ADCI COMMENTS ON USCG NPRM TO 46 CFR PART 197 SUBPART B

APPLICABILITY §197.200

"(3) Vessel operating on the navigable waters of the United States, as defined in 33 CFR part 2;

"(4) United States vessel required to have a certificate of inspection issued by the Coast Guard, including a mobile offshore drilling unit of its geographic location or:"

It is requested that further clarification be provided on where the applicability of the rulemaking will take place. Are all aspects of the NPRM to 46 CFR Part 197 Subpart B subjected to all areas and vessels under USCG jurisdiction? Or, are there certain proposed requirements, such as dive team staffing, equipment certification, and 3rd party audits which are only applicable to commercial diving operations in the OCS? As further stated below, we recommend that the proposed manning levels in the NPRM be confined only to the OCS so as not to conflict with existing OSHA manning levels in the inland environment.

Does the proposed rule extend to inland companies that are performing shallow work on tugs, towboats, or other vessels (on a one time basis)? Clarification needs to be provided on this. Currently, inland towboats are not certificated vessels, therefore inland diving operations from them follow OSHA rules. It is our understanding that this is proposed to change and they may become certificated vessels and therefore, as this standard currently is written, will then become subject to USCG diving regulations. As written, such a requirement would further increase the likelihood of individual towboat operators to violate this standard, as it would be perceived as too cost prohibitive for them to comply. Currently, legitimate diving contractors already have trouble at times competing for this work while following current OSHA manning requirements. In this instance, we recommend that, **outside of the OCS,** OSHA's requirements and manning levels for commercial diving operations should apply when working inland or off of towboats in shallow depths (in areas recognized as inland waters), as is currently done. It would be very confusing if contractors had two different sets of manning levels to follow when performing the same type of job in the same location, dependent upon such factors as whether the vessel was certificated, etc. There should also be further clarification that the adoption of IMO's *International Code of Safety for Diving Systems*, as well as the requirement for third party audits and possession of a diving system safety certificate is intended for fixed saturation systems and not for portable surface diving spreads.

DEFINITIONS §197.201

"Bell" definition should be expanded and broken up into two categories (Open Bell and Closed Bell).

"Commercial Diving Operator" (CDO) should be changed to Commercial Diving Contractor to reflect the term recognized by industry. The definition should probably read "Company or entity that performs commercial diving services." Current definition reads more like the client, "who secures the services of commercial divers to undertake commercial diving operations."

Add: "End-User" or "Client"

"Dive" definition should reflect common industry definition "…Person or persons exposed to hyperbaric conditions, performing tasks that are outlined in a dive plan…" Recommend that the definition be termed "Commercial Dive" since it states work/tasks within the definition.

Add the following definitions:

- Job Hazard Analysis (JHA), Management of Change (MOC), Hyperbaric Evacuation System (HES), Life Support Package (LSP), Self-Propelled Hyperbaric Lifeboat (SPHL), Hyperbaric Rescue Unit (HRU), Hyperbaric Rescue Chamber (HRC), Hyperbaric Rescue Facility (HRF), Hyperbaric Evacuation Plan (HEP), Risk Assessment Analysis, Manifold Operator,

"Mixed-Gas Dive" definition should differentiate between HeO_2 and NITROX Enriched Air.

REFERENCES (IBR) §197.202

Recommend that the International Consensus Standards for Commercial Diving and Underwater Operations be stated as (current edition).

Add: ASME PVHO-2, American Welding Society (AWS) D3.6 M (current edition)

Remove: ANSI/ISO 15618-1:2001

EQUIVALENTS/COMPARABLE LEVELS OF SAFETY/VARIANCES §197.203

The process for variance applications needs to be clearly defined in writing and contained in the CFR.

THIRD PARTY AUDITS/EXTERNAL AUDITS/PRE-AUDIT NOTIFICATION §197.209/211/212/213

Recommend that the frequency of the audits not exceed a 36 month period. Audits by industry-recognized trade associations or classification societies could serve as audits that are recognized by the USCG. If these are not performed by any of the above during the 36 month time period, then the USCG could assign one of its designated TPO's to perform the audit.

Recommend that there be language to allow for unexpected short weather-windows (also hurricanes and tropical storms). Additionally, many contractors "spot hire" USCG inspected/approved vessels on short notice for their operations as needed. Short notice jobs and urgent tasks happen quite frequently, and these legitimate reasons to mobilize under the five (5) day period should be considered acceptable.

In the instance of an investigated marine casualty or civil proceeding, the USCG should directly oversee the audit process.

There needs to be more clarity with respect to TPO's, who have already been identified by the USCG. The should also be a spelled out process to address cases where there may be a conflict of interest between the party being audited and the designated TPO or cases where the audited party may have feel that a lack of objectivity on the part of the TPO, due to various factors, i.e. past working relationship, etc.

P. 91 (1) Recommend that qualifications be adjusted to read:

Recommend revising the qualifications for TPO's to mirror what current industry can support from a man-power standpoint. For example, the number of Mixed-gas (HeO_2) dives overseen is 500 and saturation dives that are required for TPO's is 100. Given the reduction in the amount of mixed-gas

(HeO_2) diving that is being conducted globally, it is recommended that this number be reduced to 100 dives overseen in that mode.

Recommend greater clarification on the requirement for facilities and vessels (where diving takes place) to be audited. There are instances where an operation may only take place on a one-time basis on a vessel or at a facility. The requirement should be applied to only those sites where diving routinely takes place. The term "routinely" would need to be defined.

Recommend that commercial diving contractors retain all audit reports for a period of 10 years.

COMMERCIAL DIVING OPERATORS (COMMERCIAL DIVING CONTRACTORS) §197.220

Recommend changing §197.220 (e) to read: "The name of the diving supervisor(s) for each commercial diving operation shall be-

(a) Designated in writing; and
(b) Given to the person-in-charge prior to the commencement of any commercial diving operation.

(This is the original language in the current §197.210)

(f) Recommend that there be further revisions to the table outlining drill requirements. Drill requirements should not be so specific and the launch of the hyperbaric rescue unit should be simulated (if the required frequency is to be adhered).

(i) Recommend that there be language added to note "all on-shift dive team members will participate in a dive planning meeting before the commencement of dive operations."

(k) Recommend adding "(if applicable)" to the requirement of the submittal of a Diving System Safety Certificate to the local OIC, Marine Inspection. If this implies any sort of class certification or additional 3rd party audits of every portable dive spread, it should be understood that a majority of portable diving systems are not class certified. Any additional 3rd party audits to obtain class certification to an already non-classed dive spread, usually will result in the replacement of the existing spread, which would be financially burdensome and cost prohibitive to many diving contractors operating in USCG areas of jurisdiction. We recommend that all portable surface diving equipment be compliant to ADCI equipment guidelines and not subject to 3rd party audits or class certification. The ADCI requires that the supervisor have current records of required equipment testing. This information is required to be made ready for review and inspection upon the request of the client or regulators.

PERSON IN CHARGE (PIC [VESSEL MASTER]) §197.221

Recommend allowance for a designated alternate to stand in for the PIC to accommodate the requirement of the PIC participating in each dive team meeting (especially for 24 hour operations).

DIVE SUPERVISORS §197.222

Recommend revision of (l) the requirement to maintain where and when testing occurred for each of the following, along with test results- medical kit checks (monthly), etc. This information should be keep in separate designated equipment logs and should note be part of the dive log which is reserved for operational information.

OPERATIONS MANUAL §197.223

Recommend revision to (b) which states "The supervisor must modify the operations manual to reflect any change in the configuration or operation of the vessel or facility or in the specific diving operation as planned." The operations manual is a company document that is only subject to change by senior management. If the "dive plan" is to be altered than the management of change (MOC) process should be exercised (with contractor and client authorization).

Further clarification should be provided to: (a) "Each dive supervisor must provide the operations manual to the person in charge (PIC) prior to commencement of any diving operation…." In theory, the vessel master (especially if the vessel has been contracted from a 3rd party) would have very little understanding of its contents, as it relates to diving operations, etc. Although it should be made available to all at the dive location, little benefit would come from the submittal of the manual to the vessel master.

OPERATIONAL DUTIES IN THE EVENT OF MARINE CASUALTY OR SERIOUS MARINE EVENT §197.224

(3) Recommend revision to the requirement for a 3rd party audit prior to resumption of diving operations. This needs to be defined more clearly, and should allow for a contractor to continue operations after the incident or casualty has been appropriately addressed. The requirement for the audit should be based upon operational or equipment deficiencies which can be directly attributed to the casualty or serious marine event.

DIVE SUPERVISORS §197.242

There is likely to be a change to the current ADCI requirement for the saturation dive supervisor certification. Currently, 100 field days as a mixed-gas (HeO_2) supervisor is required. Due to the downward trend in the volume of HeO_2 diving this requirement will be amended in the ADCI Consensus Standards for Commercial Diving and Underwater Operations.

DIVERS AND DIVE TENDERS §197.243

While we recognize the importance of formal training under this identified standard, it is important to realize that there are divers and supervisors who are commercially certified prior to the existence of this standard. Recommend adding: "Dive tenders, divers, and supervisors who received their ADCI or equivalent commercial diving certifications, prior to the existence of ANSI/ACDE-01-2009 (or most current edition) are exempt from this requirement." This should also be cited in §197.209 Third-party audits (1) for the requirements of a TPO.

INDIVIDUALS CONDUCTING UNDERWATER BURNING, WELDING, OR EXOTHERMIC CUTTING §197.246

Recommend that when referencing ANSI/ACDE-01-2009, it be listed as "ANSI/ACDE Standards for Commercial Diver Training (current edition)".

Recommend referencing AWS D36.B versus ANSI/ISO 15618-1:2001. This is a better standard (more up to date and relevant for purpose)

DIVER MEDICAL TECHNICIANS §197.247

Recommend revision to the requirement to read: "Each individual acting as a diver medical technician must meet the requirements for commercial divers outlined in 46 CFR 197.243(a), be trained to the level of the national registry, and be trained as a certified medical technician according to the National Board of Diving and Hyperbaric Medical Technology."

WORK HOURS §197.252

Recommend incorporating by reference the ADCI Consensus Standards Minimum Rest Hour Policy.

WORK HOURS/OPERATIONS CONDUCTED FROM A DYNAMIC POSITIONING VESSEL §197.261

Recommend the incorporation of ADCI Consensus Standards language in Section 8 "Main umbilical must be 20 feet shorter than the closest hazard." versus "(3) Ensure that the onboard dive location is not located within 5 meters of a propulsion source. Require Bell Umbilical and Surface Umbilical Management Diagram/Plan for all diving off of DP Vessels.

OPERATIONS INVOLVING SCUBA §197.263

Recommend NOSAC Diving Subcommittee's Phase 1 and 2 recommendation on this diving application. While the ADCI knows that Scuba will not be removed from the CFR, there should be stringent restrictions for its use. A formal risk assessment should be performed when considering the use of scuba for commercial diving operations.

OPERATIONS INVOLVING MULTIPLE DIVES BY A DIVER §197.264

"Each commercial diving operator requiring divers to engage in multiple dives must first make sure that equivalent depth calculations are determined by the dive supervisor and the diver, and that those calculations are entered into the standard Navy Air Tables contained in the U.S. Navy Dive Manual (incorporated by reference, see 46 CFR 197. 202) to determine the subsequent dive profile."

Recommend that it state that the diver's residual nitrogen be determined by referring to the U.S. Navy Dive Manual's Residual Nitrogen Table (RNT).

OMITTED DECOMPRESSION §197.265

Recommend revision to the current NPRM language to read: "At the dive location, the commercial diving contractor must have written procedures for addressing instances of omitted decompression. Commercial diving contractors should follow the directions and guidance of their respective hyperbaric physician(s).

GENERAL REQUIREMENTS §197.270

Recommend the use of NOSAC Diving Subcommittee's recommended (Hyperbaric Evacuation Systems Focus Group) language. It is likely that this language will be adopted into the ADCI Consensus Standards.

NOSAC Focus Group 1 (HES)

Recommendations for Consideration

Saturation diving is a mode of diving where the diver is subjected to an ambient pressure greater than atmospheric pressure to the degree that his or her tissues become saturated with the inert breathing medium. Once saturated, the diver is committed to a set decompression procedure no matter how long he or she remains at depth. This obligation to decompression requires additional planning to provide the saturation divers with the ability to evacuate from the pressurized saturation complex.

A hyperbaric rescue unit (HRU) must be provided for evacuation of the divers with life support for a minimum of 72 hours. A site specific hyperbaric evacuation plan (HEP) must be in place to ensure the HRU and its occupants are taken to a designated location where they may be safely decompressed to atmospheric pressure.

There are two acceptable types of HRU. One is a self-propelled hyperbaric lifeboat (SPHL) and the other is a hyperbaric rescue chamber (HRC). The difference between these is basic; the SPHL is a PVHO fitted in a conventional lifeboat hull, making it capable of maneuvering under its own power with the ability to accommodate a support crew and the HRC is a PVHO that must be towed and has no capability to accommodate a support crew.

Each HRU must have a life support package (LSP) which can be mated to the HRU. The details of the LSP, including what it is comprised of and where it is located, must be included in the HEP.

Details of where the final decompression will be carried out must be included in the HEP, such as a designated hyperbaric rescue facility (HRF). The HRF is a designated rescue saturation complex where divers can decompress and receive medical attention following a disaster that required evacuation from the host. A risk assessment should be carried out to determine if the length of decompression or the medical needs of the divers outweigh the risks associated with an additional transfer to the HRF.

If the HRF is identified in the HEP, then there should be a fit test of the HRU to that HRF to ensure that no issues are encountered. This test should be carried out at least once, and every time a modification is made to the HRU that would change how it would fit to the HRF.

Recommend the revision of (d) requiring the classing of all diving systems (modular or packaged). While this can be done for newer saturation systems, this would be problematic for older systems that are still very prevalent in the OCS. The cost associated with mothballing those systems, without some type of phase-out process, would be very significant. Additionally, it is not feasible to require the classing of portable surface diving spreads, as many of the components are swapped for job load-outs. The classing of portable surface spreads is not reflective of current industry practice (international and domestic). Prescribed planned maintenance and inspection of portable surface diving components is more than sufficient to ensure that contractors are performing their due diligence towards ensuring safety from an equipment standpoint. We recommend that (4) be removed, as currently worded and adopt the following language for (e):

(e) In the use of all saturation diving systems, a hyperbaric rescue unit must be provided and —

(1) Be used for no other purpose;

(2) Not be counted to meet applicable carriage requirements for survival craft;

(3) Meet the hyperbaric evacuation system requirements of IMO Resolution A.692 (17) (incorporated by reference, see 46 CFR 197.202); and

(4) Have an HEP

COMMERCIAL DIVING OPERATOR'S GENERAL EQUIPMENT DUTIES §197.271

Recommend revision of (4) to read: "Manufacturer service life specifications, including the equipment's date of entry into dive service and recommended date of removal from service (if provided)."

EQUIPMENT DUTIES §197.272

The language in this section should be outlined in §197.222 [recommend after (b)].

DIVE SUPERVISOR'S EQUIPMENT MAINTENANCE LOGBOOK DUTIES §197.273

"Each supervisor must keep a maintenance logbook required by 46 CFR 197.272 and make it available for inspection at the dive location."

Recommend that this be amended to require only copies of current tests onsite, such as compressor air quality tests, umbilical tests, helmet inspection documentation, etc.). To have the maintenance records for all equipment onsite could be voluminous.

VOLUME TANKS §197.275

Recommend the development of a new section which covers the requirements for dive compressors. Intakes are associated with compressors. Volume tanks will be feed from compressors. The ADCI Consensus Standards (Section 6) can be incorporated by reference.

PVHO §197.277

Recommend incorporating by reference the ADCI Consensus Standards (Section 6)

DIVING LADDERS AND STAGES §197.280

Recommend incorporating by reference the ADCI Consensus Standards (Section 6)

MISCELLANEOUS EQUIPMENT REQUIREMENTS §197.286

Remove the last sentence in "Breathing gas supply, primary". It doesn't apply.

Recommend revision of "Equipment used with oxygen mixture greater than 23.5 percent by volume – Must be marked "FOR OXYGEN USE ONLY" and cleaned in accordance with Compressed Gas Association Publication G-4.1."

Recommend incorporating by reference ADCI Consensus Standards (Section 6):

"2. LP hose assemblies (less than 500 psi) used in systems containing greater than 50 percent oxygen are to be cleaned for oxygen service."

"3. Hoses used for oxygen (over 50 percent) service shall be identified by a consistent color code or tagged "FOR OXYGEN USE ONLY."

DIVE TEAM STAFFING REQUIREMENTS §197.290

Recommend incorporating by reference ADCI Consensus Standards (Section 4.5 1. Minimum Personnel)

LST as defined in the NPRM may not be qualified to operate a surface gas HeO_2 manifold.

Recommend the requirement of a DMT as part of the dive team for all surface-supplied air, mixed-gas (HeO_2), and nitrox enriched air diving operations with planned decompression **conducted in the OCS**. The ADCI doesn't feel this should be a requirement in the inland or coastal (non-offshore) environments as medical help and assistance is much more readily accessible and smaller inland companies often don't have ready access to DMT qualified personnel. The ADCI will likely consider incorporating this requirement (for operations in the OCS) in the Consensus Standards.

"(d) Mixed gas commercial diving operations must include a life support technician dedicated for the purpose of operating the mixed gas system." Recommend adding: "(excluding nitrox enriched air commercial diving operations)."