



**U.S. Army Corps of Engineers**  
**Portland District: Office of Dive Safety**  
P.O. Box 2946, Portland, Oregon 97208-2946



## **NOTICE for RECORD**

Effective 1 May 2008, the U.S. Army Corps of Engineers Portland District will no longer utilize its Dive Pre-Qualification Program.

As a result, any domestic commercial dive contractor meeting the minimum standards set forth in the most recent edition of the USACE Safety and Health Requirements Manual, EM-385-1-1, and in the Portland District's Dive Safety Regulation, NWPR-385-1-93, will be eligible to compete for routine diving work.

Prospective prime and sub-contractor diving contractors should be aware that in addition to requiring compliance with the minimum standards set forth in the latest revisions of EM-385-1-1 and NWPR-385-1-93, beginning May 1, 2008, all solicitations and contracts for diving work will require that the following minimum criteria be met:

1. Submission of current company Safe Practices Manual or equivalent. It is preferred that companies have a copy of their Safe Practices Manual on file with the USACE Portland District Office of Dive Safety. However, if the Contracting Officer determines that sufficient time is available to allow post-solicitation evaluation, the Safe Practices Manual may be submitted with the bid or offer.
  - PLEASE NOTE: Portland District must sometimes schedule dive jobs on very short notice because of emergencies or other extenuating circumstances. In order to be eligible to bid on such jobs, dive contractors must have previously provided a copy of the current version of their Safe Practices Manual to the Portland District Office of Dive Safety for review.
2. Recent, documented experience specific to the type of facility and site-specific dive work being solicited and contracted for.
3. Compliance with all applicable OSHA regulations (29 CFR 1910, subpart T) and the U.S. Navy Diving Manual (current edition).
4. No Serious, Willful, or Repeat State or Federal dive-related OSHA safety violations within the 12 months preceding the due date of the bid or proposal.

Once awarded, contract performance is contingent upon the contractor's submission of an acceptable Dive Plan, Activity Hazard Analysis, and Emergency Management Plan for the specific diving operation to be conducted. It is the contractor's responsibility to ensure that all diver credentials and equipment certifications meet the standards outlined in the most recent editions of EM-385-1-1 and NWPR-385-1-93. EM 385-1-1 and NWPR 385-1-93, as applied by the USACE Portland District Office of Dive Safety, or supplemental waiver or applicable Memorandum of Agreement (MOA) shall be the controlling authority(s) for evaluation of dive-related credentials and certifications.

**Richard A Benoit: District Diving Coordinator: (503) 808-4312**  
**Todd Manny: Deputy Diving Coordinator: (503) 808-4334**  
**Fax: (503) 808-4329**

**Department of the Army  
Portland District: Army Corp of Engineers  
P.O. Box 2946  
Portland, Oregon 97208-2946**

**CENPP-CO  
Regulation, No. 385-1-93 (revised)**

**FINAL/OFFICIAL  
01 May 2009**

**Dive Operations by Contract**

**HISTORY:** This issue replaces NPPR 385-1-93 (97) / NWPR 385-1-93 (2008)

**SUMMARY:** This regulation establishing policy and procedures for underwater diving performed by USACE and / or U.S. military dive teams and / or private commercial dive companies in the USACE Portland District is revised to condense the material which was contained in the previous edition(s).

1. **PURPOSE:** This regulation defines policies and responsibilities for underwater diving operations performed by USACE, military and contract personnel for the U.S. Army Corps of Engineers, Portland (Oregon) District.

2. **APPLICABILITY:** This regulation is applicable to all activities under the control of the Portland District.

3. **REFERENCES:**

- a. EM 385-1-1, U.S. Army Corps of Engineers *Safety and Health Requirements Manual*, Section 30, CONTRACT DIVING OPERATIONS, Appendix O, and as applicable;
- b. NAVSEA 0994-LP001-0910 and NAVSEA 0994-LP001-0920, U.S. Navy Diving Manual, 6<sup>th</sup> Edition;
- c. Occupational Safety & Health Standards, 29 CFR 1910, Subpart T;
- d. ER 385-1-86, Government Diving Operations;
- e. NOAA Diving Manual Diving for Science and Technology, 5<sup>th</sup> Edition;
- f. United States Coast Guard, 1 CFR 197, Subpart B;

4. **POLICY:** It is the policy of the Portland District that all diving and / or other underwater operations are conducted in a prudent manner which will provide for maximum efficiency of operation and minimum potential hazard to personnel, property, equipment and environment. Further, it is the policy of the Portland District that diving operations be conducted only when the task to be performed cannot effectively be accomplished by alternatives to manned diving.

---

\* This regulation replaces NPPR 385-1-93 (1997) / NWPR 385-1-93 (2008)

**5. GENERAL:**

- a. Diving operations in the Portland District will be conducted in accordance with the provisions of this regulation and the referenced documents listed above. Contracts issued for work or services within the District will reference this regulation or its most recent revision whenever diving services may be required as part of the contracted work. Wherever conflicting requirements exist, the more conservative requirement will be invoked. Diving is an inherently hazardous activity. Each dive will be carefully planned and executed according to the submitted dive plan. Each dive will be properly supported with adequate contractor and USACE personnel. Requirements of interfacing schedules and budgets, while a consideration when planning a dive operation, are not justification to waive dive safety measures or deviate from this or any referenced source. Requirements of these regulations may be waived only in immediate life threatening situations or by specific authority of the District Dive Coordinator or appointee.
- b. Unless exempted by a Memorandum of Agreement (MOA) with the USACE Portland District Office of Dive Safety, Military Dive Units must comply with all references and regulations contained herein.
- c. Surface Supply Air (SSA) is the preferred method of facilitating dive operations on USACE projects. Self Contained Underwater Breathing Apparatus (SCUBA) may be employed in instances where it is mutually determined by the dive team supervisor and District Dive Coordinator to be an effective alternative to SAS without an increased liability to diver safety. Unless waived by the District Dive Coordinator, SCUBA divers shall wear a harness, be line tethered, and maintain voice communication with surface personnel. SCUBA diving operations shall not be conducted on USACE projects without the specific, prior approval of the District Dive Coordinator or designate.
- d. NITROX (Enhanced Air) is a preferred gas for USACE Portland District dive operations. All NITROX and Mixed Gas Diving will comply and be performed in accordance with EM-385-1-1 and the U.S. Navy Dive Manual, 6<sup>th</sup> Edition.
- e. Snorkeling dives shall occur only with specific prior approval of the District Dive Coordinator and shall be conducted in accordance with EM-385-1-1. In no instance shall free diving (breath hold) techniques be allowed.

- f. USACE dive teams, Military dive units and Commercial dive companies and their employees must be determined to be legally capable and competently skilled prior to commencing any dive operation for the USACE Portland District. Any USACE, federal and / or state OSHA dive-related safety violation(s) is cause for exclusion from working in the USACE Portland District for a period to be determined by the DDC.
- g. Where conflicts between military standards and USACE regulations exist, a Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) must be obtained. Requirements for USACE, military, contractor, and dive personnel can be acquired by request from the USACE Portland District Office of Dive Safety.
- h. Verification of dive team qualifications, experience, and medical clearances shall be submitted for all dive station personnel including divers, dive supervisors, dive tenders, timekeepers, and recompression chamber operators to the USACE Portland District Office of Dive Safety for review and work eligibility determination by the District Dive Coordinator prior to the commencement of dive operations. Dive team qualification criteria will be established by the Office of Dive Safety.
- i. The District Dive Coordinator may elect to implement and enforce district-specific diving requirements. However, under no circumstance will operational requirements be less than specified in this regulation except during a declared emergency or with the expressed authorization of the District Diving Coordinator by direction of the District Commander.
- j. Dive teams under contract to the USACE Portland District are required upon direction of the District Dive Coordinator to participate and / or facilitate a simulated work-site specific dive accident, diver causality management exercise as coordinated by the Office of Dive Safety.
- k. **DIVE PLANS MUST INCLUDE THE FOLLOWING STATEMENT:**  
  
**“This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District.**

6. **RESPONSIBILITIES:**

A. **US Army Corps of Engineers (USACE):** The USACE is responsible to determine the need and scope of contract diving operations. The USACE is also responsible to define diving policy and the requirements to which USACE, military and contract divers will strictly adhere. In addition, the USACE will provide sufficient administrative and field support to ensure that diving operations are conducted safely and in accordance with applicable regulations. This task is accomplished by the personnel described below utilizing the activity sequence defined in Appendix A.

(1) **Office of Dive Safety:**

**District Dive Coordinator (DDC):**

**Deputy District Dive Coordinator (DDDC):**

The Portland District Commander will designate an Office of Dive Safety and appoint to it a District Dive Coordinator and Deputy who are responsible to the Commander for the proper management and administration of the Portland District Dive Safety Program. The specific duties of the District Diving Coordinator and Deputy District Dive Coordinator are listed in Appendix B.

(2) **Dive Safety Inspector (DSI):**

The District Commander shall appoint a sufficient number of staff DSI's to ensure that a DSI is present at all dives conducted by the USACE Portland District. In the event of a USACE Portland District staff DSI is unavailable; the Office of Dive Safety shall appoint a qualified DSI. The DSI will serve as the USACE Portland District's representative at each dive site where present. The DSI's responsibility is to ensure that the dive operation is adequately planned, equipped, staffed, and facilitated according to the submitted dive plan. The DSI is also responsible to ensure that dive conditions specified in the dive plan have been established by the USACE Portland District and the contractor. The DSI, in consultation with the Office of Dive Safety, has the on-site authority to delay or stop a dive any time concerns of dive plan implementation, environmental conditions, or safety exist. The DSI's sole responsibility is the safe facilitation of the dive operation. The DSI may serve as Project Clearance Holder. However, the DSI shall not, except in an emergency, assume other duties concurrent to the dive operation. The specific duties of the DSI are listed in Appendix B. Selection and scheduling of DSI's is the sole jurisdiction of the Office of Dive Safety, the District Dive Coordinator or appointee.

- (3) **Dive-Mission Point of Contact:**

Each USACE Portland District Operations Project Manager (OPM) will designate an on-site Dive-Project Point of Contact. The DMPC will act as a liaison between the Office of Dive Safety and on-site USACE project personnel to ensure all safety considerations are recognized and maintained throughout dive mission's duration. On-site Dive-Mission Point of Contact is responsible for assisting in the coordination of all lock-out / tag-out (LOTO) procedures. The Dive-Mission Point of Contact may also serve as Project Clearance Holder and DS I with DDC approval.
  - (4) **Project Clearance Holder:**

Each USACE Portland District Project Operations Manager will designate an on-site staff member as Project Clearance Holder. The Project Clearance Holder is responsible for researching and assigning all lock-outs and tag-outs with either a direct or indirect impact on the dive operation. The Project Clearance Holder will facilitate the pre-dive lock-out/tag-out review, insure all required red card signatures are obtained, and authorize release of all lock-out/tag-outs upon conclusion of dive operation. The Project Clearance Holder may also serve as the DPPC and DSI.
  - (5) **District Safety Office Representative:**

The District Commander shall appoint a Dive Safety Representative from the District Safety Office to provide collateral support, exclusive of operational dive plan, specific to non-diving project safety concerns such as Emergency Management Plans and Activity Hazard Analysis.
- B. USACE, Military Dive Units and/or Commercial Dive Contractors:**

Military Dive Units or Commercial Dive Contractors have the primary responsibility to accomplish dive objectives efficiently and safely as well as to adhere to all applicable regulations. Any USACE, federal and / or state OSHA violation is cause for exclusion from working in the USACE Portland District for a period of one year from the violation citation date.
- (1) **Safe Practice Manual:**

USACE and Military dive units and Commercial dive contractors shall develop and maintain a Safe Practice Manual. This manual shall encompass all aspects of their dive program and be available at all times at the dive location to each diver team member and the Dive Safety Inspector. This manual must be submitted annually to the USACE Portland District Office of Dive Safety for review and approval or upon any significant changes in unit or company procedures, organizational structure, or staffing.

**(2) Dive Plans:**

A site and job-specific dive plan, corresponding emergency management plan (EMP), activity hazard analysis (AHA), accident prevention plan (AAP), and Spill Plan conforming to the requirements of Appendix C shall be prepared and submitted for review and acceptance to the Office of Dive Safety for each dive operation. These documents shall be submitted at least 10 working days prior to the start of dive operations and be available for review at the dive site.

**NOTE: ALL DIVE PLANS MUST INCLUDE THIS STATEMENT:**

**“This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District.**

**(3) Diving Activity Coordination:**

USACE and Military dive units and commercial dive contractors shall participate in the following meetings for each dive as described in Appendix A.

- a.** Joint Review (If deemed necessary by DDC);
- b.** Lock-out/Tag-out Review;
- c.** Pre-Dive Work / Safety Conference;
- d.** Post-Dive Debriefing.

**(4) Diving Personnel:**

USACE and Military dive units and commercial dive contractors shall provide sufficient qualified personnel for each dive as defined in NWPR 385-1-93 (2009) and / or EM-385-1-1 Appendix O (2008) revisions..

**(5) Dive and Dive-Support Equipment:**

USACE and Military dive units and dive contractors dive-support and diving equipment shall comply with the requirements of NWPR 385-1-93, 01 May 2009 Revision, EM 385-1-1, Section 30 E March 2008 revision and other referenced documents as determined by the USACE Portland District Office of Dive Safety. Equipment certifications shall be submitted to the Office of Dive Safety for review at least three (3) working days prior to commencement of dive operations.

**(6) Diving Operations:**

USACE and Military dive units and commercial dive contractors shall comply with the requirements of NWPR 385-1-93, May 2009 Revision, EM 385-1-1, Section 30, B. for SCUBA operations, Section 30, C for SSA applications and Appendix O March 2008 revision, and / or applicable Memoranda of Agreement (MOA) or by determination by the USACE Portland District Office of Dive Safety.

**(7) Insurance Requirements:**

Dive contractors will, at their own expense, provide and maintain during the entire performance of the dive contract, a minimum of the following kinds of insurance:

- a. Workmen's Compensation and Employer's Liability Insurance including Federal Longshoreman and Harbor Workers and/or Jones Act Insurance: if they apply, in the amount specified by the applicable Federal and/or State authorities.
- b. Comprehensive, Bodily Injury, and Property Damage Liability: minimum limits of \$1,000,000 for injury to or death of any person; and \$1,000,000 for each accident or occurrence for bodily injury liability; and \$300,000 for each accident or occurrence for property damage liability.
- c. Automobile bodily injury and property damage liabilities: minimum limits of \$1,000,000 for injury or death of any one person and \$1,000,000 for each accident or occurrence for bodily injury liability; and \$300,000 for each accident or occurrence for property damage liability.
- d. Single General Aggregate Limits or Combined Single Unit Coverage: If single general aggregate limits or combined single unit coverage is obtained for general liability and/or automobile liability coverage, minimum amounts will be in the sum of the personal injury and property damage coverage required above. Umbrella Form Excess Liability insurance coverage will be added to general liability and automotive liability coverage to determine if minimum insurance limits are met.

**(8) Resolution of Conflicting Agency Regulations:**

Whenever possible, conflicting intra or inter government agency regulations will be resolved with the use of Memorandums of Agreement (MOA's). When MOA's are not available, resolution will be by joint verbal and / or written agreement between the USACE Portland District Office of Dive Safety and the dive unit supervisor of the agency being utilized. In all instances of regulatory conflict, the Portland District's District Dive Coordinator will be the final authority.

**FOR THE COMMANDER:**

**Richard A. Benoit  
District Dive Coordinator  
USACE Portland District  
01 May 2009**

**ENCLOSURES:**

**Appendix A,  
Appendix C, D, E:**

**Appendix B with Addendum 1**

**USACE / NWP DISTRIBUTION:**

**All Supervisors  
Office of Counsel  
Dive Safety Inspectors  
Military Dive Units**

**Operations Project Managers  
Office of Dive Safety  
Safety Office  
Commercial Dive Contractors**

## APPENDIX A

### CONDUCT OF A DIVE / ROV OPERATION

The following is a brief description of events which constitute the planning and execution of a typical USACE Portland District project dive or ROV operation. It may be modified, with the concurrence of the District Dive Coordinator, to suit the particular requirements of a specific mission. Each aspect of the sequence should, however, be considered.

#### **Dive Planning Sequence:**

1. A condition is identified by project personnel where an underwater operation may be required. This may be, but not limited to, inspection / maintenance / construction, dredge fleet support, or fisheries mission.
2. The need for an underwater operation is determined by the Project Manager and / or Resident Engineer or Biologist in conjunction with the District Dive Coordinator. A written dive request is submitted to the Office of Dive Safety. Excluding emergencies, this request should be made approximately 20 working days prior to the anticipated dive dates.
3. If required by the District Dive Coordinator, a joint review to address technical and safety concerns is held with members of the operational / technical team staff and the Office of Dive Safety. Excluding emergencies, this review should be held 10 working days prior to commencement of a dive operation.
4. Operational mode is selected; Diver or Remotely Operated Vehicle (ROV).
5. Mission dates are selected.
6. A qualified on-site USACE Dive-Project Point of Contact and / or Clearance Holder are selected by the Project Operations Manager or their designee. If available, a qualified USACE Dive Safety Inspector is selected by the Office of Dive Safety from project personnel.
7. Appropriate departmental funding requests are made at least 20 working days prior to mission.
8. Once the operation has been defined, a request for underwater operation and corresponding specification (SOW) is written by the Project Point of Contact specifying dive objectives, type of dive, equipment and personnel requirements.

- 8. (Continued)** Project Manager, Dive-Project Point of Contract, and Office of Dive Safety collaborate to determine required clearances.
- 9.** The Office of Dive Safety prepares a review of and edits the Scope of Work (SOW) document.
- 10.** Scope of Work, Dive Specifications, and request for a USACE dive team, military dive unit, or commercial dive contractor and, if needed, qualified contract Dive Safety Inspector is submitted to the appropriate District Division by the Office of Dive Safety for funding.
- 11.** Project Manager, Dive-Project Point of Contract, and Office of Dive Safety determine required clearances, permits and permissions.
- 12.** A USACE Dive Team, Military Dive Unit, or Commercial Dive Contractor is selected by appropriate District Division.
- 13.** A USACE Dive Team, Military Dive Unit, or Commercial Dive Contractor prepares and submits to the Office of Dive Safety for review and acceptance by the DDC, a job-specific Dive Plan Package consisting of Dive Plan including dive-team personnel and required certifications, site-specific Emergency Management Plan and Activity Hazard Analysis, Accident Prevention Plan, Spill Plan, MOA's, requests for support equipment and funding if applicable.
- 14.** Immediately prior to dive operations commencing, a pre-dive conference is conducted by the Dive Safety Inspector with Project Personnel, Dive Team members and others as deemed appropriate by the Office of Dive Safety. At a minimum, the pre-dive conference will cover:
  - a.** Objectives and scope of dive operation;
  - b.** Dive site conditions, hazards, environmental, and site-specific considerations;
  - c.** Simulated job-site specific dive accident, dive causality management exercise plan if directed by the USACE Portland Office of Dive Safety and District Dive Coordinator or assignee;
  - d.** Review techniques and equipment to be used;
  - e.** Review dive team and dive station equipment certifications;
  - f.** Determine dive-support equipment placement;
  - g.** Placement of Government and Dive-Team personnel;
  - h.** Detailed review of dive plan, safety protocols, emergency management plan, activity hazard analysis, and accident prevention plan;
  - i.** Review site-specific clearances, permits, and permissions.

- j. Questions;
- k. Final acceptance from Dive Team Dive Supervisor of dive plan package by Dive Safety Inspector.

**NOTE: Once accepted, no changes shall be made to the dive plan, including change of personnel, without the specific and expressed permission of the Office of Dive Safety.**

**NOTE: ALL DIVE PLANS SHALL INCLUDE THE FOLLOWING STATEMENTS:**

1) "This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District.

2) "If for any reason the dive plan is altered in mission, depth, personnel, or equipment, the DDC shall be contacted in order to review and accept the alteration prior to actual operation."

15. Physical walk-through inspections of all clearances is made and lock-out / tag-out (LOTO) cards are signed by each member of the inspection party once prior to commencing any dive operation or upon any changes to lock-outs / tag-outs. Lock-outs/tag-outs will be review as requested by the Office of Dive Safety, the Project Clearance Holder, the Dive Safety Inspector and/or Dive Team Supervisor.

**NOTE: A dive operation shall not commence unless clearances are inspected and signed by the Dive Safety Inspector, Project Clearance Holder, Dive Team Dive Supervisor and other personnel as deemed necessary.**

16. Final review of diver and dive-support equipment by dive team and Dive Safety Inspector. A check of all required surface communications is performed.

17. Perform dive operation.

**NOTE: Except during an emergency, diver in-water shifts shall not exceed four (4) hours per calendar day. No member of the dive team shall work in excess of 12 hours per calendar day.**

- 18.** A post-dive review shall be facilitated at the conclusion of each dive day by the Dive Safety Inspector and the Dive-Team Dive Supervisor. Divers are advised of the nearest recompression chamber's location and on limitations to their post-dive activities.

**NOTE: Any post-dive adjustments to the dive plan must have the specific and expressed approval of the Office of Dive Safety.**

**APPENDIX B**

**DESCRIPTIONS OF DUTIES / QUALIFICATIONS**

**USACE: Portland District: Office of Dive Safety**

**District Dive Coordinator:**

**Deputy District Dive Coordinator:**

1. Manages USACE Portland District Dive Safety Program, serves as Portland District subject-matter expert(s) for all underwater activities that involve diving and diving alternatives.
2. Maintains and enforces USACE and Portland District dive policies.
3. Reviews requests for dive operations and sanctions the necessity of proposed dives in the Portland District.
4. Consults with Operations Division Chief or designate to determine emergency dive circumstances.
5. Maintains records and other documentation for USACE, Military, and contract dive organizations and dive personnel. Standardizes processes and procedures for supporting documentation evaluation.
6. Establishes minimum eligibility and qualification requirements and standards for dive companies, military dive units, and all dive team personnel. Reviews submittals and eligibility documentation.
7. Coordinates dive-related training programs.
8. Serves as an on-site Dive Safety Inspector as needed.
9. Serves as USACE Portland District Engineer's (Commander's) representative and liaison to the government, military, and commercial dive communities.
10. Resolves conflicts in field interpretations of regulations and requirements. Propose and submits for acceptance Memorandums of Agreements (MOA's).

- 11.** Reviews for acceptance Dive Plans, Emergency Management Plans, Safe Practices Manuals and Activity Hazard Analysis.
- 12.** Coordinates dive teams under contract to the USACE Portland District in an annual simulated work-site specific dive accident, dive causality management exercise.
- 13.** Deputy District Dive Coordinator serves as District Dive Coordinator as determined by DDC and/or Operations Chief.
- 14.** Qualifications of District Dive Coordinator:
  - a.** Must be a certified dive master possessing 5-10 years of commercial and/or military dive experience. Instructor level preferred;
  - b.** Must successfully complete a HQUSACE approved or equivalent, Diving Coordinator / Dive Safety Administrator / Dive Supervisor Training Course and Working Diver Course;
  - c.** Must successfully complete specialized hyperbaric chamber training;
  - d.** Must successfully complete NITROX and / or mixed gas dive training;
  - e.** Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training. Instructor level preferred. EMT, with dive accident management (DMT and / or EDAM) certification desired;
  - f.** Must be HazMat certified;
  - g.** Must be OSHA 30 Certified.
- 15.** Qualifications of Deputy District Dive Coordinator:
  - a.** Must be a certified diver possessing 3-5 years of dive experience. Dive master level preferred;
  - b.** Must successfully complete a HQUSACE approved or equivalent, Diving Coordinator / Dive Safety Administrator / Dive Supervisor Training Course and Working Diver Course;
  - c.** Must successfully complete specialized hyperbaric chamber training;
  - d.** Must successfully complete NITROX and / or mixed gas dive training;
  - e.** Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training. EMT with dive accident management (DMT and/or EDAM) certification preferred;
  - f.** Must be HazMat certified;
  - g.** Must be OSHA 30 Certified.

**Contract / Military Dive Safety Inspector:  
USACE Staff Dive Safety Inspector; DSI's:**

1. Serves as the Office of Dive Safety on-site representative and liaison between Office of Dive Safety and all dive operation and project personnel;
2. Facilitates the on-site conduct of all diving operations as assigned by the District Diving Coordinator occurring within the USACE Portland District;
3. Insures that all diving comply with pertinent OSHA and USACE regulations and policies governing dive operations;
4. Reports all safety concerns to the Office of Dive Safety. On authority of the Office of Dive Safety, will halt diving operations if necessary;
5. With the aid and assistance of the commercial contractor or military Dive Supervisor shall participate in a lock-out/tag-out review and inspection and facilitate a pre-dive safety briefing before onset of any diving operations;
6. Participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety;
7. Acts as the dive-site point of contact with Project Control Room Operators or Ship's Master. Informs Control Room and / or Ship's Bridge of diver in-water/out-of-water status. Acts as primary point of contact in case of emergency;
8. Reports to the Office of Dive Safety at the start and conclusion of all diving operations. Evaluates in writing performance of dive contractors and their personnel. Secures video recording and dive logs to be forwarded to the Office of Dive Safety. Makes recommendations to improve performance of dive operation and affiliated personnel;
9. Participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.

**NOTE: Except with the expressed authority of the District Dive Coordinator, the Dive Safety Inspector will not approve nor accept modification(s) to the Dive Plan or Scope of Work by the dive team.**

**10. Qualifications of USACE Dive Safety Inspector:**

- a. Should be a certified diver possessing 1-3 years of dive-related experience. Advanced certification preferred;
- b. Must successfully complete a HQUSACE approved or equivalent, Diving Coordinator / Dive Safety Administrator / Dive Supervisor Training Course. Working Diver certification desired;
- c. Must successfully complete specialized hyperbaric chamber training if inspecting a dive operation where a hyperbaric chamber is utilized;

- d. Must successfully complete NITROX and / or mixed gas dive training if inspecting NITROX or Mixed Gas dive operation;
- e. Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training. BLS or EMT with dive accident management endorsements (DMT and/or EDAM) preferred;
- f. HazMat certification preferred;
- g. Shall have, at a minimum, completed the 30-hour OSHA / USACE Construction Safety Class or an equivalent course applicable to the work to be performed and given by qualified instructors. Such training shall have been within the last three (3) years;
- h. USACE DSI staff must assist a senior Dive Safety Inspector with three (3) dive operations after initial HQUSACE training. Contract DSI shall be observed working as a DSI at a USACE dive operation by a senior USACE DSI at least once as part of their qualification process;
- i. Serve as a Dive Safety Inspector for a minimum of three (3) USACE dive operations during each calendar year.

**NOTE: In addition, Contract / Military Dive Safety Inspectors shall comply with all items listed in Addendum 1 to Appendix B, Contract Specifications for Contract Dive Safety Inspectors.**

**District Safety Office Representative:**

- 1. The District Commander shall appoint a Dive Safety Representative from the District Safety Office to provide collateral support, exclusive of operational dive plan, specific to non-diving project safety concerns such as Emergency Management Plans and Activity Hazard Analysis.

**Contract / Military Dive Team Personnel:**

**1. Dive Supervisor:**

- a. Must meet or exceed all qualifications listed in the most recent revision of EM 385-1-1, Section 30 and NWPR 385-1-93. All training documentation shall be in compliance with 29 CFR 1910.410;
- b. Must be sponsored by an eligible Commercial Dive Company, Military Dive Unit, or USACE Dive Team;
- c. Must have five (5) years experience and/or 500 hours accumulated bottom time as a commercial and/or military diver contiguous with application for dive supervisor;

- d.** Must have supervised a diversity of dive operations, minimum of three (3) USACE and/or other commercial projects within the previous 12 months;
- e.** As a dive-team member, must have at least two (2) years experience working USACE Portland District or similar USACE projects; minimum of three (3) per year or an aggregate of six (6);
- f.** Must have documented training in and experience supervising specialty dive operations. Examples include but are not limited to: NITROX/Mixed Gas, Surface Decompression with Oxygen (Sur-D-O2); Altitude Diving, Deep Diving, etc.;
- g.** Must have documented training and current certification in the operation of and experience as primary operator of required (dual-lock, multi-place) recompression chamber(s) and associated equipment;
- h.** Must possess valid and current CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration provider training, BLS or EMT with dive accident management endorsements. DMT and/or EDAM preferred;
- i.** Shall be familiar with the current edition of the U.S. Army Corps of Engineers Safety & Occupational Health Manual: EM 385-1-1 March 2008, and NWPR 385-1-93 May 2009 or most recent revision;
- j.** Shall have knowledge of USACE Portland District document submittal requirements and procedures for diving operations; including but not limited to Dive Plans, Emergency Management Plans, and Activity Hazard Analysis;
- k.** Participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety;
- l.** Must have a Letter of Recommendation from current employer affirming and requesting designation as a Dive Supervisor;
- m.** Shall not have any USACE, NWP Office of Dive Safety citations and / or supervised dive site issued a Federal and / or State OSHA violation within the previous 36 months prior to application;
- n.** Qualification as a Dive Supervisor and acceptance to supervise a USACE Portland District dive project is at the sole discretion of the Office of Dive Safety.

**2. Diver:**

- a.** Must meet or exceed all qualifications listed in EM 385-1-1, Section 30 March 2008, and NWPR 385-1-93 May 2009 or most recent revision. All training documentation shall be in compliance with 29 CFR 1910.410;
- b.** Must be sponsored by an eligible Commercial Dive Company, Military Dive Unit, or USACE Dive Team;
- c.** Must have completed an accredited college, commercial, US military or other government-sponsored dive school;
- d.** With less than five (5) years of documented dive-team experience, must submit an official sealed school transcript with pre-qualification request;
- e.** Must have at least one (1) year experience working as a tender on USACE Portland District dive operations working a minimum of three (3) projects; or must have at least one (1) year experience working as a diver and/or tender on other USACE or commercial dive operations working a minimum of six (6) projects;
- f.** Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training, BLS or EMT with dive accident management endorsements. DMT and/or EDAM preferred;
- g.** Must have documented training in and a minimum of one (1) year experience diving according to protocols required by a specialty dive operation. Examples include but are not limited to: Mixed Gas, Surface Decompression with Oxygen (Sur-D-O2); Altitude Diving, Deep Diving, etc.;
- h.** Should participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.
- i.** Must have a Letter of Recommendation from current employer affirming and requesting designation as a Diver;
- j.** Must not have any documented USACE, NWP Office of Dive Safety citations and / or been a subject of Federal and / or State OSHA violations, or drug and / or alcohol related convictions within the previous 36 months prior to application;
- k.** Qualification as a Diver and acceptance to work on a USACE Portland District dive project is at the sole discretion of the Office of Dive Safety.

**3. Tender:**

- a. Must meet or exceed all qualifications listed in EM 385-1-1, Section 30 March 2008 and NWPR 385-1-93 May 2009 or most recent revision. All training documentation shall be in compliance with 29 CFR 1910.410;
- b. Must be sponsored by a Commercial Dive Company, Military Dive Unit, or USACE Dive Team;
- c. Must have attended an accredited college, commercial, US military or other government-sponsored dive school;
- d. With less than five (5) years of documented diving-team experience, must submit an official school transcript with qualification request;
- e. Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training, BLS or EMT with dive accident management endorsements. DMT and / or EDAM preferred;
- f. Should participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.
- g. Must have a Letter of Recommendation from current employer affirming And requesting designation as a Tender;
- h. Must not have any documented USACE, NWP Office of Dive Safety citations and / or been a party to any Federal and / or State OSHA violations, or drug and / or alcohol related convictions within the previous 36 months prior to application;
- i. Qualification as a Tender and acceptance to work on a USACE Portland District dive project is at the sole discretion of the Office of Dive Safety.

**NOTE: As per EM 385-1-1, Section 1, 01.A.17 – “The contractor shall employ a competent person at each project (is) to function at the Site Safety and Health Officer (SSHO)” ... who, as a minimum, “must have completed the 30-hour OSHA Construction Safety Class within the previous three years to beginning the dive project.” This assignment may be collateral to duties previously listed above exclusive of the in-water diver or standby diver.**

**NOTE:**

- 1. **CPR certification training, with AED endorsement, must be successfully completed annually and comply with the most current Emergency Cardiac Care Conference (ECCC) guidelines;**

- 2. Dive-Accident Oxygen 1<sup>st</sup> Aid certification training must be successfully completed bi-annually. Curriculum must include demand inhalator, non-rebreather, and pocket mark application;**
- 3. First Aid certification training may be successfully completed every two or three years depending on training agency requirements. First Aid curriculum must include in-line stabilization, back-boarding, neck collaring, five (5)-minute field neurological examination, and drowning intervention.**
- 4. All Dive Team members shall be Basic Life Support (BLS) certified from a nationally accredited certification agency.**

**APPENDIX B-1**

**CONTRACT SPECIFICATIONS FOR  
CONTRACT DIVE SAFETY INSPECTOR (CDSI)**

**Scope of Work:** The Contract (CDSI), Military, or Federal Agency Dive Safety Inspector (FADSI) on loan shall furnish management, supervision, personnel, and materials, supplies, equipment, transportation and vehicles as requested except as otherwise provided, and are required to perform the following duties;

**The CDSI / FADSI shall:**

- a.** Control the conduct of all diving operations as assigned by the District Diving Coordinator (DDC) occurring within the U.S. Army Corps of Engineers Portland District jurisdiction to insure that all diving operations comply with pertinent OSHA and USACE regulations and policies governing contract, military and/or USACE diving operations. The CDSI / FADSI are required to inform the Office of Dive Safety of any safety concerns observed. On authority of the DDC, all diving operations will be halted immediately if there is any reason to believe that the operation cannot be accomplished safely. (See Deficiency Documentation as listed below.)
- b.** With the aid and assistance of the Dive Supervisor, the CDSI / FADSI shall facilitate a pre-dive safety briefing before onset of any diving operations. This meeting shall at a minimum address all safety concerns and remedies outlined in the Activity Hazard Analysis and review the Dive Plan as submitted by the Dive Contractor, Military Dive Unit, or USACE Dive Team and accepted by the Office of Dive Safety.
- c.** Insure that all diving operations are video recorded according to the pertinent contract requirements and submits the recording(s) in DVD format to the Office of Dive Safety upon completion of the work.
- d.** Maintain dive logs for each dive operation. Insure that all dives follow applicable standards established by the latest revisions of EM 385-1-1 March 2008, NWPR 385-1-93 May 2009, the U.S. Navy Dive Manual 6<sup>th</sup> Edition and the Consensus Standards of the Association of Diving Contractors. Submit daily dive summary reports to the Office of Dive Safety.
- e.** Act as a Dive Safety liaison between the Portland District Safety Office, Office of Dive Safety, Dive Supervisor, Prime Contractor, and USACE project personnel.

- f. When dive operations occur at a USACE facility or off a USACE vessel, act as primary point of contact with Project Control Room Operators or Ship's Master through government provided radio or cell phone. Inform Control Room or Ship's Bridge as to status of the dive during course of operations. Inform Control Room Operator and Ship's Master when diver enters and exits water. Acts as primary point of contact in case of emergency coordinating with Control Room or Ship's Bridge to provide emergency services as needed.
- g. Report to the Office of Dive Safety immediately before commencement of and immediately after termination of all diving operations. Evaluates in writing the performance of dive contractors, military dive units, and/or USACE dive teams and their personnel. Makes recommendations for dive operation improvements.
- h. Shall upon the request of the USACE Portland District, District Dive Coordinator be required to annually participate and / or facilitate a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.

**NOTE:** At no time will the Contract Dive Safety Inspector (CDSI), Military, or Federal Agency (FADSI) Dive Safety Inspector approve, direct, or accept responsibility for modifying the Scope of Work or accepted Dive Plan. In no case shall the CDSI / FADSI allow any activity not within the approved Scope of Work or accepted Dive Plan without the express approval of the Office of Dive Safety prior to commencement of the dive operation.

**Background:** All activities required by this contract will occur within the Portland District, U.S. Army Corps of Engineers. Primary sites where diving activities occur include, but are not limited to, Bonneville Lock and Dam, Cascade Locks Oregon; The Dalles Lock and Dam, The Dalles, Oregon; Willamette Falls Locks, Oregon City, Oregon; John Day Dam, Rufus, Oregon; U.S. Government Moorings, Portland Oregon; Willamette Valley Project, main office at Lowell Oregon; Rogue River Basin Project, Trail, Oregon. Dive activities may also occur at various coastal locations or on the lower Columbia River in support of the USACE dredge fleet.

**Working Hours:** Unless otherwise specified, normal working hours except as specified below shall be 0700 to 1700 hours, Monday through Friday, federal holidays excluded. Emergency working hours are as declared.

**Certifications & Training:** The CDSI / FADSI shall at their own expense obtain any certifications or training required to perform a contract and maintain certification currency. At a minimum, one USACE-sponsored Dive Safety class must be successfully completed.

**Identification of Contract Employees and Vehicles:** The contractor shall obtain government-provided personal identification badges and vehicle identification tags as required at each Project. Badges and tags must be returned upon request or at completion of contract.

**Safety And Security Requirements:** The CDSI / FADSI shall comply with all standards of the most current editions of USACE Safety and Health Requirements Manual (EM-385 1-1), Portland District Diving Regulation (NWPR 385-1-93); the provisions of the Occupational Safety and Health Act (OSHA- Part 1910, Subpart T- Commercial Diving Standards) governing diving operations and/or U.S. Coast Guard Commercial Diving Standards as applicable. All diving operations shall use the U.S. Navy Diving Manual air diving tables Revision 6 or other specialty (Mixed Gas, etc.) U.S. Navy dive table as applicable.

**NOTE: ALL CDSI-ONLY BID SUBMITTALS AND CONTRACTS MUST INCLUDE THE FOLLOWING STATEMENT:**

**“The CDSI will ensure the Dive / Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 Revision and other applicable regulations. Failure to do so may result in the immediate termination of the CDSI contract in force and may incur chargeback’s related to the delay of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District.**

**Site Access:** The CDSI / FADSI shall be provided keys and / or keycards required performing this contract. These items shall remain the property of the government and be returned to the issuing office upon completion of the work. None of these items may be duplicated or loaned without the express approval of the Facility Operations Manager. The loss of any of these items will result in a deduction of \$10.00 per lost or damaged key or key card from the payment due the contractor.

**Accident Reporting:** All serious accidents (those resulting in death or injury requiring medical attention) by either the contractor or any person of the contract, military, or USACE dive team shall be reported to the Office of Dive Safety, the facility Control Room Operator and the District Safety Office immediately, followed by an “Preliminary Accident Report” (PAN). The contractor shall submit a written report to the Office of Dive Safety within 24 hours of the accident and submit an ENG 3394 within 12 days of the PAN. The Office of Dive Safety will immediately be notified of all accidents occurring at the dive station.

**Damage Reports:** In all instances where Government property and / or equipment are damaged by the contractor, a full report of the incident and extent of damage shall be submitted to the Office of Dive Safety within one (1) work day.

**CDSI / FADSI Employees:** All CDSI / FADSI employees shall conduct themselves in a professional manner consistent with safe diving practices at all times. No alcoholic or intoxicating beverages, illegal drugs or controlled substances not prescribed by a physician shall be possessed or consumed while on duty. Prescription and / or over-the-counter medications causing impairment shall not be taken 24-hours prior to a dive operation.

**Conflict Of Interest:** The CDSI / FADSI either individually or as a business, or member of their immediate family shall not be employed by the dive contractor, a subsidiary, or a regional competitor. A CDSI / FADSI shall not be related to any member of the working dive team they are contracted to inspect. The CDSI / FADSI or any member of their immediate family shall not have a financial interest or other affiliation with any dive company they inspect. The CDSI / FADSI may not be related to any member of the contract, military, or USACE dive team.

**Quality Assurance:** The Office of Dive Safety will monitor the CDSI / FADSI's performance through on-site visits, review of submitted records and meetings. If the CDSI fails to perform according to the requirements of this regulation or awarded CDSI contract, a Notice of Contract Deficiency will be issued. The contractor shall explain, in writing, why performance was not satisfactory and how reoccurrence of the problem will be prevented in the future. If a second Notice of Deficiency is issued, the offending CDSI will be disqualified from working USACE Portland District dive operations for a period of one (1) year.

**Deficiency Documentation:** In case of dive team or dive contractor's regulatory non-compliance, the CDSI will submit to the Office of Dive Safety within 24 hours written and / or photographic documentation of the dive team's and dive contractor's deficiency.

**Government Provided Communications:** The contractor shall be provided government owned radios and/or cell phones when required to perform their contract. These items will be the responsibility of the contractor and shall be returned in the same condition as issued.

**Contractor Provided Items:** The contractor shall provide all safety equipment as required by the Portland District Project, Portland District or as stated in the USACE Safety and Health Requirements Manual. These items include, but are not limited to, Personal Flotation Devices (PFD), hardhats, safety boots, and safety glasses.

**Qualifications of a Contract Dive Safety Inspector:**

Each person performing duties as a Contract Dive Safety Inspector shall at a minimum have the following qualifications:

- a. Successful completion of and current certification from a recognized commercial, government-sponsored, military, or USACE dive training program.

- b. Five (5) years experience of commercial, government or military dive experience including three (3) years supervising divers in underwater inspection and construction activities.
- c. Have documented training, a minimum of one-year experience and be certified in recompression chamber operations. Be trained and / or certified in Sur-D-O2 operations.
- d. Be familiar with the most current edition and / or revision of USACE Safety and Health Requirements Manual, EM 385-1-1 and USACE Portland District Dive Regulations NWPR 385-1-93.
- e. Have knowledge of USACE document submittal requirements for diving operations, including Dive Plans, Emergency Management Plans, and Activity Hazard Analysis.
- f. Have prior documented supervisory experience as a dive safety inspector, diver support crew member or diver at shipyards, navigation locks, hydroelectric and / or dam facilities.
- g. Have current First Aid / CPR / AED and Dive Emergency Oxygen Administration provider certification. BLS or EMT with dive accident management endorsements (DMT) or Emergency Dive Accident Management (EDAM) certification preferred.
- h. Have, at a minimum, completed the 30-hour OSHA Construction Safety Class or equivalent applicable to the work to be performed. Such training shall have been within the last three (3) years. OSHA HazMat and Confined Space training desired.
- i. Have dive-specific specialty certifications, including but not limited to, decompression, high-altitude diving, NITROX and / or Mixed Gas, if medium is scheduled to accomplish dive.
- j. Have, at a minimum, certified training and at least five years crane operations and rigging experience
- k. Possess a valid U.S. driver's license and be current on all required certifications.
- l. Upon application in writing to the USACE District Dive Coordinator, qualification waivers may be granted.

**Contractor Requirements:** The contractor shall have the following required items.

**1. Insurance:**

- a. Workman's Compensation and Employer's Liability Insurance as legally required by the State wherein the work is being performed.

**b.** Comprehensive, bodily injury and property damage liability; minimum amounts of \$1,000,000 for injury to or death of any person, and \$100,000 for each accident or occurrence for property damage liability.

**c.** Automobile bodily injury or property damage liability; minimum limits of \$1,000,000 for injury or death of any person and \$1,000,000 for each accident or occurrence for bodily injury liability; and \$100,000 for each accident or occurrence for property damage.

**d.** Other necessary coverage required by Federal Contracting regulations, and / or the Longshoreman and Harbor Worker's Compensation Act or Jones act.

**e.** When utilizing a dive contractor's working platform, i.e. boat, barge, etc. the Contract Dive Safety Inspector shall provide the vessel owner with a "Certificate of Insurance" listing the vessel's owner(s) as an "Additional Insured" for the duration of the dive operation if requested.

**Payments:** The CDSI shall be paid only for work accomplished and performed in accordance with these specifications and the requirements of the task orders. The contractor's administrative time to accomplish work including time spent traveling to the work site, will not be considered as work for payment. Invoices shall be submitted within two (2) weeks of the accomplished work, or bi-weekly for project assignments four weeks in length or longer to USAED, Portland, C/O USACE Finance Center, CEFC-AO-P, 5720 Integrity Drive, Millington, TN 38054-5005, with a copy sent to Rick Benoit, District Diving Coordinator, Office of Dive Safety, USACE Portland District, P.O. Box 2946, Portland, OR 97208-2946.

**NOTE:** A Contract Dive Safety Inspector on loan from a federal agency via MIPR shall follow all related USACE guidelines and policies.

## APPENDIX C

### DIVE PLAN PACKAGE

**1. Dive Plans:** An operational Dive Plan shall be developed by the contractor for each diving operation. A separate Dive Plan will be developed for all separate dive operations even if performed by the same dive team on the same day. Project-specific information needed to write the Dive Plan may be obtained from the USACE Portland District Office of Dive Safety. This Dive Plan must be accepted by the Office of Dive Safety prior to the commencement of any dive operations. A copy of the accepted Dive Plan Package must be at the dive site at all times and be available to the government representative upon request. The Dive Plan will be reviewed in detail at the pre-dive conference. No part of the Dive Plan shall be altered, revised or changed in any part without the expressed consent of the District Dive Coordinator or Deputy. All Dive Plans become a part of the contract file.

At a minimum, the Dive Plan shall meet all elements required by the most current edition of EM 385-1-1 March 2008 and NWPR 385 1-93 May 2009 and will include:

- a. Purpose of dive;
- b. Nature of work to be performed;
- c. Names of all dive team members with each dive team member's assignment clearly defined;
- d. Updated and / or amended diver or dive-team credentials;
- e. Date, time, and location of dive;
- f. Diving method to be utilized, SCUBA, SSA, Mix Gas, or NITROX;
- g. Type of dive; No-decompression, Decompression, High Altitude, etc.;
- h. Recompression schedule and method if required. Planned safety stops;
- i. Diving platform: boat, man basket, land;
- j. Anticipated dive environment, to include but no be limited to, expected surface and bottom conditions, visibility, temperature, currents, etc.;
- k. Planned rotation of divers and dive-team members;
- l. Type of hand tools being utilized if any;
- m. Post-dive procedures, including dive log completion and diver observation.

**n. NOTE: ALL DIVE PLANS MUST INCLUDE THE FOLLOWING STATEMENT:**

**“This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District.**

**2. Emergency Management Plan:** A site-specific Emergency Management Plan shall be prepared in accordance to EM 385-1-1, Section 30.A.19 by the contractor for each dive and submitted to the Office of Dive Safety for acceptance with the Dive Plan. At a minimum, content of the Emergency Management Plan shall include, but not be limited to:

- a.** Location, distance from dive site, and telephone number of nearest operational (dual-lock, multi-place, recompression chamber in compliance with EM 385-1-1 if not located at the dive site;
- b.** Location and telephone number(s) of nearest hospital(s);
- c.** Method of transportation (air or land), including distance from dive site, approximate time to dive site, telephone numbers;
- d.** Emergency access to dive site;
- e.** Procedures, including telephone numbers or alternate methods of communications, to activate emergency management services at facility where dive operation is being performed;
- f.** Site-specific protocols for extricating an entrapped or fouled diver;
- g.** Actions to overcome loss of life-support or mission-support equipment
- h.** Actions to overcome interruption of life-support or mission-support equipment;
- i.** Actions to locate / recover a lost-diver;
- j.** Actions to extricate an injured diver or dive support personnel;
- k.** Actions to extinguish a fire.

**NOTE: All dive teams under contract to the USACE Portland District are required upon request of the District Dive Coordinator to annually participate and / or facilitate a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.**

**3. Activity Hazard Analysis:** The AHA shall define the activities being performed and identify the sequences of work, the specific hazards anticipated, site conditions, equipment, materials, and control measures to be implemented to best eliminate and/or reduce each hazard. An Activity Hazard Analysis (AHA) represents the dive team's best effort to anticipate and mitigate or prevent the adverse effects of equipment failure, weather, or other unexpected events. Each AHA will be job and site specific. The AHA will be reviewed in detail at the pre-dive safety conference. Copies of applicable tag-out/lock-out clearances obtained from the dive site will be attached to the AHA. The AHA shall be prepared in accordance with the US Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, paragraph 01, A.09.

**4. Required Supporting Documentations**

- **Accident Prevention Plan;**
- **Spill Prevention Plan;**
- **Dive Team Certifications and qualification documents:**
  1. **Recent Dive Logs (previous six (6) months);**
  2. **Company Endorsement and Letter of Instatement;**
  3. **Current BLS, CPR, First Aid, O2;**
  4. **Current "Physician-signed" Medical Approval to Dive;**
  5. **Other Specialty Endorsements, including but not limited to:**
    - **OSHA 30 Hour Safety Course;**
    - **OSHA 40-hour Hazardous Materials Course;**
    - **NITROX, Mix Gas; Saturation;**
    - **DMT / EDAM (for Recompression Chamber Operators)**
    - **Dive School Diploma and Course Transcripts;**
- **Dive Station Equipment Certifications:**
  1. **Certificates of Air Quality;**
  2. **Gauge Calibrations (Pneumatic and or Pressure);**
  3. **Dive Hose / Umbilical Hydrostatic Test Results;**
  4. **Recompression Chamber;**

**APPENDIX D**

**USACE PORTLAND DISTRICT OFFICE OF DIVE SAFETY  
REQUIREMENTS EXCEEDING EM 385-1-1 MINIMUMS**

Due to local dive environments and site-specific hazards, the following list exceeding minimum standards published by the USACE Safety and Health Requirements Manual, EM 385-1-1 March 2008 Revision has been established by the Portland District Office of Dive Safety and incorporated in NWPR 385-1-93 Revision May 2009. Adherence to these enhanced standards is mandatory for all USACE Portland District dive operations unless waived by agreement or governed by a Memorandum of Agreement (MOA) on file in the USACE Portland District Office of Dive Safety. This Appendix D may be amended without notice to include additional requirements as determined by the Office of Dive Safety.

**Diver Equipment:**

1. When utilizing Surface Supplied Air, bailout bottles must be pressurized to a minimum of 3,000 PSI plus or minus 10-percent and hold at least 50 cubic feet of air.
2. All bailout systems must utilize a diver worn standard submersible pressure gauge (SPG) viewable in-water by the diver and attached to the first stage by a minimum 36-inch high pressure hose.
3. Diving in water 38-degrees-F or less, or when diving in contaminated water, first stage regulators attached to bailout bottles as part of a bailout system shall be environmentally sealed and / or cold-water rated by USN list of approved equipment.
4. All diver dive helmets must be worn, utilized, and maintained according to manufacture standards.
5. Divers diving in water less than 46-degree-F for accumulated bottom times exceeding 45 minutes or less than 36 degrees-F for accumulated bottom times exceeding 20 minutes shall require hot water diving systems. Unless waived by the Portland District of Dive Safety, variable-volume dry suits with appropriate thermal protection shall be utilized by divers working in waters 60 degrees or less. Utilizing a quick-disconnect inflator hose is mandatory for all dry suit diving.

Appropriate thermal protection (undergarment made of polartec, thinsulate, or equivalent material) shall be worn by the diver(s) when utilizing a dry suit system in water colder than 60-degrees-F. Exposure shall be limited to 180 minutes (2 hours) without a minimum of one (1) hour surface rest in a dive-site's sheltered and heated environment.

6. A sheltered and heated environment must be provided to the standby diver at the dive site in weather where the air temperature with or without wind chill is 50-degrees-F or less.
7. Hot water suit systems shall have at least a non-adjustable high temperature limit switch (125-degree maximum), in combination with at least one of the following safety devices to prevent diver scalding; expansion tank, boiler shutdown water flow switch, pressure relief valve on volume tank and/or boiler, locking control box.
8. Diver umbilical lines shall be secured at two (2) separate attachment points on the diver's harness. Lines are required to be secured at a minimum of one (1) attachment point.

**Diver-Support Equipment:**

1. A minimum of 60 minutes of portable oxygen (Jumbo-D or M-9 type cylinder) with appropriate delivery system (demand inhalator, demand resuscitator, non-re-breather or pocket mask with O2 inlet) shall be immediately available at all dive sites.
2. A backboard, Miller Board or Stokes litter with floatation, head & neck immobilizer, and a minimum of four color-coded straps with quick-release buckles shall be immediately available at all dive sites.

**Dive-Team Qualifications:**

1. All on-site dive team surface-support members shall be certified in Basic Life Support (BLS) with emergency dive accident management endorsements. At least one non-diving member of the dive team shall be certified as a Diving Medical Technician (DMT / EDAM); Emergency Medical Technician (EMT-B) with emergency dive-accident management endorsements preferred. Certifications must be documented, current and on file with the USACE Portland District's Office of Dive Safety.

2. CPR certification training, with AED endorsement, must be successfully completed annually and comply with the most current Emergency Cardiac Care Conference (ECCC) guidelines;
3. Dive-Accident Oxygen 1<sup>st</sup> Aid certification training must be successfully completed bi-annually. Curriculum must include demand inhalator, non-rebreather, and pocket mark application;
4. First Aid certification training shall be successfully completed every two or three years depending on training agency requirements. First Aid curriculum must include in-line stabilization (back-boarding, collaring, head immobilization), five (5)-minute field neurological examination, and drowning intervention.
5. Diver-team members with less than five (5) years experience must submit an official dive-school transcript as part of their application package.
6. To maintain USACE work eligibility, divers, dive team members, and dive contractors are required to have worked on an Army Corps of Engineers dive operation (preferably on a Portland District project) within the previous 12 months.
7. Dive physicals should be performed and / or supervised by a physician familiar with hyperbaric medicine. All dive physicals must utilize a standardized industry dive medical form and be signed and stamped by the examining physician and should have the physician's DEA number affixed. Dive physicals given by a physician assistant, nurse, or other medical practitioner will not be accepted.
8. Each diver shall undergo a re-examination to receive medical clearance to dive after experiencing any pressure-related diving injury requiring medical attention including but not limited to ruptured tympanic membrane, pneumothorax, decompression sickness, etc., or other non-diving illness or injury requiring emergency intervention or hospitalization.

**Miscellaneous:**

1. A prime dive contractor or diving sub-contractor or any company subsidiary shall not have received a Serious, Willful, or Repeat State or Federal dive-related OSHA safety violations within the 12 months preceding the contract scheduled start date.
2. Video recordings of dive operations shall be in DVD format.
3. All vessels utilized to facilitate a dive operation in a BRZ shall have an appropriate secondary, independent means of motorized power.
4. Subcontractors of a dive operation shall provide a "Certificate of Insurance" to owner(s) of any vessel jointly utilized during said dive operation.
5. Subcontractors of a dive operation shall name owner(s) of any vessel jointly utilized as an "Additionally Insured" for the duration of said dive operation
6. All dive teams under contract to the USACE Portland District are required upon request of the District Dive Coordinator to annually participate and / or facilitate a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.
7. The maximum allowable daily in-water work period for divers is four (4) hours per calendar day. The maximum allowable daily work shift for all dive-team members is 12 hours per calendar day.
8. Upon written application to the USACE District Dive Coordinator, waivers to the listed requirements in NWPR 1-93 may be granted by the Office of Dive Safety for cause.
9. **ALL DIVE PLANS SHALL INCLUDE THIS STATEMENT:**  
  
**"This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District."**

## APPENDIX E

### PROCEDURE FOR CORRECTIVE ACTION

**1. Policy Statement:** The United States Army Corps of Engineers Portland District's Office of Dive Safety provides a progressive system of Corrective Action to notify dive contractors, divers, and other dive team members, and contract dive safety inspectors when unsatisfactory and / or unsafe conduct, communication, or performance occurs at or during an USACE annual re-qualification audit or dive operation as determined by the Office of Dive Safety. Although this policy outlines a three-step process, it is within the discretion of the Office of Dive Safety to elect any step within the policy up to and including immediate withdrawal of work eligibility status and removal from the dive site.

**NOTE:** Corrective action taken against a dive contractor, dive-team member, or contract dive safety inspector by the Portland District Office of Dive Safety may be grounds for disqualification to work at other USACE dive projects in other USACE Districts.

**2. Purpose:** The purpose of this policy as applied by the Portland District Office of Dive Safety and Office of Council is to establish and outline the process for identifying, documenting, analyzing, and implementing corrective and preventative actions. The intent of this policy is to provide remediation and guidance to correct violations of EM 385 1-1, NWPR 385-1-93, and / or other referenced material applicable to dive operations in the USACE's Portland District as well as punitive sanctions if necessary.

**3. Process:** Dependent on the seriousness of deficiency and / or number of violations, a Notice of Deficiency, a Notice of Unsatisfactory Performance, or a Notice of Action will be written by the Office of Dive Safety and delivered to the offending party by registered mail within five (5) working days of infraction(s).

**NOTE:** Any federal and / or state OSHA dive-related safety violation is cause for immediate exclusion from working in the USACE Portland District for a period of one year from the initial violation citation date, exclusive of the policy procedures contained within NWPR-1-93, 01 May 2009 Revision.

**STEP ONE:**

**Notice of Deficiency:** This is a proactive process intended to prevent reoccurrences of safety concerns and / or regulatory violations as observed and interpreted by the Office of Dive Safety or its representative. A written response outlining corrective action addressing the infraction(s) and / or cause of the Notice of Deficiency as well as long-term preventative solutions are required to be submitted to the Office of Dive Safety within 10 working days of receipt.

**STEP TWO:**

**Notice of Unsatisfactory Performance:** This is a reactive process initiated when a response and / or corrections required by the Notice of Deficiency are not initiated. A Notice of Unsatisfactory Performance may also be written for concerns, including but not limited to, inability to perform according to contract or multiple and/or egregious violations of safety and regulatory policy as observed and interpreted by the Office of Dive Safety or its representative. A written response outlining corrective action addressing the infraction(s) and/or cause of the Notice of Unsatisfactory Performance as well as long-term preventative solutions are required to be submitted to the Office of Dive Safety within five (5) working days of receipt.

**STEP THREE:**

**Notice of Action:** This is the penalty phase when corrective actions and penalties are proposed by the Office of Dive Safety. This action may include, but not be limited to, contracting charge backs, work eligibility status audit, sanction, and / or permanent disqualification from working on USACE Portland District projects.

**INTERNAL RIGHT OF APPEAL:** Recipients of a Notice of Deficiency or Notice of Unsatisfactory Performance shall appeal to the Office of Dive Safety. If a consensual corrective agreement cannot be reached between contractor and the Office of Dive Safety, a final appeal may be made to the USACE Portland District's Office of Council. Recipients of a Notice of Action shall appeal directly to the USACE Portland District's Office of Council.