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MINUTES OF THE ADVISORY COMMITTEE FOR GENERAL INDUSTRY SAFETY ORDERS, ARTICLE 152, DIVING OPERATIONS
September 13, 2018
Sacramento, CA

1. Call to Order.

The meeting was called to order by the chair, David Kernazitskas, Senior Safety Engineer, Occupational Safety and Health Standards Board (OSHSB), at 9:30 a.m. on Thursday, September 13, 2018, in Sacramento, CA. The Chair was assisted by Cathy Dietrich, Staff Services Analyst, OSHSB.

2. Opening remarks.

Mr. Kernazitskas welcomed the attendees and started the introductions of the committee. He then reviewed the Standards Board policy regarding the use of advisory committees, explaining that the Board has found them to be an effective way to aid in the development a proposal because of the expertise of the attendees. He also provided general information about the rulemaking process.

3. Discussion of the proposed rulemaking:

Background

The Chair explained that the advisory committee was convened as a follow-up to previously adopted federal amendments regarding commercial diving operations. As a result of public comment during that process, some of the originally proposed changes were removed from the HORCHER proposal pending further discussion in an advisory committee setting. Additionally, some of the changes requested by federal OSHA were deemed by Board staff as inappropriate for amendment using the HORCHER process.

Necessity

The Chair explained that the requirement for necessity in the rulemaking effort was met because California is required to adopt regulations at least as protective as corresponding federal regulations. He stated that federal OSHA contacted the Board to point out deficiencies in the current regulations.

He also stated that zoo and aquarium representatives had contacted him with concerns about some requirements for commercial divers that they felt were overly burdensome for technical divers. He explained that one of the goals of the committee was to address the concerns of the technical diving representative, while ensuring technical diver safety.

He asked if anyone had any further comments about the need for the proposed amendments. Nobody responded.

§6051 "Definitions"

Discussion of the regulatory text began with a review of the relevant definitions. The Chair suggested replacing capitalized instances of "HOOKAH" with lower case "hookah". The committee agreed that capitalizing the word was unnecessary.

Next, the committee discussed the definition of "technical diving". Chris Moulton (Contract Services) said that in preparation for scenes with underwater photography there are diving activities that should be included in the definition for technical diving. He suggested adding "and related activities" to the part of the definition addressing "underwater photography and special effects".

The Chair asked Mr. Moulton if a specific definition for underwater activities performed in the production of movies would better serve his industry. Mr. Moulton said that he would work on a definition and provide it to the Chair at a future date.

George Peterson (Monterey Bay Aquarium) suggested changing the term "animal husbandry" to "animal care" in the definition for "zoo and aquarium exhibit diving". The suggestion was acceptable to the committee.

§6056 "Basic Operation Procedures"

In regard to the provision of a standby diver, Paul Dimeo (Aquarium of the Pacific) explained that current federal regulations are more limiting than existing California regulations. He said that in aquarium diving, where visibility is considered infinite, the in-water buddy diver is the most effective option to use. He said that his divers train using the in-water buddy diver and have shown that rescuing a distressed diver can be performed more quickly using the in-water buddy than by using a topside standby diver.

The Chair explained that he would amend the current California regulation to reflect the intent of the corresponding federal language, while adding an exception to allow technical divers to continue using the option of an in-water buddy instead of the topside standby diver.

The committee discussed the difference between the federal language requiring an in-water buddy to have "continuous visual contact" and the state's requirement for "effective communication" between the two divers. Mr. Peterson said that divers communicate in a variety of methods, including some that do not require visual contact.

The Chair explained that during a demonstration of technical diving processes at the Monterey Bay Aquarium, he observed one diver pretending to have succumbed to a heart attack or other debilitating condition, who simply stopped moving. He said that "effective communication" required the other diver to contact the distressed diver at regular intervals. Upon discovering that the distressed diver was unresponsive, the buddy diver initiated a rescue. The Chair opined that "continuous visual contact" would likely not detect the disabled diver as quickly.

Anthony Traina (CA Department of Transportation) said that many contractors use SCUBA divers to inspect bridges. He said that the water can often have less than two feet of visibility, making visual contact impossible. Mr. Peterson added that a standby diver would also have difficulty observing an emergency situation due to limited visibility, but that the in-water buddy using "effective communication" would be alerted more quickly to an emergency.

Mr. Dimeo said he preferred "effective communication" because it gave him the option to address the hazard of low visibility in a variety of ways. He said that the buddy system can break down in conditions of low visibility.

The Chair pointed out that the federal regulations would require line tending of a diver where the visibility was too poor to allow the use of an in-water buddy. He said that allowing "effective communication" would preserve the option of the in-water buddy. Eric Berg (Division of Occupational Safety and Health) said that he felt that "effective communication" was more protective.

The Chair asked if anyone felt that California should remove "effective communication" and defer to the federal requirement for "continuous visual contact." The committee recommended leaving the language as is.

"Hookah diving"

The Chair explained that hookah diving was not allowed in commercial diving and asked the committee to discuss conditions where it could be safely done in technical diving. The Chair said that the proposed amendments would remove the existing language allowing hookah to be used at depths up to 190 feet of seawater (fsw) and replace it with a limitation of 30 fsw.

Geoff Thielst (Santa Barbara City College) said that 30 fsw worked for him. Mr. Dimeo said that 30 fsw was acceptable because a first stage regulator could properly function at this depth

without the need to compensate for increased pressures at greater depths. He said that he would not allow a diver at his facility to dive on hookah below 30 fsw because of safety concerns.

Mr. Thielst asked how hull cleaners would be affected by the limitation on hookah diving. He said that many of them use hookah at depths greater than 30 fsw.

Mr. Dimeo said that much of that work is performed by a sole proprietor without the use of employees. Mr. Thielst agreed, adding that the work is often done by a single worker without someone standing by to render aid if necessary.

Mr. Peterson pointed out that hull cleaning would not be considered technical diving and therefore our proposal would not affect them. Mr. Thielst agreed that hull cleaners were not technical divers because they perform repairs and maintenance which are excluded from the definition of technical divers.

Mr. Berg said that Cal/OSHA supports 30 fsw.

The Chair suggested removing scientific diving from the hookah regulation since scientific diving operations are exempted from federal and California commercial diving regulations. The committee agreed.

Mr. Dimeo explained that proposed subsection 6056(a)(5)(C), which allows a non-return valve to be connected to the mask, helmet, or second stage of the SCUBA regulator, is necessary to address the various forms of hookah diving equipment found in the industry. He added that similar language is found in 6057(c)(1)(A).

He further explained that subsection 6056(a)(5)(D) was necessary to ensure that if a hookah diver needed to be rescued, the diver could be pulled up by the air supply hose without fear of pulling the SCUBA regulator from the diver's mouth.

Andrew Solomon (California Science Center Foundation) added that not all hookah rigs come with the proposed harness, especially those used by hobbyists in non-industrial settings. Requiring the safety harness would help ensure that the proper equipment was available for employee use and help ensure the safety of the divers.

Mr. Moulton said that he was unaware of any issues in the movie industry with the requirements for hookah.

Mr. Traina said that he did not have any concerns with the hookah requirements.

The Chair asked if proposed 6056(a)(5)(H), which required second stage regulators to be designed to function at the diver's working depth, was necessary since the proposal already limited the depth to 30 fsw.

Mr. Dimeo said that the requirement was necessary to ensure that the first and second stage regulators were properly matched. The committee agreed.

Mr. Theilst said that he had concerns with 6056(a)(5)(E), requiring an independent reserve breathing gas supply and regulator. He said that the Association of Diving Contractors International (ADCI) has a requirement for a minimum cubic feet requirement and the Navy uses a minimum time requirement. He suggested that the language should require enough air to return to the surface. He said that a dive that went 20 feet down and 200 feet horizontally into a cave would be dangerous without enough reserve air.

Mr. Peterson said that he agrees with a general requirement for providing reserve gas sufficient to reach the surface, but would not support a specific amount. He cited the shallow aquarium exhibits where a diver is only waist-deep when standing as a situation where a reserve gas supply would be unnecessary.

"Surface-Supplied Air Diving in Enclosed or Physically Confining Spaces"

The Chair moved to discuss protections for divers using surface-supplied air around enclosed or physically confining spaces. He said that the state language did not match the federal language and wanted to ensure safeguards were in place for a diver in an enclosed or physically confining space.

For the existing text, which reads: "(C) A standby diver equipped with surface-supplied gear or a pair of SCUBA divers shall hose tend at the underwater point of entry when diving is conducted in enclosed or physically confining spaces," the Chair suggested removing the word "standby" to match the federal language.

He asked the committee if a diver using surface-supplied air at the point of entry was equivalent to two SCUBA divers at the underwater point of entry. Mr. Peterson said that he preferred to have the option to use two SCUBA divers instead of a diver with surface-supplied air.

Mr. Moulton expressed concerns about line tending outside of a confined area. He said that in the film industry, the extra lines running in the area can pose a hazard to the divers and interfere with filming processes. The Chair said that he would discuss Mr. Moulton's concerns further and propose a solution at a later date.

§6057 "Equipment Procedures and Requirements"

The Chair moved to discuss the buoyancy compensation device (BCD) required by federal OSHA for SCUBA divers. He said that during the public comment period of the former HORCHER rulemaking effort, commenters stated that the BCD "not only increases the weight the diver has to carry, but it also increases the failure points on the gas system as a whole." They also stated that "concerns over a diver running out of air do not exist in aquarium and zoo diving operations."

Mr. Peterson said that the regulation is based on an outdated technology and that current scientific and technical divers are not trained to use such equipment. Further, he stated that the spent air cartridges would need to be discarded into landfills, creating an environmental concern. He said that the regulation attempts to solve a problem that does not exist.

Christian McDonald (Scripps Oceanography, UCSD) said that the regulation was developed over concerns that a diver, who needed to surface in an emergency, may lack the breathing gas to inflate the BCD. However, he said that his divers are trained to shed weight, which produces upward buoyancy and accomplishes the same purpose as the BCD, without using breathing air.

Mr. Moulton said that he agreed with the other commenters.

Mr. Dimeo said that the current ADCI regulations no longer require the BCD required by the federal language, though they did in the past.

Mr. Thielst said that the BCD was an interesting solution to a non-existent problem. He said that the equipment was no longer available for purchase and that the regulation was impossible to comply with today.

Mr. Traina said that if the purpose of the requirement to have a BCD with an independent reserved gas supply was to alleviate concerns of a diver running out of air and not being able to surface, then the solution is to drop your weight belt and surface that way. He agreed with the other commenters that the requirement was outdated.

The Chair asked if the requirement should be removed from the regulation because it does not apply to modern-day SCUBA practices.

Mr. Dimeo said that 6057(b)(4)(D) was taken from current ADCI recommendations for a BCD. He said that the proposed text was the current industry practice and could be used instead of 6057(b)(4)(C).

The committee agreed that 6057(b)(4)(D) would work and that there was no need for the separate inflation source required in 6057(b)(4)(C).

4. Review

The Chair reviewed the proposed amendments and the suggested changes from the committee.

The definition of technical diving will cover all regulated diving other than scientific or commercial dives. Mr. Thielst asked if we needed to clarify the difference between an observation and an inspection.

Mr. Berg opined that the Appeals Board would be able to distinguish between the two. Mr. Traina said that in his work, inspections which take place to evaluate the need for maintenance are considered maintenance and fall under commercial diving. Mr. Peterson said that aquarium divers perform observations regularly, but do not perform inspections.

After reviewing the rest of the changes, the Chair asked if the committee had any other concerns. No new concerns were raised.

5. Cost Impact.

The Chair explained to the committee that an important and required part of the rulemaking process is the identification of the cost impact of the proposed rulemaking, and he asked the committee members for their assistance.

The committee discussed potential costs, but determined that the changes only allow for more options in complying with the regulations. No cost impact is anticipated.

Mr. Peterson said that he did not expect a cost impact because the regulation does not require additional employees to perform tasks that have been done in the past without the additional employees. He said that if technical diving is removed from the regulations, a significant cost impact will be imposed. He said that allowing technical diving in California saves zoos and aquariums thousands of dollars each year in equipment, training, and employee costs.

Mr. Moulton said that similar savings are experienced in the movie industry because of the technical diving regulations.

6. Conclusion.

The Chair reviewed the rulemaking process with the committee. He noted that the advisory committee had determined a necessity for changes and had reached consensus on the proposed changes. He stated that committee members will receive a copy of the meeting minutes, along with a copy of the final consensus proposal within 1-2 months. Then he explained that they will have an opportunity to comment on the changes before he moves forward with the preparation of a formal rulemaking proposal.

The Chair noted that although consensus on the recommendations was achieved, there will be additional opportunities for public comment. A formal rulemaking proposal will be noticed in the coming months. The notice will be mailed-out to the committee members, so he urged them to be sure they signed the attendance roster if they want to receive a copy. The notice will also be on the OSHSB website for viewing.

There will be a 45-day public comment period, concluding with a public hearing. Anyone may attend the public hearing and provide oral comments. Changes may result from public comment and/or during the review process. If any substantive changes are made, there will be one or more additional 15-day periods for public review and comment. After that it will go to the Board for potential adoption at a Business Meeting.

If adopted by the Board, the proposal will go to the Office of Administrative Law (OAL) which will have 30 working days to review it for compliance with the Administrative Procedures Act. Finally the proposal will be filed with the Secretary of State and will become effective (enforceable) on a quarterly basis (January 1, April 1, July 1 or October 1) depending on the date of OAL approval and submission to the Secretary of State.

The Chair thanked the committee members for their attendance and participation and adjourned the meeting at 12:22 p.m.