



COLLINS ENGINEERS, INC.

CIVIL, STRUCTURAL, WATER RESOURCES AND UNDERWATER ENGINEERING

DEPT. OF TRANSPORTATION
DOCKET SECTION

44025

September 24, 1998 98 SEP 29 AM 9: 02

Docket Management Facility
[USCG-1998-37861 - 59
U. S . Department of Transportation
Room PL-40 1
400 Seventh Street, S. W.
Washington, DC 20590-001

Gentlemen:

We are very happy to see that the USCG is considering changes to the Commercial Diving Operations regulations. As you indicated in your notice, there have been a number of improvements in technology which have a bearing on safety practices, diving techniques and industry standards. Most significant to engineering firms which provide underwater inspection and evaluation services for marine structures to governmental agencies (such as the USCG), and private owners, but do not engage in underwater construction activities, the current regulations do not recognize any distinction between these two types of activities.

A number of technical and professional engineering agencies now deal with underwater engineering issues, including diving, which could be affected by changes in your commercial diving operations regulations. For example, the American Society of Civil Engineers is currently developing a manual of guideline for the underwater inspection of structures (I am Vice Chair of that committee.), and the Transportation Research Board's Subcommittee A3CO6(1) is concerned with the maintenance and management of underwater portions of structures. Both of these organizations, I believe, would be very interested in participating and assisting you with a review of the regulations.

The following general and specific comments are offered for your consideration:

General Comments

A differentiation should be made between requirements for diving work for construction purposes and diving work for engineering inspection and evaluation. Often the requirements for construction diving operations which might involve use of underwater tools and activities adjacent to heavy equipment operation and other construction activities are more stringent than are necessary for engineering inspection work where there are no other construction operations and the only tools involved may be hand held scrapers and underwater cameras. In many cases, the engineering inspection work is more like scientific diving which is excluded from these regulations.



Specific Comments

It is recommended that the areas where this standard applies be clearly and concisely defined. The definition in the text leads to a number of other federal regulations, some of which have been revised or superseded.

(Question 2) The proposal to adopt ADC's Consensus Standards, either by inclusion or by reference, is not recommended. While many items in the Consensus Standards are worthwhile and adopted by firms outside ADC, the adoption of a standard of any particular commercial group without the broad participation of others outside the group would be inappropriate for a federal agency.

(Question 1) Proposed Change to 197.3 14 (b): changing requirement for a decompression chamber frame 130 FSW to 80 FSW.

It is recommended that this change not be made. Many engineering inspection dives can be made at depths below 80 FSW without exceeding no-decompression limits.

197.346 Diver's Equipment.

It is recommended that the requirement for a reserve breathing gas supply be reviewed in light of the relative difficulty in obtaining manual reserve valve (J-valves) and the recreational diving experience with the use of K-valves and readable pressure gauges. The current accepted procedures for scientific diving might be more appropriate for engineering (non-construction) diving operations.

197.430 Scuba Diving and 197.432 Surface-Supplied Air Diving

It is recommended that the minimum size of the dive team, the specific duties of the dive team members and whether one person can perform more than one duty be specified.

(Question 11) It is recommended that no minimum training requirements be proposed. The training that is necessary depends upon the type of work being performed and the environment in which it is performed. Although many "commercial" dive schools have curricula that include hundreds of hours of training, much of that training would not be applicable in all diving operations. For example, hours spent training for underwater burning, welding, and pipe joint assembly are of little value to an underwater engineering inspector-diver conducting structural inspections of facilities.

Diving certifications by organizations devoted to or supported by underwater construction and diving companies could be prejudicial to others engaged in diving activities such as governmental agencies, engineering firms, or scientific divers.

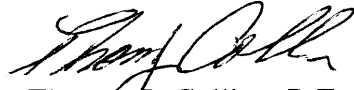
(Question 13) It is recommended that diving supervisors not be licensed by the Coast Guard. It would be difficult to develop a licensing scheme which would be applicable all types of diving operations. It has been our experience that in the engineering diving community, there is little need for additional regulation. We know of no instance of a fatality in



conjunction with engineering diving operations, and know of almost no lost time accidents related to engineering diving operations. It has been our experience that the high level of technical training of engineers, their judgement, and their generally conservative approach to diving has resulted in relatively safe engineering diving operations.

If we can provide any additional information, please feel free to contact me.

Very truly yours,



Thomas J. Collins, P.E.

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