



TOPSIDE



NOAA Diving Program News - June 2009

Diver air pressure safety alert system

Good news! Development of the in-line warning system has been approved by the Department of Commerce Small Business Innovation Research Program (SBIR). This Program is administered by NOAA's Office of Research and Technology. The contract was awarded to Desert Star Systems LLC with work commencing on July 15 to deliver a working prototype of a diver-worn, low-pressure alarm system within one year.

The device proposed by this SBIR announcement would actively monitor divers' air supply and alert them of impending low-pressure levels. As conceived, the diver air pressure alert system would consist of two parts: 1) a sending unit mounted on the diver's first-stage SCUBA regulator, and 2) a small receiving unit clipped to the front of the diver's buoyancy compensator or affixed to one of the diver's air hoses. The sending unit would transmit tank pressure information to the receiving unit wirelessly where a visual alert (i.e. light) would be displayed and an audible sound produced when tank pressure reached predetermined values - nominally 750 psi and 600 psi. The unit would be capable of operating to 300 feet; powered by a user replaceable, commercial off-the-shelf battery with a low battery warning; water and/or pressure activated; testable prior to diving; of sleek design to minimize the potential for fouling; capable of operating in salt water or fresh water at water temperatures of 28 - 100 degrees F, and air temperatures of 0 - 150 degrees F and compatible with various breathing mixtures including 100% oxygen, nitrogen-oxygen, nitrogen-oxygen-helium or helium-oxygen at all mix ratios. Also, alarms would be capable of being seen and heard by the diver's buddy located 25-feet away.



Science Diver Training Course

A contract for the development of a new training program for NOAA Science Divers has been awarded to Diving Science & Technology Corp. The initial consultation with NDC will occur in early July. This project has a six-month delivery schedule. The purpose of the training is to evaluate diving skills and orient divers to the NOAA-standard of diving. The program will consist of three parts: 1) academic instruction; 2) hands-on instruction; and 3) skills evaluation. Stay tuned!



NOS Quarterly Safety Pro Award 3rd Quarter 2009



Greg McFall, Line Office Diving Officer

NDC is pleased to announce to the greater NOAA diving community that Greg McFall, NOS LODO, was recently selected as the winner of the first NOS Quarterly Safety Pro Award. Greg was recognized for his unrelenting commitment to and support of diving safety in NOS and across NOAA. His contributions toward the implementation of needed programmatic changes and development of safety policy as a member and former Chairman of the NOAA Diving Control and Safety Board were noted. Greg is the Sanctuary Research Coordinator at the Gray's Reef National Marine Sanctuary, based in Savannah, GA. Congratulations, Greg! Well deserved.



More good news! The contract for the Acoustic Diver Signaling System has been awarded to Conquest Innovations, a small Washington-based business that provides R&D services and specialized acoustic products, primarily to Department of Defense agencies. They have developed a nice recall system based on NDC specifications. Delivery is expected in the near future and NDC will begin distributing the equipment to all units according to the list developed earlier this year.



Medical records

The NDP has recently been given an opinion by the NOAA Office of the General Counsel that dive physicals and medical information associated with injuries or illnesses are covered under the Health Insurance Portability and Accountability Act (HIPAA). This law has a section on medical privacy and prohibits those without a 'need to know' from having access to medical information. OGC has determined that the UDSs do not have this 'need to know'. As such, all dive physicals and other medical information is now to be sent directly to the NDC DMO by the diver. The UDSs are advised not to handle medical records. NDC strongly suggests divers work with their UDSs when submitting periodic physicals and other medical information so as to prevent unnecessary delays due to incomplete information being submitted or it being misdirected to the wrong person.

All documents should be submitted electronically to the NDC DMO at dmo@noaa.gov or faxed to the NDC DMO at (206)526-6506.

The current procedures for submitting medical information, whether it pertains to a routine physical or an illness or injury, are as follows. When a periodic physical is taken, the information should be sent by the diver directly to the NDC DMO at the above fax number or e-mail address or it can be sent via regular mail to the NDC. If there are any problems noted, the DMO will inform the diver in writing of how to proceed. If a temporary not-fit-for-diving-duty determination is warranted the diver will immediately notify their UDS of the change in their status. If a diver is found to be permanently not-fit-for-diving-duty as a result of an Individualized Assessment, the Director, NOAA Diving Program will notify the UDS of this change. Divers are not to dive on-duty during a medically unauthorized period. When the DMO determines the diver is once again medically authorized to dive, they will be notified in writing and they should inform their UDS who will determine if any requalification dives are needed. The diver will also be informed when the physical is approved. Divers can view the status of dive physicals on the online NOAA Divelog by looking at the 'Date of last physical' in the profile section. The date of the last accepted physical will be listed. If a diver has any medical condition which may affect their ability to dive, they are to immediately notify the NDC DMO in writing (email is acceptable) of the condition and provide copies of any examination notes, physician's instructions, etc. If the DMO notifies the diver that the condition makes them temporarily medically unfit for diving duty, the same procedures as for an adverse finding in a dive physical should be followed. Namely inform the UDS of the unauthorized status, work with the DMO to restore medical fitness, inform the UDS again once the fit for diving duty status is restored and consult with the UDS to determine if requalification dives are required.

Room with a view



Diver Brett Harrison (CCFHR) gives the 'OK' to tender Scott Fowler (NURC) during a Hyperlite training demonstration.

NOAA divers from the National Centers for Coastal Ocean Science based in Beaufort, NC and the Office of Ocean Exploration and Research based in Silver Spring, MD recently completed a decompression diving refresher course hosted by the National Undersea Research Center in Key Largo, FL. During the 12 day training, divers gained experience in deep air and Trimix (or heliox, a helium-oxygen blend) diving techniques. During each session, decompression diving basics were reviewed and divers were challenged to improve their diving safety, through advanced trouble shooting activities such as gas shut down drills, out of air scenarios and other rescue techniques. Additional out-of-water training exercises were conducted, including air consumption calculations, use of the Hyperlite® (a portable hyperbaric chamber), and lectures on safety, emergency preparedness, and buddy communication techniques. Divers expressed very positive feedback following this training; the refresher course has helped CCFHR divers prepare for an upcoming cruise exploring deep water habitats offshore of North Carolina. Decompression diving and technical dive training is required to conduct research in habitats beyond 130fsw and to safely increase limited bottom times at these depths. Divers participating in this training were Nicolás Alvarado (OER), Christine Addison, Brian Degan, Brett Harrison, Roldan Munoz, and Paula Whitfield (CCFHR).

~by Brian Degan and Roger Mays, UDS

Note: Decompression dive operations will take place from the NOAA Ship *Nancy Foster* June 23–July 1 in support of a study on invasive lionfish.

