Appendix 1: Diving Medical Exam Overview For The Examining Physician

To The Examining Physician:

This person,	, requires a medical ex	xamination to assess their fitness for cer	tification as a Scientific
Diver for Texas A&M University	ersity. Their answers on the Div	ring Medical History Form (attached) m	ay indicate potential health
have questions about diving a physicians with expertise in of Hyperbaric and Medical Soci	medicine, you may wish to const diving medicine whose names ar lety, or the Divers Alert Network	attached scuba Diving Fitness Medical ult one of the references on the attached ad phone numbers appear on an attached Please contact the undersigned Diving diving standards at Texas A&M Unive	list or contact one of the list, the Undersea g Safety Officer if you
Diving Safety Office	 er	Date	
Printed Name		Phone Number	

Scuba and other modes of compressed-gas diving can be strenuous and hazardous. A special risk is present if the middle ear, sinuses, or lung segments do not readily equalize air pressure changes. The most common cause of distress is eustachian insufficiency. Recent deaths in the scientific diving community have been attributed to cardiovascular disease. Please consult the following list of conditions that usually restrict candidates from diving (Adapted from Bove, 1998):

Conditions Which May Disqualify Candidates From Diving (Note: bracketed numbers below are pages from Bove, 1988):

- 1. Abnormalities of the tympanic membrane, such as perforation, presence of a monomeric membrane, or inability to auto inflate the middle ears. [5,7,8,9]
- 2. Vertigo, including Meniere's Disease. [13]
- 3. Stapedectomy or middle ear reconstructive surgery. [11]
- 4. Recent ocular surgery. [15, 18, 19]
- 5. Psychiatric disorders including claustrophobia, suicidal ideation, psychosis, anxiety states, untreated depression. [20 23]
- 6. Substance abuse, including alcohol. [24 25]
- 7. Episodic loss of consciousness. [1, 26, 27]
- 8. History of seizure. [27, 28]
- 9. History of stroke or a fixed neurological deficit. [29, 30]
- 10. Recurring neurologic disorders, including transient ischemic attacks. [29, 30]
- 11. History of intracranial aneurysm, other vascular malformation or intracranial hemorrhage. [31]
- 12. History of neurological decompression illness with residual deficit. [29, 30]
- 13. Head injury with sequelae. [26, 27]
- 14. Hematologic disorders including coagulopathies. [41, 42]
- 15. Evidence of coronary artery disease or high risk for coronary artery disease. [33 35]
- 16. Atrial septal defects. [39]
- 17. Significant valvular heart disease isolated mitral valve prolapse is not disqualifying. [38]
- 18. Significant cardiac rhythm or conduction abnormalities. [36 37]
- 19. Implanted cardiac pacemakers and cardiac defibrillators (ICD). [39, 40]
- 20. Inadequate exercise tolerance. [34]
- 21. Severe hypertension. [35]
- 22. History of spontaneous or traumatic pneumothorax. [45]
- 23. Asthma. [42 44]
- 24. Chronic pulmonary disease, including radiographic evidence of pulmonary blebs, bullae, or cysts. [45,46]
- 25. Diabetes mellitus. [46 47]
- 26. Pregnancy. [56]

Selected References In Diving Medicine:

Available from Best Publishing Company, P.O. Box 30100, Flagstaff, AZ 86003-0100, the Divers Alert Network (DAN) or the Undersea and Hyperbaric Medical Society (UHMS), Durham, N.C.

Bove, A.A. ed. 1998. Medical Examination Of Sport Scuba Divers, San Antonio, Tx: Medical Seminars, Inc.

Bove, A.A., Davis, J. 2003. Diving Medicine, Fourth Edition. Philadelphia: W.B. Saunders Company.

Bove, A.A. 2011. The Cardiovascular System and Diving Risk. Undersea and Hyperbaric Medicine 38(4), 261-269.

Douglas, P.S., 2011. Cardiovascular screening in asymptomatic adults: Lessons for the diving world. <u>Undersea and Hyperbaric Medicine</u> 38(4), 279-287.

Elliott, D.H. ed. 1996. Are Asthmatics Fit to Dive? Kensington, MD, Undersea and Hyperbaric Medical Society.

Edmonds, C., Lowry, C., Pennefather, J., Walker, R. 2002. *Diving and Subaquatic Medicine*, 4th Edition. London, Hodder Arnold Publishers.

Grundy, S.M., Pasternak, R., Greenland, P., Smith, S., Fuster, V., 1999. Assessment of Cardiovascular Risk by Use of Multiple-Risk-Factor Assessment Equations. AHA/ACC Scientific Statement. *Journal of the American College of Cardiology*, 34: 1348-1359. http://content.onlinejacc.org/cgi/content/short/34/4/1348

Mitchell, S.J., Bove, A.A, 2011. Medical screening of recreational divers for cardiovascular disease: Consensus discussion at the Divers Alert Network Fatality Workshop. Undersea and Hyperbaric Medicine 38(4): 289-296.

NOAA Diving Manual, NOAA. Superintendent of Documents. Washington, DC: U.S. Government Printing Office. Thompson, P.D. 2011. The cardiovascular risks of diving. Undersea and Hyperbaric Medicine 38(4): 271-277.

U.S. NAVY DIVING MANUAL. Superintendent of Documents, Washington, DC: U.S. Government Printing Office, Washington, D.C.