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COLLINS ENGINEERS, INC.
CIVIL, STRUCTURAL, WATER RESOURCES AND UNDERWATER ENGINEERING

September 16, 1998

Comments on Proposed Revisions to the
Commercial Diving Operations Regulations

Docket Management Facility USCG-1998-3786 -60
U.S. Department of Transportation Room PL-401
400 Seventh Street, S.W.
Washington, DC 205904001

Dear USCG:

As you are aware, the Commercial Diving Operations Regularions affect a number of different industries besides the underwater construction industry and ADC. Collins Engineers, Inc. is an engineering firm which routinely performs underwater structural inspections for the USCG, U. S . Navy, numerous State Departments of Transportation, as well as various other governmental and private clients.

In general, our Dive Safety Board has no comments regarding many of the proposed changes to the regulations as they pertain to underwater construction operations, since we are not involved in that sector. However, please find the following comments on issues which would affect the underwater engineering industry, which includes small entiries as defined by the Regulatory Flexibility Act:

1. Decompression Chamber

Although USCG Regulations currently mandate a decompression chamber on the dive site for dives below 130 fsw, the new ADC revisions propose mandating a chamber on site for dives below 80 fsw. Currently, OSHA mandates a dive chamber on site below 100 fsw. It has been our experience that the vast majority of underwater structural inspections are performed well within the available bottom time and do not require decompression. The proposed changes would require the underwater engineering industry to bring a chamber to every site in 80 feet of water even when an inspection could easily be performed well within safe diving practices without a chamber.

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2. Secondary Breathing Gas Sunnlv (SBGS or Bail-Gut Bottle)

Although USCG Regulations currently mandate SBGS utilization for surface-supplied diving. the new ADC revisions propose mandating a SBGS for all modes of diving including scuba, regardless of depth. Currently, OSHA only mandates SBGS for surface-supplied diving. The proposed changes would require the underwater engineering diver to carry a SBGS even when deemed unnecessary based on the relatively shallow water depths, ability to directly ascend and access the surface, and/or the anticipated short duration dive.

3. Confined Space

Although USCG Regulations currently allow scuba to be utilized in confined spaces with direct ascending access to the surface, the new ADC revisions propose prohibiting the use of scuba in confined spaces. The proposed definition of physically confining space is that space which would restrict the diver's ability to rotate himself head to toe, 180 degrees in any place, or when diver has no direct access to the surface or bell. This definition would encompass many submerged vertical shafts and water supply facilities, which are sometimes most safely performed with scuba. Currently, OSHA allows scuba to be utilized in confined spaces with direct ascending access to the surface. The proposcd changes would require the underwater engineering industry to unnecessarily mobilize significantly more equipment for SSA to sites where scuba has been routinely utilized safely.

4. Industry Standards

The proposed ADC revisions are largely based on the ADC Consensus Standards. Furthermore, the ADC Consensus Standards are defined as the "Industry Standards" in the proposed revisions to the USCG Regulations. The ADC Consensus Standards are standards that were developed by an association primarily , if not nearly exclusively, focused on the underwater construction industry. The ADC Consensus Standards are not applicable to others in the Diving Industry that are not involved in underwater construction. Therefore, it is felt that the ADC Consensus Standards should be defined as "Underwater Construction Industry Standards". rather than "Industry Standards" which infers "Diving Industry Standards". If necessary, additional standards should be defined more appropriately to catagorize and address the type of diving being discussed, such as engineering inspection or scientific diving.

5. Diver Medics

Although the currently USCG Regulations and OSHA regulations address first aid and treatment equipment, the proposed revisions to USCG 46 CFR 197.454 by Mr. Eric Hofsornmer would require that diver medics be present on a11 diving jobs. Currently , al1 individuals involved in diving operations are qualified to perform CPR, first aid. and other lifesaving operations. The proposed changes would require the underwater engineering industry to supply a diver medic on every dive site even though many of the sites involve relatively shallow water depths and/or are within minutes of a hospital.

6. Breathing Supply Hoses

The proposed revisions by Mr. Eric Hofsornmer to USCG 46 CFR 197.456 would mandate that dive hoses be cut back five feet on the working end of the hose each year regardless of frequency of use. While this may be warranted for hoses that are utilized 8 hours a day, 5 days a week, 52 weeks a year: this provision is not warranted for hoses utilized a few hours a day and only a couple times per month. Equipment maintenance requirements need to factor in the frequency of use, as well as the environment (abusive construction sites, debris-free sites, etc.).

7. Gauges and Timekeeping Devices

The proposed revisions by Mr. Eric Hofsommer to USCG 46 CFR 197.458 would mandate that the on-site diving supervisor be personally responsible for inspection of all gauges and for all violations to rules. This would require certification of calibration for all company and personnel equipment, every time the personnel? dive supervisor, or equipment is transferred to a new job. This responsibility would be better placed on someone centrally involved with all the different job sites instead of the individual diving supervisors. since people and equipment frequently move from site to site.

In response to the 14 questions posed by the USCG, please find the following responses:

1. Refer to above seven items.

2. No. Refer to above Item 4.

3. No. Since numerous dives and projects can be performed above 80 feet safely without decompression stops or the use of a decompression chamber, it is extremely costly to mobilize and maintain a decompression chamber on site when not needed. It is estimated that well over 1000 dive days in water 80 to 100 feet deep are currently performed per year by a combination of companies and agencies, At $500 per day. the total cost for implementing this part of the proposed regulations alone would be over $500,000 per year. Additionally, the cost of having a certified diver medic on every job site is estimated at over $500,000 per year. It is estimated that the revisions to the Secondary Breathing Gas Supply, confined space, and direct communications diving liveboating provisions of USCG Regulations would cost approximately $80,000 per year.

4. The following defined terms should be added to the USCG Regulations: Underwater Construction Industry Standards, Underwater Engineering/Inspection Industry Standards, Construction-Diver) Engineer-Diver? Scientific Diver.

5. Yes. A committee should be established to write section.

6. Yes. It should be addressed with reference to various EPA documents and HAZMAT Industry Standards.

7. Yes. A committee should be established to write section.

8. Yes. A committee should be established to write section.

9. Yes. A committee should be established to write section.

10. No.

11. Yes. Training requirements need to be applicable to duties assigned. ADC Construction Training requirements should not be mandated for engineer/inspection divers. Likewise, engineering training requirements should not be mandated for construction divers,

12. Yes. However. training requirements should be based on duties to be assigned. Individual committees consisting of members in that particular area of diving should be setup to develop minimum standards. Construction divers should not develop training requirements for engineer-divers or scientific divers, nor should engineer-divers or scientific divers develop training requirements for construction divers.

13. NO.

14. The small entity of underwater engineering and inspection divers, like scientific divers, is very active in diving activities. However, the number of underwater engineering and inspection divers is few compared to the construction divers in the industry. Without separate dive regulations or exemption to ADC Consensus Standards, the proposed revisions are extremely inflexible and would place a heavy burden on those involved in diving with specific duties excluding the highly dangerous construction activities.

    Similar to OSHA, it is difficult to regulate all diving operations ranging from shallow scuba operations to deep saturation dives with a single set of regulations. Many of the ADC recommendations are valid for construction related diving operations which are typically of longer duration. However, for engineering/inspection related operations, which are of much shorter duration, the ADC suggested standards are beyond what is required for safe performance of the diving operation, and in addition, will unnecessarily drive up the cost of engineering related diving operations. It is for these reasons that separate regulations may be the best route to take.

If you have any questions or would like additional information, please contact us.

Very truly yours.

COLLINS ENGINEERS, INC.
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