



Fuels & Lubricants

Commercial Diving Standard

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Version 1.0

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Commercial Diving Standard

1.0 Introduction

Safe work practices associated with Diving are designed to help prevent personnel from potential injury, property damage or adverse environmental impact due to potential hazards associated with commercial diving operations (henceforth, diving). Diving operations include surface supplied air diving, saturation diving, and surface supplied mixed gas diving.

Recreational diving is outside the scope of this Standard.

This Standard defines corporate requirements for offshore, near shore, onshore and vessel diving operations and represents the minimum requirements by which to manage both Chevron and contractor dive operations.

Note on text formatting:

Letters in Parentheses (e.g., (A)) indicate linkage to the requirement in the Corporate Diving Safety Standard

2.0 Requirements

A written program for Diving safe work practices and related support operations shall be in place and include the following elements at a minimum:

1. Alternatives to Diving shall be considered before undertaking any Diving operations. (A)
2. A Diving Permit shall be required for all diving operations. (S)
3. Diving permits shall be used in conjunction with a Permit to Work in accordance with the Fuels & Lubricants (F&L) Permit to Work Standard. (T)
4. A hazard analysis (planning) shall be performed in accordance with the OE Corporate and F&L Hazard Analysis Standard when planning work involving Diving operations. (W)
 - a. To identify significant, potential hazards, including but not limited to:
 - i. Diving mode.
 - ii. Differential pressure (ΔP).
 - iii. Surface hazards.
 - iv. Underwater hazards, including marine life.
 - v. Weather.
 - vi. Vessels.
 - vii. Enclosed or confined spaces.
 - b. To define diving equipment requirements.
 - c. To identify breathing gas requirements, including reserves.
 - d. To identify thermal and/or hazard protection requirements.
 - e. To identify if work will require additional permits (e.g., Isolation of Hazardous Energy, Hot Work, Confined Space Entry) or certificates will be required for the work.

- f. To identify and evaluate any other precautions or tools to ensure that work will be conducted safely.
 - g. To identify Simultaneous Operations.
5. A Job Safety Analysis (JSA) or equivalent shall be conducted at the work site in accordance with the OE Corporate Required Hazard Analysis Standard prior to Diving operations. (X)
6. The conditions under which a Dive is terminated shall be documented. (Q)
7. A required minimum number of divers, stand-by divers and diving support personnel for all Diving operations shall be documented, including but not limited to: (B)
 - a. Dedicated [dive supervisor](#) on site.
 - b. [Working diver](#).
 - c. [Stand-by diver](#).
 - d. [Tender for working diver](#).
 - e. Tender for stand-by diver.
8. The requirement for additional divers, stand-by divers and diving support personnel shall be documented for other types of diving (e.g., decompression dives, saturation dives). (C)
9. All Diving equipment shall comply with applicable legal requirements, standards and best practices, including but not limited to those addressing: (D)
 - a. Breathing gas quality.
 - b. Compressed gas cylinders, manifolds, gas analyzers, and other gas blending equipment.
 - c. Gauges and timekeeping devices.
 - d. Air compressors.
 - e. Air hoses/umbilicals.
 - f. Thermal and/or hazard protection suits.
 - g. Helmets (including communications systems).
 - h. Weights and harnesses.
 - i. Means to support diver ingress and egress from water to vessel/destination.
 - j. Means to assist/recover an injured/unconscious diver from the water or into a diving bell.
 - k. Hyperbaric chamber.
10. Diving equipment shall be inspected prior to each use and the condition documented, including but not limited to: (E)
 - a. Breathing air supply system, including reserve gas supplies.
 - b. Masks/helmets.
 - c. Thermal and/or hazard protection.
 - d. Bell handling system.
 - e. Communication devices.
11. The conditions under which the following Diving modes are acceptable shall be documented, including but not limited to: (G)

- a. Surface supplied air (not to include hookah system).
 - b. Surface supplied mixed-gas diving.
 - c. Saturation diving.
12. Safety procedures and checklists for applicable Diving modes shall be documented, including but not limited to: (H)
- a. Diving depth and time restrictions.
 - b. Decompression information.
 - c. Dive profiles.
 - d. Diving at altitudes
13. Requirements for hand-held power tools and equipment used in Diving operations shall be documented. (I)
14. Alternatives to hot work shall be considered before undertaking any welding and burning work during diving operations. (J)
15. The following shall be documented for welding and burning work during Diving operations: requirements, additional authorization levels, training, and competency. (K)
16. Alternatives to using explosives shall be considered before using any explosives during Diving operations. (L)
17. The following shall be documented for using explosives during Diving operations: requirements, additional authorization levels, training, and competency. (M)
18. An [entry watch diver](#), in addition to the standby diver, shall be stationed at the underwater point of entry for Diving operations conducted in enclosed or confined spaces. (N)
19. The following shall be documented for Diving Operations conducted in enclosed or confined spaces: requirements, additional authorization levels, training, and competency. (O)
20. All Dives shall be documented according to applicable legal requirements and industry standards. (P)
21. Post-dive procedures shall be described, including but not limited to potential diver health issues. (R)
22. A site-specific emergency response plan shall be developed and address responses to possible applicable contingencies based on work being performed, including but not limited to: (U)
- a. Fire.
 - b. Explosion.
 - c. Loss of communication; loss of breathing gas, loss of bell and other equipment failure.
 - d. Adverse environmental conditions.
 - e. Illness and injury.
 - f. Depth excursion outside of the dive plan.
 - g. Recovery of divers

- h. Loss of dive vessel dynamic position/drift
 - i. Loss of emergency lighting
23. The site-specific emergency response plan shall also include but not be limited to: (V)
- a. First aid requirements.
 - b. Location of decompression chamber / means of victim transfer
 - c. Medical facilities.
 - d. Medical providers.
 - e. Evacuation plan.
 - f. Rescue plan.
 - g. Drill protocols.
24. A written simultaneous operations plan (SimOps) shall be required when diving operations are concurrent with other activities, including but not limited to the following: (Y)
- a. Crane operations (where crane operations not associated with diver tasks).
 - b. Scaffold work over water or over dive boat.
 - c. Vessel operations within exclusion zone (e.g., closest point of approach) of dive boat or offshore structure, as applicable.
 - d. Pipeline activities (e.g. depressurization).
 - e. Caisson pump operations (e.g. fire water pump).
 - f. Remotely operated vehicles.
 - g. Operations or maintenance activities with risk of spill/fire within exclusion zone
25. Documentation shall be maintained on diving equipment testing, calibration, maintenance and certification. (F)
26. The Diving permitting process shall indicate roles, responsibilities and protocols as documented in the OE Corporate and F&L Permit to Work Standard. (Z)
27. Personnel assigned responsibilities in Diving operations shall be trained and competent. (AA)
28. Training requirements and competency assessment for personnel authorized in Diving Operations shall be documented. (BB)
29. The Diving standard shall define the policy for record retention that meets applicable legal, corporate and operating company requirements (or at least 6 months, whichever retention period is more). (CC)

3.0 Roles and responsibilities

Table 1: Roles, Responsibilities & Competencies

Role	Responsibilities	Minimum Performance-Based Skills Required
Dive Entry Watch	<ul style="list-style-type: none"> • Remain stationed at underwater point of entry for diving operations 	<ul style="list-style-type: none"> • F&L Diving Safety Standard

Role	Responsibilities	Minimum Performance-Based Skills Required
	<p>conducted in enclosed or confined spaces.</p> <ul style="list-style-type: none"> • Initiate rescue operations in the case of emergency. • Understands when to stop diving work. 	
Dive Supervisor	<ul style="list-style-type: none"> • Understands operational contingency plans for diving operations • Dedicated supervision of dives on location • Discuss potential hazards, mitigations and permit/work plan conditions with diving team • Ensure appropriate number of Standby Divers are onsite during diving operations and are prepared to assist Divers in the water when needed • Understands when to stop diving operations • Acts as a rescue team lead in case of an emergency. 	<ul style="list-style-type: none"> • F&L Diving Safety Std. • F&L Permit to Work/Hazard Analysis Std. • Meet required training(s) as indicated in the International Consensus Standard for Commercial Diving and Underwater Operations. • Certified by Local Diving Board, if applicable.
Diver - Standby	<ul style="list-style-type: none"> • Understands the planned work and emergency procedures • Remains on deck and is ready for deployment if needed • Ability to be deployed as a Working Diver • Understands when to stop work • Understands his roles in the rescue plan and execute as needed 	<ul style="list-style-type: none"> • F&L Diving Safety Std. • F&L Permit to Work/Hazard Analysis Std. • Meet required training(s) as indicated in the International Consensus Standard for Commercial Diving and Underwater Operations. • Certified by Local Diving Board, if applicable.
Dive Tender	<ul style="list-style-type: none"> • Dedicated to support a single Diver • Understands the planned work and emergency procedures • Monitor Divers in the water and their equipment (e.g. air lines, communications, etc.) • Understands when to stop work • Understands his roles in the rescue plan and execute as needed 	<ul style="list-style-type: none"> • F&L Diving Safety Std. • F&L Permit to Work/Hazard Analysis Std. • Meet required training(s) as indicated in the International Consensus Standard for Commercial Diving and Underwater Operations. • Certified by Local Diving Board, if applicable.
Diver (Working)	<ul style="list-style-type: none"> • Understands the planned work and emergency procedures • Communicates with the Dive Tender • Performs diving operations and underwater work • Follow all required procedures 	<ul style="list-style-type: none"> • F&L Diving Safety Std. • F&L Permit to Work/Hazard Analysis Std. • Meet required training(s) as indicated in the International Consensus Standard for

Role	Responsibilities	Minimum Performance-Based Skills Required
	<ul style="list-style-type: none"> • Adheres to all permits and hazard analysis conditions • Understands when to stop work 	<p>Commercial Diving and Underwater Operations.</p> <ul style="list-style-type: none"> • Certified by Local Diving Board, if applicable.

4.0 Training Requirements

4.1 Initial Training

Personnel must meet the competency requirements and be trained on the requirements of this standard, prior to starting work. Refer to the F&L Training Requirements Tool.

4.2 Refresher Training

Refresher training session shall be provided as follows:

- As required by local regulations or site policy.
- Whenever a person demonstrates insufficient knowledge of the F&L Diving Safety Standard.
- When a serious incident related to diving work occurred and the root cause identified the need to be retrained.
- Trained on the requirements of this standard, at least every three years.

5.0 Records

5.1 Records requirements

Copies of all Work Permits / Work Forms, and associated documentation (including records of inspection, hazard analysis, maintenance and competencies) shall be maintained in accordance with F&L Managing Safe Work Process.








5.2 Records requirements

Records shall be retained for the periods as specified below:

- Copies of all Permit to Work, Diving Work Forms, JLAs, and any other documentation, related to the job, shall be retained by the facility for at least 1 year after the job has been completed.
- Training Records shall be maintained for 3 years or until re-training occurs.

6.0 Document Control Information

6.1 Documents Reference List

Title	Attachment
Commercial Diving Form	 Commercial Diving Form_Rev 2017.pdf
Underwater Burning and Welding Checklist	 Underwater Burning and Weldir
Code of Practice for the Safe Use of Electricity Under Water	 Diving imcad045_r015.pdf
Guidelines for Oxy-Arc Cutting	 Diving imcad003.pdf
Diving Pre-Mobilization Checklist	 Diving Premob Checklist.xlsx
Checklist for Oxy-Arc Operations	 Checklist for Oxy-Arc Operations.
International Consensus Standard for Commercial Diving and Underwater Operations	 International Concensus Standar

7.0 Document Control

Description	Corporate	DS&C	SBU Specific
Approval Date			July 2021
Next Process Document Review			July 2026
Control Number			1.0

7.1 Document Change History

Changes to this document are listed in the table below by change date.

Date (DD/MMM/YR)	Version Number	Description of Change
<i>20 July 2021</i>	<i>1.0</i>	<i>New F&L Standard</i>