

**ADC I GAP Analysis
Between
Editions 6.1 and 6.2 of the
International Consensus Standards
for
Commercial Diving and Underwater Operations**



ADCI Consensus Standards GAP Analysis - Editions 6.1 and 6.2

Edition 6.1

P. ii

Sixth Edition

2014 (Revision 6.1)

Edition 6.2

P. ii

Sixth Edition

2016 (Revision 6.2)

ADCI Consensus Standards GAP Analysis - Editions 6.1 and 6.2

Edition 6.1

P. xvii

“This edition of the International Consensus Standards for Commercial Diving and Underwater Operations supersedes the 6.0 edition, dated 2011.”

Edition 6.2

P. xvii

“This edition of the International Consensus Standards for Commercial Diving and Underwater Operations supersedes the 6.1 edition, dated 2014.”

Edition 6.1

Edition 6.2

1.0 GENERAL PROVISIONS

1.0 GENERAL PROVISIONS

▪ 1.1.3 IMPLEMENTATION OF CERTIFICATION AND EQUIPMENT REQUIREMENTS

- Except where noted, all new certification and equipment requirements will take effect upon the formal public release of this document. Noted changes to take effect after the formal adoption of this document will be annotated by a superscript (1, 2 or 3) after the stated requirement. The legend for the superscripts is as follows:
 - – Compliance required by January 2012
 - – Compliance required by July 2012
 - – Compliance required by July 2013

REMOVED

Edition 6.1

2.0 DIVING PERSONNEL MEDICAL AND TRAINING REQUIREMENTS

DIVING MEDICAL AND TRAINING REQUIREMENT

2.3 DIVER MEDICAL REQUIREMENTS

Edition 6.2

2.0 DIVING PERSONNEL MEDICAL AND TRAINING REQUIREMENTS

Add "s" to "REQUIREMENT".

Insert revised section and new sub section on *Venomous Fish Stings*.

Edition 6.1

3.0 DIVING PERSONNEL RESPONSIBILITIES, QUALIFICATIONS AND CERTIFICATIONS

3.1.4 CERTIFICATION AND TRAINING MATRIX

BELL/SAT DIVING SUPERVISOR	
100 as Mixed-gas Diving Supervisor	
60 Working Days	
EXAM REQUIRED	

Edition 6.2

3.0 DIVING PERSONNEL RESPONSIBILITIES, QUALIFICATIONS AND CERTIFICATIONS

Revise BELL/SAT SUPERVISOR requirement to reflect "100 days as mixed-gas and/or air diving supervisor".

Add Nitrox Supervisor Endorsement column after Bell/Sat Diving Supervisor column.

Edition 6.1

3.0 DIVING PERSONNEL RESPONSIBILITIES, QUALIFICATIONS AND CERTIFICATIONS

3.1.5 DOCUMENTATION ACCEPTED

"2. Personnel are required to show evidence of a properly maintained commercial diver's log book."

Edition 6.2

3.0 DIVING PERSONNEL RESPONSIBILITIES, QUALIFICATIONS AND CERTIFICATIONS

3.1.5 DOCUMENTATION ACCEPTED

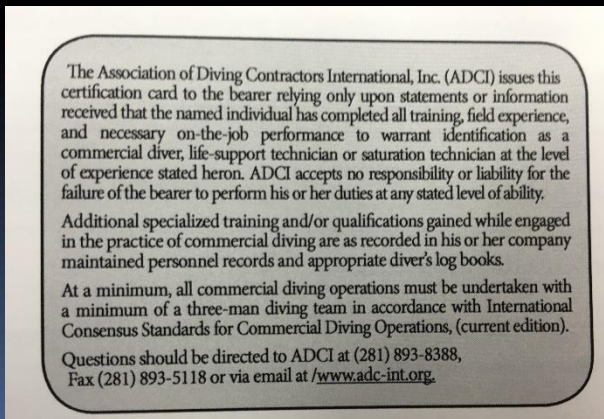
Revise "2." to read: "2. It is recommended that all divers maintain a personal commercial diver log book (ADCI Commercial Diver Log Book or equivalent) to detail hyperbaric exposures."

ADCI Consensus Standards GAP Analysis - Editions 6.1 and 6.2

Edition 6.1

3.0 DIVING PERSONNEL RESPONSIBILITIES, QUALIFICATIONS AND CERTIFICATIONS

3.1.8 PHOTO INSTRUCTIONS FOR COMMERCIAL DIVER CERTIFICATION CARDS

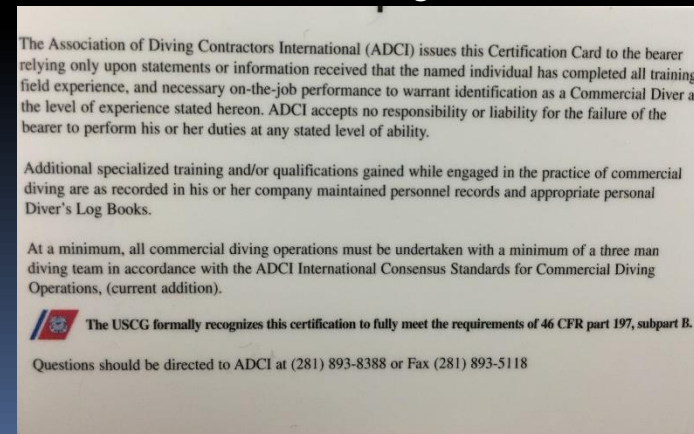


Edition 6.2

3.0 DIVING PERSONNEL RESPONSIBILITIES, QUALIFICATIONS AND CERTIFICATIONS

3.1. PHOTO INSTRUCTIONS FOR COMMERCIAL DIVER CERTIFICATION CARDS

Revise the language on the back of the certification cards to reflect USCG recognition.



Edition 6.1

3.0 DIVING PERSONNEL RESPONSIBILITIES, QUALIFICATIONS AND CERTIFICATIONS

3.4.1 RESPONSIBILITIES

“A qualified person shall be designated as the diving supervisor for each diving operation. ”

“Maintain and submit reports required by employer and relevant governmental regulations concerning diving operations and equipment maintenance , testing or repair.”

Edition 6.2

3.0 DIVING PERSONNEL RESPONSIBILITIES, QUALIFICATIONS AND CERTIFICATIONS

3.4.1 RESPONSIBILITIES

Revise the first sentence in the introductory paragraph to read: “A qualified person shall be identified in writing as the diving supervisor for each diving operation.”

22nd bulleted item – put “testing and repair” in parentheses followed by a period.

Edition 6.1

4.0 DIVING MODES: DEFINITIONS, REQUIREMENTS AND GUIDELINES

4.2.1, 4.3.1, 4.3.2.1, 4.3.3.1, 4.5.1, 4.6.1 MINIMUM
PERSONNEL REQUIREMENTS

4.5 SURFACE-SUPPLIED MIXED GAS DIVING
(HeO₂)

Edition 6.2

4.0 DIVING MODES: DEFINITIONS, REQUIREMENTS AND GUIDELINES

4.2.1, 4.3.1, 4.3.2.1, 4.3.3.1, 4.5.1, 4.6.1 MINIMUM
PERSONNEL REQUIREMENTS

Add above the bulleted items: "At a minimum, at least one member of the dive team must have a recognized O₂ provider certification or be a DMT. If that member is a part of the dive rotation, then at least two members of the dive team must have a recognized O₂ provider certification or be DMTs."

4.5 SURFACE-SUPPLIED MIXED GAS DIVING (HeO₂)

Re-number entire section, assign 4.5.1 and add title, "MINIMUM PERSONNEL REQUIREMENTS"

Edition 6.1

4.0 DIVING MODES: DEFINITIONS, REQUIREMENTS AND GUIDELINES

4.5.2 (HeO₂) MINIMUM EQUIPMENT REQUIREMENTS

Edition 6.2

4.0 DIVING MODES: DEFINITIONS, REQUIREMENTS AND GUIDELINES

4.5.2 (HeO₂) OPERATIONAL REQUIREMENTS

Insert additional language in gray shaded box:

“Any operation deeper than 165 fsw (50 msw) requires a method for mitigating the uncontrolled ascent of a diver to the surface. This can come in the form of clipping in the diver’s umbilical to the stage or bell, or the use of a “golden gate” apparatus.”

Edition 6.1

4.0 DIVING MODES: DEFINITIONS,
REQUIREMENTS AND GUIDELINES

4.6 SATURATION DIVING

Edition 6.2

4.0 DIVING MODES: DEFINITIONS,
REQUIREMENTS AND GUIDELINES

4.6 SATURATION DIVING

Re-number the entire section, assign 4.6.1 and add
title "MINIMUM PERSONNEL REQUIREMENTS"

Edition 6.1

5.0 UNDERWATER OPERATIONS:
PROCEDURES, CHECKLISTS AND GUIDELINES

5.4 FIRST AID

Tourniquet Velcro	Each	1
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Edition 6.2

5.0 UNDERWATER OPERATIONS:
PROCEDURES, CHECKLISTS AND GUIDELINES

5.24 Insert "Gas" before "consumption" above the box for "Emergency Gas Supply Duration Formula".

5.4 FIRST AID

Add a new number 4. that reads: "Documented inspection of first aid kit contents is required annually."

Change tourniquet requirement from Velcro to a "For-purpose manufactured tourniquet."

Edition 6.1

5.36.2 PERFORMING PENETRATION DIVING

“In these conditions, the dive team must include an additional tender/diver.”

Edition 6.2

5.36.2 PERFORMING PENETRATION DIVING

Revise second paragraph to read:

“In these conditions, the dive team must include an additional tender/diver, as well as a third umbilical for the topside standby diver.”

Edition 6.1

5.5 DIVER'S PERSONAL LOG BOOKS

"All divers shall maintain a personal dive log book (ADCI commercial diver log book) or equivalent to detail hyperbaric exposures. The log book must be identified to the diver using it by photograph, signature and home address. As a minimum, the following information shall be entered in the log book:"

Edition 6.2

5.5 DIVERS PERSONAL LOG BOOKS

Revise the opening paragraph to read: "It is recommended that all divers maintain a personal dive log book (ADCI Commercial Diver Log Book or equivalent) to detail hyperbaric exposures. The log book should be identified to the diver using it by photograph, signature, and home address."

Edition 6.1

6.0 LIFE-SUPPORT EQUIPMENT:
REQUIREMENTS, MAINTENANCE AND
TESTING

6.1 GENERAL

Edition 6.2

6.0 LIFE-SUPPORT EQUIPMENT:
REQUIREMENTS, MAINTENANCE AND TESTING

6.1 GENERAL

Add new paragraph:

“All relief valves related to life support systems shall be inspected and tested annually as to cracking pressure (must not exceed + 10% of MAWP.)”

Edition 6.1

6.3 DIVER'S DRESS

6.3.5 WEIGHT BELTS

"c. Be equipped with an appropriate release buckle."

Edition 6.2

6.3 DIVER'S DRESS

6.3.5 WEIGHT BELTS

Revise "c." to read:

"Be equipped with an appropriate release device."

Edition 6.1

6.5 HOSES

6.5.1 GENERAL

Edition 6.2

6.5 HOSES

6.5.1 GENERAL

Add: "10. Have all hose end fittings plugged, capped, or bagged (i.e. umbilical to helmet connection / bailout to helmet quick coupling connection). The use of tape by itself for this purpose is not permitted."

Edition 6.1

6.5 HOSES

Edition 6.2

6.5 HOSES

Add new 6.5.5 BREATHING GAS HOSES ([HP] high pressure hoses associated with the breathing gas system)

1. Breathing gas hose assemblies shall:
2. Have a minimum burst pressure equal to four times the maximum allowable working pressure (MAWP) and be suitable/rated by the manufacturer for work intended.
3. Have connectors with pressure capability equal to or greater than the designed working pressure of the system on which they are installed.
4. Have fittings of corrosion-resistant material that cannot be accidentally disengaged.
5. Be kink-resistant or arranged to prevent kinking.
6. Be visually examined and pressure tested after each boundary repair.
7. Be suitable for breathing gas service.
8. Each hose assembly will be subjected to an annual pressure test to the maximum allowable working pressure (MAWP) of the system. The test pressure should be maintained (when corrected for temperature) for 10 minutes.

Edition 6.1

6.6 COMPRESSOR SYSTEMS

6.6.4 AIR PURITY REQUIREMENTS

"2. Air purity tests shall be taken at the discharge point that would normally supply the breathing gas system, the diver's hose or cylinder fill point.

Edition 6.2

6.6 COMPRESSOR SYSTEMS

6.6.4 AIR PURITY REQUIREMENTS

Revise "2." to read:

"Air purity tests shall be taken at the discharge point that would normally supply the breathing gas system."

Edition 6.1

6.9 GAUGES

Edition 6.2

6.9 GAUGES

Add new "4." to read:

"If master reference gauge is used for calibration, gauge accuracy needs to be at least .25%."

Edition 6.1

6.11.3 SCUBA AND EGS (BAILOUT) BOTTLES

Edition 6.2

6.11.3 SCUBA AND EGS (BAILOUT) BOTTLES

Add another shaded boxed area at the bottom of the section to read:

“It is recommended that a maximum rate of 600 psig per minute be adhered to for safe filling of EGS (bailout) bottles and that personnel refrain from over-pressurization or fast filling. Proper PPE should be worn by all personnel when charging cylinders.”

Edition 6.1

6.12.2 PVHO DESIGN AND CONSTRUCTION REQUIREMENTS

Edition 6.2

6.12.2 PVHO DESIGN AND CONSTRUCTION REQUIREMENTS

All references to ASME PVHO will refer to the most current version of ASME PVHO 1 and 2.

Edition 6.1

6.12.2.1 SURFACE DIVING DECOMPRESSION CHAMBERS

"7. Have a minimum pressure capability of 6 ATA (165 fsw) [50.3 msw]; or the maximum depth of the dive for dives deeper than 10 ATA (300 fsw) [91.5 msw]."

Edition 6.2

6.12.2.1 SURFACE DIVING DECOMPRESSION CHAMBERS

Add new shaded box that reads:

"When selecting a surface diving decompression chamber, careful consideration must be given to its MAWP capabilities relative to the planned deepest depth of the diving operation (see 7.).

Revise "7." to read:

"Have a minimum pressure capacity of 6 ATA (165 fsw [50 msw]; and a minimum pressure capability of the maximum depth of the dive plus 1 ATA."

Edition 6.1

6.12.2.1 SURFACE DIVING DECOMPRESSION CHAMBERS

"8. Be capable of a minimum pressurization rate of 2 ATA (18.3 meters) to 60 feet within 1 minute. The inner lock may be blown down in advance to achieve this pressurization rate. There must be adequate air capacity on site to achieve deeper treatment depths."

"22. Have a non-return valve on through hull penetrators supplying any built-in breathing system (BIBS)."

Edition 6.2

6.12.2.1 SURFACE DIVING DECOMPRESSION CHAMBERS

Revise "8." to read:

"Be capable of a minimum pressurization rate of 60 fsw (18.3 msw) within 1 minute. The inner lock may be blown in advance to achieve this pressurization rate. There must be adequate air capacity on site to achieve deeper treatment depths."

Revise "22." to read:

"Have a non-return valve or quick disconnect with built-in check valve on through-hull penetrators supplying any built-in breathing system (BIBS)."

Edition 6.1

8.0 VESSELS AND FLOATING PLATFORMS FOR DIVING OPERATIONS

8.2 LIVE BOATING

1. Minimum Personnel

In all cases, personnel and equipment shall be selected to ensure maximum safety during operations. On small boats/vessels of less than 33 feet (10.05 meters), it may be permissible for the crew to consist of no fewer than three persons (diving supervisor, diver and tender/diver) due to space limitations.

a. Live boating diving operations (0 – 100 fsw [30 msw]) (Vessels larger than 33 feet / 10.05 msw)

- One diving supervisor
- Two divers
- Two tender/divers

b. Live boating diving operations (Deeper than 100 fsw [30 msw]) (Vessels larger than 33 feet / 10.05 msw)

- One diving supervisor
- Three divers
- Two tender/divers

Edition 6.2

8.0 VESSELS AND FLOATING PLATFORMS FOR DIVING OPERATIONS

8.2 LIVE BOATING

Revise the minimum manning requirements for live boating operations 0-130 fsw (39.6 msw) (vessels larger than 33 feet / 10.05 meters) to read:

“The dive crew shall consist of a minimum of seven (7) diving qualified personnel.

- One (1) Dive Supervisor
- One (1) Diver
- One (1) Standby Diver
- Two (2) Tender / Divers
- Two (2) personnel that are qualified divers to assist with rescue boat operations

Edition 6.1

8.0 VESSELS AND FLOATING PLATFORMS
FOR DIVING OPERATIONS
8.2 LIVE BOATING
8.2.3 PROCEDURES

Edition 6.2

8.0 VESSELS AND FLOATING PLATFORMS FOR
DIVING OPERATIONS
8.2 LIVE BOATING
8.2.3 PROCEDURES
Remove "1." and insert "a".
Re-lettered after the above change
New "b." to be added in section:

- The vessel master is notified before the diver enters or exits the water and the propulsion system must be disengaged.

Edition 6.1

8.0 VESSELS AND FLOATING PLATFORMS FOR DIVING OPERATIONS

8.2 LIVE BOATING

8.2.4 MINIMUM EQUIPMENT

“Any time existing conditions make live boating unsafe in the opinion of the vessel captain and/or supervisor.”

Edition 6.2

8.0 VESSELS AND FLOATING PLATFORMS FOR DIVING OPERATIONS

8.2 LIVE BOATING

8.2.4 MINIMUM EQUIPMENT

Revise “c.” to read:

“Any time existing conditions make live boating unsafe in the opinion of the vessel captain and/or supervisor (see DP System Section 8.3).”

Edition 6.1

8.0 VESSELS AND FLOATING PLATFORMS

FOR DIVING OPERATIONS

8.2 LIVE BOATING

8.2.4 MINIMUM EQUIPMENT

“e. A means will be used to prevent the diver’s hose from becoming entangled in the propellers of the vessel.”

Edition 6.2

8.0 VESSELS AND FLOATING PLATFORMS FOR DIVING OPERATIONS

8.2 LIVE BOATING

8.2.4 MINIMUM EQUIPMENT

Revise “e.” to read:

“A mechanical device to prevent dive umbilical entanglement in the vessel’s propulsion system.”

Add new “h.” to read:

“A method of clear communication between the tender/diver and the dive supervisor.”

Add new “i.” to read:

For emergency purposes; a means must be available to provide a stable platform for the diver for in-water decompression for vessels over 33’.”

Edition 6.1

8.0 VESSELS AND FLOATING PLATFORMS
FOR DIVING OPERATIONS
8.3.1 INTRODUCTION

Edition 6.2

8.0 VESSELS AND FLOATING PLATFORMS FOR
DIVING OPERATIONS
8.3.1 INTRODUCTION

Add as a new 4th paragraph, before new 5th
paragraph in bold font:

“Owners / operators should implement an in-house DP competency assurance process for key DP personnel which is structured, systematic and progressive. It should be noted that DPO certification is only one element in the competency assurance process.”

Edition 6.1

8.0 VESSELS AND FLOATING PLATFORMS FOR DIVING OPERATIONS

8.3.7.5 OPERATING PROCEDURES

13. DP Operations In Vicinity of other DP Vessels

8.3.8 PERSONNEL CAPABILITIES

"1. The Master"

Edition 6.2

8.0 VESSELS AND FLOATING PLATFORMS FOR DIVING OPERATIONS

8.3.7.5 OPERATING PROCEDURES

Make the "I" in the title lower case to read:

"13. DP Operations in Vicinity of other DP Vessels"

8.3.8 PERSONNEL CAPABILITIES

Revise in "1." in the second line to correctly read:

"...personnel on the vessel."

Edition 6.1

9.0 REMOTE OPERATED VEHICLES (ROVs)

9.3.3 ROV AND DIVE TEAM OPERATIONAL PROCEDURES

Edition 6.2

9.0 ROV AND DIVE TEAM OPERATIONAL PROCEDURES

9.3.3 ROV AND DIVE TEAM OPERATIONAL PROCEDURES

Revise language in shaded box to read:

“COMMUNICATION IS KEY TO SAFE AND EFFICIENT OPERATIONS.”

Edition 6.1

9.0 REMOTE OPERATED VEHICLES (ROVs)

9.3.6.1 SYSTEM RECOVERY

Edition 6.2

9.0 ROV AND DIVE TEAM OPERATIONAL PROCEDURES

9.3.6.1 SYSTEM RECOVERY

Remove the “of” after “This section” in the narrative, before the bulleted items.

Capitalize the title for all sub sections, to be consistent with the rest of the document.

Edition 6.1

10.0 ADCI COMPLIANCE AUDIT PROCEDURES

10.1 INTRODUCTION AND PURPOSE OF AUDITS

Edition 6.2

10.0 ADCI COMPLIANCE AUDIT PROCEDURE

10.1 INTRODUCTION AND PURPOSE OF AUDITS

Add to narrative in paragraph one:

“The ADCI encourages contractors and schools to use the self-audit report as a tool to perform internal audits annually, to ensure compliance to the ADCI Consensus Standards.”

ADCI Consensus Standards GAP Analysis - Editions 6.1 and 6.2

Edition 6.1

10.0 ADCI COMPLIANCE AUDIT PROCEDURES

10.3 AUDIT REPORTS

ADCI SELF-AUDIT REPORT

2. Personnel Requirements

Edition 6.2

10.0 ADCI COMPLIANCE AUDIT PROCEDURE

10.3 AUDIT REPORTS

ADCI SELF-AUDIT REPORT

2. Personnel Requirements

Remove Section 5 (Diver's Log Book)

Edition 6.1

10.0 ADCI COMPLIANCE AUDIT PROCEDURES

10.3 AUDIT REPORTS

DIVING CONTRACTOR AUDIT REPORT

Chapter II: Personnel Requirements

Edition 6.2

10.0 ADCI COMPLIANCE AUDIT PROCEDURE

10.3 AUDIT REPORTS

DIVING CONTRACTOR AUDIT REPORT

Chapter II: Personnel Requirements

-Remove Item 4 (Supervisor Log Book) from "1. DIVING SUPERVISORS"

-Remove Item 3 (Diving Log Book) from "2. DIVERS"

ADCI Consensus Standards GAP Analysis - Editions 6.1 and 6.2

Edition 6.1

10.0 ADCI COMPLIANCE AUDIT PROCEDURES

10.3 AUDIT REPORTS

COMMERCIAL DIVER TRAINING PROGRAM AUDIT REPORT

Chapter II: Personnel Requirements

Edition 6.2

10.0 ADCI COMPLIANCE AUDIT PROCEDURE

10.3 AUDIT REPORTS

COMMERCIAL DIVER TRAINING PROGRAM AUDIT REPORT

Chapter II: Personnel Requirements

-Remove from fourth row "Supervisor/Instructor Log Book"

Edition 6.1

10.0 ADCI COMPLIANCE AUDIT PROCEDURES

10.3 AUDIT REPORTS

DIVING CONTRACTOR AUDIT REPORT

Chapter III: Equipment and Systems

HANDLING SYSTEMS

Edition 6.2

10.0 ADCI COMPLIANCE AUDIT PROCEDURE

10.3 AUDIT REPORTS

DIVING CONTRACTOR AUDIT REPORT

Chapter III: Equipment and Systems

HANDLING SYSTEMS

Change the spelling of "Break" to "Brake" in Items 3 and 4.

Edition 6.1

10.0 ADCI COMPLIANCE AUDIT PROCEDURES

10.3 AUDIT REPORTS

COMMERCIAL DIVER TRAINING PROGRAM AUDIT REPORT

Chapter III: Equipment and Systems

HANDLING SYSTEMS

Edition 6.2

10.0 ADCI COMPLIANCE AUDIT PROCEDURE

10.3 AUDIT REPORTS

COMMERCIAL DIVER TRAINING PROGRAM AUDIT REPORT

Chapter III: Equipment and Systems

HANDLING SYSTEMS

Change the spelling of "Break" to "Brake" in Items 3 and 4.

Edition 6.1

10.0 ADCI COMPLIANCE AUDIT PROCEDURES

10.3 AUDIT REPORTS

COMMERCIAL DIVER TRAINING PROGRAM AUDIT REPORT

Chapter III: Equipment and Systems

DECOMPRESSION CHAMBER

27. Electrical System

Edition 6.2

10.0 ADCI COMPLIANCE AUDIT PROCEDURE

10.3 AUDIT REPORTS

COMMERCIAL DIVER TRAINING PROGRAM AUDIT REPORT

Chapter III: Equipment and Systems

DECOMPRESSION CHAMBER

27. Electrical System

Change the contents in DIVING OPERATIONS REQUIREMENT to read:

“When fitted, have electrical systems designed for the environment in which they will operate.”

ADCI Consensus Standards GAP Analysis - Editions 6.1 and 6.2

Edition 6.1

10.0 ADCI COMPLIANCE AUDIT PROCEDURES

10.3 AUDIT REPORTS

DIVING CONTRACTOR AUDIT REPORT

COMMERCIAL DIVER TRAINING PROGRAM AUDIT REPORT

Edition 6.2

10.0 ADCI COMPLIANCE AUDIT PROCEDURE

10.3 AUDIT REPORTS

DIVING CONTRACTOR AUDIT REPORT

COMMERCIAL DIVER TRAINING PROGRAM AUDIT REPORT

Remove Chapter V (HSEQ System) from both reports.

Edition 6.1

Edition 6.2

11.1 GLOSSARY OF TERMS

11.1 GLOSSARY OF TERMS

Revise “Harnesses” to read “Diving Harnesses”

Revise “Mixed-Gas Diving” to read:

“Mixed-Gas Diving (HeO₂) – A surface diving technique in which the diver is supplied with a bottom mix of helium and oxygen.”

Add “Nitrox (Enriched Air) Diving” definition: Nitrox (Enriched Air) Diving – A diving technique in which the diver is supplied a bottom mix of nitrogen, plus oxygen in excess of 21%.”

Remove extra comma from “Manifold Operator” definition.

Edition 6.1

11.2 PHYSICS AND FORMULAS

Charles' Law

Edition 6.2

11.2 PHYSICS AND FORMULAS

Revise to read:

" V_1 = Initial Volume (absolute)" and " V_2 = Final Volume (absolute)".