

## APPENDIX G

### Contract Surface-Supplied Air (SSA) Diving Operation Quality Assurance Checklist

If for any reason the dive mission is altered, the District Diving Coordinator (DDC) shall be contacted and a revised dive plan will be reviewed and accepted by the DDC prior to continuing the operation. This review may be conducted electronically and confirmed in writing after completion of the dive operation. (30.A.22)

#### A. General Checks

Does the dive supervisor have the following documents that have been accepted by the DDC on the dive site? (30.A.14, 30.A.15, 30.A.16)

- |   | YES                      | NO                       |
|---|--------------------------|--------------------------|
| a. Safe Practices Manual                  | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Dive Operations Plan                   | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Activates Hazards Analysis             | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Emergency Management Plan              | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Dive Personnel Qualifications          | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Breathing Air Certification. (30.F.05) | <input type="checkbox"/> | <input type="checkbox"/> |

#### B. Dive Team Members Checks

- |   | YES                      | NO                       |
|---|--------------------------|--------------------------|
| 1. Are the dive team members of the same personnel specified in the accepted Dive Operation Plan? (30.A.16) | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Does the dive team meet the minimum manning levels as required in 385-1-1, Appendix G? (30.B.02)         | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Does each dive team member have the following:   |                          |                          |
| a. CPR certification (30.A.08)  | <input type="checkbox"/> | <input type="checkbox"/> |
| b. First aid certification (30.A.08)  | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Emergency oxygen systems certifications (30.A.08)  | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Licensed physician letter certifying diving fitness (30.A.09)  | <input type="checkbox"/> | <input type="checkbox"/> |

- e. Driver training certification (30.A.05, 30.A.06, 30.A.07)

**C. Equipment Checks**

SSA equipment components shall be type specifically designed to be used in diving support systems (30.D.02)

1. Does each diver have three sources of air as follows? (30.C.06)

**YES** **NO**

- a. A primary air supply  
(i.e. cylinder or compressor)
- b. A reserve breathing air supply integral or in-line  
with the primary air
- c. A bailout bottle with no less than 30 c.f. that can be  
turned on by the diver
- d. Does the bailout bottle have a minimum of 90%  
pressure capacity available (30.C.02)

2. Does each tank and bailout bottle meet the following requirements?  
(30.C.02)

**YES** **NO**

- a. Seamless steel or aluminum that meet DOT 3AA  
and DOT 3AL specifications
- b. An identification symbols stamped into the shoulder  
of the tank
- c. A hydrostatically test stamp in the shoulder of each  
tank, which is no older than 5 years

3. Does each diving helmet have the following?

**YES** **NO**

- a. Two-way electronic communication system and does  
the surface unit have a **required external speaker**?  
(30.C.05, 30.F.09)
- b. A check valve in the primary air line and an exhaust  
valve? (30.F.07)
- c. Connections for a bailout bottle, which can be immediately  
turned on by the diver in event of loss of air (30.F.08)

**NOTE:** The use of Jack Brown masks is prohibited unless it incorporates electronic communication and a means of incorporating a driver carried bailout system

- |    |  |                          |                          |                          |
|----|--|--------------------------|--------------------------|--------------------------|
| 4. | Does each diver <u>umbilical</u> have the following? (30.F.06)   |                          | <b>YES</b>               | <b>NO</b>                |
|    | a. Connections made of corrosion resistant material, that are not easily disconnected  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|    | b. Markings in 10 ft. increments to 100 ft. (beginning at the divers end) and in 50 ft increments thereafter                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|    | c. Umbilical's shall have a nominal breaking strength of 1000 lb (453.6 kg) and shall be made of kink resistant materials.                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|    | d. When hoses are not in use, are their opens ends closed by trappings or by other means?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. | Does each diver have a <u>wet suit or dry suit with gloves and booties</u> , if in cold water or other environmental hazards exist.            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. | Does each diver have a <u>safety harness</u> with the following (30.F.10)  |                          | <b>YES</b>               | <b>NO</b>                |
|    | a. A positive buckling device  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|    | b. Attachment point for the safety line  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|    | c. A lifting point that keeps the diver's head up  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. | Does the dive supervisor have certifications on all hand held electric power tools? (30.E.13)  | <input type="checkbox"/> | <b>N/A</b>               | <b>YES</b>               |
|    |  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. | Air Compressor Systems   |                          | <b>YES</b>               | <b>NO</b>                |
|    | a. Is the compressor's supply intake located away from the exhaust or other contaminants? (30.F.04)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|    | b. Does the compressor have a volume tank with a check valve on the inlet side, a pressure gauge, a relief valve, and a drain valve? (30.F.02) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|    | c. Does the compressor have approved regulator, in-line Sorbent beds, and filters in the supply line? (30.F.04)                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- |  | <b>YES</b>               | <b>NO</b>                |
|--|--------------------------|--------------------------|
| d. If it is an oil lubricated compressor, does it have high-temperature, equipment failure, and carbon monoxide continuous monitoring alarm systems? | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Can the dive supervisor see and/or hear the alarms while in the diving mode?(30.F.04)   | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Are all the systems being calibrated daily or before use if not used daily? (30.F.04)   | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Are records of the testing being maintained? (30.F.04)  | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Are the results of the mandatory six-month air purity test available? (30.F.05)   | <input type="checkbox"/> | <input type="checkbox"/> |

**F. Safety and Emergency Checks**

- |   | <b>YES</b>               | <b>NO</b>                |
|---|--------------------------|--------------------------|
| 1. Is a <u>first-aid kit</u> meeting the requirements of Section 30 of 385-1-1 on the dive site? (30.F.11, 30.A.26c)  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Is an <u>oxygen resuscitation system</u> capable of delivering oxygen for a minimum of 30 minutes on the dive site? (30.F.11, 30.A.26c)  | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Is a <u>stokes litter or backboard</u> , with attached floatation device on the dive site? (30.F.11, 30.A.26b)   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Are both <u>dive flags</u> , international alpha code and recreational with minimum dimension of 23 inches square, displayed at least 3ft above the water? (30.F.12, 30.A.26b) | <input type="checkbox"/> | <input type="checkbox"/> |

**G. Pre-Dive Actions Checks**

- |   |  | <b>YES</b>                             | <b>NO</b>                             |
|---|--|--|---------------------------------------|
| 1. Did the dive supervisor conduct a <u>pre-dive conference</u> with all the dive team present? (30.A.26)     |  | <input type="checkbox"/>               | <input type="checkbox"/>              |
| 2. Was a responsible employee of the floating plant or facility present at the pre-dive conference? (30.A.26) | <b>N/A</b><br><input type="checkbox"/> | <b>YES</b><br><input type="checkbox"/> | <b>NO</b><br><input type="checkbox"/> |
| 3. Were the following discussed as a minimum? (30.A.20)   | <b>N/A</b>                             | <b>YES</b>                             | <b>NO</b>                             |
| a. The mission or scope of work.  |  | <input type="checkbox"/>               | <input type="checkbox"/>              |
| b. The location   |  | <input type="checkbox"/>               | <input type="checkbox"/>              |

- |  |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|
|  | <b>N/A</b>               | <b>YES</b>               | <b>NO</b>                |
| c. Drawing and/or photographs  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  |                          |                          |                          |
|  | <b>N/A</b>               | <b>YES</b>               | <b>NO</b>                |
| d. Equipment and materials that are to be installed as part of the mission.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Diving apparatus/equipment and craft to be used   |                          | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Diving procedures   |                          | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Maximum working depth with estimated bottom times   |                          | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Water temperatures  |                          | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Water velocity, currents  |                          | <input type="checkbox"/> | <input type="checkbox"/> |
| j. Visibility  |                          | <input type="checkbox"/> | <input type="checkbox"/> |
| k. Names and duties of personnel on the dive team  |                          | <input type="checkbox"/> | <input type="checkbox"/> |
|  |                          |                          |                          |
| 4. Were the following operational procedures discussed? (30.D.05)  | <b>N/A</b>               | <b>YES</b>               | <b>NO</b>                |
| a. All dives shall be terminated if voice communications are lost  |                          | <input type="checkbox"/> | <input type="checkbox"/> |
| b. That each diver should have a tender  |                          | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Will there be an underwater tender/diver stationed at the underwater point of entry for enclosed or physically confining spaces?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Is there a standby diver for each diver?  |                          | <input type="checkbox"/> | <input type="checkbox"/> |
|  |                          |                          |                          |
| <i>NOTE:</i> A standby dive will be dressed out and readily available when a diver is in the water (the standby diver may remove his or her head gear after it is tested for proper operations) (30.B.03, 30.D.05) |                          |                          |                          |
|  |                          |                          |                          |
|  |                          | <b>YES</b>               | <b>NO</b>                |
| 5. Was the <u>Activities Hazards Analysis</u> discussed?<br>(30.A.20, 30.A.26)   |                          | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Was the <u>Emergency Management Plan</u> discussed?<br>(30.A.20, 30.A.26)   |                          | <input type="checkbox"/> | <input type="checkbox"/> |

7. Were the following pre-dive checks performed? (30.A.26)

- |    |  |                          |                          |                          |
|----|--|--------------------------|--------------------------|--------------------------|
| a. | Were lockout/tagout procedures discussed and followed and was the clearance holder identified and was a copy of the clearance/permit signed that identified the hazards. (30.A.17) | <input type="checkbox"/> | <input type="checkbox"/> |                          |
|    |  | <b>N/A</b>               | <b>YES</b>               | <b>NO</b>                |
| b. | Crane signals or radio communication with the crane operator are reviewed  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. | Welding or cutting procedures are reviewed   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. | Blasting procedures are clearly reviewed   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. | All diving equipment was checked for proper function prior to diver entry  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

8. Do the dive logs on site contain the following information? (30.A.24)

- |    |  |                          |                          |
|----|--|--------------------------|--------------------------|
|    |  | <b>YES</b>               | <b>NO</b>                |
| a. | Full Name  | <input type="checkbox"/> | <input type="checkbox"/> |
| b. | Date and location of dive                                      | <input type="checkbox"/> | <input type="checkbox"/> |
| c. | Maximum depth and bottom time                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| d. | Surface interval between dives                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| e. | Breathing medium and type of equipment used                    | <input type="checkbox"/> | <input type="checkbox"/> |
| f. | Group classification at the beginning and end of each interval | <input type="checkbox"/> | <input type="checkbox"/> |
| g. | Water and ambient air temperature                              | <input type="checkbox"/> | <input type="checkbox"/> |
| h. | Depth(s) and duration(s) of any decompression stops            | <input type="checkbox"/> | <input type="checkbox"/> |
| i. | Date and time of last previous dive                            | <input type="checkbox"/> | <input type="checkbox"/> |
| j. | Name of Dive Supervisor(s) during dive;                        | <input type="checkbox"/> | <input type="checkbox"/> |
| k. | General description of work performed; and                     | <input type="checkbox"/> | <input type="checkbox"/> |

## H. Post Dive Action Checks

1. Did the dive supervisor have a dive team debriefing that covered the following as a minimum? (30.A.18)
- |   | YES                      | NO                       |
|---|--------------------------|--------------------------|
| a. The location of the nearest recompression chamber (if not located on site)   | <input type="checkbox"/> | <input type="checkbox"/> |
| b. A discussion of post dive activities including repetitive dives and flying?  | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Location, directions to and phone number(s) of nearest hospital(s) or available physicians capable of treating dive injuries;  | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Location and phone number of nearest USCG Rescue Coordination Center, where appropriate;   | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Description of an emergency victim transport plan including phone numbers of appropriate emergency transport services;   | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Procedures and phone numbers or other means of communications to activate emergency services at the facility where the work is being performed;  | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Diver rescue procedures conducted by the dive team, including responsibilities of team members, best location(s) where injured divers may be removed from the water, and best location(s) for performing first aid/ stabilization prior to emergency medical assistance arrival. | <input type="checkbox"/> | <input type="checkbox"/> |

***NOTE: Divers will wait at least 12 hours before flying after any dive: this interval should be extended to 24 hours following multiple days of repetitive dives (30.A.10)***

2. If decompression sickness and/or pulmonary barotraumas are suspected or symptoms are evident, were the following recorded and maintained? (30.A.25)
- |   | YES                      | NO                       |
|---|--------------------------|--------------------------|
| a. Descriptions of signs and symptoms (including depth and time of onset) | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Descriptions and results of treatment                                  | <input type="checkbox"/> | <input type="checkbox"/> |

- c. Name, address, and phone number of attending physician
3. Were copies of Diving Operations Plan, AHA, Emergency Management Plan, and dive logs submitted to the DDC and placed in the project file? (30.A.27, 30.A.14)

**IF THE ANSWER TO ANY OF THE ABOVE QUESTIONS IS NO, SUSPEND  
THE DIVE OPERATION AND RESOLVE THE ISSUE BEFORE  
PROCEEDING**



