

OCCUPATIONAL SAFETY AND
HEALTH STANDARDS FOR
GREAT LAKES COMMERCIAL
DIVING OPERATIONS

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by

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MICHU-79-208

This work is a result of research sponsored by NOAA Office of Sea Grant, Department of Commerce, under Grant No. 04-6-158-4409. The U.S. Government is authorized to produce and distribute reprints for governmental purposes notwithstanding any copyright notation that may appear hereon.

Price: \$2.25

PREFACE

The purpose of this report is to provide a basis for development of occupational safety and health standards for diving contractors and divers working in the Great Lakes area and to provide guidelines to regulatory agencies for preparation of governmental regulations in commercial and industrial diving operations. It is not intended that provisions in this report or standard are to supercede any governmental regulations, present or proposed.

INTRODUCTION

Persons involved in underwater diving operations are subject to certain occupational risks. In order to protect workers from unnecessary injury or unacceptable risks, certain standards of medical fitness, operational procedure, and equipment must be recognized and compiled. Such standards must be specific and enforceable for adequate protection of the individual worker, but must not be so "unreasonable" as to prohibit underwater work from an economic and operational requirement standpoint.

Diving technology is a rapidly expanding science, and the variations in technique and task complexity experienced throughout the industry are vast. For many years industry, standards committees, federal agencies, scientific/educational groups, diver's associations, and so forth have studied and assessed regional differences in diving practices, personnel requirements, and equipment. In addition to regional differences in these areas, there is a significant difference in these same areas between different diving groups or activities. Although all divers do work in the marine environment and are subject to the same inherent physiological effects of exposure to hyperbaric conditions, there is a vast difference in the extent of exposure, task complexity, and philosophy between the various groups. A single standard should not be applied to all underwater workers.

The various diver/operational categories that currently appear to be significantly different include:

- 1) Recreational scuba diving
- 2) Recreational scuba diving instruction
- 3) Search, rescue, and related public safety diving
- 4) Experimental diving involving human subject experimentation and diving apparatus/procedure research
- 5) Scientific/educational diving involving primarily, but not exclusively, marine environment research
- 6) Shallow-water inland or inshore commercial diving
- 7) Deepwater or offshore saturation diving
- 8) Scientific saturation diving
- 9) Industrial saturation diving
- 10) Military diving

It is likely that two or more of the above categories could be addressed in the same standard. However, it is unreasonable to address all categories of civilian diving under one general standard. The diving mode and philosophy of one group may be so completely different from that of another that the presentation of a standard based primarily on the mode and philosophy of one group may actually provide a basis for erosion of the community consensus standard of safe diving practices of the other group(s).

Consequently, this report is limited to: (1) diving in commercial and industrial situations, (2) operations in inland and territorial waters of the United States defined as the Great Lakes Basin, and (3) shallow-water diving operations in which the diver's working depth does not exceed 220 fsw and compressed air is the primary breathing gas.