

US EPA ARCHIVE DOCUMENT

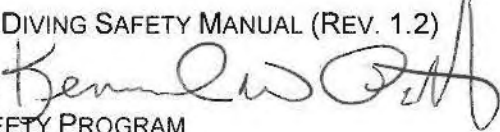


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

DIVING SAFETY  
BOARD

MEMORANDUM

**SUBJECT:** ADDENDUM TO THE EPA DIVING SAFETY MANUAL (REV. 1.2)

**FROM:** KENNARD POTTS, CHAIR   
EPA NATIONAL DIVE SAFETY PROGRAM

**To:** SEE BELOW

**THRU:** DAVID GIBSON, CHIEF  
Policy, Programs, and Oversight Branch  
Safety, Health, and Environmental Management Division (SHEMD)

**Date:** November 12, 2014

THE PURPOSE OF THIS MEMORANDUM, AND THE ATTACHED 2014 ADDENDUM TO THE EPA DIVING SAFETY MANUAL (REVISION 1.2), IS TO DOCUMENT AND DISTRIBUTE CHANGES THAT HAVE BEEN APPROVED BY THE EPA DIVE SAFETY BOARD REFLECTIVE OF THE DIVE SAFETY BOARD (DSB) DECISIONS OF 2010, 2011, 2012, AND 2013. THE MINUTES OF THE ANNUAL MEETINGS PROVIDE ADDITIONAL DETAIL ON THESE DECISIONS.

THE 2014 ADDENDUM CONTAINS DSB ADDITIONS, DELETIONS, AND APPROVED TEXT THAT WILL BE INSERTED INTO THE DIVING SAFETY MANUAL, IN THE SECTIONS INDICATED, WHEN THE MANUAL IS REVISED IN THE FUTURE. UNTIL THIS REVISION, THE 2014 ADDENDUM WILL DOCUMENT CURRENT DIVE SAFETY BOARD POLICY. THE ADDENDUM IS INTENDED TO BE A "LIVING DOCUMENT", TO BE REVISED AS NEEDED, UNTIL THE NEXT EPA DIVING SAFETY MANUAL IS PRODUCED. THE 2014, AND ANY FUTURE ADDENDUMS, ENHANCE SAFETY BY PROVIDING CURRENT EPA DIVE POLICY TO EPA DIVERS, DIVE MASTERS, MANAGERS AND SAFETY, HEALTH, AND ENVIRONMENTAL MANAGERS.

THE DSB REMAINS A COMMITTED PARTNER WITH SHEMD IN THE MAINTENANCE OF A SAFE AND ENVIRONMENTALLY SOUND WORK ENVIRONMENT. PLEASE CONTACT ME AT (202) 566-1267 IF THERE ARE ANY QUESTIONS.

Enclosure

US EPA ARCHIVE DOCUMENT

Addressees

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
DIVING SAFETY MANUAL (DSM) (Revision 1.2)

January 2014 Addendum

**Dive Safety Manual Table of Contents** Include a listing of all Appendices. See Attached.

**Dive Safety Manual - Section 2.10.2.d.** Add the paragraph below.

"Maintenance and Demonstration of Diving Fitness

Diving can be physically demanding, and requires that each diver be physically fit in order to conduct operations safely and effectively. To facilitate the maintenance of good physical conditioning, all divers may request and be granted up to three hours per week during work hours to exercise, subject to their supervisor's approval and the diver's adherence to EPA policy. The ability to establish programs to promote and maintain physical fitness of federal employees is provided under Section 7901(a) of Title 5 of the U.S.C..

All divers will be required to demonstrate their ability to meet basic physical fitness standards by successfully completing the swim test requirements of the EPA Diver Training Program. This test should be conducted at least every two years, and at any time the UDO deems necessary (e.g., following a long hiatus of not diving)."

**Dive Safety Manual - Section 2.12.2.I.** Replace the current paragraph with text below.

"Summarizing and reviewing results of the medical examinations and providing recommendations to the DSB based on the analysis."

**Dive Safety Manual - Section 3.8.2.b** Replace the current paragraph with text below.

"Evidence of a physical examination conducted by a medical doctor in accordance with criteria developed by the AAUS within 24 months of the date of the planned dive (report shall indicate medical fitness to dive), and the observer is willing to complete a medical questionnaire and waiver of liability for the subject dive."

**Dive Safety Manual - Section 4.3.2.b.** Replace the current paragraph with the text below.

"Annually, or semiannually, thereafter while continuing in active EPA diving status, allowing for three months from the sign-off date, provided the examination has been submitted prior to the end of the 12<sup>th</sup> or 24<sup>th</sup> month."

**Dive Safety Manual - Section 4.8.a** Replace the current paragraph with the text below.

"Not maintaining one or all of the EPA field safety and health requirements including CPR, first aid and medical monitoring."

**Appendix A – EPA Diving Safety Rules, Section 18.a.** Replace the current paragraph with the text below.

“An oxygen resuscitator of at least 650 liters (e.g., single Jumbo D or E cylinders or multiple smaller cylinders) capable of ventilating a non-breathing person shall be immediately available at each dive site, if permitted by local laws regarding resuscitating equipment. This emergency oxygen kit must be on the dive platform and be capable of servicing two nonbreathing divers (i.e., capable of providing 100% oxygen to both divers, e.g. via “ambu” bag valve mask (BVM), or manual trigger valve regulator) at the same time, because both divers of a buddy pair will likely have the same exposure and thus, may exhibit the same symptoms.”

**Appendix A – EPA Diving Safety Rules , Section 18.b.** Retain this section.

**Appendix A – EPA Diving Safety Rules, Section 18.c.** Strike the current section.

**Appendix A – EPA Diving Safety Rules, Section 19** Add new Section 19 paragraph below and cascade numbering of the following sections.

“19. Automatic External Defibrillator. An Automatic External Defibrillator (AED) must be onsite, or present on the parent ocean survey vessel if dive platform space is prohibitive.”

**Appendix B - U.S. Navy Dive Tables** Replace tables in DSM with (15 Apr 2008, USN rev 6). See Attached. Remove pages NOAA Nitrox I No –Decompression Tables

**Appendix C – Medical Monitoring Forms** Replace this form with the current version at the next issue of the Dive Safety Manual

**Appendix H – EPA Diving Forms** Include current R10 tending form. See attached.

Include current R10 Safety Plan. See attached.

**Appendix H - Dive Master Pre-Dive Briefing** Under 2 add, “AED”

**Appendix H - Page H-10** Label the current decompression tables included here with the following text,

“This table is for training purposes only – see Appendix B for the current decompression tables.”

**Appendix J – EPA Dive Safety Audit Checklists** Add the text below,

“Are all regulators that are out of service clearly marked or tagged out?”

**Appendix K – Nitrox Diving Standard Paragraph 2 –** Add the text below as a new paragraph.

“All EPA and EPA-sanctioned divers who are NITROX certified should complete at least one NITROX dive per year to maintain proficiency. Divers or dive units must re-qualify for NITROX diving if they have not maintained NITROX proficiency but anticipate having to utilize NITROX on an upcoming dive project. The dive unit UDO or his/her designee overseeing the dive operation shall establish requalification procedures for NITROX use. At a minimum, divers shall be able to independently determine percent

oxygen content of their dive cylinder, demonstrate an understanding of the limitations of NITROX and be able to set, read and understand NITROX settings and repetitive dive planning on their dive computer and/or appropriate tables.”

**Appendix K – Nitrox Diving Standard Paragraph 7** - Strike the current section.

**Appendix K – Nitrox Diving Standard Paragraph 8** – Strike the current section.

**Appendix K – Nitrox Diving Standard Paragraph 9** – Replace the current paragraph with the text below.

“When diving with oxygen—enriched air, divers shall use a computer set at the percentage of oxygen in the mix or diving and decompression tables calculated for the specific gas mixture used (e.g. Nitrox I , II or Equivalent Air Depth Tables).

**Appendix K – Nitrox Diving Standard Paragraph 10** – Replace the current section with the text below,

“Oxygen enriched air up to 40% oxygen can be used for EPA dive operations.”

**Appendix O - Surface Supplied Diving SOP Section 3.5.2.1** Strike the current title of the section and replace with the text below.

"Communications".

**Appendix O - Surface Supplied Diving SOP Section 3.5.2.1** Replace the last sentence of the current section with the text below,

“The set up should be close enough to the dive operation and tenders to allow clear communication between the Communications Box Operator and dive tender.”

**Appendix O - Surface Supplied Diving SOP Section 3.5.2.1** Re-number the duplicate section 3.5.2.1 as,

“Section 3.5.2.2 “Line-pull” Communications”

**Appendix O - Surface Supplied Diving SOP Section 4.3** Replace the current section with the text below,

"Two surface supplied divers may be in the water conducting work each acting as a standby diver for the other, if both are able to render the other aid within 3 minutes at all times, allowing for no decompression limits."

**Appendix P - Tethered Diving SOP - Section 3.4.5** Add the text below to the end of third paragraph of this section.

“The first stage regulator on the pony bottle must have an over-pressure relief valve so that first stage malfunction will not cause a hose failure.”

"Latest decompression tables should be carried aboard the dive platform, or dive computers capable of completing decompression calculations for exigent circumstances that require an immediate response."

## U.S. Environmental Protection Agency

## Diving Safety Manual (Revision 1.2)

## List of Appendices

- APPENDIX A EPA Diving Safety Rules
- APPENDIX B EPA Air and Nitrox I and II Dive Tables (derived from US Navy Dive Tables 15 April 2008)
- APPENDIX C Example Diver Exam EPA Medical Evaluation Form Note: contact SHEM for current version)
- APPENDIX D Non-EPA Diver Liability Release and Express Assumption of Risk & Recreational Scuba Training Council Medical Statement & Guidelines
- APPENDIX E "Dive Safe" Ship Operations Checklist Incorporated by reference Note: this document is no longer contained in current version of the EPA Vessel Safety Manual
- APPENDIX F Letters of Certification (Examples)
- APPENDIX G Letter of Reciprocity (Example)
- APPENDIX H EPA Diving Forms
- APPENDIX I EPA Dive Program Report (Template)
- APPENDIX J Safety Audit Checklist
- APPENDIX K Nitrox (Oxygen-Enriched Air) Diving (Minimum Standards for Use)
- APPENDIX L Biohazard Diving Operations (including decontamination)
- APPENDIX M Dive Computer Guidelines
- Appendix N EPA Memorandum of Agreement of Between the Safety, Health and Environmental Management Division and Diving Safety Board signed April, 10 and 11, 2010
- APPENDIX O Surface Supplied Diving Standard Operating Procedure
- APPENDIX P Tethered Diving Standard Operating Procedure
- APPENDIX Q Standard Operating Procedures for Diver Decontamination