Navy reduces costs while refurbishing deep-dive rigs

By Dan Broadstreet,
Naval Surface Warfare Center Panama City Division, Public Affairs

PANAMA CITY, Fla. (NNS) -- The U.S. Navy achieved successful open-water validation dives July 2012 on MK 16 MOD 1 Underwater Breathing Apparatus' (UBA) electronic circuitry to extend service life into the next decade for a world-class unique diving rig capable of extreme depths in open sea water.

Naval Surface Warfare Center Panama City Division (NSWC PCD) Diving and Life Support Functional Area Manager Wes Hughson credited NAVSEA's Explosive Ordnance Disposal (EOD) and Naval Special Warfare (NSW) sponsors for having the foresight to stand up the Diving and Life Support Depot (DLSD) at Panama City in 2009. NSWC PCD is a field activity for the Naval Sea Systems Command (NAVSEA), the largest single business activity in the Navy and one of the largest business establishments in the federal government.

"For example, from June 2011 through June 2012, with the Navy's centralization and stand up of the DLSD at NSWC PCD, the repair and cleaning improvements helped achieve significant savings. It was equivalent to approximately two and one quarter Man Year's worth of savings for the U.S. Navy," Hughson said.

Lt. Chris Kent, deputy commander of Commander Task Group (CTG) 56.1, simulates equipment failure by breathing from a spare regulator during a training dive using the MK 16 MOD 1 underwater breathing apparatus. The MK 16 MOD 1 is a re-breathable underwater system that minimizes surface bubbles during operations. U.S. Navy photo by Mass Communication Specialist 3rd Class Martin L. Carey

NSWC PCD Commanding Officer Capt. Scott Pratt explained the diving rig's mission and safety requirements are what make this such a significant accomplishment.

"Particularly its mission's safety requirements," Pratt said. "When we're putting a diver at depth, there is absolutely no room for mechanical or electrical failures in the rig's architecture. And to date, the Navy's Tradeoff Analysis has not found any manufacturer able to replicate the MK 16 MOD 1 UBA as safely as our DLSD can. Nor has industry been able to demonstrate the cost savings we're achieving."

"NAVSEA Supervisor of Salvage and Diving also realizes significant total ownership cost savings for the EOD and NSW program sponsors," said NSWC PCD Equipment Specialist Dave Junker.

Project Engineer Terry Adams said this upgrade marked the completion of two and a half years of development, testing and fabrication of the new electronic control suite for the UBA.

"This electronic upgrade will allow continued use of the MK 16 MOD 1 UBA for an additional 10 years," Adams said. "Not only does this provide a service life extension, but it also ensures sufficient spares to fabricate additional UBA platforms. Had this program not been successful, the Navy would have been forced to outsource for an alternate UBA at great expense in time and dollars to the U.S. government."

According to Hughson, by establishing NSWC PCD as the current MK 16 and Viper Depot several economies are realized by co-locating engineering, acquisition and depot-level functions together.

"EOD's and NSW's organizational analysis, which utilized an objective third party, determined that co-locating a depot with its associated in-service engineering activities would capitalize on in-house expertise, streamline business processes and help protect the MK 16 MOD 1 UBA from obsolescence issues," Hughson said.

"For example, having these functional facilities centralized empowers NSWC PCD with the ability to rebuild or repair a depot item, which prevents us from having to purchase a new item. Also, locating the depot with NSWC PCD's inventory minimizes expenses with the logistics delay when materials are located elsewhere, Hughson said.

Pratt added by partnering with neighboring tenant command, Navy Experimental Diving Unit (NEDU), the DLSD is able to achieve cost avoidances as well.

"Our DLSD's partnership with NEDU adds to our ability to repair and oxygen clean items in one central location. This helps us avoid sending parts off base for cleaning, reducing logistics delay time and man hours spent," Pratt said.

"This type of direct Fleet support shortens the repair and cleaning process to less than two weeks, which significantly increases Fleet readiness and system availability," Hughson added, "a significant saving to the taxpayer."