Leading up to the night of PT, the U.S. military members, who were engaged in their own type of training with already-rated Divers and EOD, empathized with the stretched out physical exertion the Thai dive students were required to complete as part of the school’s regimen.

So when the opportunity presented itself to partake, at least in a segment of it, a handful from the U.S. team volunteered to go through the final portion as a way to boost the spirits of their counterparts.

“We just wanted to show that we support them and also wanted to build camaraderie,” said Blake. “We’re here primarily to train and work closely with their Divers and EOD, but this was an opportunity to show that in all aspects of their dive program, we are 100 percent behind them. I think they appreciated us being there.”

Through the exercise-intensive night, the U.S. Navy Divers tried to integrate, but not interfere, with the training throughout the night. The four Divers stood in single file formation next to the block of students and performed calisthenics on command with their counterparts.

Around 2 a.m., the log drills began. These drills paired each American on a log team and each American was directly tied to their Thai counterparts in making it through this portion.

“I think we reached a point, especially there, where we weren’t just tagging along, but right there with them,” said

(“EODMU 5” continued on p. 19)

# FAMILY DONATES SQUALUS MEMORABILIA

By: ND1 Sam Peterson



**N**AVY EXPERIMENTAL DIVING UNIT, Panama City, FL – USS SQUALUS (SS 192), a diesel-electric submarine built at the Portsmouth Navy Yard, NH and commissioned there on 1 March 1939, suffered a catastrophic valve failure during a test dive off the Isle of Shoals at 0740 on 23 May, 1939. Partially flooded, the submarine sank to the bottom and came to rest keel down in 240 feet of water. Navy Divers and salvage ships responded quickly, and the following day began operations to rescue the surviving 32 crewmembers and one civilian from the forward sections of the boat.

CAPT Karl Wheland was the Assistant Officer In Charge of the rescue and salvage. The operation, led by CDR Charles B. Momsen aboard the salvage ship USS FALCON, resulted in the rescue of 32 crewmembers and one civilian. It has since been recalled as one of the U.S. Navy's most renowned submarine rescue missions.

By the time the job was completed, four Sailors would receive the Congressional Medal of Honor and 46 would receive the Navy Cross.

Retired Navy CAPT Bill Trueblood the son-in-law of CAPT Wheland and his

wife Karen recently donated several artifacts from the SQUALUS rescue to NEDU.

Included in the artifacts were newspaper clippings about the SQUALUS rescue and salvage, as well as Copy No. 2 of the FALCON's operation log, signed by each of its Divers.

There are also photographs and a copy of Peter Maas' 1999 book "The Terrible Hours," which recounts the rescue and salvage of the SQUALUS.

Trueblood said the Maas book had been signed by some of the SQUALUS survivors.

He and other family members had been trying to decide for years where to donate the memorabilia, he said, before making the decision at Christmas.

"My dad would be thrilled that it's down here," Karen said, adding that her mother gathered the newspaper articles



PO2 Ben Dykes looks on as CAPT Bill Trueblood (Ret.) and wife Karen discuss artifacts donated by the Trueblood family to NEDU concerning the SQUALUS rescue and salvage.

related to the SQUALUS salvage for years. Sailors of NEDU looked on with great appreciation as LCDR David Givey, the Executive Officer of NEDU, took charge of the donated items from the Trueblood family.

"What they were able to accomplish under those conditions without the aid of modern tools and methods was absolutely amazing" NDC John Keller, a Diver stationed at NEDU, said, adding "They serve as a true inspiration for today's Deep Sea Divers."

*("EODMU 5" continued from p. 18)*

And equally, the Americans said they had ample respect for their counterparts, who endured the physical intensity until 1pm the next day after starting at about 6am the previous day.

NDCM (MDV/DSW/SW) Michael Moser saw the night as a win-win for both forces.

"I think this sort of Thai-U.S. training integration will be a bridge for further integration," said Moser. "I am proud of my guys and am equally impressed at the endurance of the Thais. It was great to see our Divers and the Thais work through language barriers and work together to achieve the evolutions."

*Expeditionary Strike Group 7/Task Force 76 is the Navy's only forward deployed amphibious force and is headquartered at White Beach Naval Facility, Okinawa, Japan, with an operating detachment in Sasebo, Japan. Cobra Gold 07 is a regularly scheduled Thai-U.S. joint/combined multinational exercise designed to ensure regional stability and interoperability among participating nations.*

For more information on CTF 76, visit [www.ctf76.navy.mil](http://www.ctf76.navy.mil).



ND2 Curtis Fees and dive candidates from the Royal Thai Navy hold up a log as part of an extensive 36-hour physical training stretch of Cobra Gold 2007.

# USS OGDEN

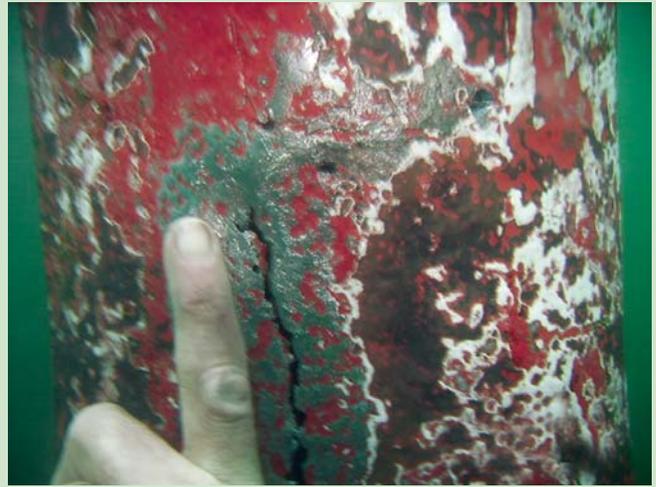
By: CWO5 Rick Armstrong

From October 2005 through November 2005 and again from December 2006 through January 2007, Southwest Regional Maintenance Center (SWRMC) Divers commenced rebuilding the port bow section of the USS OGDEN (LPD 5). Structural failure of the bow section plating caused numerous cracks in the shell plates.

Utilizing underwater non-destructive testing (Ultra-Sonic, Visual Aid Magnetic Particle), SWRMC Divers were able to provide Naval Sea Systems Command engineers with an accurate documentation of the structural breakdown of the OGDEN bow then proceeded to drill-stop the cracks.

constructed and tack welded into place to assist in holding the steel doubler plates in place as SWRMC Divers fillet welded the patches onto the damaged bow section.

These repairs included the construction of two eight-foot pieces of half-pipe to provide strength to the weakened bow section. Wet weld repairs on OGDEN took 32 days, with SWRMC Divers



A crack in the bow of USS OGDEN (LPD 5).



ND1 B.J. Perry wet welds a doubler plate to OGDEN's cracked bow section.

SWRMC Divers/welders then set-up a unique wet weld connex box pier side and commenced wet welding confirmation T-plates (a NAVSEA requirement for any underwater welds utilized for repairs on U.S. Navy vessels). A third party NAVSEA representative, who scrutinizes and evaluates all underwater wet welds, arrived on-site to observe this large scale underwater ship husbandry endeavor.

Once weld plates passed confirmation, the repair areas were mapped out and doubler plates were constructed and fit up to the hull. Hold down brackets were

diving seven days a week, 12 to 14 hours a day with 700 hours of safe bottom time.

These waterborne repairs allowed OGDEN to meet its wartime deployment of a Marine Regiment in support of the Global War on Terrorism.

Six months later, OGDEN returned to port having successfully deployed to the Persian Gulf. A post-deployment inspection

dived of the repaired bow section showed all wet weld repairs made by SWRMC Divers to be structurally sound. However, the inspection also revealed additional damage to the port and starboard bow section.

OGDEN was due to decommission and be sold to a foreign government for continued service. SWRMC Divers were called upon to conduct these additional

repairs. The same process utilized previously was employed again on the weakened bow section.

ND2(DSW) Moore, ND1(DSW) Murray, ND1(DSW/SW) Pugh, ND1(DSW) Perry, and ND1(DSW) Weber wet welded over 2,800 linear feet of fillet welds to strengthen the damaged bow section.

This team of waterborne repair experts not only ensured OGDEN deployed to the war zone on time, they completed wet weld repairs during the second phase of bow repairs ahead of

(*"USS OGDEN" continued on p. 21*)



Finished doubler plate wet welded by SWRMC Divers.

# From The Managing Editor



Jim Bladh.

At this time, I wish to announce that this will be my final edition of FACEPLATE as Managing Editor. I want to thank everyone for your support and the contributions you have provided to

make FACEPLATE an excellent publication. I have enjoyed my association with all of you. It has afforded me the opportunity to stay abreast of the diving community. I suggest that one of the Engineering Duty Officers, a Warrant Officer when available or one of the Master Chief Petty Officers replace me as Managing Editor. I will look forward to assisting the FACEPLATE team in the future by suggesting articles, editing, working on the distribution, and in any other capacity that will help.

In 1995, Captain Chip McCord asked if I would do whatever it takes to start publishing FACEPLATE again. This en-

tailed jumping through all the hoops in headquarters to get authorization. Once accomplished, our first edition came out in the spring of 1995 with the banner "We're back." Since then, we have published 21 editions. I believe each one better than the previous under the stewardship of Captain Chris Murray, Captain Mark Helmkamp and recently, Captain John Gray, with technical support from ROH Inc., particularly Zoya Gorbunova, our Production Manager and Otto Adams, our Graphic Designer. All of the above personnel, along with our three Master Chief Fleet Liaison Editors, have provided excellent support.

A brief of my diving background is as follows: I went through EOD School when it was at Indian Head, MD. From there, I was assigned to EODU 2 when it was at Charleston, SC and attended 1<sup>st</sup> Class Dive School at the Washington Navy Yard in 1956. I was selected for W-1 while assigned to the EOD Unit at Port Layutey, Morocco. Next I went to the Heavy Cruiser Canberra as the Ordinance Gunner/Diving Officer. I was also the first

exchange Officer to the British Navy for diving and served in HMS VERNON at Portsmouth, England for three years. My final tour on active duty was in the Office of the Supervisor in Washington, DC. I retired from active duty after completing 30 years service while on assignment in Danang, Vietnam and celebrated my retirement at the Majestic Hotel at the foot of Tu-Do Street in Saigon. After returning to Washington, I joined NAVSEA, Office of Supervisor of Salvage, retiring again after 28 additional years of service. There have been many changes. I remember when LT Ed Flynn was making dives, Bill Milwee was engineering the MK1 Deep Dive System, and Bob Moss was the Deputy. I have served with all SUPSALVs starting with Bill Searle to the present, Captain Rich Hooper.

FACEPLATE has been a wonderful opportunity. It has allowed me to continue to be player in the diving community. However, I feel that it is time to move on. Thank you, Bob Barth, for your many contributions over the years and thank you Red Diver for your support.

*("USS OGDEN" continued from p. 20)*

schedule, under cost, and ensured OGDEN decommissioned on time as well.

SWRMC Divers are currently the U.S. Navy's only NAVSEA certified underwater welding and NDT Dive Command. Navy Divers looking for a unique challenge and advanced training in the art of waterborne weld operations with a chance to earn an Associates Degree in Marine Technology from the Polytechnic College of Engineering and Oceaneering should contact their detailer for orders to one of the finest Diving Lockers in the Navy...SWRMC Dive Locker.



ND1 Justin Pugh Completes cover passes on a doubler plate.

CWO5 Rick Armstrong (a former Master Diver) is currently the Diving Division Branch Head for Southwest Regional Maintenance Center Code 990. He has served at a variety of diving Commands both at sea and ashore for over 30 years of service in the Diving Navy.

## DC Divers Charity Golf Classic

This year will mark the 5th annual DC Divers Charity Golf Classic to raise funds for the Navy Marine Corps Relief Society.

The event will again be held at the distinguished Courses at Andrews Air Force base on Friday, October 5 at 0930. Mark your calendars' and come out for a round of golf to support a worthy cause and visit with some old friends.

If you can't make it to golf this year contributions will be greatly appreciated and can be made using the enclosed golf announcement flier.

2007 DC Divers Golf Committee.



# Command in the Spotlight

## Naval Submarine School

By: NDC Bradley Purple

About one year ago, a United States submarine got itself run over by a much larger vessel. If there had been a three-foot deviation of where the screw of that larger vessel had cut into the hull of our submarine, the people tank would have been breached possibly sending our submarine to the sea floor. Would the survivors of the initial collision have been doomed on the bottom to suffer the same fate as the Russian submarine the Kursk? No! They would make it to the surface alive because of the training they received at the Submarine Escape Trainer located at the Naval Submarine School in Groton, CT. Also they would have owed their lives to the U.S. Navy Deep Sea Divers stationed there.

Naval Submarine School trains roughly 30,000 students a year. From Basic Enlisted Submarine School to advanced C schools, this training is the hub of the Submarine force. Submarine

Escape training is conducted at Momsen Hall by a small cadre of 12 Divers teaching individual submarine escape and surface survival techniques. Currently there are two devices with which to conduct an

in CY 2008 this will not be the case. Training will be conducted in a 36ft tower utilizing the MK-10 SEIE suits. Prior to attending this training, students will be medically screened by an Undersea

Medical Officer, conduct pulmonary function tests, and receive a pressure test to ensure maximum safety for participants.

The class will encompass two days, the first being medical screenings and classroom and the second will be the lab that includes surface survival techniques in a single seat life raft, conduct an unhooded buoyant ascent from 15 feet, and the final evolution will be an ascent from 36



All escapers on the surface (right to left): HM2 Holsapple, NDC Daoust, NDC Purple, CDR Bates, NDCM Knudson, Bill Leigh and center front, FT2 Halsey.

individual escape, the Steinke Hood (brought into service 1961) and the MK-10 SEIE (Submarine Escape/Immersion Equipment) Suit. The philosophy behind submarine escape has never changed but the ability and equipment used has change considerably.

For years the sub escape trainer in Groton has been viewed as the place where all the ROAD (Retired on Active Duty) program personnel come to serve their country. Starting

feet in the MK-10 suit.

Now this is where the pucker factor comes in. Students will be pressurizing to depth in a matter of seconds, buoyed up by 75 pounds of positive buoyancy, and ascending through the water column from 36 feet at 625 feet per minute. You do the math. That is why the facility comes with two steel double lock chambers, one at the tank top, and one down the hall. "We bend em, we mend em."

To test the MK-10 escape system's operational feasibility, three NAVSUBSCOL Sub Escape instructors participated in ESCAPEX 2006 (see article in FACEPLATE, April 2007). The goal was to escape from a U.S. Navy submarine safely, conducting a single man escape and multiple two-man escapes. Being the subject matter experts, each escape cycle



NDC Purple being escorted to trailer for observation after successful escape.

was conducted with a NAVSUBSCOL instructor. The initial run was conducted as a single man escape, conducted by NDC Sean Daoust. The other two instructors were HM2 Riley Holsapple and NDC Bradley Purple. This historical escape, which had not been attempted in over three decades and never from a nuclear powered submarine, belongs to the men of the Deep Sea. Hoo-yah!

Submarine Escape is not the only thing Navy Divers do here in Groton. We maintain a Submarine SCUBA Diver Preparatory Course, which enables us to interact with the Fleet and have a positive effect on how submarine SCUBA Divers conduct themselves on the water front. This course allows us to be the “check valve” and only recommend the most capable candidates to go to Panama City, FL.

Now the question hanging on every Deep Sea Diver’s lips is ... do they go TAD? Yes, we do. We visit other escape trainers around the world, from the United Kingdom to Australia. We learn from other trainers as well to be subject matter experts on the full realm of submarine escape.

We also TAD to other Fleet concentration areas to teach MK 10 familiarization classes. As if that was not enough, due to our relationship with the subma-



*NDC Daoust being escorted to trailer for observation after successful single man escape and the inaugural escape of the exercise.*

rine force and proximity to the Naval Submarine Research Laboratory, the Escape Trainer frequently participates in studies conducted by the lab, which can range from prolonged exposure in a disabled submarine to the effects of underwater sonar to Divers.

To sum it up, the Submarine Escape Trainer in Groton, CT is a dynamic evolving asset to the Fleet that needs Deep Sea Divers to come to and show

these submariners how business is done. So when things go wrong, they rely on the training they got from U.S. Navy Deep Sea.

---

*NDC Bradley D. Purple is currently the Leading Chief Petty Officer at the Submarine Escape Trainer at the Naval Submarine School located in Groton, CT.*

---



*Two Escapers on the surface signaling Ok to surface support personnel.*

## MDV ADVANCEMENTS

**We would like to congratulate the newly promoted Master Divers.**

### **7 - 20 - MDV**

**NDC CLIFF MORIN  
NDC JON SOMMERS  
NDC STEPHEN ZENTZ**

### **7 - 30 - MDV**

**NDC JON KLUKAS  
NDC BILLY GILBERT  
NDC JUAN PERDOMO  
NDC SCOTT VALENTINE**

### **7 - 40 - MDV**

**NDCS DEFILICE  
NDCS STEGALL  
NDCS MILLER  
CMC TAYLOR**

**HOO-YAH DEEP SEA!!!**

# 34 Years Ago in Faceplate

## Beware of the Sleeping Giant

Here is his description:

I am a compressed gas cylinder.

I weigh in at 175 pounds when filled.

I am pressurized to 2200 psi.

I have wall thickness of approximately 1/4-inch.

I stand 57 inches high.

I am 9 inches in diameter.

I wear a cap when not in use.

I wear valves, gages, and hoses when at work.

I wear many colors and bands to tell what tasks I perform.

I am ruthless and deadly in the hands of the careless or uninformed.

I am too frequently left standing alone on my small base with my cap removed and lost by an unthinking Diver.

I am ready to be toppled over – where my uncapped valve can be snapped off and all my power released through an opening no larger than the diameter of a pencil.

I have been known to jet away at great speeds.

I smash my way through bulkheads with the greatest of ease.

I fly through the air and reach distances of 1/2 mile or more.

I spin, ricochet, crash, and slam through anything in my path.

I scoff at the puny efforts of human flesh, bone, and muscle to alter my erratic course.

I can, under certain conditions, rupture or explode. Beware!

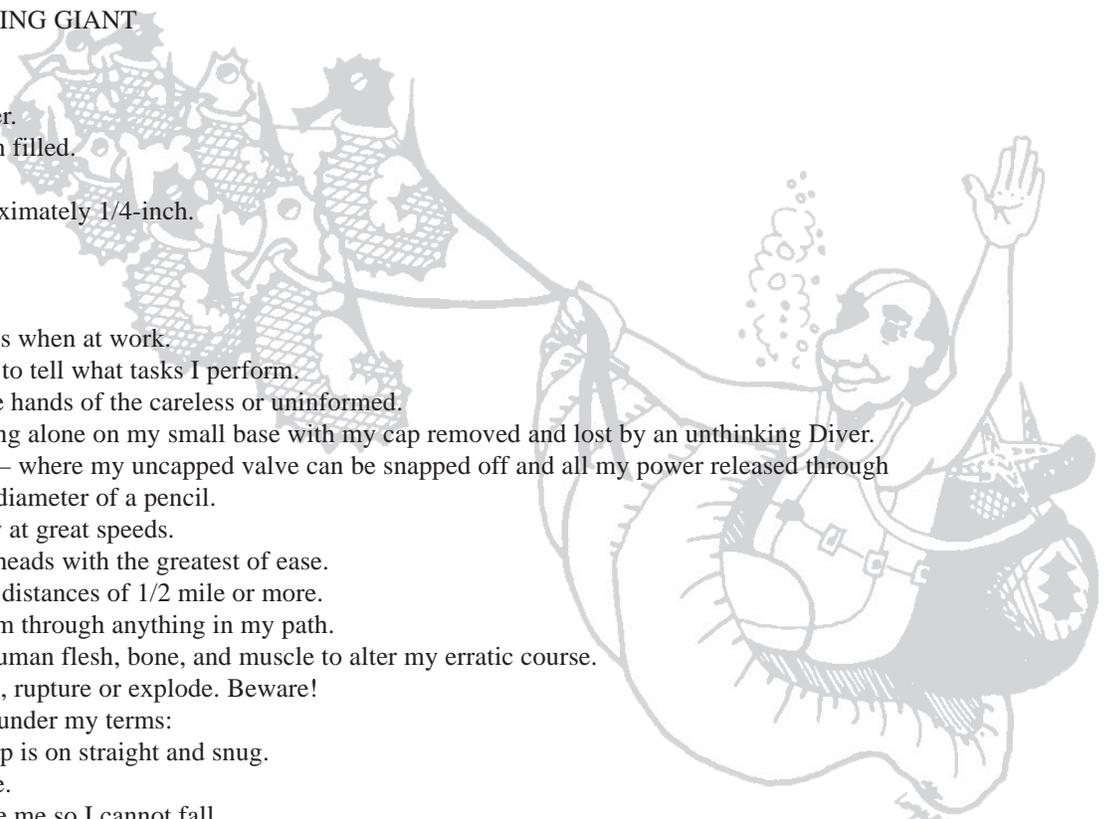
You can be my master ONLY under my terms:

Full or empty – see that my cap is on straight and snug.

Never leave me standing alone.

Keep me in a secure rack or tie me so I cannot fall.

TREAT ME WITH RESPECT: I AM A SLEEPING GIANT.



(“DAM Divers” continued from p. 13)



A Ford F-150 is recovered from upstream side of the Bonneville Dam. The truck had inadvertently entered the river creating a potentially catastrophic hazard to several main power units.

requested and received a waiver to use the Portland District’s man-basket and weight handling gear to deploy and recover Divers. This significant collaboration between inter-service agencies involving multiple personnel, required numerous hours reviewing technical and operational documentation, conducting performance and load testing of the applicable crane, and cross referencing various safety standards (OSHA, ANSI/ASME, ACOE, and Navy). This major undertaking was accomplished in an unheard of time frame due to the phenomenal work done by all.

Success would come quickly again. Prior to putting Divers on the bottom, ND2 Jay Cox did a trial run in the man-basket to ensure that the Dive Team could make the five minute surface interval time from thirty to forty feet in the chamber. Proving this was not an issue, ND1 Gray Ladd and ND2 Kevin

Smith quickly located and rigged the VBS in less than sixteen minutes of bottom time. While they were decompressing in the chamber, the John Day personnel (riggers) were coming up with the VBS and loading it onto a truck. One more subsequent dive by NDCS Todd Manny to clear the scroll slot of any excess debris and Keyport’s mission was accomplished.

Spanning the course of just over a year, NUWC Keyport Dive Locker and the Portland District Army Corps of Engineers have developed a solid bond that has produced exceptional results. This unique relationship is something thought about often here at Keyport. From having a cup of coffee in Portland to conducting dives on National power grid dams, there is something to be said about “DAM Divers.”

*NDCS(MDV/SW) Jason M. Brustad is Master Diver at NUWC Keyport.*

# CAPTAIN CHRISTOPHER C. MURRAY RETIRES

CAPT Murray was born in Washington, DC and raised in Oxon Hill, MD, graduating from Oxon Hill High School in 1972. He enlisted in the Navy at the Washington Navy Yard and was appointed to the Naval Academy in 1973. CAPT Murray received his commission from the United States Naval Academy in 1977.

He attended Dive School in 1980 and then completed shipboard salvage tours onboard USS CONSERVER, XO on USS RECLAIMER (1982-1984), and then CO of USS BOLSTER (1987-1990). During his shipboard tours, CAPT Murray participated in numerous aircraft recoveries, refloating of grounded vessels, and raising of USS BLUEGILL, off Maui, HI.

In July 1997 CAPT Murray relieved as the Commanding Officer of Mobile Diving and Salvage Unit TWO in Little Creek, VA. During this tour he led numerous salvage and diving operations including recovery of victims from a sunken Haitian ferry, Titan missile recovery off Cape Canaveral, raising of a sunken ferry in Puerto Rico, numerous aircraft recoveries, and recovery work on USS MONITOR off Cape Hatteras, NC.

CAPT Murray was assigned to Naval Sea Systems Command as Supervisor of



*Captain Chris Murray reads a letter of appreciation from NASA to the Space Shuttle COLUMBIA search and recovery team at the Fin and Feather Fishing Village in Hemphill, TX in April 2003. Nice hat, Captain!*

Diving in 1999. In this capacity he led and participated in three missions with USS MONITOR, raising her engine, aft engine spaces, turret, and cannons, was the NAVSEA on-site representative for all diving operations during the F/V EHIME MARU recovery and was responsible for all diving operations during the Space Shuttle COLUMBIA recovery in East Texas.

After completing this tour of duty, CAPT Murray relieved the Deputy Director of Deep Submergence Systems (Diving Program Sponsor) in Washington, DC. Here he focused on submarine rescue and escape as well as overseeing instructions for all Navy Divers. He worked closely

with many NATO nations and other countries such as Russia improving the U.S. Navy's submarine rescue systems, diving systems, policies, and procedures.

For many years this Sailor has stood the watch. While some of us were in our bunks at night, this Sailor stood the watch. While some of us were in school learning our trade, this Sailor stood the watch. Yes. Even before some of us were born into this world, this Sailor stood the watch.

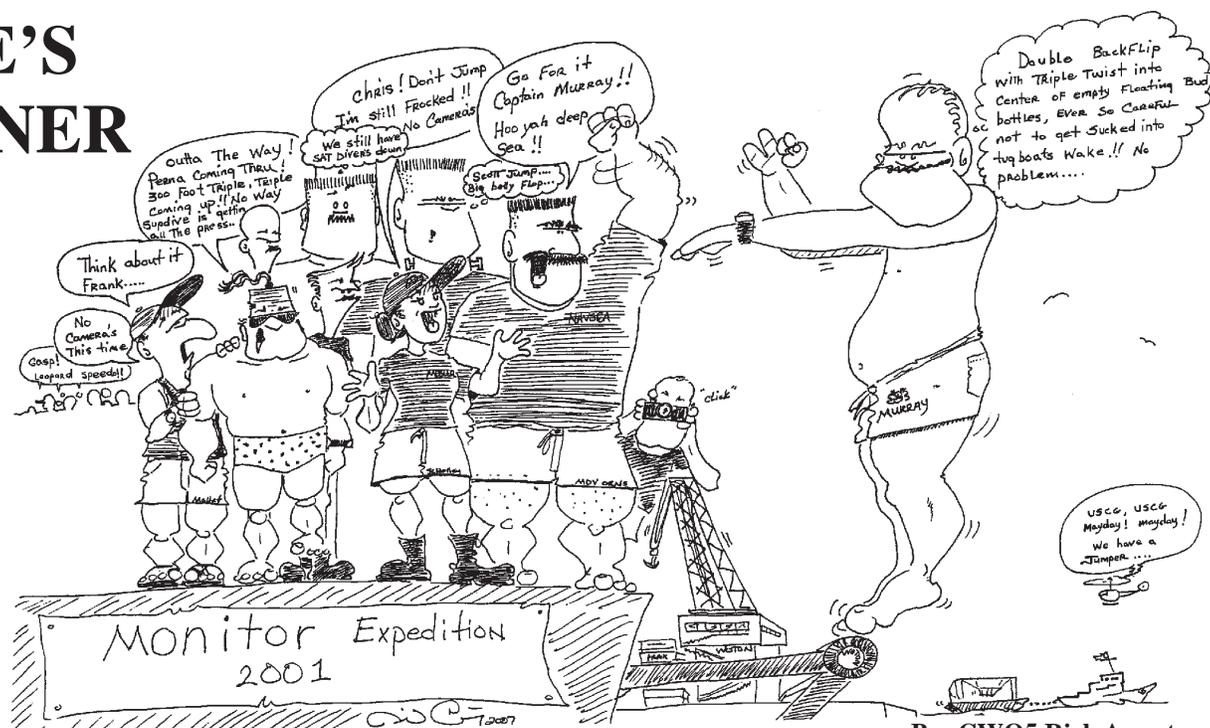
In those years when the storm clouds of war were seen brewing on the horizon of history, this shipmate stood the watch. Many times he would cast an eye ashore and see his family standing there, needing his guidance and help, needing that hand to hold during those hard times. But, still he stood the watch.

He stood the watch for thirty years. He stood the watch so that our families, our fellow countrymen and we could sleep soundly in safety, each and every night knowing that a Sailor stood the watch.

Today we are here to say "Shipmate... the watch stands relieved. Relieved by those you have trained, guided, and lead. Shipmate, you stand relieved. We now have the watch..." "Boatswain. Standby to pipe the side... a Shipmate is going ashore."

**WE WILL MISS YOU!!!**

## JAKE'S CORNER





# The Old Master



## QUALIFIED TO SUPERVISE DIVING OPERATIONS TO MAXIMUM DEPTHS ON BOARD ANY UNITED STATES NAVY DIVING ACTIVITY.

Alright, all you newly-pinned 2nd Class Divers. You have proven yourself worthy of becoming a Deep Sea Diver, denizen of the deep, qualified to a bone-crushing 190 fsw, a Hard Hat Diver, a task that required a lot of mud, sweat, and pain. Many came, few survived. "If it was easy, anybody could do it."

All the rest of you, Deep Sea shipmates, should be working toward goals. One of them is to qualify as Diving Supervisor. That is the requirement for all 1st Class Divers: large and in charge, punching watches, running the side, fine-tuning your skills as a Diving Supervisor, getting ready for the show. What is the show you ask? Well, let me tell you. It is the top of the Navy Diver career path. It is what you should be focused on and working toward each and every day.

What are the prerequisites for MDV? Two years as a Chief. Knocking out at least four tours as an ND. Qualified to the highest level of Diving Supervisor at current command. DSWS qualified. No marks below 3.0 and promotable. Written test taken and package submitted to PERS401DC. Recommendation from the Commanding Officer with emphasis placed on the candidate's leadership and technical expertise. Now we have the complete package.

Now your time has come. The MDV Candidate is expected to report aboard NDSTC fully qualified and prepared for the evaluation. Currently the candidates are evaluated in the following rigs: SCUBA, MK 16, MK 20, and MK 21.

The Master Diver test plan establishes procedures to use when evaluating the candidates performance in attaining course objectives.

The test plan has been laid out in three phases:

**PHASE ONE AND THREE** – Knowledge test in the following areas: Roles and



MDV John T. Reiss.

are evaluated on their performance through five diving scenarios. Every aspect of each scenario is weighted according to its relative criticality within the dive.

Additional points of interest in the test plan:

**Board Chairman:** CMC of NDSTC is the board chairman. His function is to oversee the performance test board, academic review board, inform each candidate of his passage or failure of the course, and make the final recommendation to PERS for the candidate's return to the course if he fails.

**Project Master:** The Project Master Diver will oversee the execution of the course and supervise all at-sea evolutions and at-sea board deliberations. He does not grade and is responsible for ensuring fair and impartial grading by evaluators.

**Project Diving Officer:** Qualified NDSTC Diving Officers CWO (7201) are preferred. His function is to provide a sounding board for the candidates to express their thought processes behind their actions during the diving operations and guide the scenario in a predetermined direction.

**Fleet Evaluators:** Oftentimes I hear complaints as to how someone did or didn't make it, the drills were good or bad, maybe it had something to do with

Responsibilities of the Master Diver, Advanced Medicine, DLSS QA, DORAs, Safety Surveys, Mission Planning and Procedures.

**PHASE TWO** – Performance scenario based tests requiring the candidate to plan, organize, and supervise diving operations. Candidates

Project Master, and the list goes on. We at the school house have continuously requested positive input whether it is for drill submitting, how drills should be run, or any other way to improve the process. Our attitude is, this is our program and we want to put the best of the best in the Fleet with the fat pin on his chest.

With the exception of NDSTC personnel, an evaluator cannot evaluate a class in which one of the candidates works directly for the evaluator, is currently stationed at the same command, or has been permanently assigned to the same command as the evaluator in the last two years.

Board of evaluators will consist of 5 or 7 Fleet MDVs. Pinning will be held at the completion of the course. We will not pin the candidate after PHASE TWO.

Candidates will be briefed the preceding day on the diving equipment, technique, and mission objective. Candidates will completely plan and supervise their dives. Set up your dive station exactly the way you want it. Trust your Divers and team, let them do their job, don't anticipate a drill, and supervise your dive.

Now the game begins. A man is judged best when he is under pressure. You will be tested on the side when the watches feel like 100 pound clumps around your neck and decisions have to be made.

Minimum passing grade for all phases is 80. Academic Review Boards will be held on candidates who fail to meet the minimum passing grade.

For those of you in the zone, it is time to step up, the Community needs you. The Navy and our diving program are changing and we need new MDVs to lead the way during this critical time of change.

*MDV John T. Reiss is currently the Command Master Chief of Naval Diving and Salvage Training Center in Panama City, FL.*

## Navy Diver Timothy Alexander Named NAVSEA Sailor of the Year

WASHINGTON, DC — Navy Diver 1st Class Timothy T. Alexander was selected as the Naval Sea Systems Command (NAVSEA) 2007 Sailor of the Year. Alexander works as a Diving Supervisor at Naval Surface Warfare Center Panama City Division.

NAVSEA Commander VADM Paul Sullivan announced the results of the competition at a ceremony held at the Washington Navy Yard Catering and Conference Center on March 9, 2007. Alexander was chosen from a group of five finalists.

Sullivan congratulated all of the finalists for their accomplishments and for being the 21st century leaders that the Navy expects them to be.

“You are all here because you excel at what you do. As your Com-

mander, I can tell you that I am proud to serve with you,” said Sullivan. “But, I also need to remind you that we’ll continue to expect great things from each of you.”

Alexander, who has been in the Navy for nearly 16 years, attributed his success to the diverse nature of the Navy and strong mentors who helped him grow as an individual and Sailor. One particular mentor stood out for Alexander.

“I had the honor of working for HTCM(MDV/SS) Lamont King, the fifth African-American Master Diver in the Navy,” said Alexander. “I worked for King almost eight years and in that time I was constantly aware that the level of commitment to his junior Divers was foremost in his mind.

“He allowed me to make mistakes that led to valuable lessons learned,” he continued. “It’s important to challenge our Sailors with more than they are used to handling.”



NDI Timothy T. Alexander.

“Master Diver Gaillard has been the more recent mentor. It’s been a privilege to have a Master Diver who is clearly respected throughout the Fleet. In my mind that respect has been born not only from professional accomplishments

but the way in which he allows junior members to own a piece of the community.”

Alexander was one of the four Sailors to advance to the final round of the Navy Sailor of the Year competition, which was held in Washington, DC in May 2007.

## From SUPDIVE... CDR John Gray

Fellow Divers:

If you haven’t already, take a look at the back cover of FACEPLATE. OK, now that you have recovered, yes it is true, you are seeing the Working Divers Conference (WDC) notional agenda for 2008 nine months in advance. I want to talk about a few of the changes we made this year and what you can expect next year.

We at NAVSEA are attempting to “Begin with the end in mind.” Every change we have made is an example of that concept. Most of these changes are Fleet-inspired but a few are just a matter of common sense.

All WDCs will be thematic in nature based on our pulse of what the Fleet wants, needs, and is interested in. In 2008 we will have three themes.

First theme is contaminated water diving. The Navy Expeditionary Combat Command (NECC) has identified this as its number one interest item. Contaminated water is truly the 500 lb gorilla in the room that no one wants to talk about. Well that is going to change. NAVSEA is actively working with multiple agencies (EPA, NOAA, and FBI), NEDU, and commercial in-

dustrial to obtain the tools, procedures, and situational awareness necessary to address this issue. If you haven’t already, you will soon see written interim guidance. If you want to know the latest and greatest for contaminated water, come to the WDC. You will get to touch the equipment and, if you like, possibly dive it as well.

The second theme is XLDS. The NECC has identified this as its second highest area of interest. By WDC 2008, one way or another, we will be talking procurement plan.

Third theme is interagency operations. Notice that I have not given you a WDC date yet. It is likely to be in May or June. I am ensuring that NOAA is available. I will go far out of my way to make sure that we pick dates that are conducive to NOAA participation. There are several federal agencies with fully-developed dive programs and we have to learn how to work better with them. That means diving with them on the SAME Dive Team, not us on the fantail and NOAA on the bow. I have found the folks at NOAA to be gifted Divers, and in some areas, like NITROX, they are ahead of us. Other big non-Navy players include the Army Corps of Engineers, the Coast Guard, and NASA. Yes, NASA. True, they do most of their dives in a 40-foot pool (big enough to be an ocean if

you have ever seen it) but they are all brilliant and know an awful lot about decompression. We can benefit by working with them.



Another issue that I would like to address about the next WDC is regarding break out sessions. We are happy to work with other commands and facilitate meetings pre- and post-WDC but break outs during the WDC are, as you saw this year, essentially over. This was based on two major observations from the Fleet. One, if you have multiple simultaneous break outs then I cannot attend them all. Two, at the WDC, we should be talking about big picture thematic issues that apply to all hands.

Real life demonstrations were a big hit this year. Being able to touch a real ORCA was highly rated. We intend to have interactive displays in the future.

Although not a major theme of the conference, the Fly Away Saturation Dive System will be in the midst of the Cert Dive. If you want to know the latest about this one-of-a-kind capability, come to the WDC.

Finally, this is a notional schedule. If we missed a major Fleet interest item, please let us know.

We can help ...

# Working Divers Conference Notional Agenda for 2008

## Day 1

### AM

- Admin/Check-in  
Manning
- CEODD
  - Recruiter
  - Detailer
  - ECM

### PM

- Contaminated water diving
- Risks to divers today with today's equipment
  - Best practices using today's equipment
  - Where our testing is taking us
  - What the future contaminated water diving rig would consist of and when it would be fielded
  - In-Water Demonstrations

## Day 2

### AM

- NON VVAL 18M Dive Manual
- Chapter Three
  - Chapter Six
  - Chapter Eight
  - Chapters 17 and 18

CERT  
Chambers/Diving Equipment

### PM

- 00C3 New Equipment/Systems Procurement and Fielding Plans
- XLDS
  - Procurement and fielding plan  
In-water demonstrations
  - Air Monitor  
Physical Demonstration
  - Topside Decompression Monitor  
Diveside Demonstration
  - Dive Computer  
In-water Demonstration

## Day 3

### AM

- VVAL 18M Howgoesit  
ORCA II
- Major Operations
- 00C5
  - 00C2

### PM

- NEDU  
DORA Instruction
- SATFADS IOC
  - NAVSAFECEN

## Day 4

### AM

- ONR  
WESS

