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Homeland Security

United States
Coast Guard



COAST GUARD DIVING POLICIES AND PROCEDURES MANUAL

VOLUME I



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Subj: COAST GUARD DIVING POLICIES AND PROCEDURES MANUAL, VOLUME I

- Ref:
- (a) U.S. Navy Diving Manual, Rev. 6 , SS521-AG-PRO-010 (NOTAL)
 - (b) Privacy Incident Response, Notification and Reporting Procedures for Personally Identifiable Information (PII), COMDTINST M5260.5(series)
 - (c) U.S. Navy Guidance for Diving in Contaminated Water, SS521-AJ-010 (NOTAL)
 - (d) Dive Locker Standard Operating Procedures, (SOP) DOGINST 3150.1(series)
 - (e) Personnel Qualification Standard for Diving Salvage Warfare Specialist (DSWS), NAVEDTRA 43910-(series) (NOTAL)
 - (f) Underwater Port Security Operations Manual. COMDTINST M16600.3 (series)
 - (g) Underwater Ship Husbandry Manual, NAVSEA S0600-AA-PRO-170 (NOTAL)
 - (h) Crew Endurance Management COMDTINST 3500.2 (series)
 - (i) Operational Risk Management, COMDTINST 3500.3 (series)
 - (j) Operation and Maintenance Manual for the Emergency Evacuation Hyperbaric Stretcher (EEHS), NAVSEA SH700-A2-MMC-010 (NOTAL)
 - (k) Commercial Diving Operations, 29 CFR 1910 Subpart T
 - (l) Commercial Diving Operations, 46 CFR 197 Subpart B
 - (m) Safety and Environmental Health Manual, COMDTINST M5100.47 (series)
 - (n) Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat, Volume I, OPNAVINST 5100.19 (series) (NOTAL)
 - (o) Administrative Investigation Manual, COMDTINST M5830.1(series)
 - (p) Coast Guard After Action Program (CGAAP), COMDTINST 3010.19 (series)
 - (q) Personnel Manual, COMDTINST M1000.6 (series)
 - (r) Medical Manual, COMDTINST M6000.1 (series)
 - (s) U.S. Coast Guard Pay Manual, COMDTINST M7220.29 (series)
 - (t) Uniform Regulations, COMDTINST M1020.6 (series).
 - (u) Property Management Manual, COMDTINST M4500.5(series)
 - (v) Coast Guard Claims and Litigation Manual, COMDTINST M5890.9(series)

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NON-STANDARD DISTRIBUTION: *D:I – Naval Diving and Salvage Training Center only

COMDTINST M3150.1C

1. PURPOSE. This Manual establishes policy and procedures for the administration, application and execution of diving operations within the Coast Guard.
2. ACTION. Area and district commanders, commanders of maintenance and logistics commands, Commander, Deployable Operations Group, Commanding Officers of headquarters units, assistant commandants for directorates, Judge Advocate General, and special staff offices at Headquarters shall ensure compliance with the provisions of this Manual. This Manual is authorized for Internet release.
3. DIRECTIVES AFFECTED. Coast Guard Diving Policies and Procedures Manual, COMDTINST M3150.1B is canceled.
4. POLICY.
 - a. This Manual does not create any right or benefit, substantive or procedural, enforceable at law by any party against the United States, its agencies or personnel, or any person. This Manual creates no duties, standard of care, or obligations to the public and should not be relied upon as a representation by the Coast Guard as to the manner of proper performance in any particular case.
 - b. This Manual promulgates internal Coast Guard planning guidance solely intended to promote efficiency and consistency in public service above and beyond the requirements of law and regulation. Any procedures and policies discussed in this Manual apply only to the Coast Guard.
 - c. The provisions of this Manual are intended as a guide for consistent and uniform execution of the Coast Guard Diving Program. Reference (a) is the primary procedural guide for general diving operations. Where Coast Guard policies or procedures differ from reference (a), discussion and guidance will be provided within the Manual. This Manual is not intended to place undue restrictions on use of sound judgment.
 - d. Requests for disclosure of any part of this Manual in connection with civil discovery shall be coordinated with Commandant (CG-0945) before any release. Requests for release in connection with the Freedom of Information Act (FOIA) shall be coordinated with Commandant (CG-0944) before any release.
 - e. Collection of Personally Identifiable Information (PII) on the forms and questionnaires contained in this manual is conducted in accordance with the Privacy Act, 5 U.S.C., 552a. Personnel authorized to handle these documents shall ensure they exhibit extreme care in safeguarding the PII. Unintended disclosure or compromise of an individual's PII constitutes a privacy breach. All suspected or confirmed privacy breaches must be reported in accordance with reference (b).
5. SUMMARY OF CHANGES. This Manual replaces COMDTINST 3150.1B dated 26 November, 2004.
6. DISCUSSION. Significant changes to content are summarized below:
 - a. Diving in Polluted Water. Expanded policy is provided for diving in polluted water in Chapter 1, Section 3.C.a. Reference (c) is provided as the primary source of guidance for situations that may involve exposure to contaminated water.

- b. Recordkeeping and Reporting. A new web based US Navy data system, the Dive/Jumps Reporting System (DJRS) is included to record all individual dive activities. Abstract of Operations/ Training Management Tool (AOPS/TMT) will be used to track currency of training and qualifications.
 - c. Diving Resources. Policy on employment of organic and external diving resources has been moved from Chapter 5 to section 1.E. Increased guidance specific to rescue diving operations and Coast Guard support of emergent versus non-emergent diving operations has been provided.
 - d. Diving Program Safety Survey. Additional policy on the Diving Program Safety Survey has been established in Section 1.F. Also, the safety survey checklist has been included as appendix (d).
 - e. Diver Personnel Qualification Standards (PQS). PQS for SCUBA Diving Supervisor, Aids to Navigation (ATON) Diver, Ports, Waterways and Coastal Security (PWCS) Diver and Polar Operations Support Diver have been established and combined with the existing Dive Tender PQS in appendix (f).
 - f. Diving Equipment Maintenance. Policy for Diving Equipment Maintenance has been established in Chapters 1, 4 and appendix (g).
 - g. Diver's Air Sampling Program (DASP). Expanded policy guidance on the DASP is provided in Section 4.C.
 - h. Diver Personnel Roles and Responsibilities found in Chapter 1 Section B has been updated in accordance with Commandant Memo 5100, Final Action Memo on USCGC HEALY dtd 10 Jan 2007.
 - i. Update of Diver Allocations found in Chapter 2, Section C Table 2-1.
 - j. Addition of Volume II of this Manual provides additional planning and procedural guidance for the following missions: PWCS, ATON, and cold water diving.
7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS. Environmental considerations were examined in the development of this Manual and have been determined to be not applicable.
8. REQUEST FOR CHANGES. Recommendations for changes to this Manual shall be submitted to Commandant (CG-7D) via the chain of command.
9. FORMS/REPORTS. The forms called for in this Manual are available in USCG Electronic Forms on the Standard Workstation or on the Internet: <http://www.uscg.mil/forms>, CG Central at <http://cgcentral.uscg.mil/>, and Intranet at <http://cgweb2.comdt.uscg.mil/CGFORMS/Welcome.htm>. MILPERSMAN 1220-100, Exhibit 8, Diver/BUD/S Medical Screening Questionnaire (appendix (e)) can be accessed at <https://www.netc.navy.mil/centers/ceneoddiv/ndstc/default.cfm?fa=courses.custom&pg=courseinfo>.

Wayne E. Justice /s/
 Rear Admiral, U.S. Coast Guard
 Assistant Commandant for Capability

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Chapter 1

Policy

Introduction

Diving operations are a critical function for any maritime organization. Most personnel are familiar with diving as a recreational activity, but do not have significant exposure to professional diving operations.

The purpose of this chapter is to discuss general Coast Guard policy for the employment of organic and external diving resources. These policies are relevant not only to Coast Guard Diving Units, but to any unit that requires diving services for maintenance or mission support.

In this Chapter

This chapter contains the following sections:

| Section | Title | See Page |
|---------|---|----------|
| A | General | 1-2 |
| B | Roles and Responsibilities | 1-3 |
| C | Considerations for Diving Operations | 1-8 |
| D | Emergency Evacuation Hyperbaric Stretcher | 1-14 |
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Section A. General

A.1. Overview Diving operations are a critical function for any maritime organization. Most personnel are familiar with diving as a recreational activity, but do not have significant exposure to professional diving operations.

A.2. Applicability This Manual provides guidance for all Coast Guard units conducting diving operations or utilizing non-Coast Guard diving resources. Only the policy set forth in Section E below is applicable to non-Coast Guard diving resources.

NOTE: All non-Coast Guard diving resources shall operate in accordance with applicable federal and state regulations and the policies of their employer or parent organization.

A.3. Safety Except as modified by this Manual, all Coast Guard diving shall be conducted in accordance with references (a) and (c). Operational risk management (ORM) shall be included in all phases of planning and execution of diving operations.

A.3.a. Responsibility The safety of all diving operations is the ultimate responsibility of the Commanding Officer. The Command Diving Officer's primary responsibility is the safe conduct of all diving operations within the command and shall retain the authority to abort diving operations when deemed necessary by risk analysis or any perceived safety threat.

A.3.b. Diving Program Safety Survey The purpose of the Diving Program Safety Survey is to enhance safety of diving operations at Coast Guard units through inspection of unit equipment and records and review of unit diving procedures.

Procedures for the Diving Program Safety Survey are detailed in section (f) below and in appendix (d).

Section B. Roles and Responsibilities

- B.1. Overview** Reference (a) provides guidance for operational responsibilities during diving operations. This section reinforces those operational responsibilities and establishes administrative responsibilities for the Coast Guard Diving Program.
-
- B.2. Diving Program Manager** The Diving Program Manager is assigned to Commandant (CG-7D) and shall:
- a. Develop and promulgate Coast Guard diving policy.
 - b. Identify, plan and budget for specific diving needs with responsible Program Managers.
 - c. Authorize establishment of diving duty billets and units, and periodically review the diving duty allowances.
 - d. Direct and advise operational diving units on matters of proper diving procedures and training.
 - e. Assist non-diving, non-CG entities requiring diving services to locate and obtain diving and salvage services.
 - f. Maintain liaison with other federal, state and local agencies and civilian groups on matters affecting Coast Guard diving
 - g. Participate in annual Diving Program Safety Surveys (DPSS) for all Coast Guard dive units.
 - h. Review all Coast Guard diving accidents and casualties, and initiate appropriate corrective action.
 - i. Authorize diving pay to personnel in excess of unit allowance of divers at any operational diving unit.
 - j. Provide input to Coast Guard Personnel Command to identify diver candidates at accession points and facilitate the assignment of divers to District 14 Buoy Tenders.
 - k. Provide funding for the procurement, maintenance, and standardization of diving equipment (see Diving Equipment Allowance list, appendix (g)). Approve/disapprove all Coast Guard diving unit requests for new equipment/changes in coordination with Diving Program Technical Manager per paragraph B.3.d. below.
 - l. Request training quotas and conduct and/or request task and training analysis for the determination of training, personnel and equipment needs.
 - m. Provide Diving Unit management training to prospective commanding officers and executive officers of afloat and ashore units at the Command and Operations School.
 - n. Assist DOG, Commandant (CG-532) with the development of Underwater
-

**B.2.
Diving Program
Manager
(continued)**

Port Security Program policy and operational requirements to support the Ports, Waterways, and Coastal Security (PWCS) mission.

- o. Be responsible for reviewing the Dive/Jumps Reporting System (DJRS) dive readiness for subordinate units ensuring all divers are qualified for diving duties by maintaining liaison with District 14 and DOG Dive Program Managers.

**B.3.
Diving Program
Technical
Manager**

The Diving Program Technical Manager is assigned to the Coast Guard Liaison Office at the Naval Diving and Salvage Training Center (NDSTC) Panama City, Florida and shall:

- a. Provide administrative support to Coast Guard students in training at the NDSTC.
- b. Provide recommendations and technical support to Commandant (CG-7D) for establishing policies and procedures for the Coast Guard Diving Program.
- c. Provide guidance and support on diving issues to all Coast Guard units.
- d. Coordinate, through Commandant (CG-7D), the standardization, distribution, maintenance and use of equipment in the Coast Guard Diving Program.
- e. Participate in annual Diving Program Safety Surveys (DPSS).
- f. Develop and administer Coast Guard-specific training.
- g. Review and process all diver application packages and provide information on qualified candidates to Commandant (CG-7D).
- h. Provide technical support to diving units.

**B.4.
DOG Dive Force
Manager**

The DOG Dive Force Manager is assigned to the Deployable Operations Group (DG-3) and shall:

- a. Be responsible for the deployment scheduling, organization, administrative oversight of dive equipment maintenance, and training of the Regional Dive Lockers.
- b. Be responsible for reviewing DJRS dive readiness for Regional Dive Lockers ensuring all divers are qualified for diving duties.
- c. Act as executive agent (EA) with CG Personnel Support Command (PSC) for identifying qualified officer and enlisted personnel for filling Dive Locker and DOG Dive Force Management billets.
- d. Be responsible for maintaining reference (d) and representing the Regional Dive Lockers on program related issues.
- e. Act as DPSS observer: provide suggestions to inspectors, bring recommendations from DPSS to DOG command and effect change as required.
- f. Provide guidance on the Request for Forces (RFF) process to non-diving Coast Guard units that request diving resources. (see <http://arllms-dogis/DOG/Org/dg3.aspx>).

-
- B.4.
DOG Dive Force
Manager
(continued)**
- g. Assist Commandant (CG-532) with the development of Underwater Port Security Program policy and operational requirements to support the Ports, Waterways and Coastal Security (PWCS) missions.
 - h. Liaise with CG-7D and NDSTC to ensure policy, training and maintenance alignment for DOG Diving forces.
 - i. Maintain liaison with other federal, state, and local agencies for operational support, exercise participation and mission-specific training.
 - j. Develop and implement a Dive Operational Readiness Assessment (DORA) process as directed by COMDT, and incorporate DORAs into the DOG Ready For Operations schedule.
-

- B.5.
District 14 Dive
Program Manager**
- The District14 Dive Program Manager is assigned to District14 (dpw) and shall:
- a. Maintain oversight of the District-14 WLB dive units.
 - b. Track the deployment readiness of those units.
 - c. Track the qualification and training status of those units in TMT and DJRS and liaise with Commandant (CG-7D).
-

- B.6.
Diving Unit
Commanding
Officer**
- The Commanding Officer of diving units shall:
- a. Be ultimately responsible for the safe and successful conduct of all diving operations at the units.
 - b. Assign orders by letter designation of the Command Diving Officer and Diving Supervisor.
 - c. Assign diving orders by letter of designation of qualified unit divers.
 - d. Promulgate a unit Dive Bill.
 - e. Ensure funding is provided for unit level equipment maintenance and recapitalization.
 - f. Provide class room time for diver training and routine structured physical training.
 - g. Provide time for training dives IAW Chapter 3.A.5.b of this manual to ensure proficiency with all diving equipment and methods.
 - h. Provide funding for adequate physical training facilities where no-cost facilities are unavailable.
-

- B.7.
Command Diving
Officer**
- A Command Diving Officer shall be assigned at each Diving Unit and shall be a qualified Diver per reference (a) but dive currency is not required:
- a. Be assigned through letter of designation by the Commanding Officer.
-

**B.7.
Command Diving
Officer
(continued)**

- b. Ensure the safe conduct of all diving operations by providing overall supervision of diving operations and ensuring strict adherence to proper procedures and safety precautions.
- c. Become thoroughly familiar with all command diving techniques and have a detailed knowledge of all applicable regulations.
- d. Ensure appropriate entries are made in personnel records to document diving qualifications.
- e. Perform all operational and administrative duties associated with the Command Diving Program.
- f. Oversee the Command Diving Equipment Maintenance Program.
- g. Administer a training and qualification program for diving watchstations.
- h. Administer the physical screening test for all divers on an annual basis.
- i. Perform screening activities for diver candidates.
- j. Serve as the dive team representative on the unit Training Board and Safety Board.
- k. Ensure all divers are familiar with Diving Safety Advisory (AIG 237) and Diving Safety Lines (AIG 7702) publications and messages and appropriate references from this Manual.
- l. Designate personnel to sample air sources in accordance with the Diver's Air Supply Program (DASP).

**B.8.
Officer of the
Day and Deck
Watch Officer**

The Officer of the Day and Deck Watch Officer shall ensure the unit Dive Bill is followed during diving operations per section E.2 of this chapter.

**B.9.
Diving
Supervisor**

The Diving Supervisor shall be a qualified diver (officer or enlisted) per reference (a) and Chapter 3 of this manual but dive currency is not required to supervise:

The Diving Supervisor Shall:

- a. Be assigned through letter of designation by the Commanding Officer.
 - b. Be qualified IAW appendix (f) of this manual and reference (e). An oral board must be completed for initial and subsequent certification. Diving supervisors must re-qualify by completing the Personal Qualification Standard checklist in appendix (f) and an oral board at each new diving command.
 - c. Exercise control over the actual diving operation for a particular dive or series of dives and abort dive operations if deemed necessary.
 - d. Remain at the dive side for the duration of the dive operation and shall not
-

**B.9.
Diving
Supervisor
(continued)**

- dive unless properly relieved by another qualified Diving Supervisor.
- e. Prepare dive plans for review by the Diving Officer considering contingencies, equipment requirements, diving assignments and back up requirements for a given diving operation.
 - f. Be familiar with all divers and support personnel on the team and evaluate the qualifications and physical fitness of the divers selected for each specific job.
 - g. Inspect all equipment and conduct pre and post-dive briefings of all personnel involved with the diving operation.
 - h. Monitor progress of dive operation, debrief divers, update instructions to subsequent divers and ensure the Commanding Officer, OOD/DWO, and Diving Officer are advised of progress and of changes to the original dive plan.
 - i. Upon completion of diving operations, gather appropriate data from divers, analyze the results of the mission, prepare reports and ensure equipment PMS and personnel records are completed.
-

**B.10.
Coast Guard
Diver**

Coast Guard Divers are initially qualified at NDSTC as described in Chapter 2 Section C and shall:

- a. Be assigned through letter of designation by the Commanding Officer.
- b. Maintain proficiency by participating in diving operations and training as prescribed in Chapter 3 of this Manual.
- c. While working, keep topside personnel (Diving Supervisor) informed of conditions on the bottom, progress of the task and of any developing problems that may indicate the need for changes to the plan or a call for assistance from other divers.
- d. While acting as diver tender or standby diver, act as safety observer and advise Diving Supervisor of any observed condition affecting the safety of the dive operation.
- e. Fill positions within the dive team that include: Diver, Standby Diver, and Diver Tender.

NOTE: Diver tenders will normally be qualified divers. Personnel that satisfactorily complete the Diver Tender Watchstation PQS in appendix (f) with a letter of designation by the Commanding Officer may be used for tender duties.

- f. Maintain qualifications by meeting currency requirements as prescribed in Chapter 3 of this Manual.
-

B.10.
Coast Guard
Diver
(continued)

- g. Maintain physical fitness by participating in regular physical training.
 - h. Perform maintenance on unit and individual issued diving equipment.
 - i. Serve as an active representative of the Diving Program by educating the public and potential diver candidates on diving units missions and screening procedures.
-

Section C. Considerations for Diving Operations

C.1. Overview

The operational planning guidance provided in reference (a) applies to all diving operations performed by Coast Guard divers. The purpose of this chapter is to address areas of consideration that must be understood by Operational Commanders in order to effectively employ Coast Guard diving resources.

Appendix (a) contains a sample diving bill and standard checklists.

C.2. Diving Missions

Coast Guard primary diving missions are:

- a. Ports, Waterways and Coastal Security (PWCS).
- b. Aids to Navigation (ATON).
- c. Polar Operations Support-Engineering support for Polar Class Ice Breakers.

Coast Guard dive capabilities supporting the primary diving missions include:

- a. Underwater Ship Husbandry (UWSH).
 - b. Underwater Search and Recovery (UWSR).
-

C.2.a. Ports, Waterways and Coastal Security (PWCS)

Coast Guard dive teams are staffed and equipped to conduct sub-surface inspections of piers, vessels, and adjacent shorelines in order to detect, identify and mark underwater threats including parasitic devices, underwater improvised explosive devices (UWIED), hazards to navigation, and conditions that may hazard a vessel.

USCG divers are not trained or equipped to perform search dives for ordnance in open water, i.e. sea mines. Due to the unique characteristics and hazards of military maritime mines only specially trained U.S. Navy Mine Countermeasures (MCM) Explosive ordnance Disposal (EOD) divers shall be employed to conduct MCM hunting and clearance operations.

In addition to divers, organic USCG Underwater Port Security capability includes Remotely Operated Vehicles (ROVs) and Integrated Anti-swimmer Systems (IASs). All Maritime Safety & Security Teams (MSSTs), Tactical Law Enforcement Teams (TACLETs) and several Port Security Units (PSUs) have ROV capability. Designated MSSTs have IAS capability. ROV and IAS capabilities that can be used independently or in conjunction with divers to detect underwater threats. Reference (f) and Volume II of this manual provide detailed information and policy guidance. All requests for DOG Dive Resources underwater port security capabilities shall follow the DOG RFF process.

**C.2.a.
Ports,
Waterways
and Coastal
Security
(PWCS)
(continued)**

NOTE: Coast Guard divers do not possess any Explosive Ordnance Disposal (EOD) capabilities and are not trained or equipped to perform Render Safe Procedures (RSP) on ordnance. Only qualified EOD divers shall attempt to render safe underwater ordnance or Improvised Explosive Devices (IEDs).

**C.2.b.
Aids to
Navigation
(ATON)**

Coast Guard dive teams assigned to District 14 Buoy Tenders (WLB) provide the ability to conduct, independent ATON operations requiring minimal support. ATON diving tasks include inspecting moorings, replacing buoy hulls, salvaging sunken buoys and lifting buoy sinkers. Most ATON diving is conducted from small boats, allowing the dive team to work ATON in shallow water where the cutter would be at risk.

Volume II of this Manual provides additional planning and procedural guidance on the ATON diving mission.

**C.2.c.
Polar
Operations
Support**

Coast Guard dive teams conduct Polar Operations support for Polar Icebreakers (WAGB) by performing engineering support including underwater hull inspections and limited repair functions in remote geographic locations. References (a) and (b) of this manual as well as Chapters 7-9 of Volume II of this Manual provide additional planning and procedural guidance for diving operations in cold water and ice covered environments.

**C.2.d.
Underwater
Ship
Husbandry
(UWSH)**

All Diving Units are authorized to perform basic underwater tasks including, but are not limited to, running gear and hull inspections, and propeller pitch calibrations in support of the primary dive missions.

References (a), (e), (g) and Volume II of this Manual provide additional guidance on underwater ship husbandry diving.

**C.2.e.
Underwater
Search and
Recovery
(UWSR)**

All Diving Units are trained in basic search techniques and may be used to locate objects underwater in support of the primary diving missions.

The search techniques discussed in Volume II of this Manual may be applied to searches for any lost objects.

Coast Guard diving units are equipped with some light salvage equipment and possess the ability to locate/raise/recover objects underwater.

**C.2.f.
Rescue Diving**

NOTE: Coast Guard divers are not trained or equipped to perform rescue diving operations. Rescue diving operations require a reduced planning and execution cycle and an unacceptable level of increased risk.

All of the **non Coast Guard** resources discussed in Section E.1, below, may be available to perform rescue diving operations, which differs from search and recovery since live humans are the object. The nearest dive team may not always be the fastest or best suited to respond to a specific situation. All available resources should be called on to determine the best response plan.

All District and Sector Command Centers should maintain an accurate list of all potential diving resources in their area of responsibility with clearly established and exercised notification procedures and protocols.

Risk management is a major concern in rescue diving operations. When planning a rescue operation, basic safety procedures will be adhered to, but may be expedited to allow for a timely operation. Rescue divers will not be put at risk unnecessarily. The On Scene Commander (OSC) shall weigh the potential benefit of conducting rescue diving operations against the significant potential of death or injury to the rescue divers.

Use of non-standard diving resources and deployment methods must be carefully examined by the SAR Mission Coordinator (SMC). Ultimately, the OSC must decide, given the location, environment and potential entrapment or entanglement hazards of the dive site, the complications of treating or evacuating a diving casualty, the training, equipment and experience of the rescue diver or divers, and numerous other factors, if deployment of rescue divers is justified in order to make an appropriate recommendation to the SMC.

**C.3.
Environmental
Considerations**

Environmental conditions directly impact the effectiveness and efficiency of diving operations. The Diving Supervisor will always include environmental considerations in the risk assessment during the planning process.

**C.3.a.
Guidance for
Diving in
Contaminated
Waters.**

Reference (c) provides specific guidance on diving in contaminated water and establishes levels of protection provided by different diving ensembles.

NOTE: Diving in severely contaminated water is the same as operating in a chemical, biological, radiological, nuclear or explosive (CBRNE) hazard environment. The Diving Supervisor shall consider water quality when making the final determination of whether or not to commence diving operations.

**C.3.b.
Current**

Divers will not normally operate in greater than one knot of current. If diving operations are conducted in greater than one knot of current, the decision to line tend divers and utilize a chase boat will be determined by the dive supervisor. In some cases, excessive tidal current may restrict diving operations to periods of slack water.

**C.4.
Personnel
Considerations**

Coast Guard divers assigned to District 14 Buoy Tenders are collateral duty divers. Priorities may dictate that they be utilized to fulfill their primary duties rather than perform diving operations.

**C.4.a.
Number
of Divers**

The minimum number of personnel required on station is based on the type of equipment used and is detailed in reference (a), figure 6-16.

The following guidance is provided for single diver operations:

- (1) A minimum of four personnel consisting of a diving supervisor, diver, diver tender and a standby diver are required to conduct SCUBA operations.
- (2) A minimum of five personnel consisting of a diving supervisor, diver, diver tender, standby diver and a standby diver tender are required to conduct Surface-Supplied Diving operations.

The following guidance is provided for buddy pair diver operations:

- (1) A minimum of four personnel consisting of a diving supervisor, two divers, and a standby diver are required to conduct SCUBA operations
- (2) A minimum of six personnel consisting of a diving supervisor, two divers, two diver tenders, and a standby diver are required to conduct Surface-Supplied Diving operations.

The minimum number of personnel required to place a diver in the water may not be the number required to perform a specific task efficiently or effectively.

These are the minimum personnel levels required. ORM may require these personnel levels be increased so the diving operations can be conducted safely.

**C.4.a.
Number
of Divers
(continued)**

NOTE: Although note (d) in figure 6-16 of reference (a) allows for minimum manning levels in open circuit SCUBA operations to be reduced to three qualified divers at the Diving Supervisor's discretion, Coast Guard SCUBA dive operations will be conducted with a minimum of four personnel per the above guidance

Where appropriate, interagency diving operations should be coordinated to provide the maximum number of divers in the water in accordance with section (e) of this Chapter.

**C.4.b.
Support
Personnel**

The number of support personnel required for diving operations is dependent on the mission and dive platform. The Diving Supervisor will determine additional personnel needed.

At a minimum, in addition to divers, all diving operations shall have a qualified Diving Supervisor who shall remain on the dive side and a tended standby diver.

**C.4.c.
Decompression
Schedules**

All Coast Guard diving operations, including surface-supplied diving operations, shall be conducted within the U.S. Navy No-Decompression Limits for Air Dives as per reference (a). Planned decompression dives shall only be conducted with Commandant (CG-7D) approval.

Coast Guard divers operating with other military diving units shall follow that unit's regulations for conducting decompression dives.

**C.4.d.
Normal and
Maximum Depth
Limits**

Normal depth limits are based on level of qualification and type of equipment and are outlined in reference (a) and Volume II of this Manual. Normal open circuit SCUBA Diving working limit is 130 feet of sea water (fsw) and 190 fsw with the approval of the Commanding Officer or Officer in Charge of the diving command. The Commanding Officer or Officer in Charge must be familiar with diving operations or defer to Commandant (CG-7D) for guidance.

**C.4.e.
Fatigue**

Due to the high level of fatigue inherent to diving operations, divers must be allowed adequate rest time between their primary duties and diving operations using the guidelines in reference (h) which requires Commanding Officers, and Officers-in-Charge to empower the Crew Endurance Management process. Generally speaking, 8 hours of uninterrupted sleep per 24 hour period is required.

**C.5.
Logistical
Considerations**

In the case of a diving casualty, immediate access to a hyperbaric treatment facility is critical. The Diving Supervisor shall ensure all divers, dive tenders, and other command and support staff are familiar with emergency response plans and the location of the nearest hyperbaric treatment facility.

**C.6.
Operational
Risk
Management
(ORM)**

All Coast Guard diving activities require the use of operational risk management (ORM) practices for planning operations and training in accordance with reference (i). ORM is essential to the safe execution of any evolution and shall be used in the planning of all diving missions and continually reevaluated throughout mission execution. ORM documentation for each diving mission shall be retained onboard for 60 days following mission completion, after which it may be discarded.

**C.7.
Hyperbaric
Treatment
Facilities**

Hyperbaric treatment facilities are a critical resource and shall be identified as early as possible in the planning phase for diving operations. The Diver's Alert Network (DAN) provides an online chamber locator service available for use by Coast Guard Diving Units. Questions about use of this service should be referred to Commandant (CG-7D).

Once a facility is identified, the Diving Supervisor shall contact the facility supervisor to discuss operating status, notification procedures and any special instructions. When diving operations are concluded, the diving supervisor shall notify the facility that diving operations are concluded. This information shall be documented in the Emergency Assistance Checklist and included in the pre-dive brief.

**C.8.
Evacuation
Plans**

The Diving Supervisor shall establish an evacuation plan and brief all potential responders prior to conducting diving operations. This plan is especially important on icebreakers and buoy tenders working in extremely remote operating areas where evacuation will require the coordination of multiple assets.

Section (d) below addresses specific considerations for evacuation procedures involving the Emergency Evacuation Hyperbaric Stretcher (EEHS).

In extremely remote areas where a feasible and timely evacuation plan cannot be established and no emergency services are available, the dive must be mission critical and the increased risk associated with diving without an evacuation plan requires an even greater emphasis on operational risk management (ORM).

**C.9.
Communications**

The decision to use voice communications is driven by the mission scope, equipment used, and complexity of the dive being attempted. Hard wired communications equipment is required for all surface supplied diving. When utilizing a full face mask in open circuit SCUBA, voice communications are required unless extenuating circumstances prevent their use. Cold water diving especially under ice may include voice communications in addition to divers being line tended. Divers should always be prepared for the failure of voice communications and shall terminate the dive in a safe manner when required. Knowledge of hand and line pull signals is exceptionally important.

Section D. Emergency Evacuation Hyperbaric Stretcher

D.1. Overview The Emergency Evacuation Hyperbaric Stretcher (EEHS) provides a means of transporting a victim of a diving casualty to a hyperbaric treatment facility. The EEHS is for transport of military divers only except as noted in paragraph D.2.c. and D.3 below. Reference (i) provides instructions on the operation and maintenance of the EEHS. A spare EEHS is maintained by the CGLO, NDSTC and may be requested by units deploying to remote operating areas, i.e. out of range of helicopter response.

D.2. Authorized Applications The EEHS provides an extremely limited emergency response capability and is intended to facilitate, not eliminate the need for transfer to a hyperbaric treatment facility. Although recompression therapy may be completed before or during evacuation, every effort shall be made to evacuate the patient to a hyperbaric treatment facility.

NOTE: If evacuation is deemed to present significant risk, the Diving Supervisor shall consult with a Diving Medical Officer (DMO) to determine if completion of treatment in the EEHS is a more prudent option than attempting to transport the patient.

D.2.a. Decompression Diving The EEHS is not a recompression chamber for the purpose of planned decompression and shall not be used for planned decompression diving operations.

D.2.b. Non-Diving Disorders The EEHS will not be used to conduct hyperbaric oxygen therapy for non-diving disorders (e.g., carbon monoxide poisoning, smoke inhalation, etc.).

D.2.c. Civilians Recompression therapy with the EEHS will not be performed on non-military personnel if a hyperbaric treatment facility is available. The Diving Officer may commence recompression therapy only when a delay in recompression would likely cause greater harm.

D.3. Supervision The EEHS shall only be operated by a qualified Dive Officer, Supervisor or designated personnel who are qualified in its use. All recompression therapy shall be conducted under the supervision of or in consultation with a Diving Medical Officer (DMO).

In the absence of a DMO, the Diving Officer or Diving Supervisor may commence recompression therapy when a delay in recompression would likely cause further

D.3. Supervision (continued) harm. If unable to establish contact with a DMO, a Master Diver (MDV) is another outstanding resource that may be available to offer assistance.

D.4. Treatment Procedures All standard procedures for hyperbaric chamber operation detailed in reference (a) shall be followed when using the EEHS with the following exceptions:

- a. No inside tender will be used.
- b. No neurological exams will be conducted once recompression therapy commences until the patient is transferred to a hyperbaric treatment facility.

Specific procedures for set-up, operation and emergencies involving the EEHS are detailed in reference (j).

D.5. Treatment Tables While the EEHS is not intended as a treatment chamber, recompression therapy may commence during the evacuation. All recompression therapy shall be conducted in accordance with reference (a) unless modified by a DMO with the concurrence of the commanding officer.

- a. Due to the operating limits of the EEHS, only Treatment Tables 5 and 6 (with extensions) shall be used.
- b. If oxygen is lost and cannot be restored by following Emergency Procedures, maintain the patient at 60 fsw and transport to a hyperbaric treatment facility. Air Treatment Tables cannot be performed in the EEHS due to working depth limitations.

D.6. Training and Familiarization Training with the EEHS is required to maintain proficiency and shall be conducted semi-annually in accordance with Table 3-1. Training shall exercise all functions of the EEHS with emphasis on the built-in breathing system and patient transfer procedures.

NOTE: Exercising the EEHS under pressure for training is not to be conducted with a live human inside.

Due to the unique configurations of different recompression chambers, training in patient transfer procedures should be conducted at the hyperbaric treatment facility that the Diving Unit is most likely to utilize in case of a diving emergency.

Dive teams supporting Polar icebreakers shall coordinate patient transfer procedures with McMurdo Station medical clinic personnel prior to or on arrival in the local operating area.

**D.6.
Training and
Familiarization
(continued)**

Upon embarkation of military or civilian contract aviation support, the Diving Officer shall coordinate and conduct EEHS familiarization training with all members of the flight crew (Coast Guard or contract helicopter support) prior to conducting dive operations. This shall include procedures for loading and unloading the EEHS and configuration of support equipment and personnel inside the aircraft.

NOTE: When planning and exercising procedures for evacuation using the HH65 helicopter, special attention must be given to the size of the pressurized EEHS and the weight of the required air supplies and auxiliary equipment.

Section E. Diving Resources

E.1. Overview This section is intended to provide guidance to operational commanders requiring diving services. The regulatory distinctions that apply to diving operations are based not on the nature of the company or agency providing the diving resources, but on the nature of the services provided. In general terms, diving services may be categorized as follows:

- a. Commercial Diving.
- b. Public Safety Diving (Rescue and Port Security Diving).
- c. Scientific Diving.

When an operational commander requires diving services it is important that the correct diving resource is requested for the service required.

E.2. Diving Bill All Coast Guard diving units are required to maintain a diving bill that details unit specific policies and procedures for the performance of diving operations. Additionally, afloat units and units that require diving services should maintain a diving bill as part of their command organization manual or standard operating procedures.

The diving bill shall detail personnel roles and responsibilities, unit specific safety procedures, equipment to be tagged out prior to commencing diving operations, required notifications to local units and pre/post-dive checklists.

Appendix (a) provides a sample diving bill as well as associated checklists required for the planning and execution of diving operations.

E.3. Regulatory Standards As discussed below, the standards and regulations that apply to diving operations are not based on the nature or composition of the dive team, but on the nature of the work performed.

Most diving resources are capable, to some degree, of performing a number of different types of work. For example, a public safety dive team, one composed of fire department or police department divers, may be capable of providing commercial diving services, just as a commercial dive team, one composed of professional, commercial divers, may be capable of providing search and rescue diving services.

E.4. Diving Resources Diving services may be provided by a variety of public agencies and private companies. Divers for these different groups must be trained, certified and utilized in accordance with their employer or parent organization and applicable federal regulations. Nothing in this Manual shall establish a requirement for non-military diving units to operate in accordance with internal Coast Guard or U.S. Navy

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- E.4. Diving Resources (continued)** regulations or procedures. Diving resources fall into the following general categories:
- a. Coast Guard diving units.
 - b. U.S. military diving units.
 - c. Commercial diving companies.
 - d. Public safety dive teams.
 - e. Scientific divers.

NOTE: Recreational divers shall not be utilized to provide diving services for the Coast Guard.

NOTE: Coast Guard divers shall not supplement non-military diving resources in an **official** Coast Guard capacity.

-
- E.5. Non Coast Guard Diver Support** There are many circumstances where Coast Guard small boats and cutters may be used to support non-Coast Guard divers. Coast Guard Command Centers and units are encouraged to be familiar with diving assets in their local area and establish standard support protocols when possible. Dive operations can be broadly categorized as emergent or non-emergent.

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- E.5.a. Emergent Diving Operations** Emergent diving operations are conducted primarily for search and rescue as discussed in Section 1.C.2.f. A diving operation would be considered emergent if live humans may be trapped underwater and divers may be the best course of rescue. Time is critical and the establishment of standard support protocols with local rescue diving assets is especially important. The discussion of pre-dive information in below E.5.b., would apply accordingly to emergent diving operations and vary only based on the urgency of the situation, experience of the non-Coast Guard divers and availability of resources.

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- E.5.b. Non-Emergent Diving Operations** Non-emergent diving operations are routine in nature and expediency is not a primary consideration. For this reason, more attention should be paid to comprehensive preparations to coordinate efforts of the dive team and Coast Guard personnel. The following information shall be thoroughly discussed prior to commencing diving operations:
- (1) The respective roles and responsibilities of the coxswain/officer of the deck and the Diving Supervisor.
 - (2) Contingency plans for diving casualties and medical emergencies.
-

- E.5.b. Non-Emergent Diving Operations (continued)**
- (3) Communications plan.
 - (4) Diver deployment and recovery procedures.
 - (5) Vessel tag-outs and mooring plans.

NOTE: Appendix (c) provides an indemnification form that must be completed and submitted to the unit commanding officer prior to commencing non-emergent diving operations.

- E.6. Dive Supervision**
- With the exception of Coast Guard divers operating with other military divers, Coast Guard personnel will not supervise or control non-Coast Guard diving resources, or serve as the designated person in charge or Diving Supervisor required by reference (k) or (l).

- E.7. Coast Guard Diving Units**
- Coast Guard Diving Units at the Regional Dive Locker East (RDLE), Regional Dive Locker West (RDLW), and aboard the District 14 WLB Buoy Tenders are the source of diving services for Coast Guard Operations. Requests for Diving Services through the Regional Dive Lockers should be made through the DOG(DG-35) using the Request for Forces (RFF) process (see <http://arlms-dogjis/DOG/Org/dg3.aspx>). The ATON Mission and District 14 WLB Dive teams are under the control of the District 14 ATON program. Requests for ATON diving services should be directed to District 14 (dpw) also using the RFF process. The Headquarters Dive Program, DOG Dive Force Manager and Command Diving Officers may have useful information about diving resources in a local area. Table 1-1 provides Coast Guard Dive Unit and support information.

| Diving Units/Support Units | Location | Phone Number |
|----------------------------|----------------------|--------------|
| CGHQ CG-7D Dive Program | CGHQ, Washington, DC | 202-372-1294 |
| DOG | Arlington, VA | 202-493-6683 |
| CGLO, NDSTC | Panama City, FL | 850-235-5269 |
| RDLE | Portsmouth, VA | 757-638-2770 |
| RDLW | San Diego, CA | 619-572-7187 |
| USCGC KUKUI | Honolulu, Hawaii | 808-842-2860 |
| USCGC WALNUT | Honolulu, Hawaii | 808-842-2865 |
| USCGC SEQUOIA | Apra Harbor, Guam | 671-355-4885 |

Table 1-1. Coast Guard Diving Units

Although the Coast Guard Auxiliary has expressed an interest in providing diving services for the Coast Guard, there is currently no Commandant approved policy to allow Coast Guard sanctioned diving by the Coast Guard Auxiliary. In order to establish a recognized Auxiliary dive team, all requirements pertaining to active duty divers in this Manual would apply. In particular, all divers must be Navy trained divers, meet levels of currency with up to date physicals and the dive unit would need to receive an annual safety survey conducted by Commandant (CG-7D).

E.8. U.S. Military Diving Units U.S. military diving units are located across the country and are trained, certified and operated under U.S. Navy regulations. U.S. military diving units should be contacted if a Coast Guard Diving Unit is unable to provide diving services. These teams have widely varying missions and capabilities including EOD, Salvage, Underwater Ship Husbandry and Underwater Construction. Contact Commandant (CG-7D) Dive Program for DOD dive contacts.

Coast Guard divers are authorized to operate with military diving units to the extent that their training and qualifications allow.

E.8.a. Safety U.S. military dive teams operate in accordance with reference (a).

E.8.b. Certification U.S. military dive teams consist of military personnel that are trained and qualified in accordance with references (a) and (e).

E.8.c. Equipment When working in conjunction with Coast Guard Diving Units, U.S. military divers may use Coast Guard diving equipment.

E.9. Commercial Dive Teams Commercial Dive Teams are defined as:
Diving resources that support operations conducted in connection with all types of work and employments, including general industry, construction, ship repairing, shipbuilding, shipbreaking and longshoring. When performing commercial diving operations, divers must adhere to the appropriate commercial diving regulations detailed in references (k) and (l). AREA Maintenance and Logistics Commands (MLCs) can provide assistance in locating commercial diving services to Coast Guard units in need of commercial diving services.

NOTE: As a federal agency directly responsible for regulating commercial diving operations, it is critical that Coast Guard units obtain commercial diving services from companies that operate in accordance with the Code of Federal Regulations.

E.9.a. Safety It is not the intent of this Manual to restate all the applicable safety requirements set forth in the commercial diving regulations.

There are some differences in commercial diving regulations depending on the

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| <p>E.9.a. Safety (continued)</p> | <p>location of the diving operations.</p> <p>(1) The majority of diving operations required by Coast Guard units are regulated by the Occupational Safety and Health Administration and the regulations contained in reference (k).</p> <p>(2) Diving operations conducted from any deepwater port, offshore platform or vessel required to have a Certificate of Inspection are regulated by the Coast Guard and the regulations contained in reference (l).</p> <p>Appendix (b) provides a simplified checklist to verify compliance with commercial diving regulations.</p> |
| <p>E.9.b. Certification</p> | <p>No specific certification is required for commercial divers. However, all divers must have experience or training necessary to perform assigned tasks in a safe and healthful manner.</p> |
| <p>E.9.c. Equipment</p> | <p>Commercial divers shall supply their own equipment.</p> |
| <p>E.10. Public Safety Dive Teams</p> | <p>Many fire departments, police departments and other public safety agencies maintain diving capabilities for public safety purposes. Public safety diving is defined as diving performed solely for search, rescue or related public safety purposes by or under the control of a governmental agency.</p> |
| <p>E.10.a. Safety</p> | <p>During rescue diving operations (non-Coast Guard), expediency is a primary consideration. For this reason, diving operations are exempted from commercial diving regulations when performed solely for search, rescue or related public safety purposes by or under the control of a governmental agency.</p> <div data-bbox="414 1333 1388 1522" style="border: 1px solid black; padding: 5px;"> <p>NOTE: The public safety diving exemption only applies to diving performed solely for search, rescue or related public safety purposes. A public safety dive team performing commercial diving operations must follow the regulations for commercial diving operations.</p> </div> |
| <p>E.10.b. Certification</p> | <p>Divers performing public safety diving operate under an exemption to the commercial diving regulations and do not require any specific certification other than that specified by their parent organization.</p> |
| <p>E.10.c. Authorization</p> | <p>Once a dive team has responded to a Search and Rescue (SAR) incident, they shall be allowed to control the diving operations without interference. If part of the dive team, the Diving Supervisor will have authority and responsibility for diving operations and shall report findings to the On-Scene Commander.</p> |

| | |
|--|--|
| E.10.d. Operations | <p>If part of the dive team, the Diving Supervisor shall serve as liaison with the On-Scene Commander and shall request necessary support and report findings.</p> <p>When performing diving operations for search, rescue or related public safety purposes, Public safety dive teams shall operate under the protocols of their certifying authority.</p> |
| E.10.e. Equipment | <p>Public safety divers shall supply their own equipment.</p> |
| E.11. Scientific Diving | <p>Diving performed solely as a necessary part of a scientific, research or educational activity by employees whose sole purpose for diving is to perform scientific research tasks.</p> <p>Scientific diving does not include performing any tasks usually associated with commercial diving such as:</p> <ol style="list-style-type: none">Placing or removing heavy objects underwater.Inspection of pipelines and similar objects.Construction or demolition.Cutting or welding.Use of explosives. |
| E.11.a. Safety | <p>Due to different operating and emergency procedures, Coast Guard divers will not supervise scientific divers or operate as part of a buddy pair with a scientific diver. The Diving Officer shall advise the Commanding Officer regarding any potentially unsafe situations.</p> |
| E.11.b. Authorization | <p>Scientific divers embarked on polar icebreakers may conduct diving operations in support of their science mission. Scientific diving operations are specifically exempted from commercial diving regulations.</p> <p>Scientific divers must request authorization from the unit they will be embarked by submitting the Indemnification and Responsibility Statement of Parent Organization form contained in appendix (c) a minimum of three months prior to the deployment.</p> |
| E.11.c. Certification | <p>Scientific divers must be certified by the National Oceanic and Atmospheric Administration (NOAA) Diving Program or an organizational member of the American Association of Underwater Sciences (AAUS). Certification shall specify the diver's depth, equipment and environmental limitations.</p> |

**E.11.d.
Operations**

Scientific divers shall conduct diving operations in accordance with the protocols of their certifying authority. The University-National Oceanographic Laboratory System (UNOLS) Research Vessel Safety Standards Manual provides guidance on the performance of scientific diving operations from research vessels. This guidance shall be reviewed by the Diving Officer and lead diver before allowing scientific divers to commence diving operations.

**E.11.e.
Equipment**

Scientific divers shall supply their own equipment.

Section F. Diving Program Safety Survey

F.1. Overview The purpose of the Diving Program Safety Survey (DPSS) is to enhance the safety of diving operations at Coast Guard Diving Units through inspection of unit equipment and records and review of unit diving procedures.

The DPSS is modeled after the biennial safety survey program performed by the Naval Safety Center. All DPSS visits will be conducted by a minimum of two inspectors who are qualified divers in accordance with Chapter 3.A.2. During the inspection, the unit's administration, training records and equipment will be inspected, followed by evaluation of the dive team's ability to plan, brief and execute a diving operation. The DPSS checklist and Operational Dive Drill Card/Evaluation Sheet used to capture this information are contained in appendix (d). The unit is encouraged to review appendix (d) prior to the visit.

F.1.a. DPSS Evaluation The DPSS checklist and Operational Dive Drill Card/Evaluation Sheet mentioned above form the basis for the DPSS evaluation.

(1) DPSS checklist: All applicable items on the checklist must be completed satisfactorily. A safety stand-down for the unit may be imposed at the discretion of the inspectors for any items that are deemed to pose a safety hazard. Discrepancies that cannot be rectified during the DPSS visit should be completed as soon as possible as recommended by the inspectors. Further diving restrictions on the unit may be imposed by Headquarters Dive Program Management if outstanding discrepancies are not completed in a timely manner. The DPSS checklist is comprised of administrative, training and equipment items.

(2) Operational Dive Drill Card/Evaluation Sheet: An evaluation of the unit's ability to plan and execute a dive will be conducted and recorded on this form. The dives will include imposed scenarios to test the supervisor's and divers' ability to respond accordingly to emergency situations. A passing grade of at least 80/100 must be received in the dive (6 Phases-Surface (pre-dive), Descent, Bottom, Ascent/Decompression, Surface(post-dive) and Chamber). Points are deducted for Minor, Intermediate or Major infractions as listed on the form.

F.1.b. Diving Program Safety Survey Visit Report After completion of a DPSS, the inspectors will conduct a debrief with the unit's Commanding Officer advising him or her of the inspector's findings. The inspectors will then provide the report to Commandant (CG-7D) including the completed DPSS checklist, Operational Dive Drill Card/Evaluation Sheet and any comments by the unit. A final letter to the unit will be sent by Commandant (CG-7D) authorizing the unit to continue diving in the current capacity of the unit, or directing the unit to stand down from diving operations until discrepancies are corrected. The report will also be forwarded to FORCECOM-7 (FC-7) for review.

**F.2.
Schedule
of Events** The DPSS instructors assigned to conduct the inspection will contact the unit prior to their arrival to coordinate the schedule of the visit.

**F.2.a.
Day One** The first day of the DPSS visit is an administrative and equipment inspection check, and planning session for Day Two. Day One will generally consist of the following events:

- (1) Command In-brief.
 - (2) Briefing and introductions for dive team.
 - (3) Complete DPSS Checklist with Diving Officer.
 - (4) Preparations for Day Two.
-

**F.2.b.
Day Two** The second day of the DPSS visit is intended to evaluate the dive team's ability to plan, brief and execute a diving operation. Day Two will generally consist of the following events:

- (1) Training dives.
 - (a) Load out and transport required equipment.
 - (b) Set up dive station.
 - (c) Conduct a dive brief.
 - (d) Perform pre-dive checks.
 - (e) Demonstrate proper water entry and egress procedures.
 - (f) Respond to diving emergencies
 - (g) Demonstrate EEHS operation
 - (2) Dive team debrief.
 - (3) Command debrief.
-

**F.3.
Logistical
Requirements**

Day One will require a room adequate for holding briefings and reviewing the unit's administrative items. Equipment and dive lockers will be inspected as well. Day Two will require an appropriate dive site and transportation to the site. Inclement weather may dictate changes to the proposed schedule.

Section G. Recreational Diving

**G.1
Overview** This section addresses use of Coast Guard issued diving equipment for recreational dives and policy on recreational dives.

**G.2.
Recreational
Use of
Coast Guard
Issued Dive
Team
Equipment** Units shall not allow Coast Guard issued dive team equipment to be used for recreational purposes.

**G.3.
Off Duty
Recreational
Diving** It is recommended that Coast Guard members participating in off duty diving activities be properly certified to the level of activity they engage in. Divers should be certified by a nationally recognized diving instruction organization such as the National Association of Underwater Instructors (NAUI), Professional Association of Dive Instructors (PADI), SCUBA Schools International (SSI) or Young Men’s Christian Association (YMCA). Diving other than in unconfined, open water, no decompression limits is not recommended. If recreational diving is done through a civilian dive shop or dive tour company, Coast Guard members should personally verify that vessel operators are properly licensed for any vessel operated and the vessel is properly equipped with first aid, firefighting and lifesaving equipment. It should also be verified that dive equipment provided is in good condition and under a legitimate inspection program.

Chapter 2 Administration

Introduction

The purpose of this chapter is to establish procedures for the maintenance of personal and command records of diving operations, for screening candidates for diver training and for administration of diving duty pay.

This chapter is intended to augment, not contradict, existing Coast Guard policies for personnel, pay and medical administration.

In this Chapter

This chapter contains the following sections:

| Section | Title | See Page |
|---------|--------------------------------------|----------|
| A | Recordkeeping and Reporting | 2-2 |
| B | Diver Candidate Screening Procedures | 2-7 |
| C | Diving Duty | 2-12 |
| D | Diver Insignia | 2-15 |

Section A. Recordkeeping and Reporting

A.1. Overview The requirements in this section apply only to Coast Guard divers and military divers performing diving operations at a Coast Guard Diving Unit.

A.2. Dive Logs Dive logs establish the diving history for each Diving Unit, and constitute the basic operational record requirement under normal, uneventful circumstances.

A.2.a. Dive/Jumps Reporting System The Dive/Jumps Reporting System (DJRS) is a web-based dive log maintained by the Naval Safety Center. DJRS accounts may be obtained from the Naval Safety Center.

- (1) DJRS will serve as the Command Smooth Log which contains a record of dives for personnel attached to the command and dives by personnel temporarily attached to the command, such as personnel on temporary duty.
- (2) Each Coast Guard diver is required to maintain a personal diving log. The best way for each diver to accomplish this is to keep a copy of each Diving Log Form in a binder or folder. Copies can be generated locally by the diver's command from DJRS.

NOTE: A primary benefit of using DJRS is that the operational data (e.g., date and location) may be used to identify divers at risk for adverse health effects resulting from exposure to contaminated water. In these cases, medical trends correlated to water quality in a particular location and time may provide an early warning for divers who may need to be evaluated for specific health issues.

A.2.b. Recompression Chamber Log The Recompression Chamber Log is the official chronological record of procedures and events for an entire dive. It is mandatory that all Coast Guard Diving Units equipped with an Emergency Evacuation Hyperbaric Stretcher (EEHS) maintain a Recompression Chamber Log. The log shall be legibly maintained in a narrative style.

The Diving Officer and Diving Supervisor shall review and sign the log daily or at the end of their watches. The Recompression Chamber Log must be retained for 3 years after the date of the dive. The minimum data items in the Recompression Chamber Log include:

- (1) Date of the dive.
- (2) Purpose of the dive.

**A.2.b.
Recompression
Chamber Log
(continued)**

- (3) Identification of the diver (s)/patient (s).
- (4) Identification of tenders.
- (5) Time for left surface (LS).
- (6) Time reached treatment depth.
- (7) Time reached stop.
- (8) Time left stop.
- (9) Depth/time of relief.
- (10) Change in symptoms.
- (11) Recompression chamber air temperature (if available).
- (12) Oxygen and Carbon Dioxide % (if available).
- (13) Medicine administered.
- (14) Fluids administered.
- (15) Fluid void.
- (16) Signature of Diving Officer or Diving Supervisor.
- (17) Comments/Remarks.

**A.3.
Diving Mishap
Reporting**

Reference (m) provides instructions for reporting of mishaps. Additional instructions specific to diving accidents and hyperbaric treatments are provided in reference (m). Include the following INFO addressees in all message traffic:

- a. COMDT COGARD WASHINGTON DC//CG-7D/CG-112/CG-113//
- b. COGARD DEPLOYABLE OPS GROUP WASHINGTON DC
- c. COGARD LO NAVDIVESALVTRACEN PANAMA CITY FL

The Coast Guard Liaison Office at the NDSTC should be contacted for diving mishap investigation guidance.

**A.4.
Mishap Report
Requirement**

Unit Commanding Officers are responsible for compliance with all mishap report requirements. This paragraph addresses mishaps that shall be reported to Coast Guard Headquarters by the diving command within the appropriate time line. Guidance for reporting procedures are found in reference (m), Safety and Environmental Health Manual, COMDTINST M5100.47(series), and reference (n), Navy Occupational Safety and Health Manual, OPNAVINST 5100.19(series).

Additionally, if an administrative investigation is going to be required, i.e., any class A or B mishap, any death or injury likely to result in disability benefit or lost time in excess of 24 hours, and the circumstances suggest a finding of

**A.4.
Mishap Report
Requirement
(continued)**

“misconduct” or “not in the LOD” might be made (see chapter 2.B of reference (o), the Administrative Investigation Manual), contact the district legal office. Questions on protocol and preserving of evidence should be referred to CG-1134 at (202-475-5218) and the Naval Experimental Dive Unit duty watchstander at (850-230-3100).

The following shall be reported to Commandant (CG-7D):

a. Dive related injuries requiring recompression therapy:

- (1) Arterial Gas Embolism (AGE).
- (2) Decompression sickness (DCS).
- (3) Unconscious / non responsive diver.

b. Dive related injuries requiring no recompression therapy but render the member not fit for diving duty:

- (1) Ear Squeeze
- (2) Reverse ear squeeze.
- (3) Sinus squeeze.
- (4) Hypothermia.
- (5) Hyperthermia.
- (6) Pulmonary Over Inflation Syndrome.

c. Mechanical Injury requiring medical treatment:

- (1) Lacerations requiring sutures.
- (2) Diver illness caused by pollutants in the water.

d. Equipment failure:

- (1) 1st and 2nd stage regulator free flow or failure.
- (2) Buoyancy Compensator Device (BCD) malfunction or failure.
- (3) Air compressor failure.
- (4) Air purification test failure.
- (5) Umbilical malfunction or failure.
- (6) Full-facemask malfunction or failure.
- (7) VVDS flooding due to diver or manufacture error
- (8) Life line failure.

e. Diving incidents (no injury occurred):

- (1) Lost diver.
 - (2) Diver separation.
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| A.4. Mishap Report Requirement (continued) | <p>(3) Loss of situational awareness by dive personnel.</p> <p>(4) Deployment of standby diver in an emergency situation.</p> <p>(5) Uncontrolled ascent/descent.</p> <p>(6) Safety violation (clearly stated in report what type of violation occurred)</p> |
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| A.5. Failure Analysis Reports | <p>The Failure Analysis Report (FAR) system provides the means for reporting, tracking and resolving material failures or deficiencies in Diving Life-Support Equipment (DLSE). The FAR was developed to provide a rapid response to DLSE failures or deficiencies. It is sent directly to the configuration manager, engineers, and technicians who are qualified to resolve the deficiency.</p> <p>Chapter 5-8 of reference (a) provides forms and detailed guidance on how to submit FARs. Any additional questions about FARs should be referred to the Coast Guard Liaison Office at NDSTC.</p> <p>Reference (p) provides guidance on the Coast Guard's primary After Action Reporting system which is another method for reporting and collecting lessons learned and best practices related to diving operations, especially if they are not related to equipment failures reportable to the Navy.</p> |
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| A.6. Dive Team Manning Shortfall Reporting | <p>Coast Guard diving units unable to maintain diver allowances set forth in Table 2-1 of this Manual shall notify via message format the following organizations:</p> <ul style="list-style-type: none"> a. Area/District Headquarters that the diving unit is assigned to b. COMDT COGARD WASHINGTON DC//CG-7D c. COGARD LO NAVDIVSALVTRACEN PANAMA CITY FL d. COGARD DEPLOYABLE OPS GROUP WASHINGTON DC <p>Units must have a minimum of 4 divers including 1 Diving Officer (MEDO) or they shall not conduct diving operations.</p> <p>Units are advised to contact Commandant (CG-7D) for guidance as required regarding diver allowances.</p> |
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| A.7. Training Records | <p>The Training Management Tool (TMT) shall be used to record unit training. The required unit training topics in Table 3-1 are available in TMT.</p> |
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| A.8. Standard Relief Process for Diving Officer | <p>The incoming and outgoing Diving Officers should perform an on-site relief documented by memo format to the Commanding Officer in charge of the Dive unit, and copy to Coast Guard HQ (CG-7D) and to the DOG.</p> |
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- A.8. Standard Relief Process for Diving Officer(continued)**
- The memo shall be retained by the unit for three years and contain the following:
- a. Status of unit readiness.
 - b. Status of unit divers' qualifications and lapse dates.
 - c. Listing of outstanding unit discrepancies and date of last unit Diving Program Safety Survey (DPSS) report.
 - d. Status of unit training logs and unit Operational Risk Management records.
 - e. Status of unit equipment and PMS records including air compressor and air tests.
 - f. General comments on condition of the dive locker and unit dive program.
 - g. Both incoming and outgoing Diving Officers shall complete the DPSS checklist and include as an enclosure to the relief memo.
 - h. Signatures of incoming and outgoing Diving Officers.
 - i. A sample relief memo and checklist are available in appendix (h). of this manual.
-

Section B. Diver Candidate Screening Procedures

B.1. Overview

Due to the physically and mentally challenging nature of diving operations, the screening requirements for diver candidates are extremely strict. The applicant's commanding officer is responsible for ensuring applicants ordered to initial diver training are qualified in all respects.

The diver screening process involves the following requirements:

- a. Eligibility Criteria.
 - b. Dive Officer Interview.
 - c. Command Endorsement.
 - d. Diving Medical Examination.
 - e. Physical Screening Test.
-

B.2. Eligibility Criteria

The basic eligibility criteria listed below must be met before proceeding with the diver candidate screening process:

- a. Applicants must be volunteers on active duty assigned to, or requesting assignment to, a diving unit.
- b. Non-rated personnel are only eligible if assigned to a Diving Unit.
- c. The maximum age for initial training is 35 years.
- d. Minimum combined ASVAB scores are AR+WK=104 (110 for Deep Sea Diving Medical Technician (DMT) applicants) and MC=50 (not applicable for officer diver candidates).
- e. No marks less than 4 in any category for the previous 6 months.
- f. Units outside the continental U.S. require an Overseas Screening Certification.

Applicants must have, as of the date of completion of initial training, at least one year of service remaining on their current enlistment or period of active service. Enlisted personnel not having the required minimum service remaining may qualify by agreeing to extend their enlistments in accordance with reference (q).

Members who voluntarily disenroll from initial training may reapply after one year. An updated Command Endorsement recommending approval must accompany the application. Members who subsequently voluntarily disenroll a second time are no longer eligible for consideration.

B.3. Dive Officer Interview

One of the major factors in the high attrition rate at NDSTC is an apparent lack of understanding by diver candidates of what is expected of them during training. Students who voluntarily dis-enroll repeatedly state they were not told how challenging the training would be. The Dive Officer interview is required to ensure

**B.3.
Dive Officer
Interview
(continued)**

the candidate is fully aware of the rigorous training program requirements and is physically, mentally and emotionally prepared to successfully complete the program.

This interview may be conducted by any Coast Guard Dive Officer. If the applicant does not have ready access to a Coast Guard diving unit, this requirement may be fulfilled by telephone interview with the CGLO NDSTC.

The following topics are provided to assist the interviewer. However, the scope of the interview is not limited to these topics.

- a. Does the applicant understand the mission and scope of the Coast Guard diving program including high risk training, hazardous duty assignments, and assignment procedures and diving duty pay?
- b. Does the applicant understand the training regimen is extremely demanding? Does the applicant understand what level of performance is expected? Does the applicant appear physically prepared for the arduous physical training program?
- c. Is the applicant's motivation for entry into the program a sincere desire for growth and achievement and not a desire for financial gains or a means to avoid present duties and responsibilities?
- d. Is the applicant mentally prepared for the arduous training and fast-paced instruction at NDSTC?
- e. Does the applicant have any financial, marital or other hardships that could negatively impact their ability to succeed in training?
- f. Does the applicant participate in a regular physical training regimen are they physically prepared for the intended course of instruction?

Once completed, the Dive Officer shall document the results of the interview in a memorandum to the CGLO NDSTC. This memorandum shall be included in the application package. A sample memorandum is available in appendix (e).

**B.4.
Commanding
Officer
Endorsement**

The Commanding Officer's endorsement is one of the most critical parts of the screening process. This endorsement is required to assess the applicant's suitability for diver training. The Commanding Officer is responsible for reviewing applicant's records and ensuring applicants meet all eligibility requirements. When considering an applicant for diver training, the following items should be assessed:

- a. The applicant's suitability for diver training and subsequent diving duty assignment.
 - b. The applicant's mental and emotional stability with regard to pressure situations, leadership and motivation for becoming a diver.
 - c. The applicant's physical fitness and involvement in physical fitness activities.
-

Commanding Officer Endorsement (continued)

The Command Endorsement must be included in the applicant's e-resume in order for it to be visible to the Assignment Officer. A sample command endorsement is enclosed in appendix (e). At a minimum, the e-resume Command Endorsement shall state:

- a. "Member recommended for Diving Duty. Member meets eligibility requirements detailed in Section 2.B.1 of the Coast Guard Diving Policies and Procedures Manual, COMDTINST M3150.1C."
- b. If the applicant is not tour complete, the endorsement shall state: "Member is not currently tour complete. Command is willing to accept early rotation of member to participate in the diving program."

For applicants who are not tour complete, the command endorsement should include a statement as to whether or not an immediate backfill is required.

B.5. Diving Medical Examination

All applicants must undergo a Diving Medical Examination in accordance with reference (r). Prior to conducting the examination, applicants are encouraged to successfully pass a diver physical screening test (appendix (e)), and review the MILPERSMAN 1220-100, Exhibit 8, Diver/BUD/S Medical Screening Questionnaire with their medical department to ensure all aspects of the examination are completed. The Diver/BUD/S Medical Screening Questionnaire is contained in appendix (e).

When possible, this examination should be conducted by a DMO. However, do not delay the examination if a DMO is not immediately available. Have your local medical department conduct the examination and the Medical Screening Questionnaire and it can be validated by the NDSTC medical department.

Once the examination is complete, fax or mail a copy of the following completed forms to the CGLO NDSTC:

- a. MILPERSMAN 1220-100, Exhibit 8, Diver/BUD/S Medical Screening Questionnaire (appendix (e)). See page 3. paragraph 9 for internet location.
 - b. DD Form 2808, Report of Medical Examination.
 - c. DD Form 2807-1, Report of Medical History.
 - d. Any related test results.
-

B.6. Physical Screening Test

This test is designed to determine the applicant's physical readiness for initial training and will be re-administered upon reporting for training. Physical Screening Test standards are the same for all candidates regardless of age or gender. Detailed guidance on this requirement is available in appendix (e).

**B.6.
Physical
Screening Test and
Documentation
(continued)**

NOTE: No waivers are available for Physical Screening Test requirements.

This test shall be administered by a military diver. If no military divers are available, contact CGLO NDSTC to receive guidance on testing procedures. Specific testing procedures change periodically.

This test shall be retaken within 30 days of reporting for training and results shall be forwarded to the CGLO NDSTC. Personnel who fail the test at that time will retest 15 days before reporting. If the member failed the retest, their orders will be cancelled and the CGLO NDSTC shall be notified.

The completed copy of the Physical Screening Test results sheet from appendix (e) shall be included in the application package.

**B.7.
Pressure
Tolerance Test**

This test is conducted at a military hyperbaric treatment facility in accordance with reference (a). If this test cannot be readily accomplished, do not delay submission of the application package.

The pressure tolerance test results are recorded on NAVMED-6150/2, Special Duty Medical Abstract.

**B.8.
Diver Training
Application
Package/
Assessment and
Selection**

The diver training application package shall only include the following:

- a. Cover letter.
- b. Command Endorsement
- c. Dive Officer Interview memorandum.
- d. Results of Physical Screening Test.
- e. Results of Medical Examination.
- f. NAVMED-6150/2, Special Duty Medical Abstract (for Pressure Tolerance Test results; if conducted).

The application package shall be sent to the CGLO NDSTC for processing at the address below:

Coast Guard Liaison Office
Naval Diving and Salvage Training Center
350 South Crag Road
Panama City, FL 32407

**B.8.
Diver Training
Application
Package/
Assessment and
Selection
(continued)**

Each year, a Diver Assessment and Selection (A&S) will be held prior to the Special Assignment E-Resume submission deadline. An ALCGPERSCOM message will be released to solicit diver candidates for participation in the A&S. Coast Guard members who successfully screen at the A&S will have their names submitted to CGPC for consideration in the assignment process. Members placed on orders as a Coast Guard diver will serve at any one of the Coast Guard Diving Units listed in Table 1-1 of this manual.

NOTE: The Diving Medical Examination must be completed within one year of reporting for training.

Section C. Diving Duty

C.1. Overview Diving duty may only be performed by Coast Guard divers at Diving Units.

C.2. Assignment to Diving Duty Diving duty in the Coast Guard is secondary to the member's primary rating (career specialty). A member may be assigned to diving duty after meeting the requirements set forth in chapter 2 of this manual, completion of dive training at the Naval Diving and Salvage Training Center, and subsequent assignment to a dive unit with a designation letter from the Commanding Officer. Personnel assigned to diving duty must ensure that they maintain qualifications and meet pre-requisites for advancement within their primary career specialty.

C.2.a. Qualification For the purposes of this Manual, qualification is defined as the minimum level of competency required to perform specific duties. Coast Guard divers must be trained and qualified in accordance with reference (e).

NOTE: Coast Guard divers receive initial training at the Naval Diving and Salvage Training Center, Panama City, Florida.

Divers receive a qualification letter from the CGLO NDSTC upon successful completion of initial training. This letter shall be filed in the member's personnel data record and the competency code specified in the letter shall be entered into Direct Access by the member's Servicing Personnel Office.

C.2.b. Designation Divers must be designated in writing by their Commanding Officer. Designation letters shall specify one of the following ratings:

- (1) Dive Officer.
- (2) Diving Supervisor.
- (3) Diver.

C.3. Diving Duty Allowances

The addition or removal of a diving duty allowance is not a personnel billet change. Diving duty allowances are detailed in Table 2-1 below.

| Diving Unit/ Support Unit | Diver Allowances | | | Non-Diver Allowance |
|---|------------------------------------|-----------------------------|---|------------------------|
| | Marine Engineer Dive Officer | 1 st Class Diver | 2 nd Class Diver /Dive Med Tech | |
| 14 th District Buoy Tender | 1 | 1 | 4 | 1(a) |
| Regional Dive Locker West | 3 | 4 | 12 | |
| Regional Dive Locker East | 3 | 4 | 12 | |
| Commandant (CG-7D) | 1 | 1 | | |
| CGLO NDSTC | 1 | 2 | 1 | |
| Deployable Operations Group (DOG) | 1 | 1 | 1 | |
| District 14 Program Manager (collateral duty) | 1(b) | | | |

Table 2-1 Diving Duty Allowances

NOTE: When determining resource qualification the following shall apply:

- (a) Denotes: If ships corpsman is not DMT qualified he / she shall complete the Recognition and Treatment Course.
- (b) Program manager should be dive qualified but not required.

Requests for Allowance Changes-

Units may request diving duty allowances and changes by memorandum via their operational chain of command to Commandant (CG-7D) containing the following information:

- (1) The specific unit for which a diving duty allowance or change in allowance is desired, and the number of diving duty authorizations and level of qualifications requested.
- (2) Justification, duration and expected benefits of having divers at the unit.
- (3) The number of divers that would have to be trained in order to initially fill the proposed diver allowance.
- (4) The type of diving equipment required to fulfill mission area tasks and project cost.

**C.4.
Diving
Duty Pay**

Reference (s) cites the authority and describes the criteria that allow for the issuance of diving duty pay. The qualification and designation letters described above constitute the Diving Orders required by reference (s).

Divers assigned TAD to a diving unit for less than 30 days for the sole purpose of performing diving duties are eligible for diving duty pay on a per diem basis for the period the dives were conducted.

Students under instruction in training courses longer than five weeks are entitled to dive pay upon successful completion of the pool phase of SCUBA training.

**C.5.
Diving Duty
Opportunities**

With the creation of new Dive Program oversight staffing and the transition from Marine Safety Security Team dive teams to Dive Lockers in 2008, the Coast Guard Dive community will consist of approximately 60 active divers at dive units, and 10-14 management personnel per the locations in table 2-1. The investment to train an entry level diver as a dive officer or second class diver is a minimum of 4-5 months. Members assigned to out of rating tours at the primary duty dive lockers should be afforded opportunities by their parent commands to pursue TAD orders to units in order to fulfill rating requirements. Divers should expect to receive orders to an initial 3 year dive duty position after initial training.

Section D. Diver Insignia

- D.1. Overview** Diver insignia is worn to indicate qualification as a Coast Guard diver. All diver insignia shall be worn in accordance with reference (t).
-
- D.2. Authorization** Divers receive a qualification letter from the CGLO NDSTC upon successful completion of initial training. This letter shall specify what insignia is authorized for wear based on the diver's level of qualification. This authorization continues indefinitely unless specifically revoked upon request of the member or by Commandant (CG-7D).
- Commanding Officers of Diving Units may make requests for revocation of authorization for wear of diving insignia to Commandant (CG-7D) when a member's performance of diving duties is such as to demonstrate unfitness for continued service as a Coast Guard diver.
-
- D.3. Insignia** The insignia authorized for wear depends on the level of qualification as follows:
- a. Dive Officer. Officers who have successfully completed the Basic Dive Officer, Marine Engineer Diving Officer or First Class Diver courses are authorized to wear the Dive Officer insignia.
 - b. First Class Diver. Enlisted members who have successfully completed the First Class Diver course are authorized to wear the First Class Diver insignia.
 - c. Medical Deep Sea Diving Technician. Health services technicians who have successfully completed the Medical Deep Sea Diving Technician course are authorized to wear the Medical Deep Sea Diving Technician insignia.
 - d. Second Class Diver. Officers and enlisted members who have successfully completed the Second Class Diver course are authorized to wear the Second Class Diver insignia.
 - e. SCUBA Diver (Gold). Officers who have successfully completed the SCUBA Diver course are authorized to wear the gold SCUBA Diver insignia.
 - f. SCUBA Diver (Silver). Enlisted personnel who have successfully completed the SCUBA Diver course are authorized to wear the silver SCUBA Diver insignia.
-

Chapter 3 Training and Qualification

Introduction This chapter addresses formal and unit training, qualification, currency and re-qualification required by all Coast Guard diving personnel.

In this Chapter This chapter contains the following sections:

| Section | Title | See Page |
|----------------|------------------|-----------------|
| A | Training | 3-2 |
| B | Qualification | 3-7 |
| C | Re-qualification | 3-9 |

Section A. Training

A.1. Overview The quality and consistency of initial, advanced and continuing training is critical to maintaining proficiency and interoperability with military Diving Units and a key component of safe diving operations.

A.2. Training Centers Except as specified below, all diver training is conducted at the Naval Diving and Salvage Training Center (NDSTC) Panama City, Florida.

- a. Initial Diver Training. The Naval Diving and Salvage Training Center (NDSTC) Panama City, Florida is the source of initial diver training.
- b. Advanced Diver Training. Information concerning Advanced Diver training can be acquired through the CGLO NDSTC.

A.2.a. Coast Guard Liaison Office The Coast Guard maintains a liaison office at NDSTC to provide administrative and training support to Coast Guard personnel. For this reason, NDSTC is the preferred training location for Coast Guard personnel. Any questions regarding diver training, screening requirements and application procedures may be referred to the CGLO.

A.2.b. Reporting to NDSTC If reporting during normal working hours, students shall report to the CGLO NDSTC. After working hours, students shall report to the Naval Support Activity Panama City, Florida Bachelor Officer Quarters (BOQ) or Bachelor Enlisted Quarters (BEQ).

NOTE: All reporting students must hand carry their health records. Candidates for diver training must have the physical signed within one year of reporting for training.

A.3. Formal Training Quotas for the following courses are managed by Commandant (CG-7D).

NOTE: Table 2-1 of this manual identifies diver allowances for all Coast Guard diving units.

**A.3.a.
Marine Engineer
Diving Officer
(MEDO)**

- (1) Coast Guard Course Code: 400312
- (2) Navy Course Identification Number: A-4N-0024
- (3) Related Competency:
 - (a) Title: Marine Engineer Diving Officer (MEDO)
 - (b) Code: OPSDF
- (4) Duration: 88 training days
- (5) Purpose: Provides students with the training necessary to perform SCUBA and surface supplied diving and to perform as a Dive Officer. Instruction includes diving physics and medicine, underwater tools, diving system certification, SCUBA, and surface supplied air diving operations. Course qualifies trainee to a depth of 190 feet.

NOTE: The Basic Dive Officer (BDO) course may also be referred to as the Marine Engineering Dive Officer (MEDO) course.

**A.3.b.
1st Class
Diver**

- (1) Coast Guard Course Code: 240340
 - (2) Navy Course Identification Number: A-433-0058
 - (3) Related Competency:
 - (a) Title: Diver, First Class
 - (b) Code: OPSDC
 - (4) Duration: 70 training days
 - (5) Purpose: Provides qualified Second Class Divers with training necessary to perform operational planning for surface-supplied diving and to hone their skills as a Diving Supervisor. Instruction includes advanced diving physics and medicine, dive systems certification, planning for all surface-supplied diving operations, open circuit SCUBA and all hyperbaric chamber operations. Prerequisite course is Diver Second Class.
-

**A.3.c.
Medical Deep
Sea Diving
Technician
(DMT)**

- (1) Coast Guard Course Code: 400394
 - (2) Navy Course Identification Number: A-4N-0020
 - (3) Related Competency:
 - (a) Title: Dive Medical Technician
 - (b) Code: HS9B
 - (4) Duration: 89 training days
 - (6) Purpose: Provides qualified health services technician with the training necessary to perform operational surface-supplied air diving team member/diver. Instruction includes advanced diving physics, medicine and underwater physiology to enable the hospital corpsman to understand the effects of pressure on the human body and the treatment of diver diseases and injuries with particular emphasis on the use of navy standard decompression tables. Prerequisite is qualification as health services technician.
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**A.3.d.
2nd Class
Diver**

- (1) Coast Guard Course Code: 240350
 - (2) Navy Course Identification Number: A-433-0030
 - (3) Related Competency:
 - (a) Title: Diver, Second Class
 - (b) Code: OPSBD
 - (4) Duration: 88 training days
 - (5) Purpose: Provides student basic instruction and training in surface supplied air and SCUBA diving techniques, underwater repair, salvage and search procedures. Instruction includes diving physics and medicine, SCUBA, surface supported diving systems, underwater tools, work techniques, underwater cutting and underwater welding procedures. Course qualifies trainees to a maximum depth of 190 feet.
-

**A.3.e.
Recognition and
Treatment of Diving
Casualties (R&T)**

- (1) Coast Guard Course Code: 501317
 - (2) Navy Course Identification Number: A-4N-0018
 - (3) Related Competency:
 - (a) Title: Recognition & Treatment Dive Casual
 - (b) Code: OPSDH
-

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|--|--|
| A.3.e. Recognition and Treatment of Diving Casualties (R&T) (continued) | <p>(4) Duration: 10 training days</p> <p>(5) Purpose: Provides medical personnel with comprehensive training in basic diving medicine. It is aimed at military physicians, physician assistants, or nurse practitioners. While the course does not involve diving duty, it does involve time at depth in a recompression chamber. Contact the CGLO NDSTC for more information on application procedures for this course.</p> |
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| A.3.f. Bauer Compressor Maintenance | <p>(1) Coast Guard Course Code: 500375/G-NIO-004</p> <p>(2) Related Competency:</p> <p style="padding-left: 20px;">(a) Title: Bauer Compressor Maintenance Tech</p> <p style="padding-left: 20px;">(b) Code: OPSDG</p> <p>(3) Duration: 3 training days</p> <p>(4) Location: Bauer San Francisco</p> <p>(5) Purpose: Provides a basic understanding of the workings and service techniques of Bauer compressor systems. The course covers basic mechanical theory and troubleshooting, basic control (electrical and pneumatic) theory, air purification systems basic units/parts nomenclature, and parts ordering procedures and information.</p> |
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| A.5. Unit Training | <p>Unit training is required to ensure all divers stay proficient in water skills and general diving knowledge. Diving Officers shall be members of their unit training board. Commanding Officers must ensure required training is planned for and conducted.</p> |
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| A.5.a. Physical Training | <p>The Diving Officer is responsible for ensuring all dive team members maintain an appropriate level of physical fitness. Commanding Officers shall provide time for physical training on a regular basis. All divers shall pass the physical screening test annually.</p> |
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| A.5.b. Diver Training | <p>Diver training is critical to maintaining an effective dive team and shall be scheduled in the unit long-range training plan. This training shall include in-water and classroom instructions to maintain proficiency in all areas of diving. Required training and periodicity is detailed in Table 3-1.</p> <p>Diver training will be conducted utilizing references (a), (e) and contents of this manual ensure consistency and interoperability with military Diving Units.</p> <p>Diver training shall be recorded using the Training Management Tool (TMT), or in accordance with unit standards for recording required training.</p> <p>Work up dives shall be conducted for more complex diving operations.</p> |
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**A.5.b.
Diver Training
(continued)**

| Training Topic | Periodicity | |
|--|-------------|--------|
| | Semi-Annual | Annual |
| Diving Administration | | X |
| Neurological Exams | X | |
| Pulmonary Overinflation Syndrome | X | |
| Decompression Sickness (Type I and II) | X | |
| Barotraumas | X | |
| Vertigo | X | |
| Breathing Gas Disorders | X | |
| Hypothermia | | X |
| Differential Diagnosis of Diving Disorders | X | |
| Treatment Tables | | X |
| Gas Laws | | X |
| Dive Planning | X | |
| Line Pull Signals/SCUBA Hand Signals | | X |
| Ship's Tag Out Procedures | | X |
| SCUBA Procedures | | X |
| CPR | | X |
| Oxygen Kit and Ambu Bag | X | |
| Shock | X | |
| Accident Investigation and Reporting | | X |
| Omitted Decompression Procedures | | X |
| Formulas Used in Diving | | X |
| Underwater Search Techniques | | X |
| Diver's Air Sampling Program | X | |
| Emergency Evacuation Hyperbaric Stretcher (EEHS) | X | |
| Ordnance Recognition | | X |
| Diving Emergencies | X | |
| Four Re-qualification Dives within 6 months for divers assigned to diving duty | X | |
| Physical Screening Test | | X |
| Variable Volume Dry Suit Familiarization | | X |
| Table 3-1. Required Unit Training Topics | | |

Section B. Qualification

- B.1. Overview** Initial diver qualifications are obtained through formal training at NDSTC. Additional watchstation training and qualification is conducted at the unit level. Regardless of the qualification source, divers must be designated by the Commanding Officer prior to performing a watchstation.
-
- B.2. Coast Guard Diver** All graduates of Second Class Diver training, described in paragraph 3.A.3 and currently qualified graduates of the Navy SCUBA diver course are considered qualified Coast Guard Divers. Second Class Diver is the minimum level of qualification that Coast Guard Divers are now trained to.
-
- B.3. Diving Supervisor** Qualification as a Diving Supervisor may be achieved by completion of the personnel qualification standards for watchstation 300 SCUBA Diving Supervisor from appendix (f) and successful completion of an oral board.
- When qualifying a dive supervisor, selection is based on knowledge of diving techniques, experience, and level of training and competence of the available personnel.
- Regardless of rank the Diving Supervisor shall be a qualified diver of demonstrated ability and experience.
- The Diving Supervisor shall be designated in writing by the Commanding Officer.
- Diving Supervisors under instruction must stand their watch under the supervision of a qualified Diving Supervisor during the qualification process.
-
- B.4. Dive Officer** Dive Officers must be commissioned officers.
- Qualification requirements for Dive Officer are met by completion of Basic Dive Officer, Marine Engineering Dive Officer or First Class Diver courses.
-
- B.5. Personnel Qualification Standards** Reference (e) provides Personnel Qualification Standards (PQS) that establish the minimum knowledge and proficiency requirements for diving watchstations. These standards will be used in conducting unit training and qualification.
- Appendix F provides guidance on PQS sections required for qualification in specific watchstations performed by Coast Guard divers, i.e. Diving Supervisor, Diver Tender, ATON Diver, PWCS Diver and Polar Operations Support Diver.
-

**B.6.
Maintaining
Currency**

An individual's diving qualification remains current as long as the minimum currency requirements are met. The minimum requirement to maintain currency is four dives within the qualification period. All training and working dives, regardless of maximum depth or bottom time are authorized for currency requirements provided they are performed with a military dive team. Recreation and recompression chamber dives are not authorized as re-qualification dives.

**B.6.a.
Periodicity**

The periodicity of currency is dependent on whether the individual is performing diving duty at a Diving Unit or not. Divers at a Diving Unit are required to dive more often to maintain proficiency.

- (1) At a Diving Unit. The diving qualification period extends for a period of six months for personnel on diving duty. The recurrent periods are 01 January through 30 June and 01 July through 31 December. A diver must complete four dives during a six month period at the end of which the diver is considered qualified for an additional six month period. At the end of the next six month period, if a total of at least four dives were not conducted then the diver's qualification lapses. All qualifying dives must be completed in accordance with this Section and Section C of this chapter.
 - (2) Not at a Diving Unit. The diving qualification period extends for a period of twelve months for personnel not on diving duty. The recurrent period is 01 January through 31 December. A diver must complete four dives during a twelve month period at the end of which the diver is considered qualified for an additional twelve month period. At the end of the next twelve month period, if a total of at least four dives were not conducted then the diver's qualification lapses. All qualifying dives must be completed in accordance with this Section and Section C of this chapter.
-

**B.6.b.
Documentation**

For divers assigned to diving units, completion of currency will be captured electronically in TMT and DJRS. TMT monitors dives conducted on a semi-annual basis in accordance with paragraph B.6.a. above and codes the diver qualification currency in red if the required qualifying dives are not conducted in a six month period

Divers who are not assigned to a Diving Unit should receive a memorandum from the Diving Unit where they performed the dives documenting the completion of currency requirements. In lieu of a memorandum, divers may request signed copies of the Command Smooth Diving Log sheets for dives they performed at the unit.

Section C. Re-qualification

C.1. Overview When a diver fails to maintain currency, they must re-qualify for diving duty in accordance with the procedures detailed below. All re-qualification dives must be supervised by a currently qualified safety diver (buddy diver).

NOTE: Prior to conducting requalification dives, the diver must have a current diving duty physical examination on file. Physical examinations are valid for a five year period.

C.2. Qualification Lapse More than Six Months but Less Than Twelve Months If a diver's qualification has lapsed for more than six months, but less than twelve months, the diver must perform four re-qualification dives with a qualified buddy diver. All training and working dives, regardless of maximum depth or bottom time are authorized for re-qualification requirements provided they are performed with a military dive team. Recreation and recompression dives are not authorized as re-qualification dives. See table 3-2 below.

C.3. Qualification Lapse More Than Twelve Months but less than Three Years If diving qualification has lapsed for more than twelve months, but less than three years, the diver must perform four re-qualification dives. Prior to conducting the re-qualification dives, the diver must have a current diving duty physical examination and complete the physical screening test. All training and working dives, regardless of maximum depth or bottom time are authorized for re-qualification requirements provided they are performed with a military dive team. Recreational or recompression dives are not authorized as re-qualification dives. See table 3-2 below.

C.4. Qualification Lapse More Than Three Years If diving qualification has lapse for more than three years, the diver must receive refresher training. Prior to conducting the re-qualification dives, the diver must have a current diving duty physical examination and complete the physical screening test. Refresher training shall consist of the following:

- a. All academic portions relating to diving physics, diving medicine and general diving procedures.
- b. All academic and practical portions relating to diving equipment in which the member has not been trained.
- c. Four re-qualification dives.

Contact CGLO NDSTC for further guidance. See table 3-2 below.

| Length of Qualification Lapse | Requalification Requirements |
|--|---|
| Within 6 months | <ul style="list-style-type: none"> • Perform 4 requalification dives (a, b) |
| Greater than 6 months, but less than 12 months | <ul style="list-style-type: none"> • Perform 4 requalification dives (a, b) |
| Greater than 12 months, but less than 3 years | <ul style="list-style-type: none"> • Complete physical screening test (a) • Perform 4 requalification dives (b) |
| Greater than 3 years | <ul style="list-style-type: none"> • Complete physical screening test (a) • Academic refresher training in diving physics, diving medicine and general diving procedures • Academic and practical portions for equipment used • Perform 4 requalification dives (b) |

Table 3-2 Diving Qualification Lapse-Requalification Requirements

NOTE:

- (a) A current Diving Duty physical examination must be on file prior to conducting requalification dives or physical screening tests.
- (b) All training and working dives regardless of max depth or bottom time are authorized and must be performed with a qualified buddy diver and a military dive team. Recreational and recompression dives do not qualify.

Chapter 4 Equipment

Introduction Commandant (CG-7D), with technical assistance from the CGLO, NDSTC will coordinate the selection and standardization of all diving equipment. Only equipment on the Authorized for Navy Use (ANU) list shall be used for Coast Guard diving operations unless waived by Commandant (CG-7D).

In this Chapter This chapter contains the following sections:

| Section | Title | See Page |
|----------------|------------------------------|-----------------|
| A | Diving Equipment Maintenance | 4-2 |
| B | Equipment Waivers | 4-4 |
| C | Diver's Air Sampling Program | 4-5 |

Section A. Diving Equipment Maintenance

- A.1. Overview** Due to equipment use, accounting and maintenance requirements, multiple approaches to maintenance must be employed to manage different types of equipment. Manufacturers' technical manuals shall be maintained for any equipment used.
-
- A.2. Unit Equipment** Unit equipment does not require any diver-specific sizing or configuration. Maintenance on unit equipment will be conducted in-house at the unit or by commercial vendors. In either case all maintenance shall be completed by certified personnel.
- Appendix (g) provides a list of unit equipment and maintenance schedules. Any equipment in excess of that listed in appendix (g) must be maintained by the unit or a local maintenance provider.
- All unit equipment shall be serialized for tracking of maintenance requirements.
-
- A.2.a. Individual Equipment** Appendix (g) identifies equipment that must be issued to individuals due to size, configuration, or hygiene issues. Individual equipment shall be treated as organizational clothing in accordance with reference (q).
-
- A.2.b. Issue** Each diver will be fitted and issued a complete set of individual equipment from the diving unit upon completion of initial training. Individual equipment will not be returned to the Dive Program upon departure from the Diving Unit.
- Divers are expected to maintain individual equipment and will not be issued additional equipment if assigned to another Diving Unit except for normal wear and tear (see A.2.d. below).
-
- A.2.c. Recordkeeping** The dive unit will enter all equipment issued to the diver on a Personal Clothing and Equipment Record (AF 538).
-
- A.2.d. Maintenance** Divers are responsible for the care and maintenance of individual equipment. Any significant equipment failures or damage sustained in the course of proper use shall be repaired or replaced locally at unit expense. If a member damages equipment due to improper use, a claim should be made against the individual. It should be preceded with an investigation in accordance with chapter 2 of reference (o) (Administrative Investigation Manual), chapter 7 of reference (u) (Property Management Manual), and chapter 2 of reference (v) (Coast Guard Claims and Litigation Manual). The unit's servicing legal office may be consulted for
-

A.2.d. assistance in conducting the investigation and filing the claim against the
Maintenance individual.
(continued)

A.3. Certain equipment and materials required for routine cleaning and maintenance
Consumables shall be procured and dispensed at the unit level. Annual funding shall be provided
by Commandant (CG-7D) to Diving Units for the procurement of consumable
items. This funding may also be used to replace equipment damaged during
appropriate use.

Section B. Equipment Waivers

**B.1.
Overview**

All equipment used by Coast Guard divers must be on the Authorized for Navy Use (ANU) list. The Dive Program Technical Manager maintains a current list of standardized Coast Guard dive equipment. Standardization is paramount in ensuring interoperability and proficiency across all Coast Guard dive units.

**B.2.
Waiver
Requests**

Commanding Officers desiring to use equipment not listed on the ANU list must request a waiver from Commandant (CG-7D) via the CGLO, NDSTC. The following information shall be included in the waiver request:

- a. Equipment specifications.
 - b. Documented test and evaluation information.
 - c. Operational requirement or performance gap to be filled.
 - d. Risk factors associated with use of the equipment.
-

Section C. Diver's Air Sampling Program

- C.1. Overview** All Coast Guard diving units shall participate in the U.S. Navy Diver's Air Sampling Program (DASP). Coast Guard participation is funded by Commandant (CG-7D) with no costs at the unit level.
-
- C.2. Forms Availability** Comprehensive instructions and forms for the Diver's Air Sampling Program are available on line at: <http://www.airtesting.com/military>. The download section is "Divers". An access code is required to access the forms. This code may be obtained from the CGLO NDSTC.
-
- C.3. Ordering Sampling Kits** Diving Officers shall designate personnel authorized to request sampling kits using the DASP Air Source Information Sheet. Air sampling kits shall be requested using the DASP Diver's Air Sample Order Form.
-
- C.4. Air Quality Standards** All diver's that are breathing air compressed from Coast Guard breathing air sources shall meet the U.S. Military Divers Breathing Air Standards established in reference (a). Diver's breathing air may be obtained from non-Coast Guard sources if a source of military diver's air is not readily available.
- Diver's air obtained from non-Coast Guard sources shall be certified in writing by the vendor as meeting the purity standards of FED SPEC BB-A-1034 Grade A Source I (pressurized container) or Source II (compressor) air. Specifications for this standard are outlined in reference (a).
- NOTE:** Do not use a compressor that is suspected of producing contaminated air or that has failed an air sample analysis until the cause of the problem has been corrected and a satisfactory air sample analysis has been obtained validating the production of acceptable air.
-
- C.5. Sampling Schedule** Taking periodic air samples is a required maintenance action and shall be performed in accordance with the PMS card(s) applicable to the compressor or system producing diver's breathing air. Each diver breathing-air source in service shall be sampled as follows:
- a. Diver air sampling test are required semi-annually (within the interval between 4 and 8 months following the last accomplishment) for dive air compressors and shall be conducted IAW the Divers Air Supply Program (DASP) in reference (a), chapter 4-4.
-

-
- C.5. Sampling Schedule (continued)**
- b. Required semi-annually
 - c. When contamination is suspected
 - d. After system overhaul
-

C.6. Procedures

Reference (a) provides general procedures for air sampling. The sampling of air sources will be accomplished in accordance with the instructions enclosed with the test kit.

Refer any questions regarding ordering or sampling procedures to CGLO, NDSTC.

C.7. Recordkeeping

A file of air analysis reports shall be kept at each unit for three years.

NOTE: Only reports of failed tests shall be forwarded to Commandant (CG-7D).

APPENDIX A. SAMPLE DIVING BILL AND STANDARD CHECKLISTS

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Diving Bill

References:

- (a) U.S. Navy Diving Manual, Rev. 5, NAVSEA SS521-AG-PRO-010
- (b) Coast Guard Diving Policy and Procedures, COMDTINST 3150.1 (series)

1. Purpose. To establish policy and procedures for conducting diving operations. This bill supplements but in no case is intended to supersede or contradict guidance found in references (a) and (b).
2. Responsibilities. Personnel designated as the Diving Officer or as Diving Supervisors shall be familiar with the contents of references (a) and (b) and the requirements of this instruction.

A. Commanding Officer:

- (1) Responsible for the safe and successful conduct of all diving operations.
- (2) Assign diving orders by letter designation of qualified unit Dive Officers, Diving Supervisors and Divers.
- (3) Ensure funding is provided for unit level equipment maintenance and recapitalization.
- (4) Provide time for dive training and routine, structured physical training.
- (5) Provide funding for adequate physical training facilities where no-cost facilities are unavailable.

B. Diving Officer:

- (1) Be designated in writing by the Commanding Officer as Diving Officer.
- (2) Directly responsible to the Commanding Officer for the safe and effective operation of the command diving program.
- (3) Ensure the safe conduct of all diving operations by providing overall supervision of diving operations and ensuring strict adherence to proper procedures and safety precautions
- (4) Ensure the termination of any diving operation which, in his/her opinion, is considered unsafe, and correct immediately any deviation from prescribed procedures or safety precautions.
- (5) Ensure personnel are properly trained as Diving Supervisors.

Appendix A to COMDTINST M3150.1C

- (6) Convene and chair (or designate another dive qualified officer as chair with Commanding Officer's approval) Diving Supervisor boards per reference (b).
- (7) Establish a continuous, long-range diver-training program to ensure divers are fully qualified.
- (8) Ensure maintenance of all diving equipment is properly completed and documented.
- (9) Keep the Commanding Officer informed on equipment status, ongoing training operations, and other aspects that pertain to the operations of the Dive Team.
- (10). Ensure all dives are entered and maintained in the Command Smooth Diving Log for three years.
- (11). Organize command dives for qualification purposes monthly.
- (12). Forward recommendations to the Commanding Officer for supervisory designations following the candidate's successful completion of all applicable Job Qualification Requirements (JQRs) and the oral board.

C. Department Heads:

- (1) Coordinate department work lists and watch lists to facilitate divers' availability for diving operations.
- (2) Provide divers adequate time for training to include:
 - (a) Physical training
 - (b) Diving proficiency
 - (c) Classroom instruction
- (3) Recommend prospective diver candidates to the Diving Officer.

D. Diving Supervisor:

- (1) Be qualified per reference (b) and designated in writing by the Commanding Officer.
- (2) Supervise diving operations and procedures, ensuring compliance with references (a) and (b) and enclosures (1) through (9), as applicable.
- (3) Notify all designated command authority upon completion.
- (4) Ensure that a cellular telephone is on dive station as backup communications.
- (5) Obtain command approval (via Diving Officer) of any diving operations planned for after normal working hours and on weekends.

- (a) Personally brief the Commanding Officer or designated representative and notify the Command Duty and Diving Officers prior to departure for diving operations.
- (b) Ensure the Diving Officer and Command Duty Officer are notified following the dive team's return and debriefed as required.
- (6) Complete, review and sign the Command Diving Smooth Log and forward to the Diving Officer.
- (7) Review and sign completed personal dive logs before forwarding to the Diving Officer for signature.
- (8) Directly supervise student diver training and scenarios.
- (9) Ensure safety is maintained during all diving operations.
- (10) Ensure ship tag-outs are done per reference (a) and this instruction.
- (11) Brief and debrief student divers following dive scenarios.
- (12) Per local requirements, ensure necessary message traffic has been generated when diving within a port or harbor.

E. Diver:

- (1) Must be qualified by formal instruction and have current qualifications for the type of breathing apparatus employed.
- (2) The individual must be medically qualified and possess a working knowledge of both this instruction and reference (a).

F. Standby diver:

- (1) Must be qualified by formal instruction and current in the apparatus employed and capable of responding to the same or greater depth as the diver.
- (2) Per reference (a), the standby diver must be ready for immediate water entry whenever divers are deployed.

3. Action.

- A. Training. Personnel designated as Diving Officers and Diving Supervisors are responsible for maintaining proficiency in the performance of their duties.
- B. Environmental restrictions. Diving operations will be suspended if any of the following conditions exist:
 - (1) Small craft warnings are in effect.

- (2) Thunderstorm Condition II or higher has been set by local military authority.
 - (3) Post-rain bacteria levels in harbors or intended dive sites exceed normal limits.
 - (4) In the opinion of the Diving Officer/Supervisor, environmental conditions have deteriorated to the point where safety could be compromised.
4. Diving Operations. All diving operations shall be conducted per references (a) and (b), using enclosures (1) through (9), as applicable. Additionally, the following provisions apply:
- A. The Diving Officer need not be on station for routine diving evolutions, except as prescribed by the Commanding Officer. Minimum manning will be per reference (a).
 - B. Personnel from other commands who wish to participate in diving operations must request permission from the Commanding Officer via the Diving Officer. They must provide the following prior to any command dives:
 - (1) Documentation of successful completion of Navy dive training.
 - (2) Record of current diving qualifications.
 - C. The Diving Officer will keep this information on file if the diver is expected to return for additional dives in the future.
5. Records/Reports.
- A. Pre-Dive Check List. A pre-dive checklist shall be completed and checked by the Diving Supervisor prior to departure for the dive.
 - B. Pre-/Post-Dive PMS. All appropriate PMS shall be accomplished.
 - C. Rough Dive Log. The Diving Supervisor must complete, review, sign, and forward the rough dive log to the Diving Officer for signature within three working days. It will then be entered into the Command Smooth Dive Log.
 - D. Command Dive Log. The Diving Officer will maintain the Command Dive Log. This record of all dives will be kept on file for a period no less than three years.
 - E. The documents below follow on pages A-7 through A-18.
 - (1) USCG Unit Dive Team, Diving Safety and Planning Checklist
 - (2) SCUBA Pre-Mission Checklist
 - (3) Emergency Assistance Checklist
 - (4) Environmental Checklist
 - (5) Diving Bill
 - (6) Ship Diving Safety Checklist
 - (7) Dive Brief
 - (8) SCUBA Pre-Dive Checklist
 - (9) Rough Diving Log

USCG "UNIT" DIVE TEAM

DIVING SAFETY AND PLANNING CHECKLIST (SHEET 1 OF 2)

| | |
|--|--|
| <p>A. ANALYZE THE MISSION FOR SAFETY.</p> <p><input type="checkbox"/> Ensure mission objective is defined.</p> <p><input type="checkbox"/> Determine that non-diving means of mission accomplishment have been considered and eliminated as inappropriate.</p> <p><input type="checkbox"/> Coordinate emergency assistance.</p> <p>B. IDENTIFY AND ANALYZE POTENTIAL HAZARDS.</p> <p>Natural Hazards:</p> <p><input type="checkbox"/> Exposure of personnel to extreme conditions.</p> <p><input type="checkbox"/> Adverse exposure of equipment to elements.</p> <p><input type="checkbox"/> Water entry and exit.</p> <p><input type="checkbox"/> Handling of heavy equipment in rough seas.</p> <p><input type="checkbox"/> Exposure to cold/cold temperatures.</p> <p><input type="checkbox"/> Dangerous marine life.</p> <p><input type="checkbox"/> Tides and currents.</p> <p><input type="checkbox"/> Limited visibility.</p> <p><input type="checkbox"/> Dangerous bottom conditions (mud, drop-offs, etc.).</p> <p><input type="checkbox"/> Sea state.</p> <p>On-Site Hazards:</p> <p><input type="checkbox"/> Local marine traffic or other conflicting naval ops.</p> <p><input type="checkbox"/> High-powered, active sonar.</p> <p><input type="checkbox"/> Radiation contamination and other pollution (chemical, sewer outfalls, etc.).</p> <p>Mission Hazards:</p> <p><input type="checkbox"/> Decompression sickness.</p> <p><input type="checkbox"/> Communications problems.</p> <p><input type="checkbox"/> Drowning.</p> <p><input type="checkbox"/> Other trauma (injuries).</p> <p>Object Hazards:</p> <p><input type="checkbox"/> Entrapment and entanglement.</p> <p><input type="checkbox"/> Shifting or working of object.</p> <p><input type="checkbox"/> Explosives or other ordnance.</p> <p>C. SELECT EQUIPMENT, PERSONNEL AND EMERGENCY PROCEDURES.</p> <p>Diving Personnel:</p> <p><input type="checkbox"/> Assign a complete and qualified Diving Team.</p> <p><input type="checkbox"/> Verify that each member of the Diving Team is properly trained and qualified for the equipment and depths involved.</p> <p><input type="checkbox"/> Determine that each man is physically fit to dive, paying attention to: General condition, any evidence of fatigue, ears and sinuses, severe cold or flu.</p> <p><input type="checkbox"/> Observe divers for emotional readiness to dive.</p> <p><input type="checkbox"/> Motivation and professional attitude.</p> | <p>Diving Equipment:</p> <p><input type="checkbox"/> Verify that diving gear chosen and diving techniques are adequate and authorized for mission and particular task.</p> <p><input type="checkbox"/> Determine that all necessary support equipment and tools are readily available and are best for accomplishing job efficiently and safely.</p> <p><input type="checkbox"/> Determine that all related support equipment such as winches, boats, cranes, floats, etc. are operable, safe and under control of trained personnel.</p> <p><input type="checkbox"/> Check that all diving equipment has been properly maintained (with appropriate records) and is in full operating condition.</p> <p>Provide for Emergency Equipment:</p> <p><input type="checkbox"/> Obtain suitable communications equipment with sufficient capability to reach outside help; check all communications for proper operation.</p> <p><input type="checkbox"/> Verify that a recompression chamber is ready for use, or notify the nearest command with one that its use may be required within a given timeframe.</p> <p><input type="checkbox"/> Verify that a completely stocked first aid kit is at hand.</p> <p><input type="checkbox"/> If oxygen will be used as standby first aid, verify that the tank is full and properly pressurized, and that masks, valves, and other accessories are fully operable.</p> <p><input type="checkbox"/> Verify that emergency transportation is either standing by or on immediate call.</p> <p>Establish Emergency Procedures:</p> <p><input type="checkbox"/> Know how to obtain medical assistance immediately.</p> <p><input type="checkbox"/> For each potential emergency situation, assign specific tasks to the diving team and support personnel.</p> <p><input type="checkbox"/> Post Emergency Assistance Checklist; ensure that all personnel are familiar with it.</p> <p><input type="checkbox"/> Verify that an up-to-date copy of U.S. Navy Decompression Tables is available.</p> <p><input type="checkbox"/> Ensure that all divers and other support personnel understand all diver hand signals.</p> <p><input type="checkbox"/> Predetermine distress signals and call-signs.</p> |
|--|--|

USCG "UNIT" DIVE TEAM

DIVING SAFETY AND PLANNING CHECKLIST (SHEET 2 OF 2)

| | |
|--|--|
| <p>D. ESTABLISH SAFE DIVING OPERATIONAL PROCEDURES</p> <p>Complete Planning, Organization, and Coordination Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure that other means of accomplishing mission have been considered before deciding to use divers. <input type="checkbox"/> Ensure that contingency planning has been conducted. <input type="checkbox"/> Completely brief the diving team and support personnel. <input type="checkbox"/> Designate properly qualified Diving Supervisor to be in charge of the mission. <input type="checkbox"/> Determine the exact depth at the job-site through the use of a depth sounder. <input type="checkbox"/> Verify existence of an adequate supply of compressed air available for all planned diving operations plus an adequate reserve for emergencies. <input type="checkbox"/> Ensure that no operations or actions on part of diving team, support personnel take place without the knowledge of and by the direct command of the Diving Supervisor. <input type="checkbox"/> Current decompression tables shall be on hand and shall be used in all planning and scheduling of diving operations. <input type="checkbox"/> Verify that, when using surface-supplied techniques, the ship, boat, or diving craft has at least a two-point moor. <input type="checkbox"/> Ensure that, when conducting SCUBA operations in hazardous conditions, a boat can be quickly cast off and moved to a diver in distress. <p>Perform Diving Safety Procedures, Establish Safety Measures:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure that each diver checks his own equipment in addition to checks made by tenders. <input type="checkbox"/> Designate a standby diver for all diving operations; standby diver shall be dressed to the necessary level and ready to enter the water if needed. <input type="checkbox"/> Assign buddy divers, when required, for all SCUBA operations. <input type="checkbox"/> Take precautions to prevent divers from being fouled on bottom. <input type="checkbox"/> Verify that ship, boat, or diving craft is displaying proper signals, flags, day shapes, or lights to indicate diving operations are in progress. <input type="checkbox"/> Thoroughly brief boat crew. <input type="checkbox"/> Verify that proper safety and operational equipment is aboard small diving boats or craft. | <p>Notify Proper Parties that Dive Operations Are Ready to Commence:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Diving Officer <input type="checkbox"/> Commanding Officer <input type="checkbox"/> Officer of the Deck/Day <input type="checkbox"/> Command Duty Officer or Commanding Officer of ships alongside <input type="checkbox"/> Bridge, to ensure that ship's personnel shall not: <ul style="list-style-type: none"> <input type="checkbox"/> Turn the propeller or thrusters <input type="checkbox"/> Get underway <input type="checkbox"/> Activate active sonar or other electronics <input type="checkbox"/> Drop heavy items overboard <input type="checkbox"/> Activate sea discharges or suction <input type="checkbox"/> Other interested parties and commands (i.e. Harbor Master/port Services Officer, Base CDO, etc.) <input type="checkbox"/> U.S. Coast Guard (if broadcast warning to civilians is required) <input type="checkbox"/> Notify facilities having recompression chambers and sources of emergency transportation that diving operations are underway and their assistance may be needed. <p>Special Considerations for Diving Operations:</p> <p>(1)On Ship or within 100 Yards of other ships.</p> <p style="padding-left: 40px;">Complete the "Ship Diving Safety Checklist" and that all necessary equipment is tagged out.</p> <p>Prior to deploying divers:</p> <ul style="list-style-type: none"> <input type="checkbox"/> ALFA flag is displayed and clearly visible to other vessels. Recommended Sport Diving flag be displayed as well. <input type="checkbox"/> Notify necessary vessel(s) of diving operations. <input type="checkbox"/> Determine type of nearby vessel traffic and whether it will impact diving operations and/or diver safety. <p>(2)Within 1000yds of other ships and/or vessel traffic</p> <p>Prior to deploying divers:</p> <ul style="list-style-type: none"> <input type="checkbox"/> ALFA flag is displayed and clearly visible to other vessels. Recommended Sport Diving flag be displayed as well. <input type="checkbox"/> Notify necessary vessel(s) of diving operations. <input type="checkbox"/> Determine type of nearby vessel traffic and whether it will impact diving operations and/or diver safety. <input type="checkbox"/> Ensure any high power sonars are secured. <p>(3)Away from ship and/or from a smallboat</p> <p>Prior to deploying divers from a smallboat:</p> <ul style="list-style-type: none"> <input type="checkbox"/> ALFA flag is displayed and clearly visible to other vessels. Recommended Sport Diving flag be displayed as well. <input type="checkbox"/> Cox'n is ready to deploy divers. <input type="checkbox"/> Propeller is disengaged, in neutral, or shut off. <input type="checkbox"/> Divers are clear of propeller before engaging it. |
|--|--|

| SCUBA PRE-MISSION CHECKLIST | |
|--|--|
| COMPLETE 24 HOURS PRIOR TO DIVING | |
| | Complete the Diving Safety and Planning Checklist |
| | Establish Dive Plan |
| | Complete the Diving Bill |
| | Determine the nearest chamber and complete the Emergency Assistance Checklist |
| | Establish the Communications Plan |
| | Brief the Command |
| COMPLETE 2 HOURS PRIOR TO DIVING | |
| | Conduct ORM assessment with Command and Dive Team, identify and address all potential hazards. |
| | Conduct pre-dive brief with dive team and any necessary personnel |
| | Make required notifications (unit personnel/chamber/local units/port operations) |
| | Verify tag-outs complete |
| | Inspect SCUBA bottles for cracking/overall condition |
| | Check SCUBA bottle O-rings for nicks and cuts and replace if necessary |
| | Gauge SCUBA bottles and ensure pressure above minimum (1800 psi) |
| | Check condition of BC or backpack straps/buckles and ensure tank is installed tightly |
| | Inspect BCD's for rips/tears/punctures |
| | Ensure proper function of BC relief valves and inflator hose and inspect for wear |
| | Inspect 1 st /2 nd stage of regulators |
| | Check all hoses for nicks/cracks/wear |
| | Check depth/submersible pressure gauges |
| | Attach to SCUBA bottle and ensure proper functioning (purge/breathe) |
| ENSURE THE FOLLOWING EQUIPMENT IS ON DIVE STATION | |
| SCUBA Tanks | Alpha/Sport/Dive Flags |
| Supervisor Kit | First Aid Kit |
| Tending Lines | Stretcher |
| Buddy Lines | Marker Floats |
| Oxygen Kit (Check psi) | Communications Gear |
| Lost Diver Buoy/Circling Lines | Personal Dive Gear |
| Lift Bags and Inflator Hose | Dive Lights |
| Required Tools | Positioning Equipment |
| Water and Food | Sun block |

| EMERGENCY ASSISTANCE CHECKLIST | | | |
|--|------------------------|----------------------|----------------------|
| MEDICAL PLAN | | | |
| | NAME/LOCATION | PHONE | RESPONSE TIME |
| DIVING MEDICAL OFFICER | | | |
| RECOMPRESSION CHAMBER | | | |
| HOSPITAL | | | |
| AIR MEDEVAC | | | |
| LAND MEDEVAC | | | |
| SEA MEDEVAC | | | |
| EMERGENCY DIVING ASSIST | | | |
| EMERGENCY MEDICAL CONSULTATION | | | |
| NAVY EXPERIMENTAL DIVE UNIT (NEDU) | PANAMA CITY, FLORIDA | 850-230-3100 | AVAILABLE 24 HOURS |
| NAVAL DIVING & SALVAGE TRAINING CENTER (NDSTC) | PANAMA CITY, FLORIDA | 850-234-4651 | AVAILABLE 24 HOURS |
| DIVER'S ALERT NETWORK (DAN) | DURHAM, NORTH CAROLINA | 919-684-8111 | AVAILABLE 24 HOURS |
| COMMUNICATIONS PLAN | | | |
| NAME | | CHANNEL/PHONE | |
| DIVER COMMS | | | |
| PRIMARY RADIO (VHF-FM) | | | |
| SECONDARY RADIO (VHF-FM) | | | |
| HARBOR CONTROL/VESSEL TRAFFIC SERVICE | | | |
| DIVE SITE CELLPHONE | | | |
| CG GROUP COMMS CENTER PHONE | | | |
| SAFETY OFFICER | | | |

| ENVIRONMENTAL CHECKLIST | | | |
|--|--|--------------------|--|
| SURFACE | | | |
| ATMOSPHERE | | SEA SURFACE | |
| Visibility: _____ Sunrise/Sunset: _____ Moonrise/Moonset: _____ Air Temperature: _____ Humidity: _____ Barometer: _____ Precipitation: _____ Cloud Description: _____ Percent Cover: _____ Wind Direction: _____ Wind Force (knots): _____ Other: _____ | Sea State: _____ Wave Action: _____ - Height _____ - Length _____ - Direction _____ Current: _____ - Direction _____ - Velocity _____ - Type _____ Surface Visibility: _____ Surface Water Temp: _____ Local Characteristics: _____ | | |
| SUBSURFACE | | | |
| UNDERWATER AND BOTTOM | | VISIBILITY | |
| Depth _____ Water Temperature: _____ _____ Depth _____ _____ Depth _____ _____ Depth _____ _____ Bottom _____ Thermoclines _____ _____ Current: - Direction _____ - Source _____ - Velocity _____ - Pattern _____ Tides: - High Water _____ Time _____ - Low Water _____ Time _____ - Ebb Dir. _____ Velocity _____ - Flood Dir. _____ Velocity _____ | Underwater (feet): _____ Depth _____ _____ Depth _____ _____ Depth _____ Bottom (feet): _____ Depth _____ Bottom Type: _____ _____ Obstructions: _____ _____ _____ Marine Life: _____ _____ _____ Other Data: _____ | | |

| DIVING BILL | | | |
|---------------------------------------|----------|----------------------------|----------|
| UNIT: | | DIVING OFFICER: | |
| DIVE | 1 | 2 | 3 |
| DIVE SUPERVISOR | | | |
| RED DIVER | | | |
| GREEN DIVER | | | |
| STANDBY DIVER | | | |
| RED TENDER | | | |
| GREEN TENDER | | | |
| STANDBY TENDER | | | |
| COMMUNICATIONS | | | |
| LOGS | | | |
| DIVE | 4 | 5 | 6 |
| DIVE SUPERVISOR | | | |
| RED DIVER | | | |
| GREEN DIVER | | | |
| STANDBY DIVER | | | |
| RED TENDER | | | |
| GREEN TENDER | | | |
| STANDBY TENDER | | | |
| COMMUNICATIONS | | | |
| LOGS | | | |
| EMERGENCY RESPONSE ASSIGNMENTS | | | |
| CONTACT MEDICAL: | | NEURO EXAM: | |
| COXSWAIN: | | O ₂ KIT SET UP: | |
| MILLER BOARD: | | TRAUMA KIT: | |

| SHIP DIVING SAFETY CHECKLIST | | |
|--|----------------------------|-------------|
| When diving operations will involve underwater ship repairs or inspections, the following procedures and safety measures are required in addition to the Diving Safety and Planning Checklist. | | |
| SAFETY OVERVIEW | | |
| The Diving Supervisor shall advise key personnel of the ship undergoing repair or inspection: | | |
| 1. OOD | 3. OODs of ships alongside | |
| 2. Engineer Officer/Engineer Petty Officer | 4. Port Operations | |
| The Diving Supervisor shall request the OOD of ship being repaired ensure that appropriate equipment is secured and tagged out. | | |
| The Diving Supervisor shall request the OOD advise him when tag outs have been completed and when diving operations may commence. | | |
| When ready, the Diving Supervisor shall request that the ship display the appropriate diving signals and pass a diving activity advisory over the 1MC every 30 minutes. For example: "There are divers working over the side. Do not operate any equipment, rotate screws, cycle rudders or fin stabilizers, take suction from or discharge to sea, activate sonar or underwater electrical equipment, or open or close any valves before checking with the Diving Supervisor." | | |
| The Diving Supervisor shall advise the OOD when diving operations commence and when they are concluded. At conclusion, the ship will be requested to pass the word on the 1MC, "Diving operations are complete. Carry out normal work routine." | | |
| <p>Diving within 50 feet of an active sea suction (located on the same side of the keel) that is maintaining a suction of 50 gpm or more, is not authorized unless considered as an emergency repair and is authorized by the Commanding Officers of both the repair activity and tended vessel. When it is determined that the sea suction is maintaining a suction of less than 50 gpm and is less than 50 feet, or maintaining a suction of more than 50 gpm and is less than 50 feet but on the opposite side of the keel, the Diving Supervisor shall determine if the sea suction is a safety hazard to the divers prior to conducting any diving operation. In all cases the Diving Supervisor shall be aware of the tend of the diver's umbilical to ensure that it will not cross over or become entrapped by an active sea suction. Diving on 688 and 774 class submarines do not present a hazard to divers when ASW pumps are operating in slow speed and MSW pumps are operating in super slow speed. Diver tag-out procedures must be completed in accordance with the TUMS and SORM to ensure ASW pumps are not operated in fast speed and MSW pumps are not operated in either fast or slow speeds. Divers must be properly briefed on location of suctions and current status of equipment.</p> | | |
| NOTIFY KEY PERSONNEL | | |
| OOD | Name | Signature |
| EO | Name | Signature |
| Port Ops | Name | Notified By |
| Local Ships: | Name | Notified By |
| | Name | Notified By |

| TAG-OUT EQUIPMENT | | |
|----------------------------|------|-----------|
| Rudder | Name | Signature |
| Anchors | Name | Signature |
| Shafts | Name | Signature |
| CPP | Name | Signature |
| Thrusters/ APU | Name | Signature |
| Fin Stabilizers | Name | Signature |
| Bottom Blows | Name | Signature |
| Fire Pumps | Name | Signature |
| ASW Pumps | Name | Signature |
| Sea Suctions | Name | Signature |
| Sea Discharges | Name | Signature |
| Sonar | Name | Signature |
| Fathometer | Name | Signature |
| Degaussing | Name | Signature |
| Cathodic Protection | Name | Signature |
| COMMENTS/EXCEPTIONS | | |
| | | |
| | | |
| CHECKLIST COMPLETE | | |
| OOD | Name | Signature |
| Diving Supervisor | Name | Signature |
| | | |

| DIVE BRIEF | |
|----------------------|---|
| | Dive Supervisor-Assumes the Side |
| Assignments | Red Diver |
| | Red Tender |
| | Green Diver |
| | Green Tender |
| | Standby Diver |
| | Standby Tender |
| | Charts/Comms |
| | Coxswain |
| | DMO/EMT |
| | Dive Officer |
| Questions | Is everyone qualified for their assigned station? |
| | Any divers on medication or experiencing aches or pains? |
| | Any dives in the past 18 hours or hyperbaric exposure in the past 48 hours? |
| | Can all divers clear? |
| | Make mental note of present condition; notify Diving Supervisor of any changes after the dive |
| Safety | Known hazards |
| | Risk assessment |
| | Tag-outs complete |
| | Flags up |
| | Bring any unsafe conditions to the attention of the Diving Supervisor |
| | Anyone can stop the dive for immediate safety issues |
| | Do not leave the side without notifying the Diving Supervisor |
| Job | Equipment |
| | Depth/Time |
| | Sea State |
| | Tides (Times/Heights) |
| | Current |
| | Water Temp |
| | Visibility |
| | Water Quality |
| Divers | You will enter the water using the _____ entry |
| | Conduct surface checks on entry |
| | Stay together |
| | Max depth is _____ |
| | Max bottom time is _____ |
| | If one diver reaches 500psi, both divers surface |
| Standby Diver | You will be stationed _____ |
| | I will brief you before you enter the water |
| | Do not enter the water without being briefed |
| | If necessary secondary egress point will be _____ |
| Tenders | Maintain positive control of divers on the Side |
| | Keep a tight tend |
| | Acknowledge and relay all line pull signals to and from the diver |
| | Keep an eye on diver's bubbles report any significant changes |

Appendix A to COMDTINST M3150.1C

| | | |
|---|---|---|
| Standby Tender | You will be stationed _____ | |
| | Be ready to immediately deploy Standby Diver | |
| | Ensure clump and circle search line ready | |
| | Do not deploy Standby Diver until I have briefed him | |
| Coxswain | Ensure you have adequate fuel for medevac | |
| | Be aware of divers' location | |
| | Keep props clear of divers | |
| | Stop engines while deploying and recovering divers and if divers' location is unknown | |
| EMT | Do we have First Aid and O2 Kit ready? | |
| | Do you have everything you need? | |
| Logs/Comms | Maintain the rough log | |
| | DRS set up? | |
| | Conduct a communications check before deploying | |
| | Give repeat backs | |
| | Use proper communications procedures | |
| | Report any unusual noises/reports to the Diving Supervisor immediately | |
| DO | Keep time for Standby Diver | |
| | Back up Diving Supervisor times for the dive | |
| Emergency Procedures | Chamber | Medevac will be by _____ |
| | | Emergency Chamber will be _____ |
| | | Chamber point of contact is _____ |
| | Loss of Air | Activate reserve (if equipped) |
| | | Notify your buddy |
| | | Emergency free ascent as last resort |
| | | Exhale during free ascent |
| | Trapped Diver | Remain calm |
| | | Ensure adequate air supply |
| | | Notify your buddy and topside |
| | | Mark the diver with tending line |
| | | Evaluate tools required to free |
| | Lost Diver | Surface while rotating 360 degrees |
| | | Sound 2-1 on tanks |
| | | Look for bubbles on the surface |
| | | Deploy Standby Diver with circling line and lost diver buoy |
| | | Notify Chamber |
| | | Notify CG Group and appropriate local units |
| | Unconscious Diver | Put regulator in mouth |
| | | Tilt head back |
| Bring unconscious diver to the surface | | |
| Gently press on unconscious diver's diaphragm while surfacing | | |
| Use unconscious diver's BC for buoyancy | | |
| | Dive Officer - Anything to add? | |
| | Man your Dive Stations - Standby for Pre-Dive Checks | |

| SCUBA PRE-DIVE CHECKLIST | | | |
|--|-----|-------|---------|
| REVIEW DIVE PLAN | | | |
| Assume the Side | | | |
| Diving Bill Assignments | | | |
| Maximum Depth and Bottom Time | | | |
| Water Entry and Egress (Location and Technique) | | | |
| Emergency Procedures | | | |
| - Loss of Air | | | |
| - Standby Diver Instructions | | | |
| - Lost Diver | | | |
| - Trapped Diver | | | |
| - Unconscious Diver on the Bottom | | | |
| - Evacuation Plan | | | |
| MEDICAL QUESTIONS | | | |
| | RED | GREEN | STANDBY |
| Any divers on medication, or experiencing aches or pains? | | | |
| Any dives in the past 18 hours? | | | |
| Can all divers clear? | | | |
| Make mental note of present condition; notify dive sup of any changes during or after dive | | | |
| EQUIPMENT CHECKS | | | |
| Check Equipment: Dive Watch, Mask, Fins | | | |
| Conduct communications checks | | | |
| Open cylinder valve and back off 1/4 turn | | | |
| Cycle reserve gas supply valve and leave in the up (closed) position (if J-Valve is used) | | | |
| Record cylinder pressure gauges (minimum 1800psi) | | | |
| Zero depth gauges | | | |
| Ensure all quick releases can be reached and are properly rigged | | | |
| Check position of knife and ensure it will not be lost if other equipment is jettisoned | | | |
| Purge and breathe your regulators | | | |
| Check power inflator hose | | | |
| DEPLOY DIVERS | | | |
| Tenders maintain positive control of divers | | | |
| Move divers to the side | | | |

APPENDIX B. COMMERCIAL DIVING REGULATORY CHECKLIST

The Diving Liaison Officer should review the following checklist with the diving supervisor or designated person-in-charge before commencing diving operations. This checklist is not a comprehensive regulatory inspection. It is intended to provide an indicator of substantial compliance with the mandatory health and safety requirements for commercial divers.

A. COMMERCIAL DIVING PERSONNEL

| Requirement | OSHA Regulation | Comments |
|---|---|--|
| Dive team members must be qualified to conduct assigned tasks. | 29 CFR 1910.410 (a) 29 CFR 1910.120 | There is not a “commercial diver certification card,” similar to those required by the recreational diving community. |
| All dive team members must have current CPR and first-aid certifications. | 29 CFR 1910.410 | |
| For surface-supplied and SCUBA operations, a qualified three-person dive team, consisting of a person-in-charge, dive tender, and line-tended diver, is required. | 29 CFR 1910.410 (c) 29 CFR 1910.424 29 CFR 1910.425 | The diving supervisor must not serve in a dual role as both supervisor and diver. A standby diver, when required, must be dressed out and ready to dive. |
| An experienced, designated person-in-charge is on-scene and supervising the operation. | 29 CFR 1910.410 (c) | The designated person-in-charge is the qualified diving supervisor. |

B. COMMERCIAL DIVING OPERATIONS

| Requirement | OSHA Regulation | Comments |
|--|---|---|
| A Safe Practices Manual or Operations Manual must be available on-site. | 29 CFR 1910.420 | This is the site-safety plan |
| The divers must have a plan to obtain emergency assistance. | 29 CFR 1910.421(b) | In particular, response personnel should review emergency procedures, emergency phone numbers, and the directions to the nearest decompression chamber and hospital. |
| First-aid equipment, including a hand-held resuscitator, must be located on site. | 29 CFR 1910.421(c) 29 CFR 1910.423 | If a decompression chamber is not on site, ensure that the divers know the location and contact numbers of the nearest facility and hospital. |
| The Diving Supervisor must conduct a pre-dive safety briefing and inspect equipment. | 29 CFR 1910.421(f) and (g) | All members of the dive team must attend. Key personnel of the ship or facility should also attend. |
| A warning signal (dive flag) must be displayed. | 29 CFR 1910.421(h) | The warning signal must be a rigid replica of the international code “A” flag at least one meter in height. |
| A dive log must be maintained. | 29 CFR 1910.423(d) 29 CFR 1910, App. C | The log should contain the date, time, and location of the start and completion of dive operations; underwater and surface conditions; name of diving supervisor; and general nature of the work performed. |

C. SCUBA DIVING OPERATIONS

| Requirement | OSHA Regulation | Comments |
|--|------------------------|--|
| SCUBA diving must be conducted in depths less than 130 fsw, within the no-decompression limits, and in currents less than one knot. | 29 CFR 1910.424 (b) | For dives deeper than 100 fsw or dives outside the no-decompression limits, an operating decompression chamber must be located on-site. The chamber must be within five minutes of the dive station. |
| A standby diver is available while the SCUBA diver is in the water. | 29 CFR 1910.424 (c) | |
| The SCUBA diver must be either line-tended or accompanied by another diver with continuous visual contact. | 29 CFR 1910.424 (c) | |
| If the SCUBA diver must work in a physically confining space, another diver must line-tend the diver from the underwater point of entry. | 29 CFR 1910.424 (c) | During salvage operations, divers may enter confined spaces to position float bags and/or harnesses. |
| SCUBA divers must carry a reserve breathing gas supply. | 29 CFR 1910.424 (c) | |

D. SURFACE-SUPPLIED AIR DIVING

| Requirement | OSHA Regulation | Comments |
|---|-------------------------------|---|
| Two-way communications must be maintained between diver and surface. | 29 CFR 1910.422(c) | |
| Surface-supplied air diving must be conducted at a depth of 190 fsw or less. | 29 CFR 1910.425 (b) | Dives of 30-minutes or less may be conducted to depths of 220 fsw. |
| Each diver must be continuously tended. | 29 CFR 1910.425 (c) | |
| Divers must carry a reserve breathing gas supply at depths greater than 100 fsw or outside the no-decompression limits. | 29 CFR 1910.425 (c) (4) (iii) | Use of bailout bottles are recommended for all commercial diving operations, regardless of depth. |
| An operating decompression chamber must be on-site for any dive outside the no-decompression limits or deeper than 100 fsw. | 29 CFR 1910.425 (b) | |

E. COMMERCIAL DIVING EQUIPMENT

| Requirement | OSHA Regulation | Comments |
|--|------------------------|---|
| Air intakes for air compressors must be located away from areas containing exhaust fumes or other hazardous materials. | 29 CFR 1910.420 (b) | |
| A depth gauge is required for every diver. | 29 CFR 1910.430 (g) | The depth gauge must be read on the surface for surface-supplied divers. SCUBA divers must carry their own depth gauge. |
| A means must be provided to assist entry and exit. | 29 CFR 1910.422 (b) | |

E. COMMERCIAL DIVING EQUIPMENT (continued)

| Requirement | OSHA Regulation | Comments |
|--|------------------------|---|
| A diving bell must be used for divers with an in-water decompression time greater than 120 minutes. | 29 CFR 1910.425 | This rule does not apply when heavy gear is worn or diving is conducted in physically confining spaces. |
| A diver's safety harness, with a positive buckling device capable of distributing the pulling force of the umbilical, is required for surface-supplied divers. | 29 CFR 1910.430 (j) | |
| When weights are worn, the belt or assembly should be equipped with a quick release. | 29 CFR 1910.430 (j) | |

APPENDIX C. INDEMNIFICATION AND RESPONSIBILITY STATEMENT OF PARENT ORGANIZATION

| | | | | | | | |
|---|---|-------------------|------|---------------------------------|------|-------------------------------------|--------------|
| U.S. DEPARTMENT OF HOMELAND SECURITY U.S. COAST GUARD CG-3150A (1-08) | <h2 style="margin: 0;">INDEMNIFICATION AND RESPONSIBILITY STATEMENT OF PARENT ORGANIZATION</h2> | | | | | | |
| <h3 style="margin: 0;"><u>Background</u></h3> <p style="font-size: small;">This release provides role clarity for dives conducted by scientific or public safety divers aboard United States Coast Guard vessels. Scientific or public safety divers embarked on United States Coast Guard vessels may conduct diving operations in support of their science or public safety mission. Scientific or public safety diving operations are specifically exempted from commercial diving regulations. Scientific divers must be certified by either the National Oceanic and Atmospheric Administration Diving Program or an organizational member of the American Association of Underwater Sciences (AAUS). Public safety divers must be certified by their parent organization. Certification shall specify the diver's depth, equipment, and environmental limitations. Divers must request authorization from the unit they will be embarked by submitting this form a minimum of three months prior to the deployment. Divers shall conduct diving operations in accordance with the protocols of their certifying authority. The USCG is not supervising the dive in any manner whatsoever. The USCG exercises no control over the dive. The USCG assumes no responsibility for the dive.</p> | | | | | | | |
| <h3 style="margin: 0;"><u>Release</u></h3> <p>In consideration of the United States Coast Guard (the "USCG") providing the diver named below with the opportunity to engage in diving activities using USCG vessels,</p> <p>The _____</p> <p>("The Organization") agrees to indemnify, hold harmless, and not to sue or otherwise pursue claims, demands, or actions (including but not limited to costs, expenses and legal fees incurred in defending any such claims, demands, or actions) against, the USCG, its officers, employees, and agents for any and all damages arising by reason of the acts or omissions of the Organization or the Organization's diver. The Organization agrees to assume full responsibility and liability for the diver's actions and assures the USCG that</p> <p>_____</p> <p style="display: flex; justify-content: space-between; width: 80%; margin-left: 20px;"> (Diver's name) (Position) </p> <p>is currently an active, certified diver at this Organization certified to a depth of _____ fsw.</p> <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 60%; border-top: 1px solid black; text-align: center;">Diver (Signature)</td> <td style="width: 40%; border-top: 1px solid black; text-align: center;">Date</td> </tr> <tr> <td style="border-top: 1px solid black; text-align: center;">Organization Supervisor (Print)</td> <td style="border-top: 1px solid black; text-align: center;">Date</td> </tr> <tr> <td style="border-top: 1px solid black; text-align: center;">Organization Supervisor (Signature)</td> <td style="border-top: 1px solid black; text-align: center;">Phone/e-mail</td> </tr> </table> | | Diver (Signature) | Date | Organization Supervisor (Print) | Date | Organization Supervisor (Signature) | Phone/e-mail |
| Diver (Signature) | Date | | | | | | |
| Organization Supervisor (Print) | Date | | | | | | |
| Organization Supervisor (Signature) | Phone/e-mail | | | | | | |

APPENDIX D. DIVING PROGRAM SAFETY SURVEY AND OPERATIONAL DIVE CHECKLISTS

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Section A. Administration

A.1. General.

A.1.a. Does the Command Organization Manual include a Diving Bill? Is the Ship Diving(Repair) Safety Checklist and Emergency Assistance Checklist part of the Diving Bill? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 1.E.2. and App. A.10, and A.13
USN Diving Manual, Rev. 6, Vol. 2, Fig. 6-20 and 22

A.1.b. Is the Diving Officer designated in writing by the Commanding Officer? (PQS qualifications are not required for non-diving Diving Officers). Y N N/A

Ref: COMDTINST M3150.1C, Sec. 2.C.2.b. and 2.C.4.a.
USN Diving Manual, Rev. 6, Vol. 2, Para. 6-8.3

A.1.c. Are Diving Supervisors designated in writing by the Commanding Officer? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 2.C.2.b.
USN Diving Manual, Rev. 6, Vol.2, para. 6-8.6.4

A.1.d. Are personnel authorized to conduct air sampling designated in writing by the Diving Officer? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 4.D.3.
USN Diving Manual, Rev. 6, Vol. 1, Chap. 4-4

A.1.e. Are air samples analyzed semi-annually IAW PMS, and do they meet the purity requirements of the U. S. Navy Diving Manual? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 4.D.5.
USN Diving Manual, Rev. 6, Vol.1, Chap. 4-4

A.1.f. Is a copy of the previous 3 years air sampling results kept on file? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 4.C.7.

A.1.g. Does the command meet the manning requirements to conduct diving operations? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 1.C.4.a.
USN Diving Manual, Rev. 6, Vol. 2, Fig. 6-16

A.2. Publications and Instructions.

A.2.a. Is a copy of the U. S. Navy Diving Manual, Rev.6, readily accessible to the Diving Officer/Supervisor? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 1.A.3.

A.2.b. Do all divers have access to Diving Safety Advisory (AIG 237) messages, Diving Safety Lines (AIG 7702) publications and messages, the list of Diving Equipment Authorized for U.S Navy Use (NAVSEA 10560 dated 26 July 2004), Safety Precautions for Forces Afloat, OPNAVINST 5100.19 (series), and Safety and Environmental Health Manual, COMDTINST M5100.47 (series) via paper or electronic sources? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 1.B.7.

A.3. Recordkeeping.

A.3.a. Does the unit maintain a Command Diving Log and is it retained for three years? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 2.A.2.a.

A.3.b. Do individual divers maintain personal diving logs documenting all their Coast Guard dives? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 2.A.2.a. (2)
USN Diving Manual, Rev. 6, Vol. 1, Para. 5-6

A.3.c. Is the Command using the AOPS/TMT System to record diving operations and training? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 2.A., 8 3.A.5.b.. & 3.B.7.b.

Appendix D to COMDTINST M3150.1C

A.3.d. Has each diver successfully completed a diving physical by a qualified Diving Medical Officer (DMO)? Is the physical current? Y N N/A

Ref: COMDTINST M6000.1B, Ch. 18, Sec. 3.H.
NAVMED P-117, Art. 15-66

A.3.e. Are diver competencies entered into Direct Access? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 2.C.2.a.

A.3.f. Are physical screening tests conducted annually? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 3.A.5.a.

A.3.g. Are all diver qualifications current? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 3.C.

A.3.h. Is the Diving Officer a designated member of the unit Training Board? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 1.B.7.j.

A.3.i. Are all diving accidents recorded and reported? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 2.A.4.
USN Diving Manual, Rev. 6, Vol. 1, Para 5-7

A.3.j. Are Operational Risk Management (ORM) practices used for planning diving operations and training? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 1.C.6.
USN Diving Manual, Rev. 6, Vol. 2, Para 6-1.1

A.3.k. Is ORM documentation retained onboard for 60 days following each dive evolution? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 1.C.6.

Section B. Training

B.1. General.

B.1.a. Is diver PQS implemented? Y N N/A
 Ref: COMDTINST M3150.1C, Sec. 3.B.5.

B.1.b. Are all divers qualified in Cardiopulmonary Resuscitation (CPR)? Y N N/A
 Ref: COMDTINST M3150.1C, Table 3-1.
 USN Diving Manual, Rev. 6, App. 5B-2

B.2. Documentation.

B.2.a. Have diver's training requirements been incorporated into the Command's long-range training plan? Y N N/A
 Ref: COMDTINST M3150.1C, Sec. 3.A.5.b.

B.2.b. Are records kept to show what training has been accomplished and what remains to be done? Y N N/A
 Ref: COMDTINST M3150.1C, Sec. 3.A.5.b.

B.2.c. Does the training plan include all required unit training topics? Y N N/A
 Ref: COMDTINST M3150.1C, Table 3-1.

Section C. SCUBA

C.1. General.

C.1.a. Are the straps and backpacks in good condition and do they have a quick release feature? Y N N/A

Ref: USN Diving Manual, Rev. 6, Vol. 2, Para. 7-2.2.4

C.1.b. Are all diver's SCUBA regulators of the approved type? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 4.B.1.
NAVSEA 10560, 26 July 2004

C.1.c. Are SCUBA bottle manifolds of the approved type? Y N N/A

Ref: NAVSEA 10560, 26 July 2004

C.1.d. Are diver's buoyancy compensators of the approved type? Y N N/A

Ref: NAVSEA 10560, 26 July 2004

C.1.e. Are all depth gauges of the approved type? Y N N/A

Ref: USN Diving Manual Rev. 6, Vol. 1, Para. 4-6.1
NAVSEA 10560, 26 July 2004

C.1.f. Is all SCUBA equipment covered by PMS? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 4..A.2.a.

C.1.g. Are manufacturer's tech manuals available for all SCUBA equipment? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 4.A.1.

C.1.h. Is SCUBA equipment serialized for tracking of maintenance accomplishment? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 4.A.2.

| | | | | |
|-------------|--|---|---|-----|
| C.1.i. | Do all divers have adequate wetsuits and variable volume dry suits? | Y | N | N/A |
| Ref: | COMDTINST M3150.1C, App. 1G | | | |
| C.1.j. | Are standby diver regulators equipped with an ANU approved octopus second stage? | Y | N | N/A |
| Ref: | USN Diving Manual Rev. 6, Vol. 2, Para. 6-8.8.3.1 NAVSEA 10560, 26 July 2004 | | | |
| C.1.k. | Are the diver's wrist watches adequate to support diving operations? | Y | N | N/A |
| Ref: | USN Diving Manual Rev. 6, Vol. 2, Para. 7-2.3.7 NAVSEA 10560, 26 July 2004 | | | |
| C.2. | <u>Maintenance.</u> | | | |
| C.2.a. | Is hygienic maintenance being performed on regulators? | Y | N | N/A |
| Ref: | PMS MIP 5921/19 R-2 | | | |
| C.2.b. | Are all SCUBA bottles within marked with hydrostatic test date? Were SCUBA bottles tested in the past 5 years? | Y | N | N/A |
| Ref: | PMS MIP 5921/19 36M-1, 60M-1 | | | |
| C.2.c. | Are SCUBA bottles stowed under pressure? Is stowage secure and away from heat? | Y | N | N/A |
| Ref: | USN Diving Manual, Rev.6, Vol. 2, Para. 7-4.5 NSTM 550, Para. 550-2.16.2 and 550-2.19.2 | | | |
| C.2.d. | Are SCUBA bottles being inspected annually in accordance with the Visual Inspection Program? | Y | N | N/A |
| Ref: | USN Diving Manual, Rev. 6, Vol. 2, Para 7-4.5 PMS MIP 5921/19 A-1R | | | |
| C.2.e. | Are critical diving gauges calibrated every 18 months? (i.e., over-bottom, submersible pressure gauges, depth gauges, SCUBA charging gauges and compressor outlet) | Y | N | N/A |
| Ref: | PMS MIP 5921/32 | | | |

Appendix D to COMDTINST M3150.1C

C.2.f. Is maintenance being conducted on buoyancy compensators?
 Ref: PMS MIP 5921/2

Y N N/A

C.2.g. Are the buoyancy compensator relief valves working and in good repair?
 Ref: PMS MIP 5921/2-14

Y N N/A

C.2.h. Is the 1st stage of the single hose regulator set at the manufacturer's psi or is it part of pre-dive?
 Ref: USN Diving Manual, Rev. 6, Vol. 2, Para. 7-5.1.4
 Manufacturer's tech manual

Y N N/A

C.2.i. Does unit maintain excess equipment outside of the DEP? Is maintenance on this equipment being conducted and recorded?
 Ref: COMDTINST M3150.1C, Sec. 4.A.2.

Y N N/A

C.3. Procedures.

C.3.a. Does a supervisor pre-dive check-off sheet exist for SCUBA?
 Ref: COMDTINST M3150.1C, App. A6

Y N N/A

C.3.b. Are all dives deeper than 100 fsw conducted with a minimum 100 scf cylinder capacity?
 Ref: USN Diving Manual, Rev. 6, Vol. 2, Fig. 6-14

Y N N/A

C.3.c. Are all dives conducted in 130 fsw or less?
 Ref: USN Diving Manual, Rev.6 Vol. 2, Fig. 6-14

Y N N/A

Section D. MK 20 AGA UBA

D.1. Underwater Breathing Apparatus.

D.1.a. Is the diver harness of the approved type, and is it in good condition? Y N N/A

Ref: UBA MK 20 MOD 0 Technical Manual, Page 2-5, Tbl. 2-1

D.1.b. Are the MK 20 MOD 0 communication components clean, dry, and free from tears, cuts and broken wires? Y N N/A

Ref: UBA MK 20 MOD 0 Technical Manual, Page 2-4, Tbl. 2-1

D.1.c. Is the MK 20 MOD 0 mask free of dirt, corrosion and deterioration? Y N N/A

Ref: UBA MK 20 MOD 0 Technical Manual, Page 2-4, Tbl. 2-1
PMS MIP 5921/172 R-5

D.1.d. Are the oral nasal check valves in good condition? Y N N/A

Ref: UBA MK 20 MOD 0 Technical Manual, Page 2-3, Tbl. 2-1
PMS MIP 5921/172 18M-1R, R-5

D.1.e. Is the head harness in good condition? Y N N/A

Ref: UBA MK 20 MOD 0 Technical Manual, Page 2-3, Tbl. 2-1
PMS MIP 5921/172 R-5

D.1.f. Does the second stage regulator function properly? Y N N/A

Ref: UBA MK 20 MOD 0 Technical Manual, Page 2-3, Tbl. 2-1, Page 4-6,
Para. 4.6.1-6
PMS MIP 5921/172 S-2R

D.1.g. Does a Supervisors Pre-Dive Inspection Check-Off Sheet exist for the MK 20 MOD 0 (When used in surface-supplied mode)? Y N N/A

Ref: UBA MK 20 MOD 0 Technical Manual, App. A-3

D.1.h. Are all surface supplied dives conducted to 60 fsw or less? Y N N/A

Ref: USN Diving Manual, Rev. 6, Vol. 2, Fig. 6-14

D.2. Umbilicals.

D.2.a. Are umbilical tests being conducted?

Ref: PMS MIP 5921/039 A-1R, 24M-1R, 24M-2R, 60M-1R
NAVSEA SS521-AH-PRO-010, Diving Umbilical Manual, Page 3

Y N N/A

D.2.b. Do the 3/8 inch hose have the proper fittings installed?

Ref: NAVSEA SS521-AH-PRO-010, Diving Umbilical Manual, Page

Y N N/A

D.2.c. Are all hoses capped off to prevent contamination (including leader hoses)?

Ref: NAVSEA SS521-AH-PRO-010/Diving Umbilical Manual, Page B-19

Y N N/A

Section E. Air Systems and Stowage

E.1. Compressors.

E.1.a. Are tech manuals available for all portable air compressors? Y N N/A

Ref: COMDTINST M3150.1C, Sec. 4.A.1.

E.1.b. Are safety precautions posted in view of all operators for compressors? Y N N/A

Ref: Applicable PMS

E.1.c. Are interstage cooling tubing and crankcase fins clean and in good condition? Y N N/A

Ref: Applicable PMS

E.1.d. Is the correct compressor oil being used? (1) 2190 TEP for normal operation or 2135 TH for cold weather, or (2) synthetic based oil that is manufacture recommended? Y N N/A

Ref: USN Diving Manual Rev. 6, Vol. 2, Para. 4-5.3

E.1.e. Are charging whips secured to prevent whipping? Y N N/A

Ref: USN Diving Manual Rev. 6, Vol. 2, Para. 7-4.3

E.1.f. Are charging whips proof tested prior to initial installation? Are rubber charging whips replaced at 12 years? Y N N/A

Ref: PMS MIP 5921/33 A-1R, R-6

E.1.g. Are pulley/fanguards installed on the air compressor(s)? Y N N/A

Ref: NAVSEA 10560, 26 July 2004, section 5.2 note 4

E.2. Flasks and Tanks.

E.2.a. Have all vertically mounted air flasks with dryer and bottom blow down installed been hydrostatically tested in the past 12 years? Y N N/A

Ref: PMS MIP 5921/034 144M-1R, 2R

Appendix D to COMDTINST M3150.1C

E.2.b. Have all air flasks without dryers been hydrostatically tested in the past 6 years? Y N N/A

Ref: PMS MIP 5921/034 72M-1

E.2.c. Have all DOT 3A or 3AA industrial gas cylinders been delivered to repair activity for and hydrostatic testing in the past 5 years? Y N N/A

Ref: PMS MIP 5921/034 60M-4R

E.2.d. Have all high pressure moisture separators and filter housings been given an internal and external visual inspection as required? Y N N/A

Ref: PMS MIP 5921/034 18M-1, 18M-2

E.3. Gauges and Valves.

E.3.a. Have all critical pressure gauges been calibrated in the past 18 months? (i.e. Pneumofathometer, Manifold Pressure (MMP), Final Outlet Discharge Pressure, SCUBA Charging, HP, MP, And LP Air, Gauges) Y N N/A

Ref: PMS MIP 5921/32 18M-5R, 18M-6R, 18M-7R

E.3.b. Are all valves which influence diver's air supply tagged to read "Diver's Air Do Not Touch"? (Surface Supplied Diving Systems only) Y N N/A

Ref: USN Diving Manual, Rev. 6, Vol. 2, Sec. 8-7.2.1

E.3.c. Have all system relief valves been tested during the last 36 months and tagged? Y N N/A

Ref: PMS MIP 5921/034 36M-4

E.4. Air Filtration Systems.

E.4.a. Are the air filters of the approved type and of the proper working pressure? Y N N/A

Ref: NAVSEAINST 10560, 26 Jul 2004

**OPERATIONAL DIVE DRILL CARD
SCUBA**

1. Purpose. To assess the ability of a dive team to adequately staff, supervise, and appropriately respond to diving emergencies in accordance with currently approved policy and procedures.

2. Prerequisites:

- (1)
- (2)
- (3)
- (4)

3. Initial condition.

4. Sequence of events:

a. Surface phase:

b. Descent:

c. Bottom phase:

d. Surface phase:

e. Chamber phase:

(1) Diagnosis.

(2) COA.

(3) Other considerations.

End of dive

Submitted: _____

Approved: _____

D. ASCENT/DECOMPRESSION PHASE: CRITICALITY DEDUCT

| | | |
|--|---------------------|--|
| 1. KEEPS TRACK OF DEPTH & BOTTOM TIME | MAJOR | |
| 2. OBSERVE & CONTROL UP & OVER | INTERMEDIATE | |
| 3. SIDE MANAGEMENT | MAJOR | |
| TOTAL DEDUCTIONS THIS PHASE | | |

E. SURFACE PHASE(post dive)

| | | |
|--|---------------------|--|
| 1. GIVE ALL INFORMATION TO CHARTS | INTERMEDIATE | |
| 2. DETERMINES RED DIVERS CONDITION/TX | MAJOR | |
| 3. SIDE / TIME MANAGEMENT | MAJOR | |
| TOTAL DEDUCTIONS THIS PHASE | | |

F. CHAMBER PHASE:

| | | |
|--|---------------------|--|
| 1. HEARING PROTECTION | MINOR | |
| 2. PATIENT ON O2, TRAVEL RATE/DEPTH | MAJOR | |
| 3. STARTS NEURO AT DEPTH | MAJOR | |
| 4. VENT AND MONITORS CHAMBER | INTERMEDIATE | |
| 5. TENDER OBLIGATIONS | MAJOR | |
| 6. CORRECT TX TABLE | MAJOR | |
| TOTAL DEDUCTIONS THIS PHASE | | |

100 MINUS _____ POINTS = _____

***FINAL GRADE _____**

EVALUATOR: _____

***A passing grade is achieved by the dive team after satisfactorily passing at least 80% of the drill.**

APPENDIX E. SAMPLE DIVER APPLICATION PACKAGE

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3150
29 Dec 2003

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Public Availability to be Determined Under 5 U.S.C. § 522

MEMORANDUM

From: BM2 John Smith

Reply to
Attn of:

To: CGLO NDSTC
Thru: CGC POLAR STAR

Subj: SAMPLE REQUEST FOR DIVER TRAINING

Ref: (a) Coast Guard Diving Policies and Procedures Manual, COMDTINST M3150.1 (series)

1. I request diver training in conjunction with assignment to a diving unit.
2. Personal information:
 - a. Employee ID number: 1020593
 - b. Social Security Number: 555-44-6666
 - c. Date reported to unit: July 2004
 - d. Expected rotation date: July 2007
 - e. End of Enlistment: May 2006
3. Waiver requests are submitted for the following items: ASVAB.
4. I understand the extended service obligation I incur upon completion of diver training. I agree not to transfer or accept "A" School from my diving duties for a minimum of 1 year from completion of diver training.

#

Enclosures: (1) Dive Officer/Master Diver Interview
(2) Physical Screening Test
(3) Medical Examination
(4) Pressure Tolerance Test Results

3150
04Jan 2004

FIRST ENDORSEMENT on BM2 Smith's memo of 29 Dec 2003

From: A. J. Cutterman, CAPT
CGC POLAR STAR

To: CGLO NDSTC

Subj: SAMPLE REQUEST FOR DIVER TRAINING(COMMAND ENDORSEMENT)

1. BM2 Smith is a dedicated, high performing individual who has a strong understanding of mechanical concepts. He is a qualified coxswain and works closely with the engineering department to conduct daily boat checks. He is also a qualified rigger for underway replenishment.

2. Given his professionalism and commitment, I have full confidence that BM2 Smith will succeed in diver training.

#

Note: If requested, waivers shall be addressed in the body of the command endorsement.

U.S. Department of
Homeland Security

United States
Coast Guard



Commanding Officer
USCGC POLAR STAR (WAGB 10)

FPO AP 96698-3920
Staff Symbol: Dive
Phone: (206) 217-6260
Fax: (206) 217-6263

3150

MEMORANDUM

From: LTJG A. J. Diver
DO, CGC POLAR STAR

Reply to
Attn of: LTJG Diver

To: CGLO, NDSTC

Subj: SAMPLE DIVE OFFICER INTERVIEW FOR BM3 W. B. HOOYAH

Ref: (a) Coast Guard Diving Policies and Procedures Manual,
COMDTINST M3150.1 (series)

1. In accordance with reference (a), conducted Dive Officer interview with BM3 William B. Hooyah. BM3 Hooyah is aware of the training and duty requirements involved with Coast Guard diving, and possesses the motivation and physical aptitude to succeed in diver training.
2. I may be reached for any questions at 206-217-6260 or Diveo@polarstar.uscg.mil.

#

| | | |
|--|--------------------------------|--------------------------------------|
| U.S. DEPARTMENT OF HOMELAND SECURITY U.S. COAST GUARD CG-3150B (1-08) | PHYSICAL SCREENING TEST | |
| Applicant's Name | Rank/Rate | Date |
| Administrator's Name | Rank/Rate | |
| <p>1. 500 yard SWIM: In swimming attire, swim nonstop 500 yards utilizing the side or breast stroke. Applicant may push off pool sides during turns.</p> <p>Maximum Time Limit: 14min Time: _____</p> <p>Ten-minute rest period.</p> | | |
| <p>2. PUSH-UPS: The exercise will be performed with the back straight, head up, and knees together. Begin by bending the elbow and lowering entire body until the top of the arms, shoulder and lower back are aligned and parallel to the deck. They may stop and rest in the up position. They will then push their body up, keeping their back straight, and locking their elbows. They will count each repetition aloud as they complete a push-up.</p> <p>Minimum Number: 42 Maximum Time Limit: 2min Number: _____</p> <p>Two-minute rest period.</p> | | |
| <p>3. SIT-UPS: Lie flat on back with knees bent, heels close to buttocks (approximately 10 inches) with arms folded across the chest and feet held to the floor by partner. Sit up touching elbow to thighs. Each time you touch your thighs will count as one sit-up. Lie back touching shoulder blades to deck. Repeat as many times as required in the allotted time frame. You may stop and rest in the up or down position, however, if you lower your legs, fail to keep your feet to the ground, or fail to keep your arms folded across your chest, the test is ended.</p> <p>Minimum Number: 50 Maximum Time Limit: 2min Number: _____</p> <p>Two-minute rest period.</p> | | |
| <p>4. PULL-UPS: The exercise will be performed by grasping the pull-up bar and hanging straight down. Hands should be placed on the bar with palms away, at shoulder width. Repetitions will be counted aloud by applicants each time they pull their chins over the bar. Applicants shall not swing or bicycle their feet as they pull their chin over the bar, and they must maintain a vertical position during the exercise.</p> <p>Minimum: 6 Number: _____</p> <p>Ten-minute rest period.</p> | | |
| <p>5. 1.5 mile RUN: Applicants may wear sneakers and standard PT gear.</p> <p>Maximum Time Limit: 12min 45sec Time: _____</p> | | |
| <small>U.S. Dept. of Homeland Security, USCG, CG-3150B, Rev 01-08</small> | | <input type="button" value="Reset"/> |

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| DIVER/BUD/S MEDICAL SCREENING QUESTIONNAIRE | | | |
|---|----------------|--------------------------|--------------------------|
| NAME/RANK: | SSN: | DOB: | |
| PRESENT COMMAND: | BR OF SERVICE: | DATE: | |
| (CONCEALMENT OF MEDICAL HISTORY WILL BE REPORTED TO HIGHER AUTHORITIES AND MAY RESULT IN PERMANENT DISQUALIFICATION.) | | | |
| DIVING MEDICAL QUESTIONS | | Yes | No |
| 1. Have you ever been found medically disqualified for a dive physical or any other physical at any time? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Since your last physical, or in the last 18 months, have you been sick, injured, consulted a physician, used medication (including over-the-counter), or been hospitalized for any reason? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Have you ever experienced any middle or inner ear dysfunction including inability to equalize middle ear pressure, inner or middle ear surgery, ringing, disequilibrium, hearing deficit? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Is or has your uncorrected vision ever been worse than 20/20 in either eye? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Do you have any difficulty distinguishing colors or seeing at night? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Have you ever had any corneal surgery, or manipulation to correct poor vision? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Since age 12, have you had asthma or wheezing at any time? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Have you ever had a collapsed lung (pneumothorax), experienced pulmonary barotraumas, had a positive PPD, or taken INH in the past 6 months? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Do you have any skin condition worsened by tight clothing, moisture, or sun exposure? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Do you have any musculoskeletal condition that limits intense exercise, suffered any type of fracture in the last 3 months, or had any bone/joint surgery in the last 6 months? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have you ever been evaluated for, or treated for, any psychiatric problems (including depression, anxiety, personality disorder, etc.)? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Have you ever had legal, professional or personal problems due to alcohol use, or been diagnosed with dependence, or had any level of treatment for abuse? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Have you ever had a migraine or other severe headache? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have you ever had seizures, convulsions or sustained a head injury resulting in loss of consciousness, loss of memory, concussion, or skull fracture? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Have you ever had brain surgery? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Do you have any area of altered sensation or strength in your body? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Have you ever suffered Decompression Sickness or Arterial Gas Embolism? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Do you suffer from motion sickness or fear of enclosed spaces? | | <input type="checkbox"/> | <input type="checkbox"/> |
| PATIENT SIGNATURE: | | DATE: | |

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| DIVER/BUD/S MEDICAL SCREENING QUESTIONNAIRE (Cont'd.) | | | |
|--|---------|--|--|
| ANY POSITIVE RESPONSES REQUIRE ELABORATION ON THIS PAGE BY A DIVING MEDICAL OFFICER | | | |
| NAME/RANK: | | SSN: | DOB: |
| PRESENT COMMAND: | | BR OF SERVICE: | DATE: |
| ADDITIONAL DIVING MEDICAL QUESTIONS | | | |
| DMO SCREEN (to be filled out by DMO/UMO, HMO or qualified representative) | | | |
| | | | Yes |
| | | | No |
| 1. SF 88, Report of Medical Examination and SF 93, Report of Medical History are complete, correct, for dive/jump duty and within 1 year of application? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Is the physical signed/countersigned by a DMO/UMO or HMO? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Every page of member's health record has been reviewed? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Any disqualifying condition has a completed, approved waiver from BUMED (Med-21)? | | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Any non-disqualifying condition that might affect dive training is thoroughly documented? | | <input type="checkbox"/> | <input type="checkbox"/> |
| DIVING MEDICAL OFFICER COMMENTS | | | |
| QUESTION# | COMMENT | CD/NCD? | WAIVER? |
| | | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| DMO SIGNATURE | | DMO STAMP | |
| DMO PHONE NUMBER | | DMO FAX NUMBER | |
| RECORD SCREENING (to be filled in by medical department) | | | |
| G6PD results | | Sickle cell results | |
| | | Blood Type | |
| IMMUNIZATION MUST BE COMPLETED AND CURRENT PRIOR TO TRANSFER | | <input type="checkbox"/> Tetanus | Date |
| | | <input type="checkbox"/> Typhoid | Date |
| | | <input type="checkbox"/> Yellow Fever | Date |
| | | <input type="checkbox"/> HAV | Date |
| | | <input type="checkbox"/> Flu | Date |

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PRIVACY ACT STATEMENT

1. The information provided by the member in this medical questionnaire is covered by the Privacy Act, 5 U.S.C. 552a as follows:

- A. Authority. 5 U.S.C. 301 Departmental Regulations; Executive Order 9397 (SSN)
- B. Purpose. Disclosure of your Social Security Number (SSN) is mandatory and solicited pursuant to Executive Order 9397 of 1943, which provides that it is in the interest of economy and orderly administration that the Federal Government use exclusively the social security number for identification.
- C. Routine Uses. To the Department of Homeland Security, U.S. Coast Guard, U.S. Navy and other Federal, State and Local agencies for the purpose of verifying medical information.
- D. Disclosure. Voluntary; however, if information is not provided, no further action can be taken regarding your application for diving duty.

NOTE: THE DIVER MEDICAL SCREENING QUESTIONNAIRE AND SF 88/93 MUST BE COMPLETELY FILLED OUT AND FAXED TO NAVY DIVING AND SALVAGE TRAINING CENTER (NAVDIVSALVTRACEN), MEDICAL DEPARTMENT, PANAMA CITY, FL PRIOR TO APPLICATION TO NAVY PERSONNEL COMMAND (NAVPERSCOM) (PERS-401D OR PERS-407CK). ANY WAIVERS MUST HAVE WRITTEN APPROVAL BY BUREAU OF MEDICINE AND SURGERY (BUMED) (MED-21) AND A COPY FAXED TO NAVDIVSALTRACEN, MEDICAL DEPARTMENT.

TELEPHONE:
DSN 436-5215 COMM (850) 235-5215

MEDICAL FAX:
DSN 436-5993 COMM (850) 235-5993

STUDENT SUPPORT OFFICE FAX:
DSN 436- 5242 COMM (850) 235-5242

PLACE ORIGINAL DIVER MEDICAL SCREENING QUESTIONNAIRE, SF 88/93, AND ANY APPROVED WAIVERS IN MEDICAL RECORD.

DIVING STANDARDS:
NAVMED P-117, Manual of the Medical Department, chapter 15, article 15-66, and section III

MEDICAL WAIVER:
NAVMED P-117, article 15-74

BUMED (MED-21) TELEPHONE:
COMM (202)762-4342

APPENDIX F. PERSONNEL QUALIFICATION STANDARDS FOR COAST GUARD DIVING

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100 INTRODUCTION TO FUNDAMENTALS

100.1 INTRODUCTION

This PQS begins with a Fundamentals section covering the basic knowledge and principles needed to understand the equipment or duties to be studied. These fundamentals were taught during the school phase of your training. The references listed at the beginning of each fundamental will aid you in your self-study program. All references cited for study are selected according to their credibility and availability.

100.2 How to Complete

The fundamentals you will have to complete are listed in the Watchstation (300 Section) for each watchstation qualification. You should complete all required fundamentals before starting the watchstation portions of this PQS, since knowledge gained from fundamentals will aid you in understanding the your watchstation tasks. You may be asked any questions from the fundamentals required for your watchstation.

100.3 REQUALIFICATION REQUIREMENTS

Signatures marked with an (*) are required when previously qualified personnel report to new commands. Command designation as SCUBA Dive Supervisor constitutes authorization to serve as PQS Qualifier for this PQS. The names of designated Qualifiers should be made known to all members of the dive team.

101 DIVING ORGANIZATION FUNDAMENTALS

References:

- (a) U.S. Navy Diving Manual, NAVSEA SS521-AG-PRO-010
 - (b) Coast Guard Diving Policies and Procedures Manual, COMDTINST M3150.1 (series)
-

101.1* Discuss the duties, responsibilities, and the organizational relationship to the Command's Diving program of the following positions:

- a. Diving Officer
- b. Diving Supervisor
- c. Command Divers
- d. Standby Diver
- e. Tenders/Timekeepers

(Signature and Date)

102 SAFETY PRECAUTIONS FUNDAMENTALS

References:

- (a) Tag-out Users Manual, NAVSEA S0400-AD-URM-010/TUM
 - (b) U.S. Navy Diving Manual, NAVSEA SS521-AG-PRO-010
 - (c) Waterborne Underwater Hull Cleaning of Navy Ships, NAVSEA S9086-CQ-STM-010/CH-081
 - (d) Boat Operations and Training (BOAT) Manual, Vol. I, COMDTINST M16114.32 (series)
-

102.1 Discuss general safety precautions involved in planning SCUBA diving operations.

(Signature and Date)

102.2 Discuss the safety precautions involved in the following:

- a. Diving on a wreck
- b. Diving on ships in a nest
- c. Searching for underwater hazardous devices
- d. Diving under a hull
- e. Underwater search and recovery operations
- f. Diving in adverse environmental conditions
- g. Diving in cold water and under ice
- h. Sonar hazards
- i. Flying after diving
- j. Tag-out procedures
- k. Small boat operations
- l. Using lift bags
- m. Aids to Navigation diving
- n. Using civilian air sources

(Signature and Date)

102.3 Discuss the safety precautions when handling compressed gas cylinders, using high-pressure air/gases, and using oxygen.

(Signature and Date)

102 SAFETY PRECAUTIONS FUNDAMENTALS(CONT'D)

102.4 Discuss the safety precautions for fuel handling, gas cylinder charging and compressor operations.

(Signature and Date)

102.5 Discuss the physical characteristics, precautions and habitat of hazardous marine life in your area of responsibility.

(Signature and Date)

103 DIVE PLANNING PROCEDURES FUNDAMENTALS

References:

- (a) U.S. Navy Diving Manual, NAVSEA SS521-AG-PRO-010
 - (b) Coast Guard Diving Policies and Procedures Manual, COMDTINST M3150.1 (series)
-

103.1 How would various underwater conditions at the dive site influence your selection of the type of equipment to be used?

(Signature and Date)

103.2 Describe the advantages and disadvantages of SCUBA diving.

(Signature and Date)

103.3 Describe the effects of tides, currents, and atmospheric conditions.

(Signature and Date)

103.4 Explain the hazards peculiar to diving operations and discuss the safety precautions to be observed before diving.

(Signature and Date)

103.5 Explain the purpose of the pre-dive checklist and the specific items regarding the physical condition of the divers.

(Signature and Date)

103 DIVE PLANNING PROCEDURES FUNDAMENTALS (CONT'D)

103.6 Describe the normal and emergency communications methods used in SCUBA diving operations.

(Signature and Date)

103.7 Describe the normal and maximum depth limitations placed on SCUBA diving equipment and qualifications.

(Signature and Date)

103.8 Describe the restrictions and operational considerations for SCUBA diving equipment.

(Signature and Date)

103.9 Define the difference between chamber on station, site, and available.

(Signature and Date)

103.10 Describe the diving boat safety checklist.

(Signature and Date)

103.11* Describe the manning requirements for the various diving capabilities of your command.

(Signature and Date)

103 DIVE PLANNING PROCEDURES FUNDAMENTALS (CONT'D)

103.12* Describe the Emergency Assistance Checklist.

(Signature and Date)

103.13* Name all equipment required to perform SCUBA diving operations at the command.

(Signature and Date)

103.14* Explain the local laws governing the taking of marine life from local waters.

(Signature and Date)

103.15* Explain the notification procedures for the nearest Recompression Chamber.

(Signature and Date)

103.16* Describe the different logistics requirements for transporting an injured diver to a Recompression Chamber.

(Signature and Date)

104 **UNDERWATER PHYSIOLOGY AND DIVING MEDICINE**
FUNDAMENTALS

References:

(a) U.S. Navy Diving Manual, NAVSEA SS521-AG-PRO-010

104.1 Identify the body systems.

(Signature and Date)

104.2 Discuss the following conditions:

- a. Hypoxia
- b. Oxygen toxicity
- c. Carbon monoxide poisoning
- d. Hypercapnia (CO₂)
- e. Asphyxia
- f. Suffocation
- g. Strangulation
- h. Pulmonary over inflation syndrome (POIS)
- i. Hypothermia
- j. Heat exhaustion/heat stroke

(Signature and Date)

104.3 What methods are used for the prevention of and treatment for diver's pressure diseases?

(Signature and Date)

105 RECOGNITION AND TREATMENT OF DIVING CASUALTIES
FUNDAMENTALS

References:

- (a) U.S. Navy Diving Manual, NAVSEA SS521-AG-PRO-010
-

105.1 State where information on treatment tables used for recompression treatments can be found.

(Signature and Date)

105.2 Define the following terms:

- a. Decompression sickness (DCS)
- b. Type I DCS
- c. Type II DCS
- d. Gas embolism
- e. Central nervous system (CNS) symptoms
- f. Omitted decompression
- g. Oxygen toxicity
- h. Pulmonary over inflation syndromes (POIS)
- i. In-water treatment
- j. Rate of descent
- k. Carbon monoxide (CO) poisoning
- l. Neurological exam
- m. Dive profile
- n. Rate of ascent

(Signature and Date)

105 RECOGNITION AND TREATMENT OF DIVING CASUALTIES
FUNDAMENTALS (CONT'D)

105.3 Describe the steps for treatment of the following:

- a. Type I DCS
- b. Type II DCS
- c. Pulmonary over inflation syndrome (POIS)
- d. Recurrence following treatment
- e. Omitted decompression

(Signature and Date)

105.4 Identify the six parts of a neurological examination.

(Signature and Date)

105.5 How is the proper treatment table selected?

(Signature and Date)

106 DECOMPRESSION TABLE FUNDAMENTALS

References:

- (a) U.S. Navy Diving Manual, NAVSEA SS521-AG-PRO-010
-

106.1 Discuss the criteria for selecting the following decompression tables:

- a. U.S. Navy standard air decompression table
- b. No decompression limits and repetitive group designation table for non-decompression tables
- c. Residual nitrogen time table for repetitive dives
- d. Altitude diving tables
- e. Required surface interval before ascent to altitude after diving

(Signature and Date)

106.2 Define the following terms:

- a. Single dive
- b. Repetitive dive
- c. Maximum depth
- d. Total bottom time
- e. Decompression schedule
- f. Decompression stop
- g. Surface interval
- h. Residual nitrogen
- i. Repetitive group designator
- j. Residual nitrogen time
- k. Equivalent single dive time
- l. Surface decompression
- m. Omitted decompression
- n. Exceptional exposure dives

(Signature and Date)

106.3 Discuss all aspects of omitted decompression.

(Signature and Date)

106 DECOMPRESSION TABLE FUNDAMENTALS (CONT'D)

106.4 Explain the need for decompression and decompression schedules.

(Signature and Date)

107 DIVING RECORDS AND REPORTS FUNDAMENTALS

- (a) U.S. Navy Diving Manual, NAVSEA SS521-AG-PRO-010
 - (b) Coast Guard Diving Policies and Procedures Manual, COMDTINST M3150.1 (series)
 - (c) Naval Occupational Safety and Health Program Manual for Forces Afloat, Volume I, OPNAVINST 5100.19 (series)
-

107.1* Discuss the requirements of the command diving log and the procedures for maintaining it.

(Signature and Date)

107.2* Explain how a diving accident gets reported.

(Signature and Date)

107.3 Explain the proper procedure for filling out the following:

- a. Dive supervisor checklist
- b. Diving chart
- c. Repetitive dive worksheet
- d. Pre-dive checklist
- e. Operational procedures

(Signature and Date)

108 AIDS TO NAVIGATION (ATON) DIVING FUNDAMENTALS

References:

- (a) NAVSEA SS521-AG-PRO-010, U.S. Navy Diving Manual
- (b) COMDTINST M3150.2 (series), USCG Diving Policies and Procedures Manual
- (c) COMDTINST M16500.21 (series), Aids to Navigation Manual-Seamanship,
- (d) COMDTINST M16672.2, U.S. Coast Guard Navigation Rules International-Inland

108.1 Describe in general why the inherent danger of ATON work is compounded in a diving environment. (ref.a, b.)

(Signature and Date)

- .2 Discuss the general safety precautions/considerations in relation to ATON Diving for the following: (ref. a., b.)
- a. Use of tending lines
 - b. Lifting operations
 - c. Chain handling underwater (movement and marine growth)
 - d. Live boating
 - e. Towing operations
 - f. Polluted water
 - g. Handling of ATON batteries

(Signature and Date)

- .3 Explain/discuss the following terms and their significance in ATON Diving: (ref. b)
- a. Short stay
 - b. Mooring Inspection
 - c. Chafe
 - d. Mooring (components)
 - e. Chain Bridle
 - f. Bail
 - g. Split Key
 - h. Tow line
 - i. Tag line
 - j. Rotten stops
 - k. Positioning System

(Signature and Date)

108 AIDS TO NAVIGATION (ATON) DIVING FUNDAMENTALS (CONT'D)

108.4 Discuss the purpose and usage of the following tools in ATON Diving Operations.
(ref. b, c)

- a. Split key spreaders.
- b. Split Key punch
- c. Blacksmith's Hammer
- d. Vice grips
- e. 5inch C-Clamp
- f. Plastic slide micrometer
- g. Screw pin shackles
- h. Fill whip

(Signature and Date)

.5 Describe the safety considerations and steps (factors) involved for the following ATON Diving operations: (ref. b.)

- a. Setting a short stay line.
- b. Dealing with an inverted sinker
- c. Sinker Management (Sinker Marking)
- d. Lost Sinker Procedures
- e. Lifting Operations
- f. Chain Bundling
- g. Chain Top Disconnect/Reconnect
- h. Chain Bottom Disconnect/Reconnect
- i. Setting an Aid
- j. Towing Operations
- k. Position Check (Describe ATON positioning hardware and software)
- l. Mooring inspection
- m. Sunken aid recovery
- n. ATON battery recovery

(Signature and Date)

108 AIDS TO NAVIGATION (ATON) DIVING FUNDAMENTALS (CONT'D)

108.6 Discuss the following factors that affect U/W operations. (ref. a, ch. 2-5)

- a. Environmental conditions
- b. Bottom conditions
- c. Depth
- d. Search techniques
- e. Support craft
- f. Support personnel

(Signature and Date)

.7 Describe U/W search procedures.

- a. Jackstay (ref. a, ch. 8-11.3)
- b. Circle line (ref. a, ch. 8-11.3)

(Signature and Date)

.8 Discuss the requirements for navigational lighting. (ref. d)

—

(Signature and Date)

109 PORTS, WATERWAYS AND COASTAL SECURITY (PWCS) DIVING FUNDAMENTALS

References:

- [a] COMDTINST M3150.2, Vol II, U.S. Coast Guard Diving Policies and Procedures Manual
- [b] NAVSEA SS521-AG-PRO-010, U.S. Navy Diving Manual
- [c] EODB 60A-1-1-22, General EOD Safety Precautions
- [d] EODB 60A-1-1-37, Underwater Ordnance (UWO), Operations and Procedures

109.1 Discuss the MSWPTC analysis that is used in planning a PWCS dive. Discuss ROV usage vs using divers. (ref. a., ch. 1)

(Signature and Date)

- .2 Discuss the general considerations/planning that apply to PWCS diving operations: (ref.a, ch. 1)
- a. Safety
 - b. Flexibility
 - c. Security forces
 - d. Information gathering
 - e. Appropriate search technique
 - f. Necessary equipment

(Signature and Date)

- .3 Discuss the following underwater hazardous devices (UHDs)/ordnance including safety precautions and identifying characteristics that should be noted. (ref. a. ch. 1, b.)
- a. Limpet Mines
 - b. Special Attack Charges
 - c. Contact mines
 - d. Influence mines
 - e. Drill mines
 - f. Drifting mines

(Signature and Date)

**109 PORTS, WATERWAYS AND COASTAL SECURITY (PWCS) DIVING
FUNDAMENTALS (CONT'D)**

- .4 Discuss safe separation distance for HERO unsafe and HERO susceptible ordnance.
(ref. c, ch. 3)

(Signature and Date)

- 109.5 Discuss the following conditions that affect underwater explosions.
(ref. b.)
- a. Type of explosion and size of charge.
 - b. Characteristics of the seabed.
 - c. Location of the explosive charge.
 - d. Water depth.
 - e. Distance from the explosion.

(Signature and Date)

- .6 Discuss the safety precautions for explosive ordnance. (ref. d., ch. 2)

(Signature and Date)

- .7 Discuss the following factors that affect U/W operations.
(ref. b, ch. 2-5)
- a. Environmental conditions
 - b. Bottom conditions
 - c. Depth
 - d. Intelligence (Threat assessment)
 - e. Search techniques
 - f. Support craft
 - g. Support personnel

(Signature and Date)

**109 PORTS, WATERWAYS AND COASTAL SECURITY (PWCS) DIVING
FUNDAMENTALS (CONT'D)**

- 8 Describe U/W bottom, hull, pier search procedures. (ref. a, ch. 2 & b, ch. 8)
- a. Jackstay
 - b. Circle
 - c. In-line
 - d. Expanding Square
 - e. Parallel
 - f. Towed
 - g. Necklace and Half Necklace
 - h. Floating Buoy (Modified Necklace)
 - i. Vertical Pier

(Signature and Date)

- .9 Discuss proper response to Under Water Hazardous Devices. (ref. a, chap 3)
- a. Diver
 - b. Internal
 - c. External

(Signature and Date)

300 INTRODUCTION TO WATCHSTATIONS

INTRODUCTION

The Watchstation section of your PQS is where you get a chance to demonstrate to your Qualifier that you can put the knowledge you have gained in the previous sections to use. It allows you to practice the tasks required for your watchstation and to handle abnormal conditions and emergencies. Before starting your assigned tasks, you must complete the prerequisites that pertain to the performance of that particular task. Satisfactory completion of all prerequisites is required prior to achievement of final watchstation qualification.

FORMAT

Each watchstation in this section contains:

- A FINAL QUALIFICATION PAGE, which is used to obtain the required signatures for approval and recording of Final Qualification.
- PREREQUISITES, which are items that must be certified completed before you can begin qualification for a particular watchstation. Prerequisites may include schools, watchstation qualifications from other PQS books, and fundamentals, systems/mission areas, or watchstation qualifications from this book. Prior to signing off each prerequisite line item, the Qualifier must verify completion from existing records. Record the date of actual completion, not the sign-off date.
- WATCHSTATION Performance, which is the practical factors portion of your qualification. The performance is broken down as follows:
 - Tasks (routine operating tasks that are performed frequently)
 - Infrequent Tasks
 - Abnormal Conditions
 - Emergencies
 - Training Watches
- If there are multiple watchstations, a QUALIFICATION PROGRESS SUMMARY will appear at the end of the Standard.

OPERATING PROCEDURES

The PQS deliberately makes no attempt to specify the procedures to be used to complete a task or control or correct a casualty. The only proper sources of this information are the technical manuals or other policy-making documents prepared for a specific installation or a piece of equipment. Additionally, the level of accuracy required of a trainee may vary from school to school, ship to ship, and unit to unit based upon such factors as mission requirements. Thus,

proficiency may be confirmed only through demonstrated performance at a level of competency sufficient to satisfy the Commanding Officer.

DISCUSSION ITEMS

Though actual performance of evolutions is always preferable to observation or discussion, some items listed in each watchstation may be too hazardous or time consuming to perform or simulate. Therefore, you may be required to discuss such items with your Qualifier.

NUMBERING

Each Final Qualification is assigned both a watchstation number and a Final Qualification number. The Final Qualification number is to be used for recording qualifications in service and training records.

HOW TO COMPLETE

After completing the required prerequisites applicable to a particular task, you may perform the task under the supervision of a qualified watchstander. If you satisfactorily perform the task and can explain each step, your Qualifier will sign you off for that task. After all line items have been completed, your Qualifier will verify Final Qualification by signing and dating the Final Qualification pages.

FINAL QUALIFICATION

301 DIVER TENDER

NAME _____ RATE/RANK _____

This page is to be used as a record of satisfactory completion of the above job qualification requirement. Only current command qualified and specified diving supervisors may sign the completion of applicable sections by oral examination or observation of performance. Diving supervisors will only award a signature after the trainee has fully demonstrated a basic knowledge of the section under review. Award of signature means the diving supervisor has complete confidence in the trainee's ability.

This qualification sheet is to be maintained by the trainee and updated to ensure awareness of remaining tasks.

Having observed satisfactory performance, it is recommended the trainee be designated a qualified DIVER TENDER.

RECOMMENDED _____ DATE _____
Senior Diver

RECOMMENDED _____ DATE _____
Diving Officer

QUALIFIED _____ DATE _____
Commanding Officer

SERVICE RECORD ENTRY _____ DATE _____

301 DIVER TENDER

301.1 PREREQUISITES

FOR OPTIMUM TRAINING EFFECTIVENESS, THE FOLLOWING ITEMS SHOULD BE COMPLETED PRIOR TO STARTING YOUR ASSIGNED TASKS BUT SHALL BE COMPLETED PRIOR TO FINAL WATCHSTATION QUALIFICATION.

301.1.1 Fundamentals from this PQS:

101 Diving Organization Fundamentals

Completed _____
(Signature and Date)

102 Safety Precautions Fundamentals

Completed _____
(Signature and Date)

301.2 TASKS

For the tasks below:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

301.2.1 Assist in setting up dive station.

Questions
ABCG

(Signature and Date)

301 DIVER TENDER(CONT'D)

| | <u>Questions</u> |
|--|------------------|
| 301.2.2 Assist a diver in donning a wetsuit. | ABCG |
| <hr/> | |
| (Signature and Date) | |
| 301.2.3 Assist a diver in donning a variable volume dry suit. | ABCEG |
| <hr/> | |
| (Signature and Date) | |
| 301.2.4 Demonstrate safety procedures for charging SCUBA cylinders. | ABCEG |
| <hr/> | |
| (Signature and Date) | |
| 301.2.5 Verify that first stage regulator is properly attached to the SCUBA tank. | ABCEG |
| <hr/> | |
| (Signature and Date) | |
| 301.2.6 Verify that second stage regulator or full-face mask is properly attached. | ABCEG |
| <hr/> | |
| (Signature and Date) | |
| 301.2.7 Verify that depth gauge and maximum depth indicator are zeroed. | ABCEG |
| <hr/> | |
| (Signature and Date) | |

301 DIVER TENDER(CONT'D)

| | <u>Questions</u> |
|--|------------------|
| 301.2.8 Verify that submersible pressure gauge reads greater than 1800psi. | ABCEG |
| _____ | |
| (Signature and Date) | |
| 301.2.9 Verify that power inflator is attached to SCUBA tank. | ABCEG |
| _____ | |
| (Signature and Date) | |
| 301.2.10 Verify that weight belt is worn outside all other equipment. | ABCEG |
| _____ | |
| (Signature and Date) | |
| 301.2.11 Verify that all quick releases are properly rigged. | ABCEG |
| _____ | |
| (Signature and Date) | |
| 301.2.12 Demonstrate proper line pull procedures. | ABCDEFG |
| _____ | |
| (Signature and Date) | |
| 301.2.13 Demonstrate proper diver tending procedures. | ABCDEFG |
| _____ | |
| (Signature and Date) | |

301.3 INFREQUENT TASKS

- For the infrequent tasks below:
- A. What are the steps of this procedure?
 - B. What are the reasons for each step?
 - C. What control/coordination is required?
 - D. What means of communications are used?
 - E. What safety precautions must be observed?
 - F. What parameters/operating limits must be monitored?
 - G. Satisfactorily perform this task.

301 DIVER TENDER(CONT'D)

301.3.1 Demonstrate search line pull signals. **Questions**
ABCDEFG

(Signature and Date)

301.4 ABNORMAL CONDITIONS

For the abnormal conditions below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this abnormal condition.

301.4.1 Deploy and tend standby diver. **Questions**
ABCDEFGH

(Signature and Date)

301.5 EMERGENCIES

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this emergency.

301 DIVER TENDER(CONT'D)

301.5.1 Demonstrate emergency line pull signals. **Questions**
ABCDEFGH

(Signature and Date)

301.5.2 Lost diver ABCDEFGH

(Signature and Date)

301.5.3 Trapped diver ABCDEFGH

(Signature and Date)

301.5.3 Injured/Unconscious Diver ABCDEFGH

(Signature and Date)

301.6 WATCHES

301.6.1 Stand the following watches under instruction:

Diver Tender (4 times)

(Signature and Date) (Signature and Date)

(Signature and Date) (Signature and Date)

Diver Tender during emergency drills

(Signature and Date)

301 DIVER TENDER(CONT'D)

301.7 EXAMINATIONS

301.7.1 Pass an oral examination board

(Signature and Date)

FINAL QUALIFICATION

302 SCUBA DIVE SUPERVISOR

NAME _____ RATE/RANK _____

This page is to be used as a record of satisfactory completion of the above job qualification requirement. Only current command qualified and specified diving supervisors may sign the completion of applicable sections by oral examination or observation of performance. Diving supervisors will only award a signature after the trainee has fully demonstrated a basic knowledge of the section under review. Award of signature means the diving supervisor has complete confidence in the trainee's ability.

This qualification sheet is to be maintained by the trainee and updated to ensure awareness of remaining tasks.

QUALIFICATION RECORD

SIGNATURE _____ DATE _____
Supervisor

Having observed satisfactory performance, it is recommended the trainee be designated a qualified SCUBA DIVE SUPERVISOR.

RECOMMENDED _____ DATE _____
Senior Diver

RECOMMENDED _____ DATE _____
Diving Officer

QUALIFIED _____ DATE _____
Commanding Officer

SERVICE RECORD ENTRY _____ DATE _____

302 SCUBA DIVE SUPERVISOR

302.1 PREREQUISITES

FOR OPTIMUM TRAINING EFFECTIVENESS, THE FOLLOWING ITEMS SHOULD BE COMPLETED PRIOR TO STARTING YOUR ASSIGNED TASKS BUT SHALL BE COMPLETED PRIOR TO FINAL WATCHSTATION QUALIFICATION.

302.1.1 Minimum of six months as a SCUBA Diver, E-4 and above, must be fully qualified to dive with the type of equipment that is being used in the dive, currently qualified in CPR, and successfully complete a formal SCUBA Dive Supervisor course of instruction. Interim qualification acceptable for those awaiting formal SCUBA Dive Supervisor course of instruction.

Completed _____
(Signature and Date)

302.1.2 Fundamentals from this PQS:

101 Diving Organization Fundamentals

Completed _____
(Signature and Date)

102 Safety Precautions Fundamentals

Completed _____
(Signature and Date)

103 Planning Procedures Fundamentals

Completed _____
(Signature and Date)

104 Underwater Physiology and Diving Medicine Fundamentals

Completed _____
(Signature and Date)

302 SCUBA DIVE SUPERVISOR (CONT'D)

105 Recognition and Treatment of Diving Casualties Fundamentals

Completed _____
(Signature and Date)

106 Decompression Table Fundamentals

Completed _____
(Signature and Date)

107 Diving Records and Reports Fundamentals

Completed _____
(Signature and Date)

302.2 TASKS

For the tasks below:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

302.2.1 Perform a satisfactory dive brief

Questions
ABCG

(Signature and Date)

302.2.2 Perform a satisfactory dive debrief

ABCG

(Signature and Date)

302 SCUBA DIVE SUPERVISOR (CONT'D)

302.2.3 Demonstrate the ability to formulate how much time a given air source should last at a given depth with the diver working at a moderate rate Questions
ABFG

(Signature and Date)

302.3 INFREQUENT TASKS

For the infrequent tasks below:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

302.3.1 Calculate an altitude dive with repet Questions
ABG

(Signature and Date)

302.3.2 Set up dive station for a contaminated water dive ABDEFG

(Signature and Date)

302.3.3 Demonstrate a proper neurological exam without assistance ABCDEFG

(Signature and Date)

302 SCUBA DIVE SUPERVISOR (CONT'D)

302.4 ABNORMAL CONDITIONS

For the abnormal conditions below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this abnormal condition.

| | | |
|---------|-------------------------------------|------------------------------|
| 302.4.1 | Barotrauma during ascent and decent | <u>Questions</u> ABCDEFGH |
|---------|-------------------------------------|------------------------------|

(Signature and Date)

| | | |
|---------|---|----------|
| 302.4.2 | Changes in surrounding environment (i.e., sea state, wind, current, waterborne traffic) | ABCDEFGH |
|---------|---|----------|

(Signature and Date)

| | | |
|---------|-----------------------|----------|
| 302.4.3 | Omitted decompression | ABCDEFGH |
|---------|-----------------------|----------|

(Signature and Date)

| | | |
|---------|------------------------|----------|
| 302.4.4 | Loss of communications | ABCDEFGH |
|---------|------------------------|----------|

(Signature and Date)

302 SCUBA DIVE SUPERVISOR (CONT'D)

302.5 EMERGENCIES

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this emergency.

302.5.1 Lost diver

Questions
ABCDEF GH

(Signature and Date)

302.5.2 Trapped diver

ABCDEF GH

(Signature and Date)

302.5.3 Blowup

ABCDEF GH

(Signature and Date)

302.5.4 Decompression sickness

ABCDEF GH

(Signature and Date)

302 SCUBA DIVE SUPERVISOR (CONT'D)

Questions
ABCDEF GH

302.5.5 Disorder due to breathing gases (contaminated air supply)

(Signature and Date)

302.5.6 Pulmonary over inflation syndrome

ABCDEF GH

(Signature and Date)

302.5.7 Mechanical injuries/trauma

ABCDEF GH

(Signature and Date)

302.5.8 Unconscious diver on the surface/on the bottom

ABCDEF GH

(Signature and Date)

302.6 WATCHES

302.6.1 Stand the following watches under instruction:

SCUBA Dive Supervisor (4 times)

(Signature and Date)

(Signature and Date)

(Signature and Date)

(Signature and Date)

302 SCUBA DIVE SUPERVISOR (CONT'D)

SCUBA Dive Supervisor during emergency drills

(Signature and Date)

302.7 EXAMINATIONS

302.7.1 Pass an oral examination board

(Signature and Date)

FINAL QUALIFICATION

303 AIDS TO NAVIGATION (ATON) DIVER

NAME _____ RATE/RANK _____

This page is to be used as a record of satisfactory completion of the above job qualification requirement. Only current command qualified and specified diving supervisors may sign the completion of applicable sections by oral examination or observation of performance. Diving supervisors will only award a signature after the trainee has fully demonstrated a basic knowledge of the section under review. Award of signature means the diving supervisor has complete confidence in the trainee's ability.

This qualification sheet is to be maintained by the trainee and updated to ensure awareness of remaining tasks.

Having observed satisfactory performance, it is recommended the trainee be designated a qualified SCUBA DIVE SUPERVISOR.

RECOMMENDED _____ DATE _____
Senior Diver

RECOMMENDED _____ DATE _____
Diving Officer

QUALIFIED _____ DATE _____
Commanding Officer

SERVICE RECORD ENTRY _____ DATE _____

303 AIDS TO NAVIGATION (ATON) DIVER

303.1 PREREQUISITES

FOR OPTIMUM TRAINING EFFECTIVENESS, THE FOLLOWING ITEMS SHOULD BE COMPLETED PRIOR TO STARTING YOUR ASSIGNED TASKS BUT SHALL BE COMPLETED PRIOR TO FINAL WATCHSTATION QUALIFICATION.

303.1.1 Minimum of qualification as a SCUBA Diver, E-4 and above, must be fully qualified to dive with the type of equipment that is being used in the dive.

Completed _____
(Signature and Date)

303.1.2 Fundamentals from this PQS:

101 Diving Organization Fundamentals

Completed _____
(Signature and Date)

102 Safety Precautions Fundamentals

Completed _____
(Signature and Date)

108 ATON Diving Fundamentals

Completed _____
(Signature and Date)

303 AIDS TO NAVIGATION (ATON) DIVER (CONT'D)

303.2 TASKS

For the tasks below:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

303.2.1 Conduct a mooring inspection.

Questions
ABCDEFG

(Signature and Date)

303.2.2 Conduct a chain bottom disconnect and reconnect. (2 times)
evolution may involve replacing the sinker, chain or both.

ABCDEFG

(Signature and Date)

(Signature and Date)

303.2.3 Conduct a chain top disconnect and reconnect. (2 times)
evolution may involve replacing the sinker, chain or both.

ABCDEFG

(Signature and Date)

(Signature and Date)

303 AIDS TO NAVIGATION (ATON) DIVER (CONT'D)

Questions
ABCDEFG

303.2.4 Conduct an aid repositioning evolution. (2 times)

(Signature and Date)

(Signature and Date)

303.3 **INFREQUENT TASKS**

For the infrequent tasks below:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

Questions
ABCDEFG

303.3.1 Conduct a Sunken Aid Recovery.

(Signature and Date)

303.3.2 Conduct an ATON Battery Recovery.

ABCDEFG

(Signature and Date)

303.3.3 Discuss planning and logistics for a Fly-Away ATON Mission.

ABCDEFG

(Signature and Date)

303 AIDS TO NAVIGATION (ATON) DIVER (CONT'D)

303.4 ABNORMAL CONDITIONS

For the abnormal conditions below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this abnormal condition.

303.4.1 Changes in surrounding environment (i.e., sea state, wind, current, waterborne traffic)

Questions
ABCDEFG

(Signature and Date)

303.4.2 Loss of communications

ABCDEFG

—

(Signature and Date)

303 AIDS TO NAVIGATION (ATON) DIVER (CONT'D)

303.5 EMERGENCIES

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this emergency.

303.5.1 Personnel casualty

Questions
ABCDEFGH

(Signature and Date)

303.5.2 Fouled diver

ABCDEFGH

(Signature and Date)

303.6 WATCHES

None

303.7 EXAMINATIONS

303.7.1 Pass an oral examination board

(Signature and Date)

FINAL QUALIFICATION

304 PORTS, WATERWAYS, AND COASTAL SECURITY (PWCS) DIVER

NAME _____ RATE/RANK _____

This page is to be used as a record of satisfactory completion of the above job qualification requirement. Only current command qualified and specified diving supervisors may sign the completion of applicable sections by oral examination or observation of performance. Diving supervisors will only award a signature after the trainee has fully demonstrated a basic knowledge of the section under review. Award of signature means the diving supervisor has complete confidence in the trainee's ability.

This qualification sheet is to be maintained by the trainee and updated to ensure awareness of remaining tasks.

Having observed satisfactory performance, it is recommended the trainee be designated a qualified **PWCS DIVER**.

RECOMMENDED _____ DATE _____
Senior Diver

RECOMMENDED _____ DATE _____
Diving Officer

QUALIFIED _____ DATE _____
Commanding Officer

SERVICE RECORD ENTRY _____ DATE _____

304 PORTS, WATERWAYS, AND COASTAL SECURITY (PWCS) DIVER

304.1 PREREQUISITES

FOR OPTIMUM TRAINING EFFECTIVENESS, THE FOLLOWING ITEMS SHOULD BE COMPLETED PRIOR TO STARTING YOUR ASSIGNED TASKS BUT SHALL BE COMPLETED PRIOR TO FINAL WATCHSTATION QUALIFICATION.

304.1.1 Minimum of qualification as a SCUBA Diver, E-4 and above, must be fully qualified to dive with the type of equipment that is being used in the dive. For usage of Variable Volume Dry Suits (VVDS), divers must demonstrate competency in their usage by completing VVDS, ZEAGLE Familiarization Job sheet.(Annual Dive Unit Training Requirement)

Completed _____
(Signature and Date)

304.1.2 Fundamentals from this PQS:

101 Diving Organization Fundamentals

Completed _____
(Signature and Date)

102 Safety Precautions Fundamentals

Completed _____
(Signature and Date)

109 PWCS Diving Fundamentals

Completed _____
(Signature and Date)

117 Underwater Hull and Appendages Fundamentals (from DSWS)

Completed _____
(Signature and Date)

304 PORTS, WATERWAYS, AND COASTAL SECURITY (PWCS) DIVER (CONT'D)

304.2 TASKS

For the tasks below:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

304.2.1 Discuss planning for a search mission . **Questions**
ABCDG

(Signature and Date)

304.2.2 Conduct a vessel tag out. ABCDEFG

(Signature and Date)

304.2.3 Conduct a bottom search. (2 times-different method each time) ABCDEFG

(Signature and Date)

(Signature and Date)

304.2.4 Conduct a hull search. (2 times-different method each time) ABCDEFG

(Signature and Date)

(Signature and Date)

304 PORTS, WATERWAYS, AND COASTAL SECURITY (PWCS) DIVER (CONT'D)

304.2.5 Conduct a pier search. (2 times-different method each time) **Questions**
ABCDEFG

(Signature and Date)

(Signature and Date)

304.2.6 Deploy a marker float from a suspect object location. ABCDEFG

(Signature and Date)

304.3 INFREQUENT TASKS-None to be discussed.

304.4 ABNORMAL CONDITIONS

For the abnormal conditions below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this abnormal condition.

304.4.1 Changes in surrounding environment (i.e., sea state, wind, current, waterborne traffic) **Questions**
ABCDEFG

(Signature and Date)

304 PORTS, WATERWAYS, AND COASTAL SECURITY (PWCS) DIVER (CONT'D)

304.4.2 Loss of communications Questions
ABCDEFG

(Signature and Date)

304.5 EMERGENCIES

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this emergency.

304.5.1 Personnel casualty ABCDEFGH

(Signature and Date)

304.5.2 Fouled diver ABCDEFGH

(Signature and Date)

304.6 WATCHES-None

304.7 EXAMINATIONS

304.7.1 Pass an oral examination board

(Signature and Date)

FINAL QUALIFICATION

305 POLAR OPERATIONS SUPPORT DIVER

NAME _____ RATE/RANK _____

This page is to be used as a record of satisfactory completion of the above job qualification requirement. Only current command qualified and specified diving supervisors may sign the completion of applicable sections by oral examination or observation of performance. Diving supervisors will only award a signature after the trainee has fully demonstrated a basic knowledge of the section under review. Award of signature means the diving supervisor has complete confidence in the trainee's ability.

This qualification sheet is to be maintained by the trainee and updated to ensure awareness of remaining tasks.

Having observed satisfactory performance, it is recommended the trainee be designated a qualified **POLAR OPERATIONS SUPPORT DIVER**.

RECOMMENDED _____ DATE _____
Senior Diver

RECOMMENDED _____ DATE _____
Diving Officer

QUALIFIED _____ DATE _____
Commanding Officer

SERVICE RECORD ENTRY _____ DATE _____

305 POLAR OPERATIONS SUPPORT DIVER

305.1 PREREQUISITES

FOR OPTIMUM TRAINING EFFECTIVENESS, THE FOLLOWING ITEMS SHOULD BE COMPLETED PRIOR TO STARTING YOUR ASSIGNED TASKS BUT SHALL BE COMPLETED PRIOR TO FINAL WATCHSTATION QUALIFICATION.

305.1.1 Minimum of qualification as a SCUBA Diver, E-4 and above, must be fully qualified to dive with the type of equipment that is being used in the dive. Divers must have completed the Coast Guard approved Cold Water/Ice Diving course, no. _____.

Completed _____
(Signature and Date)

305.1.2 Fundamentals from this PQS:

101 Diving Organization Fundamentals

Completed _____
(Signature and Date)

102 Safety Precautions Fundamentals

Completed _____
(Signature and Date)

117 Underwater Hull and Appendages Fundamentals (from DSWS)

Completed _____
(Signature and Date)

119 Underwater Ship's Husbandry Equipment and Organizational Fundamentals sections 119.10-119.17(from DSWS)

Completed _____
(Signature and Date)

305 POLAR OPERATIONS SUPPORT DIVER (CONT'D)

305.2 TASKS

For the tasks below:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. What parameters/operating limits must be monitored?
- G. Satisfactorily perform this task.

| | | |
|---------|---|-----------------------------|
| 305.2.1 | Discuss planning for a UWSH task. _____ (Signature and Date) | <u>Questions</u> ABCDEFG |
| 305.2.2 | Conduct a vessel tag out. _____ (Signature and Date) | ABCDEFG |
| 305.2.3 | Conduct a hull inspection on a WAGB (prior to deploying on a polar deployment). _____ (Signature and Date) | ABCDEFG |
| 305.2.4 | Conduct a controllable pitch propeller calibration on a WAGB (prior to deploying on a polar deployment). _____ (Signature and Date) | ABCDEFG |

305 POLAR OPERATIONS SUPPORT DIVER (CONT'D)

305.3 INFREQUENT TASKS-

For the infrequent tasks below:

- A. What are the steps of this procedure?
- B. What are the reasons for each step?
- C. What control/coordination is required?
- D. What means of communications are used?
- E. What safety precautions must be observed?
- F. What parameters/operating limits must be monitored?
- G. Satisfactorily perform or simulate this infrequent task.

305.3.1 Install underwater patches plugs and cofferdams. ABCDEFG

(Signature and Date)

305.4 ABNORMAL CONDITIONS

For the abnormal conditions below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this abnormal condition.

304.4.1 Changes in surrounding environment (i.e., sea state, wind, current, waterborne traffic) ABCDEFG

(Signature and Date)

304.4.2 Loss of communications ABCDEFG

(Signature and Date)

305 POLAR OPERATIONS SUPPORT DIVER (CONT'D)

305.5 EMERGENCIES

For the emergencies listed below:

- A. What indications and alarms are received?
- B. What immediate action is required?
- C. What are the probable causes?
- D. What operating limitations are imposed?
- E. What emergencies or malfunctions may occur if immediate action is not taken?
- F. How does this condition affect other operations/equipment/watchstations?
- G. What follow-up action is required?
- H. Satisfactorily perform or simulate the corrective/immediate action for this emergency.

305.5.1 Personnel casualty ABCDEFGH

(Signature and Date)

305.5.2 Fouled diver ABCDEFGH

(Signature and Date)

305.6 WATCHES-None

305.7 EXAMINATIONS

305.7.1 Pass an oral examination board

(Signature and Date)

**QUALIFICATION PROGRESS SUMMARY FOR
COAST GUARD DIVING**

NAME _____ RATE/RANK _____

This qualification progress summary is used to track the progress of a trainee in the watchstations for this PQS and ensure awareness of remaining tasks. It should be kept by the individual or in the individual's training jacket and updated with an appropriate signature (Training Petty Officer, Division Officer, Senior Watch Officer, etc.) as watchstations are completed.

301 DIVER TENDER

Completed _____ Date _____
(Signature)

302 SCUBA DIVE SUPERVISOR

Completed _____ Date _____
(Signature)

303 AIDS TO NAVIGATION (ATON) DIVER

Completed _____ Date _____
(Signature)

304 PORTS, WATERWAYS, AND COASTAL SECURITY (PWCS) DIVER

Completed _____ Date _____
(Signature)

305 POLAR OPERATIONS SUPPORT DIVER

Completed _____ Date _____
(Signature)

APPENDIX G. DIVING EQUIPMENT ALLOWANCE LIST AND MAINTENANCE SCHEDULE

| | Quantity | | Maintenance Schedule | | |
|--|------------------|----------------------|----------------------|-------|-------|
| | Unit Equipment | Individual Equipment | 12 mo | 18 mo | 36 mo |
| | Dive Mask | | | | |
| MK 20 AGA MKII | 8 | | | X | |
| Swivel, Hose Adapter | 8 | | | | X |
| Through Water Comms | | | | | |
| Surface Station | 1 | | X | | |
| Single Sideband Transceiver | 8 | | X | | |
| Surface Accessory Kit | 1 | | X | | |
| Ear & Mic Assy, AGA | 10 | | X | | |
| Diver Recall/Hydrophone | 1 | | X | | |
| Regulators | | | | | |
| 1st Stage | 8 | | | X | |
| 2nd Stage, Primary | 8 | | | X | |
| 2nd Stage, Octopus | 8 | | | X | |
| Free-flow Control Device | 16 | | | X | |
| Hoses | | | | | |
| MK 20 AGA whip, 3/8" x 32" Long | 8 | | | | X |
| Regulator whip, 3/8" x 32" Long, Black | 8 | | | | X |
| Regulator whip, 3/8" x 36" Long, Yellow | 8 | | | | X |
| Variable volume dry suit inflator, 32" | 8 | | | | X |
| BC Inflator, 26" - 3/8" UNF, Black | 8 | | | | X |
| Fill whip | 2 | | | | X |
| Wetsuits | | | | | |
| 5mm Step-In Combo Wetsuit | | 1 | | | |
| 5mm Molded Sole Zipper Boot, Pair | | 1 | | | |
| 5/3mm Hood w/Bib | | 1 | | | |
| 5mm Glove, Pair | | 1 | | | |
| Variable volume dry suit | | | | | |
| Variable volume dry suit, Back Entry w/ Hood | | 1 | X | | |
| Variable volume dry suit Liner, Base John Fleece | | 1 | | | |
| Variable volume dry suit Liner, Base Jacket Fleece | | 1 | | | |
| Variable volume dry suit Liner, Outer Pant | | 1 | | | |
| Variable volume dry suit Liner, Outer Jacket | | 1 | | | |
| Socks, Fleece, Pair | | 1 | | | |
| Gloves, Dry Glove w/Latex Seal, Pair | | 1 | | | |
| Buoyancy Compensator | | | | | |
| BC w/Power Inflator | 8 | | X | | |

Appendix G to COMDTINST M3150.1C

| | Quantity | | Maintenance Schedule | | |
|---|--------------------|----------------------|----------------------|-------|-------|
| | Unit Equipment | Individual Equipment | 12 mo | 18 mo | 36 mo |
| | Instruments | | | | |
| Submersible Pressure Gauge, 0-5,000 PSI | 8 | | | X | |
| Depth Gauge, 230 fsw | 8 | | | X | |
| Tank Pressure Checker, DIN Valve | 2 | | | X | |
| SCUBA Accessories | | | | | |
| Dive Mask | | 1 | | | |
| Fins, Pair | | 1 | | | |
| Snorkel | | 1 | | | |
| Dive Knife | | 1 | | | |
| Dive Watch | | 1 | | | |
| Flashlight | | 1 | | | |
| Ankle Weights, Long, 3.9 lb, Pair | 8 | | | | |
| Miscellaneous Equipment | | | | | |
| Compressor, Portable | 1 | | X | | |
| Charging Adapter, Yoke-to-DIN | 2 | | | | |
| 100CF Steel Cylinder w/ DIN Valve | 20 | | X | | |
| Lift Bag, 500lb capacity | 2 | | X | | |
| Bear Paw, Magnet, 250lb | 2 | | | | |
| Buddy Line, 6 ft | 4 | | | | |
| Tending Line, 200 ft | 4 | | | | |
| Necklace Line, 80 ft, w/ Buoy | 2 | | | | |
| Pelican Float, w/ Magnet | 6 | | | | |
| Weight Belt | 10 | | | | |
| Anti-Fog Gel | 8 | | | | |
| Zipper Wax | 8 | | | | |
| Variable volume dry suit Seal Conditioner | 8 | | | | |
| Alpha Flag, 20" by 24" | 2 | | | | |
| Civilian Diver Down Flag, 20" by 24" | 2 | | | | |

Note: Any change of, through water comms, regulators or BCs, from the existing initial unit issue to other equipment on the ANU must be approved by Commandant (CG-7D) in order to preserve standardization of equipment between dive units.

APPENDIX H. SAMPLE DIVING OFFICER RELIEF MEMO AND CHECKLIST

TABLE OF CONTENTS

Sample Diving Officer Relief Memo.....H-3
Sample Diving Officer Relief Check sheet.....H-4

U.S. Department of
Homeland Security

United States
Coast Guard



Commanding Officer
USCGC KUKUI (WLB 203)

FPO AP 99999-3333
San Francisco, CA
Phone: (808) 322-1111
Fax: (808) 322-1918
Email: Joe.Hooyah@uscg.mil

3150
March 14, 2009

MEMORANDUM

From: LTJG Jim Diver
LTJG Joe Hooyah

Reply to LTJG Joe Hooyah
Attn of:

To: Commanding Officer USCGC KUKUI WLB 203

Subj: SAMPLE RELIEF OF DIVING OFFICER MEMO

Ref: (a) Coast Guard Diving Policies and Procedures Manual Vol I. COMDTINST 3150.1
C, Chapter 2.A.9

1. In accordance with reference (a), an onsite relief of diving officers in which LTJG Jim Diver was relieved by LTJG Joe Hooyah, was conducted on March 11, 2009.
2. The following was noted:
 - a. The dive unit was found to be ready to conduct operations
 - b. All divers were currently qualified.
 - c. One SCUBA tank hydro test date was expired. It was sent to a facility on the day of inspection.
 - d. All training logs, PMS and ORM records were current.
 - e. The unit's compressor was in good operating condition. Next servicing date is in June 2009.
 - f. The condition of equipment and the dive locker was found to be in excellent condition with maintenance performed as required.

#

Enclosures: (1) **Dive Officer Relief Check Sheet**
(2) **DPSS Check sheet**

Copy: CG-7D Dive Program

Dive Officer Relief Check Sheet

| | DATE | INITIALS |
|---|-------------|-----------------|
| 1. Review Command Diving Log (DJRS) for the following for each diver: | | |
| A. Start/Stop Dive Times | _____ | _____ |
| B. Total Bottom Time (TBT) | _____ | _____ |
| C. Total Time of Dive (TTD) | _____ | _____ |
| D. Maximum Depth | _____ | _____ |
| E. Repetitive Groups | _____ | _____ |
| F. Surface Interval | _____ | _____ |
| G. Location | _____ | _____ |
| H. On-Scene Conditions | _____ | _____ |
| I. Mission | _____ | _____ |
| J. Platform | _____ | _____ |
| K. Equipment Used | _____ | _____ |
| L. Name of Diving Supervisor | _____ | _____ |
| M. Name of Diving Officer | _____ | _____ |
| 2. Review Dive Equipment Maintenance for: | | |
| A. First/Second Stage Regulators | _____ | _____ |
| B. Buoyancy Compensators | _____ | _____ |
| C. Full Face Mask | _____ | _____ |
| D. Surface Supplied Console | _____ | _____ |
| E. Scuba Bottles | _____ | _____ |
| F. Surface Supplied Umbilicals | _____ | _____ |

Note: This equipment shall be serviced by a certified manufacturer technician to include CG personnel with the appropriate manufacturer certification. Items A-D shall be serviced every 12 months at a minimum. Item E shall be visually inspected (VIP) every 12 months and hydrostatically tested every 60 months. Item F shall be hydrostatically tested every 24 months and fitting pull tested every 60 months.

| | DATE | INITIALS |
|--|-------------|-----------------|
| 3. Review Dive Compressor Maintenance Records | _____ | _____ |
| 4. Review Diver Air Sampling Records | _____ | _____ |
| 5. Review Qualification Letters for all Divers, Diving Supervisors, and Diver Tenders | _____ | _____ |
| 6. Review Dive Team Manning Level | _____ | _____ |
| 7. Ensure completion of required annual/semi-annual dive unit training | _____ | _____ |
| 8. Verify individual diver quals and competencies have been entered in Direct Access (Military Dive Training Competencies only) | _____ | _____ |
| 9. Review past dive trip/mission reports | _____ | _____ |
| 10. Ensure there is AOR contact info aboard | _____ | _____ |

I verify that the above tasks have been completed by the relieving Diving Officer and all dive records and equipment are in satisfactory condition.

Incoming Diving Officer: _____
Print Name Signature/Date

Outgoing Diving Officer: _____
Print Name Signature/Date

APPENDIX I. ABBREVIATIONS AND ACRONYMS

| | |
|-------|---|
| ATON | Aids to Navigation |
| BDO | Basic Dive Officer |
| CDL | Command Diving Log |
| CGLO | Coast Guard Liaison Office |
| CPE | Circle of Probable Error |
| DMO | Diving Medical Officer |
| DAN | Divers Alert Network |
| DASP | Divers Air Sampling Program |
| DLSE | Divers Life Support Equipment |
| DMT | Medical Deep Sea Diving Technician |
| DJRS | Dive/Jumps Reporting System |
| DPSS | Diving Program Safety Survey |
| EEHS | Emergency Evacuation Hyperbaric Stretcher |
| EOD | Explosive Ordinance Disposal |
| FAR | Failure Analysis Report |
| FSW | Feet Sea Water |
| IED | Improvised Explosive Device |
| MDV | Master Diver |
| MEDO | Marine Engineer Dive Officer |
| MSST | Maritime Safety and Security Team |
| NDSTC | Naval Diving and Salvage Training Center Panama City, Florida |
| NOAA | National Oceanic and Atmospheric Administration |
| OSC | On Scene Commander |
| PDL | Personal Diving Log |
| PMS | Preventive Maintenance System |
| PWCS | Ports, Waterways, and Coastal Security |
| RSP | Render Safe Procedures |
| SAR | Search and Rescue |
| SCUBA | Self-Contained Underwater Breathing Apparatus |
| SMC | SAR Mission Coordinator |
| SSD | Surface Supplied Diving |
| TMT | Training Management Tool |
| UHD | Underwater Hazardous Devices |

Appendix I to COMDTINST M3150.1C

| | |
|------|--|
| UMO | Undersea Medical Officer (same qualifications as DMO for Army and Air Force but designates USN Medical Officer specifically) |
| UWSH | Underwater Ships Husbandry |
| UWSR | Underwater Search and Rescue |
| VVDS | Variable Volume Dry Suit |

APPENDIX J. GLOSSARY

| | |
|------------------------|---|
| Dive Team | A group of divers and support personnel assembled to perform a specific mission. A common misconception is that the only requirement for diving operations is equipment and a qualified diver. With the exception of search and rescue, no diving may be conducted for or by the Coast Guard without a complete dive team. This Manual provides detailed policy on manning requirements for dive teams. |
| Diving Operations | Unless specifically stated, diving operations in the context of this Manual applies only to diving operations the Coast Guard directly controls or which are undertaken by Coast Guard divers. |
| Diving Unit | An operational unit that possesses an organic diving capability. Coast Guard Diving Units are Polar Icebreakers, Fourteenth District Buoy Tenders and Maritime Safety and Security Teams. |
| Diving Medical Officer | A medical officer who has completed the Medical Department Dive Officer course at the Naval Diving and Salvage Training Center. For the purpose of this Manual, this shall include Diving Medical Officers, Undersea Medical Officers and Hyperbaric Medical Officers. |
| Master Diver | A senior military first class diver who has completed the Master Diver qualification course approved by the U.S. Navy. |
| Master Diver Course | Course of instruction presented at the Naval Diving Training Salvage Center, Panama City Fla. To senior military first class divers. The civilian diving certification of Dive Master does not represent an equivalent level of training, experience or qualification as the military Master Diver. |
| Military Dive Team | A military dive team consists of military personnel, trained and qualified in accordance with U.S. Navy Diving and Salvage Warfare Specialist Personnel Qualification Standards and operated in accordance with reference (a). |
| Scientific Diving | Diving performed solely as a necessary part of a scientific, research, or educational activity by employees whose sole purpose for diving is to perform scientific research tasks. Scientific diving does not include tasks associated with commercial diving such as: rigging heavy objects underwater, inspection of pipelines, construction, demolition, cutting, welding or the use of explosives. |