

APPENDIX P
CONTRACT DIVING OPERATIONS

1. General. The Contractor shall have and execute a Safe Diving Practices Manual and a Dive Operations Plan. The term "Contractor" includes sub-contractors at any tier, and includes all forms of contracting arrangements, including, but not limited to construction contract, supply contract, service contract, purchase order, delivery order under an Indefinite Delivery contract, etc.

2. References. All diving operations shall be performed and conducted in accordance with the requirements of this regulation and the following documents, latest edition at time of submittal of offer (where a difference in standards exists, the most stringent shall apply):

a. U.S. Army Corps of Engineers' Safety and Health Requirements Manual, EM 385-1-1.

b. U.S. Navy Diving Manual, Volumes I and/or II (NAVSEA, O994-LP-001-9010 and NAVSEA 0994-LP-001-9020), as appropriate.

c. 29 CFR 1910, Subpart T, OSHA.

d. U.S. Army Corps of Engineers, South Atlantic Division regulation CESADR 385-1-1.

3. Administration. The following items shall be furnished by the contractor as a single submittal after award of the contract, preferably before the pre-construction conference. All items must be reviewed and accepted by the District Diving Coordinator (DDC) prior to the commencement of any diving operations. These items shall be a completely separate document from the Accident Prevention Plan required for any other work under the contract.

a. Safe Diving Practices Manual.

b. Dive Operations Plan (see EM 385-1-1, paragraph 30.A.13). This Plan shall contain information specific to the diving operation(s) to be performed under the contract. A generalized, philosophical discussion of diving, or an enumeration of diving-related theory will NOT be accepted.

c. Activity Hazard Analysis. This must address specific hazards anticipated for the particular diving operations to be performed under the contract, and must specifically address other

CESAJR 385-1-1
APP P
1 Sep 98

work of any kind being performed under the contract that could interface with or affect the diving operation, such as crane lifts, as well as methods or procedures for communications between the other work, crane operators, etc., and the divers. Applicable lock out, tag out or safe clearance procedures for any machinery that could affect the divers must also be included in the Analysis.

d. Medical certificate from a licensed physician who is qualified in barotrauma and hyperbaric medicine. The certificate shall indicate that the diver is physically qualified to perform diving work, and detailing any limitations the individual may have. The certificate shall be based upon a physical examination of the diver conducted by that physician within the 365 calendar days immediately prior to the date of any dive performed under the contract.

e. An up-to-date resume for each diver, describing diving training and experience for that individual.

f. Proof of CPR and first-aid training for each member of the dive team.

g. Air quality certificates or other documentation, demonstrating that the breathing air source for the divers has been tested at not more than 6-month intervals, and otherwise complies with the standards specified in paragraph 30.E.05.b, EM 385-1-1.

h. Certification or documentation that any SCUBA air cylinders to be used by the divers have been visually inspected at 12-month intervals and hydrostatically tested at 5-year (60-month) intervals as specified in paragraph 30.B.03.f(3), EM 385-1-1.

i. Identification of the oxygen resuscitation equipment to be available at the dive location during any diving operations.

4. Organization and Responsibilities.

a. The District Safety and Occupational Health Office is responsible for the oversight of the District Diving Policy. With respect to contract diving operations, that oversight includes, but is not limited to, the following:

(1) Review of contractor's Dive Plans and Diving logs as part of regular scheduled inspections.

(2) Review of Preventative Maintenance Program for all diving equipment utilized by contractor divers, including log of equipment inspection and maintenance, and record of air quality certification as part of regular scheduled inspections.

(3) Review of medical certificates for divers.

(4) Review of each contractor's dive plan, including recommendations of the DDC.

b. The DDC has the responsibility of organizing, integrating, monitoring, and administering the total diving program within the District. All matters concerning diving operations shall be referred to him/her. The DDC shall also:

(1) Review all dive plans.

(2) Maintain all records of District diving operations.

c. An alternate DDC shall perform the above duties when the DDC is not available.

d. Tender. Each tender shall perform pre-dive and post-dive inspections of all diving gear and support equipment, establish diving time schedules, serve as timekeeper when the dive team does not include one, and assist divers as needed.

e. Diver. Each Diver shall ensure that he/she has an adequate air supply, sufficient air reserve, and all required equipment in his/her possession during diving activities. Each diver is responsible for notifying the Diving Supervisor/Dive Master of any changes in his/her ability to dive safely. Each Diver shall maintain a Diving Log. (Sample form enclosed at Section 1 of this Appendix.)

5. Operations.

a. Equipment. Types of equipment as prescribed in the U.S. Navy Diving Manual are considered acceptable.

(1) All diving equipment, including diving craft, shall be inspected at least every 12 months and following any repairs, accidental damage, or long periods of disuse. These inspections will be documented in writing, and legible copies of the most recent inspection certificates/reports will be made available to the Government upon request.

CESAJR 385-1-1
APP P
1 Sep 98

b. Repetitive Dives. Special problems are associated with repetitive diving and the procedures and tables outlined in the U.S. Navy Diving Manual shall be closely followed when performing repetitive dives. The repetitive dive work sheet (Sample form enclosed at Section 2 of this Appendix) shall be used to record and control dives in this category.

c. Emergency Diving Requirements. When situations arise requiring an emergency dive, the DDC shall receive immediate telephone notification of the same, along with a verbal diving plan which will be confirmed in writing. An "emergency" will not be created or declared to circumvent the requirement to submit a Dive Plan for diving operations in support of scheduled work under the contract.

d. Alteration of Mission. If for any reason the dive mission as planned is altered, the DDC shall be contacted and the revised procedure established, reviewed and approved prior to the operation continuing.

e. Snorkeling and Breath-hold Diving. Snorkeling and breath-hold diving are considered to be diving activities conducted without an artificial source of breathing air. Therefore, all requirements of this regulation and the documents referenced in paragraph 2, above, shall be strictly adhered to, except those that relate to or specify breathing air sources and equipment. In lieu of buoyancy compensators, snorkeling vests shall be furnished for and worn by all employees performing snorkeling.

6. Inspection of Diving.

a. Diving Inspectors are normally not required for nonworking type dives. Nonworking type dives are defined as those which are performed in order to conduct an inspection, recover minor dropped items, and sample gathering. A/E contracts fall under this category. Conditions may require that inspections be performed in some cases, as on working dives, as determined by the DDC.

b. Full-time inspection of working dives is not required. A Diving Inspector will be present at the initial pre-dive conference and may spot check any working dive. Diving Inspectors shall be trained and designated as specified in EM 385-1-1.

c. Full-time inspection will be required in all dives in which it is felt a clear and present hazard exists. The decision for full-time inspection will be made by the Area Engineer/Staff Chief with the concurrence of the DDC.

d. If the situation arises where an activity does not have a Diving Inspector and one is needed, the DDC will assist in arranging for one from another activity.

7. Dive Teams. The minimum number of personnel required for all contract diving operations in the Jacksonville District is as follows:

a. SCUBA Diving - Untethered, working depth 0 to 60 feet.

Diving Supervisor/Dive Master*	1
Divers (In the water, in visual contact at all times.)	2
Standby Diver	<u>1</u>
Total team members	4

* The Diving Supervisor/Dive Master will have NO OTHER DUTIES, and WILL NOT SERVE AS THE STANDBY DIVER.

b. SCUBA Diving - Tethered with communications, working depth 0 to 100 feet.

Diving Supervisor/Dive Master*	1
Diver in water	1
Standby Diver (tethered with communications)	1
Tender**	<u>2</u>
Total team members	5

* The Diving Supervisor/Dive Master will have NO OTHER DUTIES, and WILL NOT SERVE AS TENDER FOR THE STANDBY DIVER.

** For each additional diver in the water, one Tender will be added to the team. The Tender for the Standby Diver will serve as Timekeeper for all Divers in the water.

c. Surface-supplied air - any working depth.

Diving Supervisor/Dive Master*	1
Diver in water	1
Standby Diver	1

CESAJR 385-1-1
APP P
1 Sep 98

Tender**	2
Timekeeper (For all dives to working depths in excess of 33 feet)	<u>1</u>
Total team members	5 or 6

* The Diving Supervisor/Dive Master will have NO OTHER DUTIES, and WILL NOT SERVE AS STANDBY DIVER, TIMEKEEPER, OR TENDER FOR THE STANDBY DIVER.

** For each additional diver in the water, one Tender will be added to the team. For dives to working depths of less than 33 feet, the Tender for the Standby Diver will serve as Timekeeper for all Divers in the water. For dives deeper than 33 feet and/or repetitive dives, the standby diver must not have dived within the past 12 hours.

d. Surface-supplied mixed-gas diving (HeO2). Will be in accordance with Table IV of Appendix N to EM 385-1-1.

8. Emergency Procedures.

a. The following are procedures to be followed in the event of a diving emergency. The entire team shall become familiar with these procedures.

(1) For diving operations along the coastal and gulf waters, the Intercoastal Waterway, and the Lake Okeechobee area, requests for emergency assistance may be made to the U.S. Coast Guard. The closest location should be utilized to save time. Marine radio channel 16, for emergencies, should be used in lieu of telephone calls. Any call placed to the U.S. Coast Guard should be directed to the Duty Officer.

(2) For all diving operations, the Diving Master/Supervisor is responsible for obtaining the nearest location and emergency numbers (ambulance, police, hospital, hyperbaric chamber, etc.) for the diving area, and including that information in the Dive Operations Plan.

b. Emergency air transport service will allow for seriously injured personnel to be transported to hospitals and/or hyperbaric chambers locations. As a minimum, the following should be made available at the time of the rescue effort:

- (1) Name of person making request.
- (2) Exact location of pick-up site.

- (3) Number of injured persons with ages.
- (4) Type of injuries.
- (5) Time of injury.
- (6) Condition of patient(s).
- (7) Special equipment/medication/attention required to sustain life of patient(s).
- (8) Pick-up site information.
 - (a) Marking of landing area (lights, flares, smoke, markers, etc.).
 - (b) Type of landing area (parking lot, grass field, ocean pickup, helipad, etc.).
 - (c) Obstructions (power lines, buildings, flag poles, etc.).
 - (d) Weather (estimated ceiling, and visibility, any precipitation).
 - (e) Winds (estimated direction and velocity).
- (9) Proposed destination of patient(s).
- (10) Number of persons to accompany patient(s).